

From: jane halton
Sent: Wed, 11 Mar 2020 23:33:28 +0000
To: Chikwe Ihekweazu
Cc: Yijun LIN (MOH);Annelise Wilder-Smith;Ximena Aguilera;Constance LOW (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
 [REDACTED] TAN (MCI);dandona@uw.edu;Jacobs,
 Michael;Ngozi [REDACTED]
 Stephen (CDC/DDPHSIS/OD);Cleghorn, Sean [REDACTED]
 Khan;gmleung@hku.hk;eduardo.carmo@saude.gov.br;Ziad
 [REDACTED]
 ail.com;ephpvj@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);John N. Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH);Olivia OH (MOH);Beatrice Bernard;Zalinah KADIS (MCI);Nur ASHIKIN (MOH);Vernon Lee;Muhammad AKMAL (MOH);Deborah_ng@ncid.sg
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Greetings all

I am under pressure too and will be in and out remotely. Not quite sure at what times but will try and do as much as possible.

Best

Jane

Sent from my iPad

On 12 Mar 2020, at 10:16 am, Chikwe Ihekweazu <chikwe.ihékweazu@ncdc.gov.ng> wrote:

Dear Colleagues

I regret that I will no longer be able to join this meeting by teleconference.

Following the two cases in Nigeria, we are managing a lot of pressure both from government and the public. I recognise the critical importance of this group and regret my inability to join the meeting at this time.

I look forward to outputs from the meeting and hopefully, things get calm soon for me to contribute more.

Best wishes

Chikwe

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Wednesday, March 11, 2020 10:44 AM

To: Annelise Wilder-Smith; Ximena Aguilera; Constance LOW (MOH); BRIAND, Sylvie; FALL, Ibrahima Soce; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com;

(b)(6)@gmail.com; (b)(6) Karen TAN (MCI); dandona@uw.edu;
 Jacobs, Michael; Ngozi Erundu; (b)(6) riha@cepi.net;
 Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW);
 (b)(6) Kamran Khan; gmleung@hku.hk; Chikwe Ihekweazu;
 eduardo.carmo@saude.gov.br; Ziad Memish; (b)(6)
 (b)(6) (b)(6) (b)(6) ephpjv@nus.edu.sg;
 Deborah NG (MOH); Felicia HONG (MOH); Vernon LEE (MOH); John N. Nkengasong; ID
 Commissioners Lancet; Wen Qing YEO (MOH); Olivia OH (MOH); Beatrice Bernard; Zalinah
 KADIS (MCI); gmleung@hku.hk
Cc: Constance LOW (MOH); Nur ASHIKIN (MOH); Vernon Lee; Vernon LEE (MOH); Muhammad
 AKMAL (MOH); Deborah_ng@ncid.sg; Olivia OH (MOH)
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13
 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
 Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera'
 <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie'
 <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann'
 <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>;
 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk'
 <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com'
 <cfetpyhj@vip.sina.com> (b)(6) (b)(6)
 (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>;
 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu'
 <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net'
 <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov'
 <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>;
 (b)(6) (b)(6) 'Kamran Khan'
 <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu'
 <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>;
 'Ziad Memish' (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) Yijun LIN (MOH)
 <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH)
 <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE

(MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from 10AM to 12 Noon (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from 3PM to 5PM (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness Day 1	Topic: Lancet ID Commission on Pandemic Preparedness Day 2
Time: Mar 12, 2020 08:00 AM Singapore	Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

Join Zoom Meeting

(b)(6)
(b)(6)

Meeting ID: (b)(6)

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Password: (b)(6)

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One tap mobile

One tap mobile

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Dial by your location

Dial by your location

(b)(6) US (San Jose)
 (b)(6) US (New York)
 Meeting ID: (b)(6)
 Find your local number:
 (b)(6)

(b)(6) US (San Jose)
 (b)(6) US (New York)
 Meeting ID: (b)(6)
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Table 2. Working documents

No.	Section	Summary of Content	Action required
Introduction (i.e. ecology to changing risk)			
1	<i>Introduction to the current risks and state of preparedness</i>	<ul style="list-style-type: none"> Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world 	<ul style="list-style-type: none"> Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
Public Health Ecology			
2	<i>A new ecology and a changing imperative</i>	<ul style="list-style-type: none"> Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology 	<ul style="list-style-type: none"> Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)			
3	Building flexible preparedness components Lead: Daniel	Novel solutions / approach to building <ul style="list-style-type: none"> Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership 	
4	Info / big data - Risk assessment of diseases Lead: Kamran Khan	Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease	Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: <ul style="list-style-type: none"> What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures?
5	Pharmaceutical and non-pharmaceutical interventions Lead: Richard	How do interventions need to change for the new ecology: <ul style="list-style-type: none"> Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process 	Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.
6	Strategic communications and advocacy Lead: Karen Tan	Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology	

Next Steps

7	Next steps	Recommendations, measurables	timeline	and	Nil; to be discussed in Singapore in March 2020 Survey on new dates
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Regards,
Yijun

MOH EMS

[Redacted] (b)(6)

MOH EMS

[Redacted] (b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn;c.bruschke@minInv.nl; Daniel.Bausch@phe.g

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Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erundu

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@cdc.gov; Cleghorn, Sean (ELS-LOW) [Redacted] (b)(6)

Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

[Redacted] (b)(6)

[Redacted] (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet [Redacted] (b)(6) Wen Qing YEO (MOH)

<YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee [Redacted] (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness [Day 1]

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

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Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondu@lshtm.(b)(6); Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6); John N. Nkengasong <NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmluong@hku.hk; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.c (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 13 February 2020 1:59 PM

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by **14 Feb 2020**.

Thank you and we appreciate your understanding.

(Y/N)?

Still attending?

Booked air tickets?

If not attending in person, okay for teleconference?

Regards,
Yijun

MOH EMS

(b)(6)



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From: Kamran Khan
Sent: Wed, 11 Mar 2020 13:28:26 +0000
To: Jacobs, Michael;Yijun LIN (MOH);Annelise Wilder-Smith;Ximena Aguilera;Constance LOW (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
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Erondu(b)(6);riha@cepi.net;Ryan.Morhard@weforum.org;Redd, Stephen
(CDC/DDPHSIS/OD);Cleghorn, Sean (b)(6)
Ihekweazu;eduardo.carmo@saude.gov.br;Ziad
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ail.com;ephpv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);John N.
Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH);Olivia OH (MOH);Beatrice Bernard;Zalinah
KADIS (MCI);gmleung@hku.hk
Cc: Constance LOW (MOH);Nur ASHIKIN (MOH);Vernon Lee;Vernon LEE
(MOH);Muhammad AKMAL (MOH);Deborah_ng@ncid.sg;Olivia OH (MOH)
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness
(12-13 Mar 2020)

Dear Colleagues –

I also want to send my sincere regrets – with each passing day I am pulled deeper into hospital and public health COVID-19 emergency readiness and response activities. With very long work days and a 12 hour time difference it will be difficult for me to join the calls late night my time in Toronto. I am deeply committed to this important work but unfortunately the timing is presenting challenges. Appreciate your understanding.

Kamran

Kamran Khan MD MPH FRCPC
Physician-Scientist
Department of Medicine
Division of Infectious Diseases
Li Ka Shing Knowledge Institute
St. Michael's Hospital

Professor
Faculty of Medicine, Division of Infectious Diseases
Dalla Lana School of Public Health
University of Toronto

Founder and CEO, BlueDot
www.bluedot.global

From: "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>

Date: Wednesday, March 11, 2020 at 6:48 AM

To: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera <xaguilera@udd.cl>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "briands@who.int" <briands@who.int>, "FALL, Ibrahima Soce" <socef@who.int>, David Heymann <David.Heymann@lshtm.ac.uk>, "Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, 余宏杰 <cfetpyhj@vip.sina.com>,

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Kamran Khan <Kamran@bluedot.global>, "gmleung@hku.hk"

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"eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish

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Cc: "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "Nur ASHIKIN (MOH)"

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<MUHAMMAD_Akmal@moh.gov.sg>, "Deborah_ng@ncid.sg" <Deborah_ng@ncid.sg>, Olivia

OH <Olivia_OH@moh.gov.sg>

Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Colleagues

I am very disappointed to miss the meeting this week. To be clear, this is due to the emerging situation in the UK and the need to support the response, and is no reflection on the situation in Singapore. As a consequence, I also won't be able to dial in as offered, but I wanted to wish you all well and reiterate that I am keen to contribute off line afterwards.

Best wishes to all
Mike

#hello my name is...

Michael Jacobs | Consultant & Hon. Associate Professor of Infectious Diseases
Royal Free London NHS Foundation Trust, Pond Street, London NW3 2QG, UK
T: +44 (0)20 7794 0500 x34640
E: michael.jacobs@ucl.ac.uk (or michael.jacobs@nhs.net for patient confidential emails)

From: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>

Date: Tuesday, 10 March 2020 at 15:42

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera <xaguilera@udd.cl>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "BRIAND, Sylvie" <briands@who.int>, "FALL, Ibrahima Soce" <socef@who.int>, David Heymann <David.Heymann@lshtm.ac.uk>, "Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, "cfetpyhj@vip.sina.com" <cfetpyhj@vip.sina.com>, (b)(6)

(b)(6) (b)(6) (b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, "dandona@uw.edu" <dandona@uw.edu>, "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>, Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>,

(b)(6) (b)(6) "riha@cepi.net" <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "Cleghorn, Sean (ELS-LOW)" <sean.cleghorn@lancet.com>,

(b)(6) (b)(6) Kamran Khan <Kamran@bluedot.global>, "gmleung@hku.hk" <gmleung@hku.hk>, Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memis (b)(6)

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) "Yijun LIN (MOH)"

<LIN_Yijun@MOH.gov.sg>, "ephbjv@nus.edu.sg" <ephbjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "John N. Nkengasong" <NkengasongJ@africa-union.org>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>,

Beatrice Bernard <Beatrice@bluedot.global>, "Zalinah KADIS (MCI)" <Zalinah_KADIS@mci.gov.sg>, "gmleung@hku.hk" <gmleung@hku.hk>

Cc: "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "Nur ASHIKIN (MOH)"

<Nur_ASHIKIN@moh.gov.sg>, Vernon Lee (b)(6) "Vernon LEE (MOH)"

<Vernon_LEE@moh.gov.sg>, "Muhammad AKMAL (MOH)"
 <MUHAMMAD_Akmal@moh.gov.sg>, "Deborah_ng@ncid.sg" <Deborah_ng@ncid.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness **Day 1**
 Time: Mar 12, 2020 08:00 AM Singapore

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**
 Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)
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Meeting ID: (b)(6)
 Password: (b)(6)

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(b)(6) US (San Jose)
 (b)(6) US (New York)

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(b)(6) US (San Jose)
 (b)(6) US (New York)

Dial by your location

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Dial by your location

(b)(6) US (San Jose)
 (b)(6) US (New York)

Meeting ID: (b)(6)

Meeting ID: (b)(6)

Find your local number:

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Find your local number:

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Table 2. Working documents

No.	Section	Summary of Content	Action required
Introduction (i.e. ecology to changing risk)			
1	<i>Introduction to current risks and state of preparedness</i>	Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world	Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
Public Health Ecology			
2a	<i>A new ecology and changing imperative</i>	Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology	Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)			
3	Building flexible preparedness components	Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership	Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures? Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.
4	Info / big data - Risk assessment of diseases	Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access on data equity and access. Thinking about tech in that context. Travel risk and spread of disease	
5	Pharmaceutical and non-pharmaceutical interventions	How do interventions need to change for the new ecology: Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process	
6	Strategic communication and advocacy	Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology	
	Lead: Daniel		
	Lead: Kamran Khan		
	Lead: Richard		
	Lead: Karen Tan		
Next Steps			
7	Next steps	Recommendations, timeline and measurables	Nil; to be discussed in Singapore in March 2020

Survey on new dates

Regards,
Yijun

MOH EMS

[REDACTED] (b)(6)

MOH EMS

[REDACTED] (b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahim Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;

Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; [REDACTED] (b)(6) [REDACTED] (b)(6) Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; [REDACTED] (b)(6) riha@cepi.net;

Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;

[REDACTED] (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish <zmemish@yahoo.com>; [REDACTED] (b)(6) [REDACTED] (b)(6)

[REDACTED] (b)(6) [REDACTED] (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet [REDACTED] (b)(6) Wen

Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee [REDACTED] (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. **Teleconferencing instructions**

Topic: Lancet ID Commission on Pandemic Preparedness [Day 1]

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

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(b)(6) # US (San Jose)
US (New York)

Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) # US (San Jose)
US (New York)

Dial by your location

(b)(6) JS (San Jose)
JS (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>
Sent: Thursday, 20 February 2020 10:09 PM
To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -
 Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)
 <c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael
 <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-
 LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6); John N. Nkengasong
 <NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmluong@hku.hk;
 Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon
 LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)
 <MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)
 <Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6); Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by **14 Feb 2020**.

Thank you and we appreciate your understanding.

(Y/N)?

Still attending?

Booked air tickets?

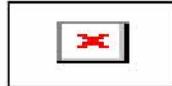
If not attending in person, okay
for teleconference?

Regards,

Yijun

MOH EMS

(b)(6)



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From: Brusckke, dr. C.J.M. (Christianne)
Sent: Tue, 3 Mar 2020 14:15:14 +0000
To: 'Vernon Lee'; Daniel Bausch; John N. Nkengasong; Redd, Stephen (CDC/DDPHSIS/OD); BRIAND, Sylvie; Constance LOW (MOH); FALL, Ibrahima Soce; ID Commissioners Lancet; David Heymann; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; deanmed@hku.hk; cfetpyhj@vip.sina.com
 [REDACTED] (b)(6) TAN (MCI); dandona@uw.edu; Jacobs, Michael; Ngozi.Erondou@lshtm.ac.uk; [REDACTED] (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org
 [REDACTED] (b)(6) - Contact; Chikwe Ihekweazu; Kamran Khan; eduardo.carmo@saude.gov.br; Ziad Memish; Donnelly, Christl A
Cc:
 [REDACTED] (b)(6)
 un LIN (MOH); ephpjv@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH); [REDACTED] (b)(6) yeo_wen_qing@moh.gov.sg; sean.cleghorn@lancet.com
Subject: RE: Lancet ID Commission updates
Attachments: Lancet Commission IntroBM_VL Ecology_VL 5 Dec 2019.docx

Dear Vernon and others,

Thanks for sending the 2 chapters. I have read them carefully, interesting!
 I have inserted some comments, mainly to give the veterinary perspective and I have some questions as well.

I hope it is helpful,
 All the best
 Christianne

Van: Vernon Lee [REDACTED] (b)(6)

Verzonden: donderdag 5 december 2019 08:24

Aan: Daniel Bausch <Daniel.Bausch@phe.gov.uk>; John N. Nkengasong <NkengasongJ@africa-union.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; BRIAND, Sylvie <briands@who.int>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; FALL, Ibrahima Soce <socef@who.int>; ID Commissioners Lancet [REDACTED] (b)(6) David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; Brusckke, dr. C.J.M. (Christianne) <c.j.m.brusckke@minlv.nl>; deanmed@hku.hk; cfetpyhj@vip.sina.com [REDACTED] (b)(6) [REDACTED] (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondou@lshtm.ac.uk; [REDACTED] (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; [REDACTED] (b)(6) - Contact [REDACTED] (b)(6) Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; Kamran Khan <Kamran@bluedot.global>; eduardo.carmo@saude.gov.br; Ziad Memish [REDACTED] (b)(6); Donnelly, Christl A <c.donnelly@imperial.ac.uk>

CC: [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6)

[REDACTED] (b)(6) Yijun LIN (MOH) <LIN_Yijun@moh.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; [REDACTED] (b)(6) yeo_wen_qing@moh.gov.sg; sean.cleghorn@lancet.com

Onderwerp: Re: Lancet ID Commission updates

Dear Commissioners,

Hope you're doing well.

I'm attaching the draft of the first 2 chapters that the teams have been working on. They are still work in progress but much work has been done, and I wanted to update you and also see if you have any comments as we continue to work on these.

We look forward to receiving the updates from workgroups 3 to 6 by end Dec/early Jan.

Happy holidays and hope to see everyone soon.

Best regards,

Vernon

Dit bericht kan informatie bevatten die niet voor u is bestemd. Indien u niet de geadresseerde bent of dit bericht abusievelijk aan u is gezonden, wordt u verzocht dat aan de afzender te melden en het bericht te verwijderen.

De Staat aanvaardt geen aansprakelijkheid voor schade, van welke aard ook, die verband houdt met risico's verbonden aan het elektronisch verzenden van berichten.

This message may contain information that is not intended for you. If you are not the addressee or if this message was sent to you by mistake, you are requested to inform the sender and delete the message.

The State accepts no liability for damage of any kind resulting from the risks inherent in the electronic transmission of messages.

(b)(4)

From: NIAID COVID-19 Peer Review Pre-Recruitment Team
Sent: Fri, 24 Apr 2020 00:57:48 +0000
To: (b)(6) DC/DDID/NCEZID/DHCPP)
Subject: RE: peer review

Dear (b)(6)

Thank you so much for your interest and willingness to help with these reviews. We will reach out to you if your expertise is needed once the applications come in.

Sincerely,
The NIAID COVID-19 Peer Review Recruitment Team.

From: (b)(6) (CDC/DDID/NCEZID/DHCPP) (b)(6)
Sent: Monday, April 20, 2020 8:07 AM
To: NIAID COVID-19 Peer Review Pre-Recruitment Team
<NIAIDCOVID19PEERREVIEWPRERECREUITMENTTEAM@niaid.nih.gov>
Subject: peer review

Hi. I received the recruitment letter for peer review of NIAID FOAs. I have participated in (b)(6) peer reviews with (b)(6) in the past. I have participated with (b)(6) on peer reviews of projects (b)(6) (b)(6) (b)(6) I occasionally participate in peer review of manuscripts for (b)(6) Emerging Infectious Diseases. My background is in (b)(6) and have engaged in evaluation of (b)(6) development and diagnostics development. (b)(6)

(b)(6)

A not too out of date CV is attached.

Best regards

(b)(6)

From: Wolfe, Mitchell (CDC/OD)
Sent: Mon, 27 Jan 2020 18:33:06 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD)
Subject: RE: Coronavirus - Impromptu meeting/call tomorrow afternoon

Also, did you get what you need to talk with Steve Morrison? I'm not sure who has info that is for release, but I've been talking with Anita Patel for info.

Mitchell Wolfe, MD, MPH
RADM, USPHS
Chief Medical Officer, Office of the Director
Centers for Disease Control and Prevention
Ph: (202) 245-0600

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: Monday, January 27, 2020 1:31 PM
To: Wolfe, Mitchell (CDC/OD) <maw6@cdc.gov>
Subject: RE: Coronavirus - Impromptu meeting/call tomorrow afternoon

I tend to agree. It would be good to hear what people say and try to feed what's relevant into the response.

I'll be up there, so could do it if we decide it's the most important thing. In other words, we probably need someone who has the big picture to know who goes where. Would Kyle have a better idea of what else is coming our way?

From: Wolfe, Mitchell (CDC/OD) <maw6@cdc.gov>
Sent: Monday, January 27, 2020 13:27
To: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Subject: FW: Coronavirus - Impromptu meeting/call tomorrow afternoon

Hi Steve,

FYI. I'm not sure this is something we want to attend with all going on, but wanted to send to you to be sure.

Mitchell Wolfe, MD, MPH
RADM, USPHS
Chief Medical Officer, Office of the Director
Centers for Disease Control and Prevention
Ph: (202) 245-0600

From: Jeremy Konyndyk (jkonyndyk@CGDEV.ORG) <jkonyndyk@CGDEV.ORG>
Sent: Monday, January 27, 2020 1:16 PM
To: peggy@hbfam.net; james.lawler@unmc.edu; Ali.Khan@unmc.edu; David Brett-Major <david.brett-

major@navigatinghealthrisks.com>; dhanfling@igt.org; Thomas Inglesby <tinglesby@jhu.edu>; matthew.j.hepburn.civ@mail.mil; jnuzzo1@jhu.edu; Nicole Lurie <nicole.lurie@cepi.net>; Kerr, Lawrence (HHS/OS/OGA) <Lawrence.Kerr@hhs.gov>; Wolfe, Mitchell (CDC/OD) <[msw6@cdc.gov](mailto:mw6@cdc.gov)>; Madad, Syra (CDC nychhc.org) <Syra.Madad@nychhc.org>; lborio@igt.org; George, Dylan <dgeorge@igt.org>; scovitchjr@state.gov; Prashant Yadav (pyadav@CGDEV.ORG) <pyadav@CGDEV.ORG>; Amanda Glassman (aglassman@CGDEV.ORG) <AGlassman@CGDEV.ORG>; Guenaël Rodier (guenael.rodier@outlook.com) <guenael.rodier@outlook.com>
Cc: Noor Shakfeh (nshakfeh@CGDEV.ORG) <nshakfeh@CGDEV.ORG>; Rebecca Katz <Rebecca.Katz@georgetown.edu>; 'Beth Cameron' <cameron@nti.org>; Jaime Yassif <yassif@nti.org>
Subject: Coronavirus - Impromptu meeting/call tomorrow afternoon

Greetings colleagues -

Along with Beth Cameron of NTI and Rebecca Katz of Georgetown, I would like to invite you to join an informal, not-for-attribution brainstorming session **tomorrow from 3-4:30pm EST** on US and global readiness for a potential Coronavirus pandemic.

The emerging information on nCoV-2019 indicates a virus with extremely dangerous potential: it appears highly human-to-human transmissible, may exhibit instances of asymptomatic spread, and has demonstrated a concerning fatality rate. In China the virus is already straining health systems to the limit, has depleted medical supplies, and has prompted drastic control measures by the government. Experts are now suggesting that the outbreak may no longer be controllable within China, and meanwhile each day additional new cases are showing up in more countries around the world. It is important to anticipate a contingency in which the outbreak cannot be contained. If other countries begin seeing outbreaks that mirror China's, health systems and supply chains could be quickly overwhelmed. It is unlikely that new medical countermeasures will become rapidly available, meaning that control or mitigation strategies will need to rely on existing systems and capabilities.

CGD, NTI, and Georgetown are therefore convening a small high level brainstorming session tomorrow afternoon to begin considering policy recommendations for a scenario of uncontrolled spread. This session will aim to discuss:

- Priority measure to enhance the readiness of US hospitals and public health systems
- Consideration of crisis standards of care, and thresholds at which they should be triggered
- Considerations for a distributed, community-based approach to isolation and care in areas where health systems become overwhelmed
- Other priority vulnerabilities as identified by participants
- How these issues should best be messaged to policymakers and the public

Given the short notice, we anticipate most people will need to join by phone or video. Call-in details are below. For those who would like to join in-person, please feel free to come to CGD - 2055 L Street, Washington DC.

To RSVP, please send a note to me and Noor Shakfeh (copied) letting us know if you can make it, and whether you intend to attend in person.

Warm regards,

Jeremy Konyndyk

Video conference details below:

Meeting URL

(b)(6)

Meeting ID

(b)(6)

Want to dial in from a phone?

Dial one of the following numbers:

(b)(6)

(US (San Jose))

(US (Primary, San Jose))

(see all numbers -

(b)(6)

Enter the meeting ID and passcode followed by #

Connecting from a room system?

Dial: (b)(6) and enter your meeting ID & passcode

From: Schuchat, Anne MD (CDC/OD)
Sent: Mon, 27 Jan 2020 18:42:50 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD); McGowan, Robert (Kyle) (CDC/OD/OCS); Berger, Sherri (CDC/OCOO/OD)
Subject: RE: Coronavirus - Impromptu meeting/call tomorrow afternoon

Would consider optional w these considerations:

(b)(5)

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: Monday, January 27, 2020 1:37 PM
To: McGowan, Robert (Kyle) (CDC/OD/OCS) <omc2@cdc.gov>; Schuchat, Anne MD (CDC/OD) <acs1@cdc.gov>; Berger, Sherri (CDC/OCOO/OD) <sob8@cdc.gov>
Subject: FW: Coronavirus - Impromptu meeting/call tomorrow afternoon

Should I agree to do this tomorrow afternoon? looks like a call in.

From: Wolfe, Mitchell (CDC/OD) <msw6@cdc.gov>
Sent: Monday, January 27, 2020 13:27
To: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Subject: FW: Coronavirus - Impromptu meeting/call tomorrow afternoon

Hi Steve,

FYI. I'm not sure this is something we want to attend with all going on, but wanted to send to you to be sure.

Mitchell Wolfe, MD, MPH
 RADM, USPHS
 Chief Medical Officer, Office of the Director
 Centers for Disease Control and Prevention
 Ph: (202) 245-0600

From: Jeremy Konyndyk (jkonyndyk@CGDEV.ORG) <jkonyndyk@CGDEV.ORG>
Sent: Monday, January 27, 2020 1:16 PM
To: peggy@hbfam.net; james.lawler@unmc.edu; Ali.Khan@unmc.edu; David Brett-Major <david.brett-major@navigatinghealthrisks.com>; dhanfling@igt.org; Thomas Inglesby <tinglesby@jhu.edu>; matthew.j.hepburn.civ@mail.mil; jnuzzo1@jhu.edu; Nicole Lurie <nicole.lurie@cepi.net>; Kerr, Lawrence (HHS/OS/OGA) <Lawrence.Kerr@hhs.gov>; Wolfe, Mitchell (CDC/OD) <msw6@cdc.gov>; Madad, Syra (CDC nychhc.org) <Syra.Madad@nychhc.org>; lborio@igt.org; George, Dylan

<dgeorge@igt.org>; scovitchjr@state.gov; Prashant Yadav (pyadav@CGDEV.ORG)
<pyadav@CGDEV.ORG>; Amanda Glassman (aglassman@CGDEV.ORG) <AGlassman@CGDEV.ORG>;
Guenael Rodier (guenael.rodier@outlook.com) <guenael.rodier@outlook.com>
Cc: Noor Shakfeh (nshakfeh@CGDEV.ORG) <nshakfeh@CGDEV.ORG>; Rebecca Katz
<Rebecca.Katz@georgetown.edu>; 'Beth Cameron' <cameron@nti.org>; Jaime Yassif <yassif@nti.org>
Subject: Coronavirus - Impromptu meeting/call tomorrow afternoon

Greetings colleagues -

Along with Beth Cameron of NTI and Rebecca Katz of Georgetown, I would like to invite you to join an informal, not-for-attribution brainstorming session **tomorrow from 3-4:30pm EST** on US and global readiness for a potential Coronavirus pandemic.

The emerging information on nCoV-2019 indicates a virus with extremely dangerous potential: it appears highly human-to-human transmissible, may exhibit instances of asymptomatic spread, and has demonstrated a concerning fatality rate. In China the virus is already straining health systems to the limit, has depleted medical supplies, and has prompted drastic control measures by the government. Experts are now suggesting that the outbreak may no longer be controllable within China, and meanwhile each day additional new cases are showing up in more countries around the world. It is important to anticipate a contingency in which the outbreak cannot be contained. If other countries begin seeing outbreaks that mirror China's, health systems and supply chains could be quickly overwhelmed. It is unlikely that new medical countermeasures will become rapidly available, meaning that control or mitigation strategies will need to rely on existing systems and capabilities.

CGD, NTI, and Georgetown are therefore convening a small high level brainstorming session tomorrow afternoon to begin considering policy recommendations for a scenario of uncontrolled spread. This session will aim to discuss:

- Priority measure to enhance the readiness of US hospitals and public health systems
- Consideration of crisis standards of care, and thresholds at which they should be triggered
- Considerations for a distributed, community-based approach to isolation and care in areas where health systems become overwhelmed
- Other priority vulnerabilities as identified by participants
- How these issues should best be messaged to policymakers and the public

Given the short notice, we anticipate most people will need to join by phone or video. Call-in details are below. For those who would like to join in-person, please feel free to come to CGD - 2055 L Street, Washington DC.

To RSVP, please send a note to me and Noor Shakfeh (copied) letting us know if you can make it, and whether you intend to attend in person.

Warm regards,

Jeremy Konyndyk

Video conference details below:

Meeting URL

(b)(6)

Meeting ID

(b)(6)

Want to dial in from a phone?

Dial one of the following numbers:

(b)(6) (US (San Jose))
(b)(6) (US (Primary, San Jose))
(see all numbers (b)(6))

Enter the meeting ID and passcode followed by #

Connecting from a room system?

Dial: bjn.vc or (b)(6) and enter your meeting ID & passcode

From: Wolfe, Mitchell (CDC/OD)
Sent: Mon, 27 Jan 2020 18:36:24 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD)
Subject: RE: Coronavirus - Impromptu meeting/call tomorrow afternoon

If you find out more, let me know!

If you have any written points, I'd love to see them. I am just getting up to speed (I hope) in a short time.

Mitchell Wolfe, MD, MPH
RADM, USPHS
Chief Medical Officer, Office of the Director
Centers for Disease Control and Prevention
Ph: (202) 245-0600

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: Monday, January 27, 2020 1:35 PM
To: Wolfe, Mitchell (CDC/OD) <mw6@cdc.gov>
Subject: RE: Coronavirus - Impromptu meeting/call tomorrow afternoon

I've got my own version of the answers / TPs, which I think are OK, ie not specific. Good to know who to go to and who to ask to prioritize.

From: Wolfe, Mitchell (CDC/OD) <mw6@cdc.gov>
Sent: Monday, January 27, 2020 13:33
To: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Subject: RE: Coronavirus - Impromptu meeting/call tomorrow afternoon

Also, did you get what you need to talk with Steve Morrison? I'm not sure who has info that is for release, but I've been talking with Anita Patel for info.

Mitchell Wolfe, MD, MPH
RADM, USPHS
Chief Medical Officer, Office of the Director
Centers for Disease Control and Prevention
Ph: (202) 245-0600

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: Monday, January 27, 2020 1:31 PM
To: Wolfe, Mitchell (CDC/OD) <mw6@cdc.gov>
Subject: RE: Coronavirus - Impromptu meeting/call tomorrow afternoon

I tend to agree. It would be good to hear what people say and try to feed what's relevant into the response.

I'll be up there, so could do it if we decide it's the most important thing. In other words, we probably need someone who has the big picture to know who goes where. Would Kyle have a better idea of what else is coming our way?

From: Wolfe, Mitchell (CDC/OD) <maw6@cdc.gov>
Sent: Monday, January 27, 2020 13:27
To: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Subject: FW: Coronavirus - Impromptu meeting/call tomorrow afternoon

Hi Steve,

FYI. I'm not sure this is something we want to attend with all going on, but wanted to send to you to be sure.

Mitchell Wolfe, MD, MPH
 RADM, USPHS
 Chief Medical Officer, Office of the Director
 Centers for Disease Control and Prevention
 Ph: (202) 245-0600

From: Jeremy Konyndyk (jkonyndyk@CGDEV.ORG) <jkonyndyk@CGDEV.ORG>
Sent: Monday, January 27, 2020 1:16 PM
To: peggy@hbfam.net; james.lawler@unmc.edu; Ali.Khan@unmc.edu; David Brett-Major <david.brett-major@navigatinghealthrisks.com>; dhanfling@igt.org; Thomas Inglesby <tinglesby@jhu.edu>; matthew.j.hepburn.civ@mail.mil; jnuzzo1@jhu.edu; Nicole Lurie <nicole.lurie@cepi.net>; Kerr, Lawrence (HHS/OS/OGA) <Lawrence.Kerr@hhs.gov>; Wolfe, Mitchell (CDC/OD) <maw6@cdc.gov>; Madad, Syra (CDC nychhc.org) <Syra.Madad@nychhc.org>; lborio@igt.org; George, Dylan <dgeorge@igt.org>; scovitchjr@state.gov; Prashant Yadav (pyadav@CGDEV.ORG) <pyadav@CGDEV.ORG>; Amanda Glassman (aglassman@CGDEV.ORG) <AGlassman@CGDEV.ORG>; Guenael Rodier (guenael.rodier@outlook.com) <guenael.rodier@outlook.com>
Cc: Noor Shakfeh (nshakfeh@CGDEV.ORG) <nshakfeh@CGDEV.ORG>; Rebecca Katz <Rebecca.Katz@georgetown.edu>; 'Beth Cameron' <cameron@nti.org>; Jaime Yassif <yassif@nti.org>
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(US (San Jose))

(US (Primary, San Jose))

(see all numbers -

(b)(6)

Enter the meeting ID and passcode followed by #

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Dial: bjn.vc or (b)(6) and enter your meeting ID & passcode

From: Yijun LIN (MOH)
Sent: Tue, 28 Jan 2020 10:18:30 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD)
Cc: Gershman, Lynn E. (CDC/DDPHSIS/OD); Constance LOW (MOH)
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in 12 - 13 March 2020

Thanks Dr Redd for the reply and noted the previous email from Ms Gershman.

Regards,
 Yijun

[MOH EMS](#)

[3S-id=0d4e16fe-d7e4-492f-b238-ff12d7e29301:531ed8c6]

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: Tuesday, 28 January 2020 5:47 PM
To: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Cc: Gershman, Lynn E. (CDC/DDPHSIS/OD) <veu4@cdc.gov>
Subject: Re: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in 12 - 13 March 2020

I am planning to attend.

Stephen C. REDD, M.D.
 RADM, USPHS

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Monday, January 27, 2020 23:37
To: BRIAND, Sylvie; FALL, Ibrahima Soce; John N. Nkengasong; David Heymann; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)@gmail.com; (b)(6) Karen TAN (MCI); dandona@uw.edu; Jacobs, Michael; Ngozi.Erondou@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; Redd, Stephen (CDC/DDPHSIS/OD); sean.cleghorn@lancet.com; (b)(6) Kamran Khan; Chikwe Ihekweazu; eduardo.carmo@saude.gov.br; Ziad Memish; (b)(6)
Cc: (b)(6) (b)(6) (b)(6) (b)(6) ephjv@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH); Vernon LEE (MOH); Vernon Lee; Constance LOW (MOH); ID Commissioners Lancet; Wen Qing YEO (MOH)
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in 12 - 13 March 2020

Dear all,

Grateful for those who have replied that they are coming for the upcoming meeting from 12 – 13 Mar.

For those who have not yet replied, Do let us know whether you will be coming by today **Tuesday, 28 Jan** pls.

Thank you.

Regards,
Yijun

MOH EMS

[3S-id=aaf937a3-dd1b-4449-8c3b-fc4631218f4b:531ed8c6]

From: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>

Date: Thursday, 23 January 2020 at 9:47 AM

To: "BRIAND, Sylvie" <briands@who.int>, "FALL, Ibrahima Soce" <socef@who.int>, "John N. Nkengasong" <NkengasongJ@africa-union.org>, David Heymann <david.heyman@lshtm.ac.uk>, "annelies.wilder-smith@lshtm.ac.uk" <annelies.wilder-smith@lshtm.ac.uk>, "xaguilera@udd.cl" <xaguilera@udd.cl>, "Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, "cfetpyhj@vip.sina.com" <cfetpyhj@vip.sina.com>,

(b)(6) (b)(6) (b)(6)
(b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, "dandona@uw.edu" <dandona@uw.edu>, "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>, "Ngozi.Erond@lshtm.ac.uk" <Ngozi.Erond@lshtm.ac.uk>, (b)(6)
(b)(6) "riha@cepi.net" <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "sean.cleghorn@lancet.com" <sean.cleghorn@lancet.com>, (b)(6)
(b)(6) Kamran Khan <Kamran@bluedot.global>, Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish <(b)(6)>,
(b)(6) (b)(6)

Cc: (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) "ephpjv@nus.edu.sg" <ephpjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Vernon Lee (b)(6) "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, ID Commissioners Lancet
(b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>

Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Dear Commissioners,

Apologies for the delay and we appreciate your patience on this.

We would like for you to reconfirm your attendance for the 2nd meeting of the Lancet ID Commission which will be held in Singapore from 12 – 13 Mar 2020. Do let us know whether you will be coming by **Monday, 27 Jan** pls.

As per previous practice, commissioners would be given a fixed sum upon arrival to pay for air tickets, daily expenses and airport transfer. The invitation letters will be sent next week and you may proceed to make your travel arrangements then.

We're attaching the draft meeting agenda for early info pls.

Thank you.

Regards,
Yijun

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Friday, 10 January 2020 7:12 PM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6); (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondudu@lshtm.ac.uk; (b)(6); riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6);

(b)(6)

Cc: (b)(6); (b)(6); (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6) ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>

Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,
Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

[3S-id=5f51183e-8e68-4bcb-82bf-6612fa1f7371:531ed8c6]

From: Constance LOW (MOH)

Sent: Wednesday, 23 October 2019 11:53 AM

To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>;

(b)(6) (b)(6); (b)(6)
(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erondou@lshtm.ac.uk' <Ngozi.Erondou@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>;

(b)(6) (b)(6)
Cc: (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) 'ID Commissioners Lancet' (b)(6)

Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,
Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 9 October 2019 8:08 AM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@afrika-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com (b)(6); (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com; (b)(6)

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Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: *Restricted*

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)
- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,
 Constance, Deborah, Vincent and Yijun

MOH EMS

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(b)(6)

From: Yijun LIN (MOH)
Sent: Tue, 28 Jan 2020 04:37:15 +0000
To: BRIAND, Sylvie;FALL, Ibrahima Soce;John N. Nkengasong;David Heymann;annelies.wilder-smith@lshtm.ac.uk;xaguilera@udd.cl;Amadou.SALL@pasteur.sn;c.bruschke@minInv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.hk;cfetpyhj@vip.sina.com; (b)(6) dr (b)(6) m;Karen TAN (MCI);dandona@uw.edu;Jacobs, (b)(6) rg;Redd, Stephen (b)(6) Khan;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad (b)(6)
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(b)(6)

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 (b)(6) Kamran Khan <Kamran@bluedot.global>, Chikwe Ihekweazu <chikwe.ihkweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memis (b)(6)
 (b)(6) (b)(6)
Cc: (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) "ephpjv@nus.edu.sg" <ephpjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Vernon Lee (b)(6) "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO Wen Qing@moh.gov.sg>
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

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MOH EMS

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Sent: Friday, 10 January 2020 7:12 PM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl;

Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondul@lshtm.ac.uk; (b)(6)
riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;
 (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihhekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish
 (b)(6) (b)(6)
 Cc: (b)(6) (b)(6) (b)(6)
 (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6) ID Commissioners Lancet
 (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,
 Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 23 October 2019 11:53 AM

To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>;

(b)(6) (b)(6) (b)(6)

(b)(6); Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erondul@lshtm.ac.uk' <Ngozi.Erondul@lshtm.ac.uk> (b)(6) (b)(6); 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>;

(b)(6) (b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee'

(b)(6) 'ID Commissioners Lancet' (b)(6)

Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,
Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 9 October 2019 8:08 AM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

(b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) ID Commissioners Lancet (b)(6)

Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)

- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,
Constance, Deborah, Vincent and Yijun

[MOH EMS](#)

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Annelise Wilder-Smith
Sent: Fri, 21 Feb 2020 09:32:07 +0000
To: Yijun LIN (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;John N. Nkengasong;David Heymann;xaguilera@udd.cl;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch;deanmed@
 (b)(6) TAN
 (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi Erond
 (b)(6);riha@cepi.net;Ryan.Morhard@weforum.org;Redd, Stephen
 (b)(6) Khan;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad (b)(6)
Cc:
 (b)(6)
 phpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);Vernon Lee;Constance LOW (MOH);Wen Qing YEO (MOH)
Subject: Lancet ID Commission in March 2020 in Singapore

I am looking forward to meeting you all soon in Singapore.

As you can imagine, the interest on the role of megacity settings and poor urban planning is now more enhanced than ever before due to COVID-19.

Here an interesting URL link for a call for better city-planning to curb epidemics that are increasingly driven by overcrowded urbanised settings:

<http://www.thisisplace.org/i/?id=1ef5bdea-12eb-4ed7-9491-8f72e7509c97>

Best, Annelies

From: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>

Date: Thursday, 23 January 2020 at 9:47 AM

To: "BRIAND, Sylvie" <briands@who.int>, Ibrahima-soce FALL <socef@who.int>, Dr John Nkengasong <NkengasongJ@africa-union.org>, David Heymann <David.Heymann@LSHTM.ac.uk>, Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera Sanhueza <xaguilera@udd.cl>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, deanmed <deanmed@hku.hk>, Yu Hongjie <cfetpyhj@vip.sina.com>, jane halton (b)(6)@gmail.com, (b)(6) (b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, Lalit Dandona <dandona@uw.edu>, "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>, Ngozi Erond <Ngozi.Erond@lshtm.ac.uk>, Peter Horby (b)(6) Richard Hatchett <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "Cleghorn, Sean (ELS-CAM)" <sean.cleghorn@lancet.com>, (b)(6) (b)(6) Kamran Khan <Kamran@bluedot.global>, Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish

(b)(6) (b)(6) (b)(6)
Cc: (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) (b)(6)
 (b)(6) "ephpjv@nus.edu.sg" <ephpjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Vernon Lee <(b)(6)> "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>

Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Dear Commissioners,

Apologies for the delay and we appreciate your patience on this.

We would like for you to reconfirm your attendance for the 2nd meeting of the Lancet ID Commission which will be held in Singapore from 12 – 13 Mar 2020. Do let us know whether you will be coming by **Monday, 27 Jan** pls.

As per previous practice, commissioners would be given a fixed sum upon arrival to pay for air tickets, daily expenses and airport transfer. The invitation letters will be sent next week and you may proceed to make your travel arrangements then.

We're attaching the draft meeting agenda for early info pls.

Thank you.

Regards,
Yijun

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Friday, 10 January 2020 7:12 PM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6); (b)(6); Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondudu@lshtm.ac.uk; (b)(6); riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com; (b)(6); Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish <(b)(6)>; (b)(6)

Cc: (b)(6); (b)(6); (b)(6)

(b)(6); Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6); ID Commissioners Lancet (b)(6); Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>

Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,
Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 23 October 2019 11:53 AM

To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>;

(b)(6) <(b)(6)>; (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erondou@lshtm.ac.uk' <Ngozi.Erondou@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>;

(b)(6) (b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' <(b)(6)>

(b)(6) 'ID Commissioners Lancet' (b)(6)

Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,
Yijun and Constance

MOH EMS

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(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 9 October 2019 8:08 AM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6); (b)(6); Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6); riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com; (b)(6)

Cc: (b)(6); (b)(6); (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) ID Commissioners Lancet (b)(6)

Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: *Restricted*

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)
- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,
Constance, Deborah, Vincent and Yijun

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Richard Hatchett
Sent: Fri, 17 Apr 2020 13:20:52 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Cc: Nick Jackson; Paul Kristiansen; Debra Yeskey; Melanie Saville
Subject: RE: quick question

Dear Inger,

That would be great – happy to set up a call when and as you and team are in a position to do so.

Best regards,
Richard

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: 17 April 2020 12:30
To: Richard Hatchett <richard.hatchett@cepi.net>
Cc: Nick Jackson <nick.jackson@cepi.net>; Paul Kristiansen <paul.kristiansen@cepi.net>; Debra Yeskey <debra.yeskey@cepi.net>; Melanie Saville <melanie.saville@cepi.net>
Subject: Re: quick question

I am going to speak with Christina and Joel later this morning - let's try to regroup early next week?

Inger

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

From: Richard Hatchett <richard.hatchett@cepi.net>
Sent: Tuesday, April 14, 2020 8:07 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Cc: Nick Jackson <nick.jackson@cepi.net>; Paul Kristiansen <paul.kristiansen@cepi.net>; Debra Yeskey <debra.yeskey@cepi.net>; Melanie Saville <melanie.saville@cepi.net>
Subject: RE: quick question

P.S. If not this, it might be good to set up a call with you and your team to discuss other potential enabling science collaborations between CEPI and CDC!

From: Richard Hatchett
Sent: 14 April 2020 13:07
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Cc: Nick Jackson <nick.jackson@cepi.net>; Paul Kristiansen <paul.kristiansen@cepi.net>; Debra Yeskey <debra.yeskey@cepi.net>; Melanie Saville <melanie.saville@cepi.net>
Subject: RE: quick question

Dear Inger,

Thanks for reaching out and let's get your scientists off their hands!

Adding Nick Jackson, Paul Kristiansen, and Deb Yeskey (as well as Mel), who can advise on whether we're doing this and how we might take advantage of such capabilities if available. Would love to partner with you on this or any other projects that my technical team thinks could accelerate vaccine development.

Best regards,
Richard

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: 14 April 2020 13:03
To: Richard Hatchett <richard.hatchett@cepi.net>
Subject: quick question

Richard – Is CEPI supporting the development of coronavirus reporter virus systems/ some to be used outside of BSL3 - to evaluate neutralization assay on a high throughput basis? (I did not review proposals so do not know the answer) If you want to direct me to the Sharepoint site, that's fine. Or refer me to someone else at CEPI.

I am asking because as my scientists sit on their hands, this might be a useful contribution we could make.

Hope you are doing well –

Inger

Inger Damon MD PhD
Director Division of High Consequence Pathogens and Pathology (DHCPP)
National Center for Emerging and Zoonotic Diseases (NCEZID)
Centers for Disease Control and Prevention
Atlanta, GA

From: Dr. Joanne Liu
Sent: Sat, 14 Mar 2020 05:02:57 +0000
To: Eduardo Hage Carmo
Cc: Ximena Aguilera; Yijun LIN (MOH); Annelise Wilder-Smith; Constance LOW (MOH); BRIAND, Sylvie; FALL, Ibrahima Soce; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.
 [REDACTED] (b)(6) TAN (MCI); dandona@uw.edu; Jacobs, Michael; Ngozi [REDACTED] (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; Redd, Stephen (CDC/DDPHSIS/OD); Cleghorn, Sean [REDACTED] (b)(6) Khan; gmleung@hku.hk; Chikwe Ihekweazu; Ziad [REDACTED] (b)(6) ail.com; ephpjv@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH); Vernon LEE (MOH); John N. Nkengasong; ID Commissioners Lancet; Wen Qing YEO (MOH); Olivia OH (MOH); Beatrice Bernard; Zalinah KADIS (MCI); Nur ASHIKIN (MOH); Vernon Lee; Muhammad AKMAL (MOH); Deborah_ng@ncid.sg; Wycliffe WEI (MOH)
Subject: Re: RES: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear colleagues commissioners

I am echoing like other colleagues my regrets for not being able to connect, I was, like many of you, in covid19 crisis management at work.

I remain committed to the vital Lancet Commission work.

Be all safe and in solidarity

Joanne

Envoyé de mon iPhone

Le 14 mars 2020 à 03:00, Eduardo Hage Carmo <Eduardo.Carmo@saude.gov.br> a écrit :

Dear colleagues

Unfortunately it was not possible to participate in the meeting via teleconference due to the COVID situation in my country and a number of activities that I have assumed, including participation in the EOC of 3 national institutions. I hope that this meeting have been very productive and I reiterate that I hope to contribute to the next steps.

Best regards

Eduardo

De: Ximena Aguilera [xaguilera@udd.cl]

Enviado: quinta-feira, 12 de março de 2020 15:10

Para: 'Yijun LIN (MOH)'; 'Annelise Wilder-Smith'; 'Constance LOW (MOH)'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'David Heymann'; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; [REDACTED] (b)(6)

[REDACTED] (b)(6) 'Karen TAN (MCI)'; dandona@uw.edu; 'Jacobs, Michael'; 'Ngozi Erundu'; [REDACTED] (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; 'Cleghorn, Sean (ELS-LOW)'; [REDACTED] (b)(6) 'Kamran Khan'; gmleung@hku.hk; 'Chikwe Ihekweazu';

Eduardo Hage Carmo; 'Ziad Memish'; (b)(6) (b)(6)
 (b)(6) (b)(6) ephpjv@nus.edu.sg; 'Deborah NG (MOH)'; 'Felicia HONG (MOH)'; 'Vernon LEE (MOH)'; 'John N. Nkengasong'; 'ID Commissioners Lancet'; 'Wen Qing YEO (MOH)'; 'Olivia OH (MOH)'; 'Beatrice Bernard'; 'Zalinah KADIS (MCI)'; gmlung@hku.hk
Cc: 'Constance LOW (MOH)'; 'Nur ASHIKIN (MOH)'; 'Vernon Lee'; 'Vernon LEE (MOH)'; 'Muhammad AKMAL (MOH)'; Deborah_ng@ncid.sg; 'Olivia OH (MOH)'; 'Wycliffe WEI (MOH)'
Assunto: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Thank you, I will be there,

Best regards,

Ximena

De: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Enviado el: Thursday, March 12, 2020 11:31 AM
Para: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahim Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondou <Ngozi.Erondou@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com> (b)(6)); Kamran Khan <Kamran@bluedot.global>; gmlung@hku.hk; Chikwe Ihekweazu <chikwe.ihhekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6); Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmlung@hku.hk
CC: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6); Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>
Asunto: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

[redacted] (b)(6)

[redacted]

Meeting ID: [redacted] (b)(6)

Password: [redacted] (b)(6)

One tap mobile

[redacted] (b)(6) JS (San Jose)
[redacted] JS (New York)

Dial by your location

[redacted] (b)(6) S (San Jose)
[redacted] S (New York)

Meeting ID: [redacted] (b)(6)

Find your local number: [redacted] (b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

[redacted] (b)(6)

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; [redacted] (b)(6) [redacted] (b)(6)
[redacted] (b)(6) <dr.joanne.liu@gmail.com>; Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; [redacted] (b)(6) [redacted] (b)(6) 'riha@cepi.net'

<riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>;
 (b)(6) (b)(6) 'Kamran Khan'
 <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu'
 <chikwe.ihkweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>;
 'Ziad Memish' (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) 'ephpjv@nus.edu.sg'
 <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)
 <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N.
 Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet'
 (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>;
 Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah
 KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)
 <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>;
 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
 Yijun

MOH EMS

[3S-id=d9fbab4f-46f6-4cdd-b770-214cf61c3fc4:531ed8c6]

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera'
 <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie'
 <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann'
 <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>;
 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk'
 <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com'
 <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
 (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>;
 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu'
 <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net'
 <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov'
 <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>;
 (b)(6) (b)(6) 'Kamran Khan'
 <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu'
 <chikwe.ihkweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>;

'Ziad Memish' (b)(6) (b)(6) (b)(6)
 (b)(6) <(b)(6)> (b)(6)
 <Yijun.Ln@gmail.com>; (b)(6) (b)(6)>; Yijun LIN (MOH)
 <LIN_Yijun@MOH.gov.sg>; 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH)
 <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE
 (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID
 Commissioners Lancet' (b)(6) Wen Qing YEO (MOH)
 <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard'
 <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk'
 <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)
 <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>;
 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness Day 1	Topic: Lancet ID Commission on Pandemic Preparedness Day 2
Time: Mar 12, 2020 08:00 AM Singapore	Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

Password: (b)(6)

One tap mobile

One tap mobile

(b)(6) US (San Jose)
US (New York)

(b)(6) US (San Jose)
US (New York)

Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number:

(b)(6)

Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number:

(b)(6)

Table 2. Working documents

No.	Section	Summary of Content	Action required
	Introduction (i.e. ecology to changing risk)		
	<i>Introduction to the current risks and state of preparedness</i>	Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world	Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
	Public Health Ecology		
2	<i>A new ecology and a changing imperative</i> << File: Lancet Commission IntroBM_VL & Ecology_VL Dec 2019.docx >>	Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the 5 ecology	Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
	Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)		
3	Building flexible preparedness components Lead: Daniel	Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership	Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures?
4	Info / big data - Risk assessment of diseases Lead: Kamran Khan	Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease	
5	Pharmaceutical and non-pharmaceutical interventions	How do interventions need to change for the new ecology: Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process	Chairs of each workgroup to reach out to members and designate a member to expand

Lead: Richard

<< File: Lancet
Commission
Brainstorming
Session v3.docx
>>

Strategic
communications
and advocacy

Comms as a tool to manage epidemic threats.

Lead: Karen Tan

<< File: Lancet
article_final.docx
>>

What are the new comms activities that are needed in the new
ecology

pointers for the section.

Next Steps

7 Next steps Recommendations, timeline and measurables

Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>;

Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL,

Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;

Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk;

cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi

Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net;

Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;

(b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu

<chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6); Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>;

ephjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong

<NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen

Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice

Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon.LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD.Akmal@moh.gov.sg>
Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**
Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 2]**
Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
US (New York)

Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael
<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6); Vernon

LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 13 February 2020 1:59 PM

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)

<Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by **14 Feb 2020**.

Thank you and we appreciate your understanding.

(Y/N)
 ?

Still attending?

Booked air tickets?

If not attending in person,
 okay for teleconference?

Regards,
 Yijun

[MOH EMS](#)

(b)(6)

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 EM CASO DE DÚVIDA, CONTATE A CENTRAL DE ATENDIMENTO AO USUÁRIO.

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From: Annelise Wilder-Smith
Sent: Sat, 14 Mar 2020 05:27:11 +0000
To: Ziad Memish;Eduardo Hage Carmo
Cc: Ximena Aguilera;Yijun LIN (MOH);Constance LOW (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch;deanmed@hku.hk;cfetpyhj@
 (b)(6) TAN
 (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi
 (b)(6) Stephen
 (CDC/DDPHSIS/OD);Cleghorn, Sean (b)(6)
 Khan;gmleung@hku.hk;Chikwe
 (b)(6)
 mail.com;ephpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);John N. Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH);Olivia OH (MOH);Beatrice Bernard;Zalinah KADIS (MCI);Nur ASHIKIN (MOH);Vernon Lee;Muhammad AKMAL (MOH);Deborah_ng@ncid.sg;Wycliffe WEI (MOH)
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

We had a very productive meeting, and missed you.

Although the work load for all of us has increased due to COVID, we also said that our amount of traveling will be reduced significantly in the upcoming weeks, and we may in fact find ourselves in a position with more time to devote to writing....

Very tough times ahead of us, for the whole world, in fact.

Best, Annelies

From: Ziad Memish (b)(6) >
Date: Saturday, 14 March 2020 at 4:20 AM
To: Eduardo Hage Carmo <Eduardo.Carmo@saude.gov.br>
Cc: Ximena Aguilera Sanhueza <xaguilera@udd.cl>, "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "BRIAND, Sylvie" <briands@who.int>, Ibrahima-soce FALL <socef@who.int>, David Heymann <David.Heymann@LSHTM.ac.uk>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch" <Daniel.Bausch@phe.gov.uk>, deanmed <deanmed@hku.hk>, Yu Hongjie <cfetpyhj@vip.sina.com>, jane halton (b)(6) (b)(6)
 (b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, Lalit Dandona <dandona@uw.edu>, "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>, Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>, (b)(6) (b)(6)
 "riha@cepi.net" <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "Cleghorn, Sean (ELS-LOW)" <sean.cleghorn@lancet.com>, (b)(6)

(b)(6) Kamran Khan <Kamran@bluedot.global>, Gabriel Leung <gmleung@hku.hk>, Chikwe Ihekweazu <chikwe.ihkweazu@ncdc.gov.ng>, (b)(6) <(b)(6)>, (b)(6) <(b)(6)>, (b)(6) <(b)(6)>, (b)(6) <(b)(6)>, (b)(6) <(b)(6)> "ephjv@nus.edu.sg" <ephjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Dr John Nkengasong <NkengasongJ@africa-union.org>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>, Beatrice Bernard <Beatrice@bluedot.global>, "Zalinah KADIS (MCI)" <Zalinah_KADIS@mci.gov.sg>, "Nur ASHIKIN (MOH)" <Nur_ASHIKIN@moh.gov.sg>, Vernon Lee (b)(6), "Muhammad AKMAL (MOH)" <MUHAMMAD_Akmal@moh.gov.sg>, "Deborah_ng@ncid.sg" <Deborah_ng@ncid.sg>, "Wycliffe WEI (MOH)" <Wycliffe_WEI@moh.gov.sg>
Subject: Re: RES: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear All,
 So sorry for not being able to join as well and happy to be involved in any further effort
 Sincerely,
 Ziad

Sent from my iPhone

On Mar 14, 2020, at 5:00 AM, Eduardo Hage Carmo <Eduardo.Carmo@saude.gov.br> wrote:

Dear colleagues
 Unfortunately it was not possible to participate in the meeting via teleconference due to the COVID situation in my country and a number of activities that I have assumed, including participation in the EOC of 3 national institutions. I hope that this meeting have been very productive and I reiterate that I hope to contribute to the next steps.
 Best regards
 Eduardo

De: Ximena Aguilera [xaguilera@udd.cl]

Enviado: quinta-feira, 12 de março de 2020 15:10

Para: 'Yijun LIN (MOH)'; 'Annelise Wilder-Smith'; 'Constance LOW (MOH)'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'David Heymann'; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) <(b)(6)> 'Karen TAN (MCI)'; dandona@uw.edu; 'Jacobs, Michael'; 'Ngozi Erundu'; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; 'Cleghorn, Sean (ELS-LOW)'; (b)(6) 'Kamran Khan'; gmleung@hku.hk; 'Chikwe Ihekweazu'; Eduardo Hage Carmo; 'Ziad Memish'; (b)(6) <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> ephjv@nus.edu.sg; 'Deborah NG (MOH)'; 'Felicia HONG (MOH)'; 'Vernon LEE (MOH)'; 'John N. Nkengasong'; 'ID Commissioners Lancet'; 'Wen Qing YEO (MOH)'; 'Olivia OH (MOH)'; 'Beatrice Bernard'; 'Zalinah KADIS (MCI)'; gmleung@hku.hk

Cc: 'Constance LOW (MOH)'; 'Nur ASHIKIN (MOH)'; 'Vernon Lee'; 'Vernon LEE (MOH)'; 'Muhammad AKMAL (MOH)'; Deborah_ng@ncid.sg; 'Olivia OH (MOH)'; 'Wycliffe WEI (MOH)'

Assunto: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Thank you, I will be there,

Best regards,

Ximena

De: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Enviado el: Thursday, March 12, 2020 11:31 AM

Para: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahim Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk; Chikwe Ihekweazu <chikwe.ihhekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk
CC: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>

Assunto: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the [Americas](#) and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
(b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) <(b)(6)>; 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan'

(b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' <(b)(6)>; Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness Day 1	Topic: Lancet ID Commission on Pandemic Preparedness Day 2
Time: Mar 12, 2020 08:00 AM Singapore	Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

Join Zoom Meeting

(b)(6)	bid
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Meeting ID: (b)(6)

Meeting ID: (b)(6)

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(b)(6)	US (San Jose) US (New York)	(b)(6)	US (San Jose) US (New York)
Meeting ID: (b)(6)		Meeting ID: (b)(6)	
Find your local number:		Find your local number:	
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Table 2. Working documents

No.	Section	Summary of Content	Action required
		Introduction (i.e. ecology to changing risk)	
1	<i>Introduction to current risks and state of preparedness</i>	Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world	Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
		Public Health Ecology	
2	<i>A new ecology and a changing imperative</i>	Define public health ecology Link ecology to disruptions i.e. what << File: Lancet Commission risks to be targeted at based on the IntroBM_VL & Ecology_VL 5 ecology Dec 2019.docx >>	Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
		Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)	
3	Building flexible preparedness components Lead: Daniel	Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership	Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures?
4	Info / big data - Risk assessment of diseases Lead: Kamran Khan	Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease	
5	Pharmaceutical and non-pharmaceutical interventions Lead: Richard	How do interventions need to change for the new ecology: Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process	Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.

<< File: Lancet
Commission
Brainstorming
Session v3.docx
>>

Strategic
communications
and advocacy
Comms as a tool to manage epidemic threats.
What are the new comms activities that are needed in the new
ecology
Lead: Karen Tan
<< File: Lancet
article_final.docx
>>

Next Steps

7 Next steps Recommendations, timeline and measurables

Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>;
Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL,
Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;
Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk;
cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI)
<Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi
Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net;

Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;
(b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu
<chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>;
ephpijv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)
<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong
<NkengasongJ@africa-union.org>; ID Commissioners Lancet <(b)(6)> Wen
Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice
Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)
<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon.LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD.Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

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US (New York)

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(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

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Topic: Lancet ID Commission on Pandemic Preparedness **[Day 2]**

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

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US (New York)

Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

[MOH EMS](#)

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmluong@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon

LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
Constance

[MOH EMS](#)

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 13 February 2020 1:59 PM

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon Lee [REDACTED] (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

(Y/N)
?

Still attending?

Booked air tickets?

If not attending in person,
okay for teleconference?

Regards,
Yijun

[MOH EMS](#)

[REDACTED] (b)(6)

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**PROTEÇÃO AO CRÉDITO, NÃO ENVIAM E-MAILS COM AVISOS DE DÉBITOS, PROCESSOS E RECADASTRAMENTOS.
EM CASO DE DÚVIDA, CONTATE A CENTRAL DE ATENDIMENTO AO USUÁRIO.**

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From: Annelise Wilder-Smith
Sent: Sun, 15 Mar 2020 08:20:16 +0000
To: Ziad Memish;Eduardo Hage Carmo
Cc: Ximena Aguilera;Yijun LIN (MOH);Constance LOW (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch;deanmed@hku.hk;cfetpyhj@
 (b)(6) TAN
 (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi
 (b)(6) Stephen
 (CDC/DDPHSIS/OD);Cleghorn, Sean (b)(6)
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 mail.com;ephpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);John N. Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH);Olivia OH (MOH);Beatrice Bernard;Zalimah KADIS (MCI);Nur ASHIKIN (MOH);Vernon Lee;Muhammad AKMAL (MOH);Deborah_ng@ncid.sg;Wycliffe WEI (MOH)
Subject: Singapore's measures to contain COVID-19
Attachments: Singapore`s measures to curb COVID-19.pdf

Dear all,

During my visit in Singapore, I had the chance to explore how Singapore is tackling COVID, and how the Society is contributing.

Fever screening at every entry to institutions and buildings, schools and universities, paired with hand sanitizers. Liberal testing and prompt isolation of cases, extensive contact tracing advanced by digital technologies and police support, and strictly enforced quarantine of contacts. No community quarantine, no cancellation of events, all schools and universities open. Life is normal, but all people implement social distancing, use hand sanitizers frequently (as available basically in every building in almost every room), and do not complain at all about having their temperature checked several times per day.

Vernon Lee, our Chair of this Lancet ID Commission, has written a nice piece on how Singapore basically has kept a flat line over the past 7 weeks in terms of daily new cases. Lots to learn from Singapore! He also provides a list of the measures taken in the below URL link.

[Interrupting transmission of COVID-19: lessons from containment efforts in Singapore.](#)

Lee VJ, Chiew CJ, Khong WX.

J Travel Med. 2020 Mar 13. pii: taaa039. doi: 10.1093/jtm/taaa039.

Annelies

From: Ziad Memish (b)(6)
Date: Saturday, 14 March 2020 at 4:20 AM
To: Eduardo Hage Carmo <Eduardo.Carmo@saude.gov.br>
Cc: Ximena Aguilera Sanhueza <xaguilera@udd.cl>, "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "BRIAND, Sylvie" <briands@who.int>, Ibrahima-soce FALL <socef@who.int>, David Heymann <David.Heymann@LSHTM.ac.uk>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch" <Daniel.Bausch@phe.gov.uk>, deanmed <deanmed@hku.hk>, Yu Hongjie <cfetpyhj@vip.sina.com>, jane halton (b)(6) "Dr. Joanne Liu" (b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, Lalit Dandona <dandona@uw.edu>, "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>, Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>, (b)(6) (b)(6) "riha@cepi.net" <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "Cleghorn, Sean (ELS-LOW)" <sean.cleghorn@lancet.com>, (b)(6) (b)(6) Kamran Khan <Kamran@bluedot.global>, Gabriel Leung <gmleung@hku.hk>, Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) "ephjv@nus.edu.sg" <ephjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Dr John Nkengasong <NkengasongJ@africa-union.org>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>, Beatrice Bernard <Beatrice@bluedot.global>, "Zalinah KADIS (MCI)" <Zalinah_KADIS@mci.gov.sg>, "Nur ASHIKIN (MOH)" <Nur_ASHIKIN@moh.gov.sg>, Vernon Lee (b)(6) "Muhammad AKMAL (MOH)" <MUHAMMAD_Akmal@moh.gov.sg>, "Deborah_ng@ncid.sg" <Deborah_ng@ncid.sg>, "Wycliffe WEI (MOH)" <Wycliffe_WEI@moh.gov.sg>
Subject: Re: RES: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear All,
 So sorry for not being able to join as well and happy to be involved in any further effort
 Sincerely,
 Ziad

Sent from my iPhone

On Mar 14, 2020, at 5:00 AM, Eduardo Hage Carmo <Eduardo.Carmo@saude.gov.br> wrote:

Dear colleagues

Unfortunately it was not possible to participate in the meeting via teleconference due to the COVID situation in my country and a number of activities that I have assumed, including participation in the EOC of 3 national institutions. I hope that this meeting have been very productive and I reiterate that I hope to contribute to the next steps.

Best regards
Eduardo

De: Ximena Aguilera [xaguilera@udd.cl]

Enviado: quinta-feira, 12 de março de 2020 15:10

Para: 'Yijun LIN (MOH)'; 'Annelise Wilder-Smith'; 'Constance LOW (MOH)'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'David Heymann'; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6); (b)(6); 'Karen TAN (MCI)'; dandona@uw.edu; 'Jacobs, Michael'; 'Ngozi Erundu'; (b)(6); rha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; 'Cleghorn, Sean (ELS-LOW)'; (b)(6); 'Kamran Khan'; gmleung@hku.hk; 'Chikwe Ihekweazu'; Eduardo Hage Carmo; 'Ziad Memish'; (b)(6); (b)(6); (b)(6); (b)(6); ephpjv@nus.edu.sg; 'Deborah NG (MOH)'; 'Felicia HONG (MOH)'; 'Vernon LEE (MOH)'; 'John N. Nkengasong'; 'ID Commissioners Lancet'; 'Wen Qing YEO (MOH)'; 'Olivia OH (MOH)'; 'Beatrice Bernard'; 'Zalinah KADIS (MCI)'; gmleung@hku.hk
Cc: 'Constance LOW (MOH)'; 'Nur ASHIKIN (MOH)'; 'Vernon Lee'; 'Vernon LEE (MOH)'; 'Muhammad AKMAL (MOH)'; Deborah_ng@ncid.sg; 'Olivia OH (MOH)'; 'Wycliffe WEI (MOH)'
Assunto: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Thank you, I will be there,

Best regards,

Ximena

De: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Enviado el: Thursday, March 12, 2020 11:31 AM

Para: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6); (b)(6); Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; (b)(6); rha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6); Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6); (b)(6); (b)(6); (b)(6); (b)(6); ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6); Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk

CC: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>

Asunto: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

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Meeting ID: (b)(6)

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(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)**Sent:** Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahim Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6); (b)(6); (b)(6); (b)(6); (b)(6); Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; (b)(6); (b)(6); 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6); (b)(6); 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6); (b)(6); (b)(6); (b)(6); (b)(6); (b)(6); 'jxxm0349@gmail.com' (b)(6); 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6); Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6); Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>

Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,

Yijun

MOH EMS

(b)(6)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness **Day 1**
Time: Mar 12, 2020 08:00 AM Singapore

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**
Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

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Password: 094224

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Table 2. Working documents

No.	Section	Summary of Content	Action required
		Introduction (i.e. ecology to changing risk)	
1	<i>Introduction to the current risks and state of preparedness</i>	Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world	Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
		Public Health Ecology	
2	<i>A new ecology and a changing imperative</i>	Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology	Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a
	<< File: Lancet Commission IntroBM_VL & Ecology_VL 5		

Dec 2019.docx >>

commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

3 Building flexible preparedness components
Lead: Daniel
Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership

4 Info / big data - Risk assessment of diseases
Lead: Kamran Khan
Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease

5 Pharmaceutical and non-pharmaceutical interventions
Lead: Richard
<< File: Lancet Commission Brainstorming Session v3.docx >>
How do interventions need to change for the new ecology: Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process

6 Strategic communications and advocacy
Lead: Karen Tan
<< File: Lancet article_final.docx >>
Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology

Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:

What has to be true for this to work?
What would be the expected impact?

Are there any examples of successes or failures?

Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.

Next Steps

7 Next steps Recommendations, timeline and measurables

Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

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(New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

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Meeting ID: (b)(6)

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US (New York)

Dial by your location

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US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,

Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmleung@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

(Y/N)

?

Still attending?

Booked air tickets?

If not attending in person,
okay for teleconference?

Regards,
Yijun

MOH EMS

(b)(6)

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IMPORTANTE: FORAM IDENTIFICADOS LINKS NESTA MENSAGEM PARA ACESSO A SITES EXTERNOS, CUJA SEGURANÇA NÃO PÔDE SER VERIFICADA. É DE FUNDAMENTAL IMPORTÂNCIA COMPORTAR-SE DE MANEIRA SEGURA EM NOSSA REDE, NÃO ABRINDO ANEXOS E LINKS DESCONHECIDOS, AINDA QUE SUPOSTAMENTE ENVIADOS POR PESSOAS CONHECIDAS. LEMBRANDO QUE INSTITUIÇÕES FINANCEIRAS, DO PODER JUDICIÁRIO, SERVIÇO DE PROTEÇÃO AO CRÉDITO, NÃO ENVIAM E-MAILS COM AVISOS DE DÉBITOS, PROCESSOS E RECADASTRAMENTOS. EM CASO DE DÚVIDA, CONTATE A CENTRAL DE ATENDIMENTO AO USUÁRIO.

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Interrupting transmission of COVID-19: lessons from containment efforts in Singapore

Vernon J Lee, PhD^{1,2}, Calvin J Chiew, MPH¹, Wei Xin Khong, PhD¹

¹Ministry of Health, Singapore

²Saw Swee Hock School of Public Health, Singapore

Corresponding author: Vernon J Lee, Communicable Diseases Division, Ministry of Health, Singapore, 12 College Road, Singapore 169852, Email: Vernon.LEE@moh.gov.sg

Highlight

Despite multiple importations resulting in local chains of transmission, Singapore has been able to control the COVID-19 outbreak without major disruption to daily living. In this article, we describe the combination of measures taken by Singapore to contain COVID-19 and share some early lessons learnt from the experience.

Keywords:

COVID-19; outbreak; Singapore; coronavirus; mitigation; importation;

Introduction

As of Mar 9, 2020, more than 100,000 COVID-19 cases and 3,800 deaths have been reported globally, including over 28,000 cases and 600 deaths in 100 countries or regions outside China.¹ Countries are now facing emerging outbreaks that threaten to develop into local epidemics if not well contained. China, which had initiated the largest community containment effort in history, has been successful at containing the outbreak, and since mid-February the daily number of new COVID-19 cases has been declining in China.² In the Republic of Korea (ROK) with one of the highest number of infections outside China, the outbreak also appears to have stabilized after application of rigorous measures such as strict contact tracing and large-scale quarantine.

Singapore, a city-state and global travel hub in Southeast Asia, was one of the first countries to be affected by COVID-19, and for a while was the country with the highest COVID-19 numbers outside of China from Feb 5, 2020 to Feb 18, 2020. This was in part due to Singapore's strategy of using a comprehensive surveillance system to detect as many cases as possible, and to contain them at the individual level. Despite early importations resulting in local chains of transmission, the rise in the number of cases has been steady without the exponential growth observed elsewhere. This suggests that this strategy, coupled with community-based measures proportionate to the transmission risk, has been effective in containing spread, and could be considered in countries in the early stages of the outbreak where it is not possible to mount massive community-wide containment efforts.

Singapore's approach

Singapore was one of the worst affected areas in the 2003 SARS outbreak, and since then Singapore has steadily built up its outbreak preparedness, including developing a national pandemic preparedness plan based on risk assessment and calibration of response measures that are proportionate to the risk. This includes holding regular exercises, and building the National Centre for Infectious Diseases (NCID), a 330-bed purpose built infectious diseases management facility with integrated clinical, laboratory and epidemiologic functions.

One of the lessons learnt from SARS is that clear leadership and direction is critical to ensure coordinated response across all sectors. Therefore, a Multi-Ministry Task Force was set up before Singapore had its first COVID-19 case to provide central coordination for a Whole-of-Government handling of the crisis.

Surveillance and containment measures

Singapore's surveillance for COVID-19 aimed to identify as many cases as possible using complementary detection methods. First, a case definition to identify suspect cases, at healthcare facilities or through contact tracing, was established based on clinical and epidemiological criteria, and evolved over time as more information became available. To identify cases in the community that do not fulfill the case definition, an enhanced surveillance system was set up to detect COVID-19 among all cases of pneumonia in hospital and primary care, severely-ill patients in hospital intensive care units and deaths with possible infectious cause, and influenza-like illness (ILI) in sentinel primary care clinics. Finally, doctors were also allowed to test patients whom they viewed with suspicion for clinical or epidemiological reasons. To support the surveillance system, SARS-CoV-2 RT-PCR laboratory testing capacity was scaled up rapidly to all public hospitals in Singapore, and is able to handle 2,200 tests a day for a population of 5.7m. Similarly, ROK has also quickly expanded testing capacities, including setting up drive-through testing stations, and has conducted over 200,000 tests to date.³

All suspected and confirmed cases were immediately isolated in hospital to prevent onward transmission. Contact tracing was also initiated to determine their movement history 14 days prior to symptom onset to isolation to determine possible sources of infection and also to prevent onward transmission among close contacts. Any contact with current or recent symptoms after exposure to the case was referred to hospitals for isolation and testing as part of active case finding. Close contacts who were well were placed under mandatory quarantine for 14 days from their last date of exposure, while other lower-risk contacts were put on phone surveillance.

As of Mar 10, 2020, over 4000 close contacts had been placed under quarantine, and 8 cases developed symptoms while under quarantine and tested positive. To facilitate compliance and reduce hardship, the Quarantine Order Allowance Scheme provides economic assistance. At the same time, the Infectious Diseases Act provides legal power to enforce contact tracing and quarantine, and to prosecute those who do not comply.

Healthcare measures

A network of more than 800 Public Health Preparedness Clinics (PHPCs) was activated to enhance management of respiratory infections in the primary care setting, with subsidies extended to Singapore residents to incentivize them to seek care at these PHPCs. As early COVID-19 disease is mild and undifferentiated, medical practitioners were instructed to provide extended medical leave of up to five days for patients with respiratory symptoms. This allowed possible COVID-19 cases to self-isolate at home to reduce the number of undetected cases seeding community transmission. Those with persistent or worsening symptoms are advised to return to the same doctor for evaluation and referral for testing.

At the hospitals, infection control measures were strengthened, including strict visitor controls, cohorting of patients with pneumonia or respiratory infection, and maintenance of strict infection control practices across all settings with personal protective equipment levels appropriate for the

patient care setting. Movement of patients and doctors between healthcare institutions was also limited to prevent multiple institutions from being affected at the same time.

Border control measures

Apart from detecting cases and containing spread, prevention of imported cases is important to reduce the force of infection from external sources. In Singapore, temperature and health screening of incoming travelers from Wuhan since Jan 3, 2020, and extended to all travellers since Jan 29, 2020, is in place at all ports of entry. Travelers who meet the suspect case definition are conveyed directly to hospital.

Singapore has, as of Mar 4, 2020, advised Singaporeans to defer non-essential travel to mainland China, Republic of Korea (ROK), Northern Italy and Iran and imposed entry restrictions on visitors from the same areas. Returning residents and long-term pass holders with travel history to these affected regions are subject to a 14-day quarantine.

Community and social measures

The community-level approach in Singapore was focused on social responsibility while life continued as usual with precautions. Public education is a key strategy to empower the public, and is done through traditional print and broadcast media, as well as social media. This includes messages on regular handwashing and seeking medical treatment early and staying at home when unwell. The use of masks was only encouraged for ill persons to prevent them from infecting others, and the government distributed four masks to every household. Detailed anonymised information on COVID-19 cases is shared publicly to prevent speculation, while misinformation is quickly debunked and clarified on a government website.

In the workplace, employees are encouraged to monitor their temperature and health regularly, and institutions to step up their business continuity plans, including allowing employees to telecommute where possible and having segregated teams. Advisories to avoid large-scale events of more than 1,000 people are in place, while ongoing events are advised to take precautions such as health screening and turning away ill individuals. Schools have remained open, and have implemented precautionary measures such as reduction of mass assemblies, inter-class and inter-school activities, and staggered meal times. Mass fever screening through thermal temperature scanners is widely instituted at entry to public buildings, such as offices, hotels, community centres and places of worship.

Although these precautions are implemented, relative normalcy of day-to-day life has been maintained in Singapore. Notably, Singapore has not implemented school closures or other major social distancing measures, as there is no evidence of widespread community transmission, and rates of COVID-19 infection among children remain low.⁴ School closures and social distancing have been performed in China and Hong Kong, where containment is also successful. However, Singapore's experience suggests it is possible to avoid major social disruptions and contain the spread of COVID-19, as a sustainable approach over the long term.

Success and Challenges

With the combination of measures, Singapore has been able to interrupt transmission to contain the outbreak. The majority of cases were detected through application of the case definition at the point of medical consult or through contact tracing.⁵ Statistical modeling of the effective reproduction

number has shown it to be consistently below 1, suggesting that containment efforts are successful (Pung et al, unpublished data).

However, several challenges lie ahead. Firstly, the longer the outbreak persists, the more chains of community transmission and missed cases are present, and the more difficult it will be to link cases and contain spread. Contact tracing and quarantine are resource-intensive activities and may not be sustainable in the long run. Secondly, some individuals who continue to work or attend social functions while symptomatic are driving disease spread, leading to substantial community transmission. Thirdly, with global spread, the force of infection from imported cases will be substantial, leading to new waves of infection.

As Singapore is a travel hub with high reliance on trade, sustained border control measures may not be practical with global disease spread, and it may not be feasible to completely shut a country's borders for a prolonged duration. These factors may result in a rise in cases, and additional measures will be required to achieve a balance between containing disease spread and reducing the overall health and socioeconomic impact due to community transmission.

Conclusion

Early detection of cases through surveillance and aggressive contact tracing around known cases has helped to contain spread of the outbreak in Singapore. Together with other healthcare, border and community measures, they allow the COVID-19 outbreak to be managed without major disruption to daily living. Countries could consider these measures for a proportionate response to the risk of COVID-19.

Author contributions:

All authors contributed equally to the literature review, data collection and writing of the manuscript.

Declaration of interests:

We declare no competing interests.

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Table: Summary of measures taken for COVID-19 in Singapore and other countries (as of Mar 10, 2020)

Measure	Singapore	Other Countries (selected)
Surveillance and containment measures		
Case detection	Case definition was established based on clinical and epidemiological criteria, and continuously updated as the COVID-19 situation evolved. Surveillance was enhanced to test COVID-19 in all pneumonia patients, ICU patients and deaths from possible infectious cause, and influenza-like illness (ILI) in sentinel primary care sites. Doctors were also allowed to test patients whom they viewed with suspicion for clinical or epidemiological reasons.	Affected countries instituted various case finding activities using WHO's case definition or a modified version. ⁶ Malaysia, Republic of Korea (ROK) and the United Kingdom incorporated COVID-19 testing for severe acute respiratory illness (SARI) and ILI surveillances. In Japan, Republic of Korea (ROK) and the United States (US), doctors were allowed to test patients at their discretion.
Quarantine & phone surveillance	Symptomatic contacts were referred to hospital. Asymptomatic close contacts were placed under compulsory quarantine for 14 days, while lower-risk contacts were put on phone surveillance.	Mandatory quarantine was required by law in several countries/regions, including Brunei, Hong Kong, Israel, mainland China and ROK.
Laboratory testing	PCR testing for COVID-19 is available at all public hospital laboratories to increase national diagnostic capacity, and other healthcare institutions can send samples for testing at these facilities. Serological tests were used to investigate linkages between cases and clusters.	In Japan and the United States (US), COVID-19 testing was extended to non-public health laboratories. Serological testing using IgM and IgG antibodies was described in mainland China.
Healthcare measures		
Clinical management in primary care	Medical practitioners were instructed to provide extended medical leave of up to five days for patients with respiratory symptoms, and to refer them for further testing if they do not recover. Patients were advised to return to the same doctor if symptoms persist.	In UK, primary care practitioners were advised to avoid face-to-face assessment of suspected cases. Instead, patients should be immediately isolated and referred to the local health authorities via a hotline. ⁷ General practitioners in Australia were similarly advised to refer patients to dedicated health services, undertake remote telemedicine consultation or make safe arrangements to assess possible COVID-19

		patients. ⁸
Infection prevention and control	Infection control measures were strengthened at healthcare institutions, including strict visitor controls, cohorting of patients with pneumonia or respiratory infection, and maintenance of strict infection control practices across all settings. Inter-institution movement of patients and doctors was limited.	Infection control measures recommended by the US Centers for Disease Control to healthcare institutes included limiting points of entry to facilities, prioritizing triage of patients with respiratory symptoms, exploring alternatives to face-to-face triage, limiting visitor access and movement within facility, and managing exposed healthcare workers ⁹ .
Healthcare services	Over 800 Public Health Preparedness Clinics (PHPCs) were activated to enhance management of respiratory infections in the primary care setting, with subsidies extended to Singapore residents.	Australia and China set up “fever clinics” to assess large volume of people for COVID-19 while minimizing risk of transmission to other patients.
Designated hospital	Majority of cases were isolated and treated at the National Centre for Infectious Diseases (NCID), a 330-bed purpose built infectious diseases management facility.	While most countries managed their cases in existing hospitals, China established at least 14 temporary medical facilities designated to treat COVID-19 patients. Two new hospitals with at least 1,000 beds each were also built in Wuhan city.
Border control measures		
Temperature screening	Temperature and health screening for inbound travelers is being conducted at all land, air, and sea checkpoints.	Countries including China are conducting temperature screening of incoming passengers at air, land and sea checkpoints.
Travel advisories & border restrictions	Singaporeans are advised to defer non-essential travel to mainland China, ROK, Northern Italy and Iran, and entry restrictions are imposed on visitors from these regions. Returning residents with travel history to these areas are subject to a 14-day quarantine.	At least 45 countries or regions issued partial or complete travel bans on mainland China, Iran, Italy, ROK or other countries.
Community and social measures		
Schools	Schools have remained open, but implemented precautionary measures such as reduction of mass assemblies, inter-class and inter-school activities, and staggered meal times.	Country/region-wide school closures were announced in Albania, Bulgaria, Iran, Iraq, Italy, Japan, mainland China, Hong Kong, Saudi Arabia, Spain and ROK.
Workplaces	Employees are encouraged to monitor their temperature and health regularly, and institutions are encouraged to step up their business continuity plans, such as telecommuting where possible and having segregated teams.	Hong Kong’s Centre for Health Protection encouraged companies to develop comprehensive policies that include business continuity and operational plans to maintain core services ¹⁰ . In US, employers were recommended to develop contingency plans for situations that may arise during outbreaks ¹¹ .
Public communications	Public education was done through traditional print and broadcast media, as well as social media. Public are advised to practise social responsibility while life continues as usual with precautions. Misinformation is debunked and clarified on a government website.	Most countries delivered public-service announcements promoting social responsibility and set up telephone hotlines for public enquiries. In mainland China, several provinces mandated mask wearing in public spaces.
Lockdown of affected areas	No areas have been locked down to date.	Massive lockdowns were reported in mainland China, Palestine, Saudi Arabia, and Italy. Smaller scale lockdowns were reported

	in ROK, Cyprus and Vietnam.
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From: Wycliffe Wei Enli (MOHH)
Sent: Sun, 22 Mar 2020 08:21:08 +0000
To: Annelise Wilder-Smith;Ximena Aguilera;BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanme (b)(6) TAN (MCI;dandona@uw.edu;Jacobs, Michael;Ngozi Erondu (b)(6) riha@cepi.net;Ryan.Morhard@weforum.org;Redd, Stephen (CDC/DDPHSIS/OD);Cleghorn, Sean (b)(6) Khan;gmleung@hku.hk;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad (b)(6) 49@gmail.com;ephpjv@nus.edu.sg;Vernon LEE (MOH;John N. Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH;Beatrice Bernard;Zalinal KADIS (MCI;gmleung@hku.hk
Cc: Constance LOW (MOH;Nur ASHIKIN (b)(6) LEE (MOH;Muhammad AKMAL (MOH;Deborah NG (MOH;Deborah Ng Hee Ling (NCID);Olivia OH (MOH;Wycliffe WEI (MOH;Constance LOW (MOH;Felicia HONG (MOH;Olivia OH (MOH
Subject: [Notes of Meeting] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)
Attachments: Outline-Assignments.pdf, Notes of meeting-Day1.pdf, Notes of meeting-Day2.pdf

Dear Commissioners,

It was our pleasure to have hosted the meeting from 12 – 13 Mar 2020 and we thank all of you who managed to join us.

We have recorded notes from the meeting discussions and attach them here for your reference. We have also included another document to highlight key points and to provide an outline of the report with corresponding assignments.

Thank you once again, and we wish you well in this challenging time.

On behalf of the secretariat,
Wycliffe

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 12 March 2020 10:31 pm
To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com;
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Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness Day 2	
Time: Mar 13, 2020 08:00 AM Singapore	
Join Zoom Meeting	
(b)(6)	
Meeting ID:	(b)(6)
Password:	(b)(6)
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Meeting ID: (b)(6)	
Find your local number: (b)(6)	

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minInv.nl' <c.bruschke@minInv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6)
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Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6)
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(b)(6) (b)(6)}; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>;
 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 1 Time: Mar 12, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p>(b)(6)</p> <p>Meeting ID: (b)(6) Password: (b)(6)</p> <p>One tap mobile</p> <p>(b)(6) US (San Jose) US (New York)</p> <p>Dial by your location</p> <p>(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: (b)(6) Find your local number: (b)(6)</p>	<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 2 Time: Mar 13, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p>(b)(6)</p> <p>Meeting ID: (b)(6) Password: (b)(6)</p> <p>One tap mobile</p> <p>(b)(6) US (San Jose) US (New York)</p> <p>Dial by your location</p> <p>(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: (b)(6) Find your local number: (b)(6)</p>
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Table 2. Working documents

	Section	Summary of Content	Action required
Introduction (i.e. ecology to changing risk)			
1	<i>Introduction to the current risks and state of preparedness</i>	<ul style="list-style-type: none"> Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world 	<ul style="list-style-type: none"> Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
Public Health Ecology			
2	<i>A new ecology and a changing imperative</i> << File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >>	<ul style="list-style-type: none"> Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology 	<ul style="list-style-type: none"> Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)			
3	Building flexible preparedness components Lead: Daniel	Novel solutions / approach to building <ul style="list-style-type: none"> Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership 	Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: <ul style="list-style-type: none"> What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures? Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.
4	Info / big data - Risk assessment of diseases Lead: Kamran Khan	Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease	
5	Pharmaceutical and non-pharmaceutical interventions Lead: Richard << File: Lancet Commission Brainstorming Session v3.docx >>	How do interventions need to change for the new ecology: <ul style="list-style-type: none"> Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process 	
6	Strategic communications and advocacy Lead: Karen Tan	Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new	

	Section	Summary of Content	Action required
	<< File: Lancet article_final.docx >>	ecology	
	Next Steps		
7	Next steps	Recommendations, timeline and measurables	Nil; to be discussed in Singapore in March 2020 Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com;

(b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6)

(b)(6) (b)(6) (b)(6)
(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg;

Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet

(b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a) Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness [Day 1]
Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) JS (San Jose)
(b)(6) JS (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]
Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
 (b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
 Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>
Sent: Thursday, 20 February 2020 10:09 PM
To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk;
 (b)(6) - Contact (b)(6) Bruschke, dr. C.J.M.
 (Christianne) <c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>;
 Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erundu@lshtm.ac.uk;
 (b)(6) Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; Ziad Memish
 (b)(6) John N. Nkengasong <NkengasongJ@africa-union.org>; Daniel Bausch
 <Daniel.Bausch@phe.gov.uk>; gmluong@hku.hk; Redd, Stephen (CDC/DDPHSIS/OD)
 <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6)
 Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)
 <MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)
 <Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by **14 Feb 2020**.

Thank you and we appreciate your understanding.

	(Y/N)?
Still attending?	
Booked air tickets?	
If not attending in person, okay for teleconference?	

Regards,
 Yijun

[MOH EMS](#)

(b)(6)

Lancet Infectious Diseases Pandemic Preparedness Commission Meeting

12 to 13 March 2020

Key Notes for Authors

1. There has been a change in the structure of the report (see below and notes of meeting). While the previous content would still be largely relevant, it would need to be reorganised based on the new structure.
2. The section should include a preamble explaining the context or background of the issue.
3. The report should use panels to illustrate the points raised in the discussion and could feature case-studies or best practices. COVID-19 could be used, although an in-depth discussion should be left for a separate paper.
4. In the new report structure, the four sections would correspond to the four recommendations to be made by the commission. Authors should develop a recommendation based on the discussion in the section.
5. Please refer to the relevant sections of the notes of meeting for the contents of discussion that occurred during the meeting.
6. The deadline for the draft of the section would be 30 Apr 2020.

Sections and Assigned Commissioners

Sections	Assigned Commissioners
i. Introduction	Dr Bethan McDonald Prof David Heymann Prof Peter Horby A/Prof Vernon Lee
ii. Ecology - a new ecology and a changing imperative	A/Prof Vernon Lee and team Dr Michael Jacobs Mr Ryan Morhard Dr Sylvie Briand
1. National preparedness (global convergence)	Prof Daniel Bausch Prof Jane Halton Asst Prof Ngozi Erondu Dr John Nkengasong
2. Urban preparedness	A/Prof Vernon Lee
3. Digital innovations and communications	Prof Gabriel Leung / Prof David Heymann A/Prof Khan (Informatics / Big Data) Ms Karen Tay (Communications) Dr John Nkengasong (Communications) Prof Christl Donnelly
4. Technological innovations, production, equitable distribution and access	Dr Richard Hatchett Prof Wilder-Smith Prof Ximena Aguilera Dr Amandou Sall Dr Hongjie Yu Prof Peter Horby Dr Michael Jacobs Dr Stephen Redd

Note: assignments in black were discussed during the meeting, while those in maroon/orange are a remapping of previous assignments.

Lancet Infectious Diseases Commission for Pandemic Preparedness, Day 1

Notes of Meeting

12 Mar 2020, 9am – 4.30pm

Grand Copthorne Waterfront, Singapore

In-Attendance

Chair:

A/Prof Vernon Lee
(Chairperson) Ministry of Health, Singapore

Co-chairs:

Prof David Heymann London School of Hygiene & Tropical Medicine;
Chatham House

Prof Annelies Wilder-Smith London School of Hygiene & Tropical Medicine

Commissioners:

Dr Bethan Mcdonald Oxford University

Prof Daniel Bausch UK Public Health Rapid Support Team, Public Health
England; London School of Hygiene & Tropical
Medicine, London

Prof Gabriel Leung Li Ka Shing Faculty of Medicine, University of Hong Kong

Ms Karen Tan Ministry of Communications and Information,
Singapore

Asst Prof Ngozi Erondue London School of Hygiene & Tropical Medicine

Via Teleconference:

Dr Christianne Brusckie Ministry of Agriculture, Nature and Food Quality, The
Netherlands

Mr Sean Cleghorn Editor, Lancet ID Journal

Prof Ximena Aguilera University of Desarrollo, Chile

Secretariat:

Dr Deborah Ng National Centre for Infectious Diseases, Singapore
Ministry of Health, Singapore

Mr Lin Yi Jun Ministry of Health, Singapore

Dr Wycliffe Wei National Centre for Infectious Diseases, Singapore
Ministry of Health, Singapore

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Lancet Infectious Diseases Commission for Pandemic Preparedness, Day 2

Notes of Meeting

13 Mar 2020, 9am – 1.30pm

Grand Copthorne Waterfront, Singapore

In-Attendance

Chair:

A/Prof Vernon Lee
(Chairperson) Ministry of Health, Singapore

Co-chairs:

Prof David Heymann London School of Hygiene & Tropical Medicine;
Chatham House

Prof Annelies Wilder-Smith London School of Hygiene & Tropical Medicine

Commissioners:

Dr Bethan McDonald Oxford University

Prof Daniel Bausch UK Public Health Rapid Support Team, Public Health
England; London School of Hygiene & Tropical
Medicine, London

Prof Gabriel Leung Li Ka Shing Faculty of Medicine, University of Hong
Kong

Ms Karen Tan Ministry of Communications and Information,
Singapore

Asst Prof Ngozi Erondú London School of Hygiene & Tropical Medicine

Via Teleconference:

Mr Sean Cleghorn Editor, Lancet ID Journal
Prof Ximena Aguilera University of Desarrollo, Chile

Secretariat:

Dr Deborah Ng National Centre for Infectious Diseases, Singapore
Ministry of Health, Singapore

Mr Lin Yi Jun Ministry of Health, Singapore

Dr Wycliffe Wei National Centre for Infectious Diseases, Singapore
Ministry of Health, Singapore

(b)(4)

(b)(4)

(b)(4)

The meeting for Day 2 ended at 1:30pm.

From: Constance LOW (MOH)
Sent: Wed, 15 Jan 2020 01:15:48 +0000
To: Vernon Lee; Daniel Bausch; John N. Nkengasong; Redd, Stephen (CDC/DDPHSIS/OD); BRIAND, Sylvie; FALL, Ibrahima Soce; David Heymann; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; deanmed@hku. (b)(6) TAN (MCI); dandona@uw.edu; Jacobs, (b)(6) (b)(6) - Contact; Chikwe Ihekweazu; Kamran Khan; eduardo.carmo@saude.gov.br; Ziad Memish; Donnelly, Christl A; gmleung@hku.hk
Cc: (b)(6)
 jun LIN (MOH); ephpjv@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH); (b)(6); Wen Qing YEO (MOH); sean.cleghorn@lancet.com; ID Commissioners Lancet
Subject: RE: Lancet ID Commission updates
Attachments: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx

Message Classification: Restricted

Dear Commissioners,

Hope everyone had a good break and is doing well.

We are re-attaching the draft of the first 2 chapters for comments and we look forward to receiving updates from workgroups 3 to 6 by end of Jan pls.

Thanks and best regards,
 Vernon and team

[MOH EMS](#)

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Vernon Lee (b)(6)
Sent: Thursday, 5 December 2019 3:24 PM
To: Daniel Bausch <Daniel.Bausch@phe.gov.uk>; John N. Nkengasong <NkengasongJ@africa-union.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; BRIAND, Sylvie <briands@who.int>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; FALL, Ibrahima Soce <socef@who.int>; ID Commissioners Lancet (b)(6) David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondudu@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; (b)(6) - Contact (b)(6) Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; Kamran Khan <Kamran@bluedot.global>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6)

Donnelly, Christl A <c.donnelly@imperial.ac.uk>

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>;

(b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>;

sean.cleghorn@lancet.com

Subject: Re: Lancet ID Commission updates

Dear Commissioners,

Hope you're doing well.

I'm attaching the draft of the first 2 chapters that the teams have been working on. They are still work in progress but much work has been done, and I wanted to update you and also see if you have any comments as we continue to work on these.

We look forward to receiving the updates from workgroups 3 to 6 by end Dec/early Jan.

Happy holidays and hope to see everyone soon.

Best regards,
Vernon

(b)(4)

From: Wycliffe WEI (MOH)
Sent: Wed, 15 Apr 2020 06:01:05 +0000
To: 'Annelise Wilder-Smith'; 'Ximena Aguilera'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'David Heymann'; 'Amadou.SALL@pasteur.sn'; 'c.bruschke@minInv.nl'; 'Daniel.Bausch@phe.gov.uk'; 'deanm (b)(6)'; 'TAN (MCI)'; 'dandona@uw.edu'; 'Jacobs, Michael'; 'Ngozi (b)(6)'; 'Stephen (CDC/DDPHSIS/OD)'; 'Cleghorn, Sean (b)(6)'; 'Khan'; 'gmleung@hku.hk'; 'Chikwe Ihekweazu'; 'eduardo.carmo@saude.gov.br'; 'Ziad (b)(6)'; '49@gmail.com'; 'ephpjv@nus.edu.sg'; 'John N. Nkengasong'; 'ID Commissioners Lancet'; 'Wen Qing YEO (MOH)'; 'Beatrice Bernard'; 'Zalinah KADIS (MCI)'
Cc: Constance LOW (MOH); Nur ASHIKIN (b)(6); LEE (MOH); Muhammad AKMAL (MOH); Deborah NG (MOH); Deborah Ng Hee Ling (NCID); Olivia OH (MOH); Wycliffe WEI (MOH); Constance LOW (MOH); Felicia HONG (MOH); Olivia OH (MOH)
Subject: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness
Attachments: Zoom-Meeting.ics

Dear commissioners,

To discuss possible responses of the Lancet ID Pandemic Preparedness commission to the ongoing COVID-19 outbreak, we are organizing an ad-hoc meeting via video-conference on Zoom as suggested by some members of the commission.

The details of the meeting are as follows:

Date: 16 Apr 2020, Thursday

Time: 9:00am (CL GMT-4) / 2:00pm (UK GMT+1) / 9:00pm (HK SGP GMT+8)

Duration: 1 hour

Zoom Meeting ID: (b)(6)

Password: (b)(6)

Zoom Meeting Link:

(b)(6)

You can let me know if you would be able to join us for this meeting, and we hope to see you then.

Thank you.

On behalf of the secretariat,
Wycliffe

Other Ways to Connect to Zoom:

Meeting ID: 967 1422 7842

Password: 748762

One tap mobile

(b)(6) # US (Chicago)
(b)(6) # US (Houston)

Dial by your location

(b)(6) US (Chicago)
(b)(6) US (Houston)
(b)(6) US (New York)
(b)(6) US (San Jose)
(b)(6) US
(b)(6) US

Meeting ID: (b)(6)

Find your local number: (b)(6)

Join by SIP

(b)(6)

Join by H.323

(b)(6) US West)
(b)(6) US East)
(b)(6) (China)
(b)(6) (India Mumbai)
(b)(6) (India Hyderabad)
(b)(6) (EMEA)
(b)(6) (Australia)
(b)(6) (Hong Kong)
(b)(6) (Brazil)
(b)(6) (Canada)
(b)(6) (Japan)

Meeting ID (b)(6)

Password: (b)(6)

From: Wycliffe Wei Enli (MOHH)

Sent: Sunday, 22 March 2020 4:21 pm

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6) (b)(6)

(b)(6) 'Karen TAN (MCI)' <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu'

<Ngozi.Erondul@lshtm.ac.uk>; (b)(6) (b)(6)
 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org'
 <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW'
 <sean.cleghorn@lancet.com>; (b)(6) (b)(6)
 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe
 Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br'
 <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>;
 'Vernon LEE (MOH)' <Vernon.LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) 'Wen Qing YEO
 (MOH)' <YEO.Wen.Qing@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; 'Zalinah
 KADIS (MCI)' <Zalinah.KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: 'Constance LOW (MOH)' <Constance.LOW@moh.gov.sg>; 'Nur ASHIKIN (MOH'
 <Nur.ASHIKIN@moh.gov.sg>; (b)(6) 'Vernon LEE (MOH'
 <Vernon.LEE@moh.gov.sg>; 'Muhammad AKMAL (MOH)' <MUHAMMAD.Akmal@moh.gov.sg>;
 'Deborah NG (MOH)' <Deborah.NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID)
 <deborah_ng@ncid.sg>; 'Olivia OH (MOH)' <Olivia.OH@moh.gov.sg>; 'Wycliffe WEI (MOH'
 <Wycliffe.WEI@moh.gov.sg>; 'Constance LOW (MOH)' <Constance.LOW@moh.gov.sg>; 'Felicia
 HONG (MOH)' <Felicia.HONG@moh.gov.sg>; 'Olivia OH (MOH)' <Olivia.OH@moh.gov.sg>
Subject: [Notes of Meeting] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

It was our pleasure to have hosted the meeting from 12 – 13 Mar 2020 and we thank all of you who managed to join us.

We have recorded notes from the meeting discussions and attach them here for your reference. We have also included another document to highlight key points and to provide an outline of the report with corresponding assignments.

Thank you once again, and we wish you well in this challenging time.

On behalf of the secretariat,
 Wycliffe

From: Yijun LIN (MOH) <LIN.Yijun@MOH.gov.sg>

Sent: Thursday, 12 March 2020 10:31 pm

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance.LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com;

(b)(6)

(b)(6)

Karen TAN (MCI)

<[Karen TAN@mci.gov.sg](mailto:Karen_TAN@mci.gov.sg)>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; gmlung@hku.hk; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) ephjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmlung@hku.hk
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness Day 2	
Time: Mar 13, 2020 08:00 AM Singapore	
Join Zoom Meeting	
(b)(6)	
Meeting ID:	(b)(6)
Password:	(b)(6)
One tap mobile	
(b)(6)	US (San Jose) US (New York)
Dial by your location	
(b)(6)	US (San Jose)

(b)(6)	US (New York)
Meeting ID:	(b)(6)
Find your local number:	(b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minInv.nl' <c.bruschke@minInv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6)
(b)(6) (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihkweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6); 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>

Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minInv.nl' <c.bruschke@minInv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6)
(b)(6) (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondou' <Ngozi.Erondou@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihkweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) @gmail.com>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

- 1) For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
- 2) For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 1 Time: Mar 12, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p>(b)(6)</p> <p>Meeting ID: (b)(6) Password: (b)(6)</p> <p>One tap mobile</p> <p>(b)(6) # US (San Jose) # US (New York)</p> <p>Dial by your location</p> <p>(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: (b)(6) Find your local number: (b)(6)</p>	<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 2 Time: Mar 13, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p>(b)(6)</p> <p>Meeting ID: (b)(6) Password: (b)(6)</p> <p>One tap mobile</p> <p>(b)(6) US (San Jose) US (New York)</p> <p>Dial by your location</p> <p>(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: (b)(6) Find your local number: (b)(6)</p>
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Table 2. Working documents

Section	Summary of Content	Action required
Introduction (i.e. ecology to changing risk)		
1 <i>Introduction to the current risks and state of preparedness</i>	<ul style="list-style-type: none"> Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world 	<ul style="list-style-type: none"> Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
Public Health Ecology		
2 <i>A new ecology and a changing imperative</i> << File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >>	<ul style="list-style-type: none"> Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology 	<ul style="list-style-type: none"> Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)		
3 Building flexible preparedness components Lead: Daniel	<p>Novel solutions / approach to building</p> <ul style="list-style-type: none"> Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership 	<p>Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:</p> <ul style="list-style-type: none"> What has to be true for this to work? What would be the expected impact?
4 Info / big data - Risk assessment of diseases Lead: Kamran Khan	<p>Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease</p>	<ul style="list-style-type: none"> Are there any examples of successes or failures?
5 Pharmaceutical and non-pharmaceutical interventions Lead: Richard << File: Lancet Commission Brainstorming Session v3.docx >>	<p>How do interventions need to change for the new ecology:</p> <ul style="list-style-type: none"> Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process 	<p>Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.</p>

	Section	Summary of Content	Action required
6	Strategic communications and advocacy Lead: Karen Tan << File: Lancet article_final.docx >>	Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology	
Next Steps			
7	Next steps	Recommendations, timeline and measurables	Nil; to be discussed in Singapore in March 2020 Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com;

(b)(6)

(b)(6)

Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>;

Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net;

Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW)

<sean.cleghorn@lancet.com>; (b)(6) Kamran Khan

<Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>;

eduardo.carmo@saude.gov.br; Ziad Memish (b)(6)

(b)(6)

(b)(6)

(b)(6)

(b)(6)

Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephjv@nus.edu.sg;

Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N.

Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet

(b)(6)

Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>;

Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>;

Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a) Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**
Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password (b)(6)

One tap mobile

(b)(6) # US (San Jose)
(b)(6) # US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 2]**
Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) # US (San Jose)
 (b)(6) # US (New York)

Dial by your location

(b)(6) US (San Jose)
 (b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
 Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk;

(b)(6) - Contact (b)(6) Bruschke, dr. C.J.M.

(Christianne) <c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>;

Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk;

(b)(6) Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; Ziad Memish

(b)(6) John N. Nkengasong <NkengasongJ@africa-union.org>; Daniel Bausch

<Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk; Redd, Stephen (CDC/DDPHSIS/OD)

<scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6)>;

Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

	(Y/N)?
Still attending?	
Booked air tickets?	
If not attending in person, okay for teleconference?	

Regards,
Yijun

[MOH EMS](#)

(b)(6)

Sent: Tue, 14 Apr 2020 07:51:53 +0000
Subject: Lancet ID meeting - Covid 19

lin_yijun@moh.gov.sg is inviting you to a scheduled Zoom meeting.

Topic: Lancet ID meeting - Covid 19
Time: Apr 16, 2020 09:00 PM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) # US (Chicago)
(b)(6) # US (Houston)

Dial by your location

(b)(6) US (Chicago)
(b)(6) US (Houston)
(b)(6) US (New York)
(b)(6) US (San Jose)
(b)(6) US
(b)(6) US

Meeting ID: (b)(6)

Find your local number: (b)(6)

Join by SIP

(b)(6)

Join by H.323

(b)(6) (US West)
(b)(6) (US East)
(b)(6) (China)
(b)(6) (India Mumbai)
(b)(6) (India Hyderabad)
(b)(6) (EMEA)
(b)(6) (Australia)
(b)(6) (Hong Kong)
(b)(6) (Brazil)
(b)(6) (Canada)
(b)(6) (Japan)

Meeting ID: (b)(6)

Password: (b)(6)

From: jane halton
Sent: Thu, 16 Apr 2020 22:17:16 +0000
To: Vernon Lee
Cc: Wycliffe WEI (MOH);Annelise Wilder-Smith;Ximena Aguilera;BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
 [REDACTED] (b)(6) TAN (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi Erondu [REDACTED] (b)(6) riha@cepi.net;Ryan.Morhard@weforum.org;Redd, Stephen (CDC/DDPHSIS/OD);Cleghorn, Sean [REDACTED] (b)(6) Khan;gmleung@hku.hk;Chikwe lhekweazu;eduardo.carmo@saude.gov.br;Ziad [REDACTED] (b)(6) ail.com;ephpjv@nus.edu.sg;John N. Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH);Beatrice Bernard;Zalinah KADIS (MCI);Constance LOW (MOH);Nur ASHIKIN (MOH);Vernon LEE (MOH);Muhammad AKMAL (MOH);Deborah NG (MOH);Deborah Ng Hee Ling (NCID);Olivia OH (MOH);Felicia HONG (MOH)
Subject: Re: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Know what it's like. I am on the PMs taskforce here and had no chance of dialing in.

If we could get a short update on what was discussed so we can input that would be great.

Best

Jane

Sent from my iPad

On 17 Apr 2020, at 12:04 am, Vernon Lee [REDACTED] (b)(6) wrote:

Apologies my minister called for an urgent matter and I had to take the call.

Everyone had disbanded when I came back.

We'll put the thoughts and discussions together and we'll circulate the points for the commentary and will look to draft something.

Cheers,

Vernon

From: Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>

Sent: Wednesday, April 15, 2020 2:01 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@ishtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@ishtm.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minlnv.nl <c.bruschke@minlnv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cftptyhj@vip.sina.com <cftptyhj@vip.sina.com>; [REDACTED] (b)(6) [REDACTED] (b)(6)

(b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; scr1@cdc.gov <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; gmleung@hku.hk <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) ephpjv@nus.edu.sg <ephpjv@nus.edu.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; (b)(6) (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID <deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>

Subject: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear commissioners,

To discuss possible responses of the Lancet ID Pandemic Preparedness commission to the ongoing COVID-19 outbreak, we are organizing an ad-hoc meeting via video-conference on Zoom as suggested by some members of the commission.

The details of the meeting are as follows:

Date: 16 Apr 2020, Thursday

Time: 9:00am (CL GMT-4) / 2:00pm (UK GMT+1) / 9:00pm (HK SGP GMT+8)

Duration: 1 hour

Zoom Meeting ID: (b)(6)

Password: (b)(6)

Zoom Meeting Link:

(b)(6)

You can let me know if you would be able to join us for this meeting, and we hope to see you then.

Thank you.

On behalf of the secretariat,
 Wycliffe

Other Ways to Connect to Zoom:

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (Chicago)
(b)(6) US (Houston)

Dial by your location

(b)(6) US (Chicago)
(b)(6) US (Houston)
(b)(6) US (New York)
(b)(6) US (San Jose)
(b)(6) US

(b)(6) 2 US

Meeting ID: (b)(6)

Find your local number: (b)(6)

Join by SIP

(b)(6)

Join by H.323

(b)(6) (US West)

(b)(6) (US East)

(b)(6) (China)

(b)(6) (India Mumbai)

(b)(6) (India Hyderabad)

(b)(6) (EMEA)

(b)(6) (Australia)

(b)(6) (Hong Kong)

(b)(6) (Brazil)

(b)(6) (Canada)

(b)(6) (Japan)

Meeting ID: (b)(6)

Password: (b)(6)

From: Wycliffe Wei Enli (MOHH)

Sent: Sunday, 22 March 2020 4:21 pm

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6)
(b)(6) (b)(6) (b)(6) 'Karen TAN (MCI)' <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; (b)(6)

(b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6)
 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihkweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>;
 'Ziad Memish' (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; 'Vernon LEE (MOH)' <Vernon.LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@afrika-union.org>; 'ID Commissioners Lancet' (b)(6)
 'Wen Qing YEO (MOH)' <YEO_Wen_Qing@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>;
 'Zalinah KADIS (MCI)' <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: 'Constance LOW (MOH)' <Constance_LOW@moh.gov.sg>; 'Nur ASHIKIN (MOH)' <Nur_ASHIKIN@moh.gov.sg> (b)(6); 'Vernon LEE (MOH)' <Vernon.LEE@moh.gov.sg>; 'Muhammad AKMAL (MOH)' <MUHAMMAD_Akmal@moh.gov.sg>;
 'Deborah NG (MOH)' <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>;
 'Olivia OH (MOH)' <Olivia_OH@moh.gov.sg>; 'Wycliffe WEI (MOH)' <Wycliffe_WEI@moh.gov.sg>;
 'Constance LOW (MOH)' <Constance_LOW@moh.gov.sg>; 'Felicia HONG (MOH)' <Felicia_HONG@moh.gov.sg>; 'Olivia OH (MOH)' <Olivia_OH@moh.gov.sg>
Subject: [Notes of Meeting] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

It was our pleasure to have hosted the meeting from 12 – 13 Mar 2020 and we thank all of you who managed to join us.

We have recorded notes from the meeting discussions and attach them here for your reference. We have also included another document to highlight key points and to provide an outline of the report with corresponding assignments.

Thank you once again, and we wish you well in this challenging time.

On behalf of the secretariat,
 Wycliffe

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 12 March 2020 10:31 pm

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondy <Ngozi.Erondy@lshtm.ac.uk>;
 (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan

<Kamran@bluedot.global>; gmluong@hku.hk; Chikwe Ihekweazu <chikwe.ihkweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish <(b)(6)>; (b)(6)
 (b)(6) (b)(6); (b)(6) ephjv@nus.edu.sg;
 Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmluong@hku.hk
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from 9AM to 12 Noon (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness Day 2	
Time: Mar 13, 2020 08:00 AM Singapore	
Join Zoom Meeting	
(b)(6)	
Meeting ID:	(b)(6)
Password:	(b)(6)
One tap mobile	
(b)(6)	US (San Jose)
(b)(6)	US (New York)
Dial by your location	
(b)(6)	(San Jose)
(b)(6)	(New York)
Meeting ID:	(b)(6)
Find your local number:	(b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
(b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihkweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6)
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(b)(6) (b)(6) (b)(6) 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6)
Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minInv.nl' <c.bruschke@minInv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondudu' <Ngozi.Erondudu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

- 1) For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
- 2) For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 1</p> <p>Time: Mar 12, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p style="text-align: center;">(b)(6)</p> <p>Meeting ID: <input type="text" value="(b)(6)"/></p> <p>Password: <input type="text" value="(b)(6)"/></p> <p>One tap mobile</p> <p style="text-align: center;">(b)(6) US (San Jose) US (New York)</p> <p>Dial by your location</p> <p style="text-align: center;">(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: <input type="text" value="(b)(6)"/></p> <p>Find your local number:</p> <p style="text-align: center;"><input type="text" value="(b)(6)"/></p>	<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 2</p> <p>Time: Mar 13, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p style="text-align: center;">(b)(6)</p> <p>Meeting ID: <input type="text" value="(b)(6)"/></p> <p>Password: <input type="text" value="(b)(6)"/></p> <p>One tap mobile</p> <p style="text-align: center;">(b)(6) US (San Jose) US (New York)</p> <p>Dial by your location</p> <p style="text-align: center;">(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: <input type="text" value="(b)(6)"/></p> <p>Find your local number:</p> <p style="text-align: center;"><input type="text" value="(b)(6)"/></p>
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Table 2. Working documents

	Section	Summary of Content	Action required
	Introduction (i.e. ecology to changing risk)		
1	<i>Introduction to the current risks and state of preparedness</i>	<ul style="list-style-type: none"> • Describe current risks posed by emerging epidemic threats • Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world 	<ul style="list-style-type: none"> • Peter and Bethan to draft the introduction section in bullet points or prose where relevant;

	Section	Summary of Content	Action required	
Public Health Ecology				
2	<p><i>A new ecology and a changing imperative</i></p> <p><< File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >></p>	<ul style="list-style-type: none"> Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology 	<ul style="list-style-type: none"> Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words) 	
Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)				
3	<p>Building flexible preparedness components</p> <p>Lead: Daniel</p>	<p>Novel solutions / approach to building</p> <ul style="list-style-type: none"> Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership 	<p>Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:</p> <ul style="list-style-type: none"> What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures? <p>Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.</p>	
4	<p>Info / big data - Risk assessment of diseases</p> <p>Lead: Kamran Khan</p>	<p>Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease</p>		
5	<p>Pharmaceutical and non-pharmaceutical interventions</p> <p>Lead: Richard</p> <p><< File: Lancet Commission Brainstorming Session v3.docx >></p>	<p>How do interventions need to change for the new ecology:</p> <ul style="list-style-type: none"> Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process 		
6	<p>Strategic communications and advocacy</p> <p>Lead: Karen Tan</p> <p><< File: Lancet article_final.docx >></p>	<p>Comms as a tool to manage epidemic threats.</p> <p>What are the new comms activities that are needed in the new ecology</p>		
Next Steps				
7	Next steps	Recommendations, timeline and measurables		<p>Nil; to be discussed in Singapore in March 2020</p> <p>Survey on new dates</p>

Regards,

Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;

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Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;

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<NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen

Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice

Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a) Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

+ (b)(6) # US (San Jose)
+ (b)(6) # US (New York)

Dial by your location

(b)(6) JS (San Jose)
(b)(6) JS (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) # US (San Jose)
(b)(6) # US (New York)

Dial by your location

(b)(6) JS (San Jose)
(b)(6) JS (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

[MOH EMS](#)

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; [REDACTED] (b)(6) -
Contact [REDACTED] (b)(6) Bruschke, dr. C.J.M. (Christianne)
 <c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael
 <michael.jacobs@ucl.ac.uk>; Ngozi.Erundu@lshtm.ac.uk; [REDACTED] (b)(6) Cleghorn, Sean (ELS-
 LOW) <sean.cleghorn@lancet.com>; Ziad Memish [REDACTED] (b)(6) John N. Nkengasong
 <NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk;
 Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; [REDACTED] (b)(6)
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee [REDACTED] (b)(6) Vernon
 LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)
 <MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

MOH EMS

[REDACTED] (b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)
 <Constance_LOW@moh.gov.sg>; Vernon Lee [REDACTED] (b)(6) Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

	(Y/N)?
Still attending?	
Booked air tickets?	
If not attending in person, okay for teleconference?	

Regards,
Yijun

[MOH EMS](#)

(b)(6)

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From: International Vaccine Institute
Sent: Thu, 16 Apr 2020 03:16:20 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD)
Subject: IVI to begin Phase I/II trial of INOVIO's COVID-19 DNA vaccine in South Korea

[View this email in your browser](#)



IVI, INOVIO, and KNIH to partner with CEPI in a Phase I/II clinical trial of INOVIO's COVID-19 DNA vaccine in South Korea



- The Coalition for Epidemic Preparedness Innovations (CEPI) grants funding \$6.9 million to INOVIO and IVI to conduct clinical testing in Korea for INOVIO's COVID-19 vaccine candidate based on their well-established DNA platform technology
- Korea National Institute of Health (KNIH) to support IVI's testing efforts

April 16, 2020, SEOUL, Korea and PLYMOUTH MEETING, PA. USA – The International Vaccine Institute (IVI) announced today that the Coalition for Epidemic Preparedness Innovations (CEPI) has granted \$6.9 million funding to INOVIO (NASDAQ:INO) to work with IVI and the Korea National Institute of Health (KNIH) for Phase I/II clinical trial of INOVIO’s COVID-19 vaccine candidate (INO-4800) in South Korea. IVI will conduct the trial in parallel to INOVIO’s Phase I INO-4800 study currently underway in the US since April 6, 2020 with 40 healthy adults receiving the vaccine candidate and eventually expanding to older adults.

Dr. Jerome H. Kim, Director General of IVI, said, “Vaccines are the long-term solution to controlling the COVID-19 pandemic. The rapid global response to developing vaccine candidates has been a profound demonstration of governments, industry, and the scientific community coming together to confront a common crisis, and we’re looking forward to accelerating one of those candidates through clinical testing. IVI has achieved promising trial results with INOVIO’s DNA vaccine platform in the past, and we’re pleased to partner again to test the safety and immunogenicity of an urgently needed COVID-19 vaccine.”



“The rapid global response to developing vaccine candidates has been a profound demonstration of governments, industry, and the scientific community coming together to confront a common crisis, and we’re looking forward to accelerating one of those candidates through clinical testing.”

Jerome H. Kim
Director General, IVI



Dr. J. Joseph Kim, INOVIO's President and CEO, said, "Developing a safe and effective COVID-19 vaccine is a global imperative, and we're pleased to partner with IVI and KNIH to test INO-4800 in South Korea. Our DNA vaccine platform was one of the first technologies to receive support from CEPI to accelerate a COVID-19 vaccine, and IVI conducting safety and efficacy trials in South Korea is a crucial step forward in evaluating this vaccine."



“
Developing a safe and effective
COVID-19 vaccine is a global imperative,
and we're pleased to partner with IVI and KNIH to
test INO-4800 in South Korea.
”

J. Joseph Kim
President, CEO, INOVIO

Dr. Richard Hatchett, CEO of CEPI said, "Developing a safe and effective vaccine and ensuring its global supply is our best exit strategy from the COVID-19 pandemic. CEPI is pleased to work with Inovio and IVI in this critical next stage of testing."

“ Developing a safe and effective vaccine and ensuring its global supply is our best exit strategy from the COVID-19 pandemic.

CEPI is pleased to work with INOVIO and IVI in this critical next stage of testing.”

Richard Hatchett
CEO, CEPI

INOVIO's DNA vaccine platform is also utilized in their MERS vaccine, INO-4700, for which IVI previously conducted Phase I clinical testing with GeneOne Life Science in South Korea.

This news follows the announcement from the Korean Ministry of Food and Drug Safety made on April 13th that they will adopt a fast-track approval process for COVID-19 vaccine and treatment clinical trials. The period of clinical trial screening will be shortened to seven days (down from 30 days) for substances with experience in use and within 15 days for new materials. Additionally, vaccines developed with a proven safety platform, such as INOVIO's DNA platform, will be exempt from toxicology tests which will minimize data submission and expedite clinical trials. Plumblin Life Sciences (XKRX: 222670) of South Korea also collaborated on this project. Korea Centers for Disease Control and Prevention (KCDC) and the KNIH and has also pledged their support for IVI's testing efforts.

A global pandemic demands responses without borders

Learn more about how IVI is accelerating vaccines against COVID-19

[Learn
more](#)

About the International Vaccine Institute (IVI)

The International Vaccine Institute (IVI) is a nonprofit inter-governmental organization established in 1997 at the initiative of the United Nations Development Programme (UNDP). Headquartered in Seoul, South Korea, IVI was the first international organization hosted by Korea. IVI has 35 signatory countries and the World Health Organization (WHO) on its treaty, including Republic of Korea, Sweden and India as state funders.

Our mandate is to make vaccines available and accessible for the world's most vulnerable people. We focus on infectious diseases of global health importance such as cholera, typhoid, shigella, salmonella, schistosomiasis, Group A Streptococcus, Hepatitis A, HPV, TB, HIV, MERS, COVID-19, as well as antimicrobial resistance. For more information, please visit <https://www.ivi.int>

About INOVIO

INOVIO is a biotechnology company focused on rapidly bringing to market precisely designed DNA medicines to treat, cure, and protect people from diseases associated with HPV, cancer, and infectious diseases. INOVIO is the first and only company to have clinically demonstrated that a DNA medicine can be delivered directly into cells in the body via a proprietary smart device to produce a robust and tolerable immune response. Specifically, INOVIO's lead candidate VGX-3100, currently in Phase 3 trials for precancerous cervical dysplasia, destroyed and cleared high-risk HPV 16 and 18 in a Phase 2b clinical trial. High-risk HPV is responsible for 70% of cervical cancer, 90% of anal cancer, and 69% of vulvar cancer. Also in development are programs targeting HPV-related cancers and a rare HPV-related disease, recurrent respiratory papillomatosis (RRP); non-HPV-related cancers glioblastoma multiforme (GBM) and prostate cancer; as well as externally funded infectious disease DNA vaccine development programs in Zika, Lassa fever, Ebola, HIV, and coronaviruses associated with MERS and COVID-19 diseases. Partners and collaborators include Advaccine, ApolloBio Corporation, AstraZeneca, The Bill & Melinda Gates Foundation, Coalition for Epidemic Preparedness Innovations (CEPI), Defense Advanced Research Projects Agency (DARPA)/DOD, GeneOne Life Science/VGXI, HIV Vaccines Trial Network, Medical CBRN Defense Consortium (MCDC), National Cancer Institute, National Institutes of Health, National Institute of Allergy and Infectious Diseases, Ology Bioservices, Plumline Life Sciences, Regeneron, Roche/Genentech, University of Pennsylvania, Walter Reed Army Institute of Research, and The Wistar Institute. INOVIO also is a proud recipient of 2020 Women on Boards "W" designation recognizing companies with more than 20% women on their board of directors. For more information, visit www.inovio.com.

About CEPI

CEPI is an innovative partnership between public, private, philanthropic, and civil society organisations, launched at Davos in 2017, to develop vaccines to stop future epidemics. CEPI has moved with great urgency and in coordination with WHO in response to the emergence of COVID-19. CEPI has initiated 8 partnerships to develop vaccines against

the novel coronavirus. The programmes will leverage rapid response platforms already supported by CEPI as well as new partnerships. The aim is to advance COVID-19 vaccine candidates into clinical testing as quickly as possible.

Before the emergence of COVID-19 CEPI's priority diseases included Ebola virus, Lassa virus, Middle East Respiratory Syndrome coronavirus, Nipah virus, Rift Valley Fever and Chikungunya virus. CEPI also invested in platform technologies that can be used for rapid vaccine and immunoprophylactic development against unknown pathogens (Disease X).

CONTACT

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youngmi.cho@ivi.int

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Jeff Richardson, VP of Communications & Strategic Relations, +1-267-440-4211,
jrichardson@inovio.com

CEPI:

Rachel Grant, Director of Communications and Advocacy, Rachel.Grant@cepi.net



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Our mailing address is:

International Vaccine Institute
SNU Research Park, 1 Gwanak-Ro, Gwanak-Gu
Seoul, Seoul 151-742
South Korea

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From: Vernon Lee
Sent: Thu, 16 Apr 2020 14:04:25 +0000
To: Wycliffe WEI (MOH); 'Annelise Wilder-Smith'; 'Ximena Aguilera'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'David Heymann'; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.
 [REDACTED] (b)(6) TAN
 (MCI); dandona@uw.edu; 'Jacobs, Michael'; 'Ngozi Erondu' [REDACTED] (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; Redd, Stephen (CDC/DDPHSIS/OD); 'Cleghorn, Sean' [REDACTED] (b)(6) Khan'; gmleung@hku.hk; 'Chikwe Ihekweazu'; eduardo.carmo@saude.gov.br; 'Ziad [REDACTED] (b)(6) ail.com; ephpjv@nus.edu.sg; 'John N. Nkengasong'; 'ID Commissioners Lancet'; Wen Qing YEO (MOH); 'Beatrice Bernard'; Zalinah KADIS (MCI)
Cc: Constance LOW (MOH); Nur ASHIKIN (MOH); Vernon LEE (MOH); Muhammad AKMAL (MOH); Deborah NG (MOH); Deborah Ng Hee Ling (NCID); Olivia OH (MOH); Constance LOW (MOH); Felicia HONG (MOH); Olivia OH (MOH)
Subject: Re: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Apologies my minister called for an urgent matter and I had to take the call. Everyone had disbanded when I came back. We'll put the thoughts and discussions together and we'll circulate the points for the commentary and will look to draft something.

Cheers,
 Vernon

From: Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>
Sent: Wednesday, April 15, 2020 2:01 PM
To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minInv.nl <c.bruschke@minInv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; [REDACTED] (b)(6) [REDACTED] (b)(6) riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; scr1@cdc.gov <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW' <sean.cleghorn@lancet.com>; [REDACTED] (b)(6) [REDACTED] (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; gmleung@hku.hk <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; 'Ziad Memish' [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) ephpjv@nus.edu.sg <ephpjv@nus.edu.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' [REDACTED] (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>;

'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; (b)(6) (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID <deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear commissioners,

To discuss possible responses of the Lancet ID Pandemic Preparedness commission to the ongoing COVID-19 outbreak, we are organizing an ad-hoc meeting via video-conference on Zoom as suggested by some members of the commission.

The details of the meeting are as follows:

Date: 16 Apr 2020, Thursday
Time: 9:00am (CL GMT-4) / 2:00pm (UK GMT+1) / 9:00pm (HK SGP GMT+8)
Duration: 1 hour

Zoom Meeting ID: (b)(6)

Password: (b)(6)

Zoom Meeting Link:

(b)(6)

You can let me know if you would be able to join us for this meeting, and we hope to see you then.

Thank you.

On behalf of the secretariat,
Wycliffe

Other Ways to Connect to Zoom:

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6)	# US (Chicago)
	# US (Houston)

Dial by your location

(b)(6)	US (Chicago)
	US (Houston)
	US (New York)
	US (San Jose)
	US

(b)(6) US

Meeting ID: (b)(6)

Find your local number: (b)(6)

Join by SIP

(b)(6)

Join by H.323

(b)(6) (US West)

(b)(6) (US East)

(b)(6) (China)

(b)(6) (India Mumbai)

(b)(6) (India Hyderabad)

(b)(6) (EMEA)

(b)(6) (Australia)

(b)(6) (Hong Kong)

(b)(6) (Brazil)

(b)(6) (Canada)

(b)(6) (Japan)

Meeting ID: (b)(6)

Password: (b)(6)

From: Wycliffe Wei Enli (MOHH)**Sent:** Sunday, 22 March 2020 4:21 pm

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6); (b)(6); (b)(6); 'Karen TAN (MCI)' <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; (b)(6); (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6); (b)(6); 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihhekweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6); (b)(6); (b)(6); (b)(6); (b)(6); (b)(6); (b)(6); (b)(6); 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; 'Vernon LEE (MOH)' <Vernon.LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6); 'Wen Qing YEO (MOH)' <YEO_Wen_Qing@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; 'Zalinah KADIS (MCI)' <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>;
Cc: 'Constance LOW (MOH)' <Constance_LOW@moh.gov.sg>; 'Nur ASHIKIN (MOH'

<Nur_ASHIKIN@moh.gov.sg>; [REDACTED] (b)(6) 'Vernon LEE (MOH' <Vernon_LEE@moh.gov.sg>; 'Muhammad AKMAL (MOH' <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah NG (MOH' <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>; 'Olivia OH (MOH' <Olivia_OH@moh.gov.sg>; 'Wycliffe WEI (MOH' <Wycliffe_WEI@moh.gov.sg>; 'Constance LOW (MOH' <Constance_LOW@moh.gov.sg>; 'Felicia HONG (MOH' <Felicia_HONG@moh.gov.sg>; 'Olivia OH (MOH' <Olivia_OH@moh.gov.sg>
Subject: [Notes of Meeting] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

It was our pleasure to have hosted the meeting from 12 – 13 Mar 2020 and we thank all of you who managed to join us.

We have recorded notes from the meeting discussions and attach them here for your reference. We have also included another document to highlight key points and to provide an outline of the report with corresponding assignments.

Thank you once again, and we wish you well in this challenging time.

On behalf of the secretariat,
 Wycliffe

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 12 March 2020 10:31 pm
To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; [REDACTED] (b)(6) [REDACTED] (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; [REDACTED] (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; [REDACTED] (b)(6) Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk; Chikwe Ihekweazu <chikwe.ihkweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet [REDACTED] (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee [REDACTED] (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH)

<Wycliffe_WEI@moh.gov.sg>

Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness Day 2	
Time: Mar 13, 2020 08:00 AM Singapore	
Join Zoom Meeting	
(b)(6)	
Meeting ID:	(b)(6)
Password:	(b)(6)
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(b)(6)	# US (San Jose)
(b)(6)	# US (New York)
Dial by your location	
(b)(6)	US (San Jose)
(b)(6)	US (New York)
Meeting ID:	(b)(6)
Find your local number:	(b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
(b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6)
Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera'

<xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6); Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

- 1) For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
- 2) For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 1</p> <p>Time: Mar 12, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p>(b)(6)</p> <p>Meeting ID: (b)(6)</p> <p>Password: (b)(6)</p> <p>One tap mobile</p> <p>(b)(6) 9# US (San Jose) 9# US (New York)</p> <p>Dial by your location</p> <p>(b)(6) US (San Jose) (b)(6) US (New York)</p> <p>Meeting ID: (b)(6)</p> <p>Find your local number:</p> <p>(b)(6)</p>	<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 2</p> <p>Time: Mar 13, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p>(b)(6)</p> <p>Meeting ID: (b)(6)</p> <p>Password: (b)(6)</p> <p>One tap mobile</p> <p>(b)(6) # US (San Jose) # US (New York)</p> <p>Dial by your location</p> <p>(b)(6) US (San Jose) (b)(6) US (New York)</p> <p>Meeting ID: (b)(6)</p> <p>Find your local number:</p> <p>(b)(6)</p>
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Table 2. Working documents

Section	Summary of Content	Action required
Introduction (i.e. ecology to changing risk)		
1	<i>Introduction to the current risks and state of preparedness</i>	<ul style="list-style-type: none"> Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world
Public Health Ecology		
2	<i>A new ecology and a changing imperative</i> << File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >>	<ul style="list-style-type: none"> Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology
Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)		

	Section	Summary of Content	Action required
3	Building flexible preparedness components Lead: Daniel	Novel solutions / approach to building <ul style="list-style-type: none"> • Sustainability, • Adequate health services to manage surge, • Increase Collaboration and Partnership 	Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: <ul style="list-style-type: none"> • What has to be true for this to work? • What would be the expected impact? • Are there any examples of successes or failures? Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.
4	Info / big data - Risk assessment of diseases Lead: Kamran Khan	Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease	
5	Pharmaceutical and non-pharmaceutical interventions Lead: Richard << File: Lancet Commission Brainstorming Session v3.docx >>	How do interventions need to change for the new ecology: <ul style="list-style-type: none"> • Pharmaceutical; • Non pharmaceutical e.g. - border control, IPC, failures in regulatory process 	
6	Strategic communications and advocacy Lead: Karen Tan << File: Lancet article_final.docx >>	Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology	
Next Steps			
7	Next steps	Recommendations, timeline and measurables	Nil; to be discussed in Singapore in March 2020 Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk;

cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihhekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a) Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness [Day 1]

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password (b)(6)

One tap mobile

(b)(6) # US (San Jose)
 (b)(6) # US (New York)

Dial by your location

(b)(6) US (San Jose)

+1 646 558 8656 US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
US (New York)

Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,

Yijun & Constance

[MOH EMS](#)

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmluong@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon

LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: *Restricted*

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
Constance

[MOH EMS](#)

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 13 February 2020 1:59 PM

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)

<Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

	(Y/N)?
Still attending?	
Booked air tickets?	
If not attending in person, okay for teleconference?	

Regards,
Yijun

[MOH EMS](#)

(b)(6)

Elsevier Limited. Registered Office: The Boulevard, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom, Registration No. 1982084, Registered in England and Wales.

From: Wycliffe WEI (MOH)
Sent: Fri, 17 Apr 2020 16:36:41 +0000
To: 'Annelise Wilder-Smith'; 'Ximena Aguilera'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'David Heymann'; 'Amadou.SALL@pasteur.sn'; 'c.bruschke@minInv.nl'; 'Daniel.Bausch@phe.gov.uk'; 'deanm (b)(6) TAN (MCI)'; 'dandona@uw.edu'; 'Jacobs, Michael'; 'Ngozi (b)(6) Stephen (CDC/DDPHSIS/OD)'; 'Cleghorn, Sean (b)(6) Khan'; 'gmleung@hku.hk'; 'Chikwe Ihekweazu'; 'eduardo.carmo@saude.gov.br'; 'Ziad (b)(6) 49@gmail.com'; 'ephpjv@nus.edu.sg'; 'John N. Nkengasong'; 'ID Commissioners Lancet'; 'Wen Qing YEO (MOH)'; 'Beatrice Bernard'; 'Zalinah KADIS (MCI)
Cc: Constance LOW (MOH); Nur ASHIKIN (b)(6) LEE (MOH); Muhammad AKMAL (MOH); Deborah NG (MOH); Deborah Ng Hee Ling (NCID); Olivia OH (MOH); Constance LOW (MOH); Felicia HONG (MOH); Olivia OH (MOH)
Subject: RE: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear commissioners,

Following the meeting on 16 Apr 2020, some of the commissioners would further deliberate on the issues raised during the discussion. Once ready, the notes of the meeting would be shared to update you. For your information please.

Best regards,
Wycliffe

From: Wycliffe WEI (MOH)
Sent: Wednesday, 15 April 2020 2:01 pm
To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minInv.nl' <c.bruschke@minInv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6) (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br'

<eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>;
 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet'
 (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>;
 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI)
 <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)
 <Nur_ASHIKIN@moh.gov.sg>; (b)(6) (b)(6) Vernon
 LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)
 <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah NG (MOH' <Deborah_NG@moh.gov.sg>;
 'Deborah Ng Hee Ling (NCID' <deborah_ng@ncid.sg>; Olivia OH (MOH)
 <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>; Constance LOW
 (MOH) <Constance_LOW@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>;
 Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear commissioners,

To discuss possible responses of the Lancet ID Pandemic Preparedness commission to the ongoing COVID-19 outbreak, we are organizing an ad-hoc meeting via video-conference on Zoom as suggested by some members of the commission.

The details of the meeting are as follows:

Date: 16 Apr 2020, Thursday

Time: 9:00am (CL GMT-4) / 2:00pm (UK GMT+1) / 9:00pm (HK SGP GMT+8)

Duration: 1 hour

Zoom Meeting ID: (b)(6)

Password: (b)(6)

Zoom Meeting Link:

(b)(6)

You can let me know if you would be able to join us for this meeting, and we hope to see you then.

Thank you.

On behalf of the secretariat,
 Wycliffe

Other Ways to Connect to Zoom:

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) # US (Chicago)
US (Houston)

Dial by your location

(b)(6) US (Chicago)
US (Houston)
US (New York)
US (San Jose)
US
US

Meeting ID: (b)(6)

Find your local number: (b)(6)

Join by SIP

(b)(6)

Join by H.323

- (b)(6) (US West)
- (b)(6) (US East)
- (b)(6) (China)
- (b)(6) (India Mumbai)
- (b)(6) (India Hyderabad)
- (b)(6) (EMEA)
- (b)(6) (Australia)
- (b)(6) Hong Kong
- (b)(6) (Brazil)
- (b)(6) (Canada)
- (b)(6) (Japan)

Meeting ID: (b)(6)

Password: (b)(6)

From: Wycliffe Wei Enli (MOHH)

Sent: Sunday, 22 March 2020 4:21 pm

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6) (b)(6) (b)(6) 'Karen TAN (MCI)' <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6)

'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihkweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>;
 'Vernon LEE (MOH)' <Vernon.LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) 'Wen Qing YEO (MOH)' <YEO_Wen_Qing@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; 'Zalinah KADIS (MCI)' <Zalinah.KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: 'Constance LOW (MOH)' <Constance.LOW@moh.gov.sg>; 'Nur ASHIKIN (MOH)' <Nur.ASHIKIN@moh.gov.sg>; (b)(6) 'Vernon LEE (MOH)' <Vernon.LEE@moh.gov.sg>; 'Muhammad AKMAL (MOH)' <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah NG (MOH)' <Deborah.NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>; 'Olivia OH (MOH)' <Olivia.OH@moh.gov.sg>; 'Wycliffe WEI (MOH)' <Wycliffe.WEI@moh.gov.sg>; 'Constance LOW (MOH)' <Constance.LOW@moh.gov.sg>; 'Felicia HONG (MOH)' <Felicia.HONG@moh.gov.sg>; 'Olivia OH (MOH)' <Olivia.OH@moh.gov.sg>
Subject: [Notes of Meeting] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

It was our pleasure to have hosted the meeting from 12 – 13 Mar 2020 and we thank all of you who managed to join us.

We have recorded notes from the meeting discussions and attach them here for your reference. We have also included another document to highlight key points and to provide an outline of the report with corresponding assignments.

Thank you once again, and we wish you well in this challenging time.

On behalf of the secretariat,
 Wycliffe

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 12 March 2020 10:31 pm

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance.LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com;
 (b)(6) (b)(6); Karen TAN (MCI) <Karen.TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6); Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk; Chikwe Ihekweazu

<chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish
 (b)(6); (b)(6); (b)(6);
 (b)(6); jxxm0349@gmail.com; ephjv@nus.edu.sg; Deborah NG (MOH)
 <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon
 LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6); Wen Qing YEO
 (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>;
 Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI)
 <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)
 <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6); Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)
 <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH)
 <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13
 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from 9AM to 12 Noon (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness Day 2	
Time: Mar 13, 2020 08:00 AM Singapore	
Join Zoom Meeting	
(b)(6)	
Meeting ID:	(b)(6)
Password:	(b)(6)
One tap mobile	
(b)(6)	US (San Jose) US (New York)
Dial by your location	
(b)(6)	US (San Jose) US (New York)
Meeting ID:	(b)(6)
Find your local number:	(b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6)
(b)(6) (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihkweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6)
(b)(6) (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondur' <Ngozi.Erondur@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihkweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6); Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

- 1) For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
- 2) For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 1</p> <p>Time: Mar 12, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p style="text-align: center;">(b)(6)</p> <p>Meeting ID: (b)(6)</p> <p>Password: (b)(6)</p> <p>One tap mobile</p> <p style="text-align: center;">(b)(6) US (San Jose) US (New York)</p> <p>Dial by your location</p> <p style="text-align: center;">(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: (b)(6)</p> <p>Find your local number:</p> <p style="text-align: center;">(b)(6)</p>	<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 2</p> <p>Time: Mar 13, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p style="text-align: center;">(b)(6)</p> <p>Meeting ID: (b)(6)</p> <p>Password: (b)(6)</p> <p>One tap mobile</p> <p style="text-align: center;">(b)(6) US (San Jose) US (New York)</p> <p>Dial by your location</p> <p style="text-align: center;">(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: (b)(6)</p> <p>Find your local number:</p> <p style="text-align: center;">(b)(6)</p>
--	--

Table 2. Working documents

Section	Summary of Content	Action required
Introduction	(i.e. ecology to changing risk)	

	Section	Summary of Content	Action required
1	<i>Introduction to the current risks and state of preparedness</i>	<ul style="list-style-type: none"> Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world 	<ul style="list-style-type: none"> Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
Public Health Ecology			
2	<i>A new ecology and a changing imperative</i> << File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >>	<ul style="list-style-type: none"> Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology 	<ul style="list-style-type: none"> Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)			
3	Building flexible preparedness components Lead: Daniel	Novel solutions / approach to building <ul style="list-style-type: none"> Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership 	Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: <ul style="list-style-type: none"> What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures? Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.
4	Info / big data - Risk assessment of diseases Lead: Kamran Khan	Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease	
5	Pharmaceutical and non-pharmaceutical interventions Lead: Richard << File: Lancet Commission Brainstorming Session v3.docx >>	How do interventions need to change for the new ecology: <ul style="list-style-type: none"> Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process 	
6	Strategic communications and advocacy	Comms as a tool to manage epidemic threats. What are the new comms activities	

	Section	Summary of Content	Action required
	Lead: Karen Tan << File: Lancet article_final.docx >>	that are needed in the new ecology	
	Next Steps		
7	Next steps	Recommendations, timeline and measurables	Nil; to be discussed in Singapore in March 2020 Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com;

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(b)(6)

Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>;

Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net;

Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW)

<sean.cleghorn@lancet.com>; (b)(6) Kamran Khan

<Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>;

eduardo.carmo@saude.gov.br; Ziad Memish (b)(6)

(b)(6)

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(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpyj@nus.edu.sg;

Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N.

Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet

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Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>;

Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>;

Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6); Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a) Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness [Day 1]
Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) # US (San Jose)
(b)(6) # US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]
Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
 (b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
 Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>
Sent: Thursday, 20 February 2020 10:09 PM
To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk;
 (b)(6) - Contact (b)(6) Bruschke, dr. C.J.M. (Christianne) <c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>;
 Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erundu@lshtm.ac.uk;
 (b)(6) Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; Ziad Memish
 (b)(6) John N. Nkengasong <NkengasongJ@africa-union.org>; Daniel Bausch
 <Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk; Redd, Stephen (CDC/DDPHSIS/OD)
 <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6)
 Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)
 <MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)
 <Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by **14 Feb 2020**.

Thank you and we appreciate your understanding.

	(Y/N)?
Still attending?	
Booked air tickets?	
If not attending in person, okay for teleconference?	

Regards,
 Yijun

[MOH EMS](#)

(b)(6)

From: Ryan Morhard
Sent: Wed, 11 Mar 2020 14:07:44 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD); Kamran Khan; Jacobs, Michael; Yijun LIN (MOH); Annelise Wilder-Smith; Ximena Aguilera; Constance LOW (MOH); BRIAND, Sylvie; FALL, Ibrahima Soce; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.
 [REDACTED] TAN
 (MCI); dandona@uw.edu; Ngozi [REDACTED] Sean (ELS-
 [REDACTED]
 lhekweazu; eduardo.carmo@saude.gov.br; Ziad
 [REDACTED]
 ail.com; ephpjv@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH); Vernon LEE (MOH); John N. Nkengasong; ID Commissioners Lancet; Wen Qing YEO (MOH); Olivia OH (MOH); Beatrice Bernard; Zalinah KADIS (MCI)
Cc: Constance LOW (MOH); Nur ASHIKIN (MOH); Vernon Lee; Vernon LEE (MOH); Muhammad AKMAL (MOH); Deborah_ng@ncid.sg; Olivia OH (MOH)
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear colleagues,

Same – I wish I could be there and remain absolutely committed to our important work. Thank you again for the chance to contribute. And best wishes to the team there.

Ryan Morhard
 Lead, Global Health Security, International Organizations, and IGWELs
 World Economic Forum

Ryan.Morhard@weforum.org

[REDACTED]

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: 11 March 2020 14:49
To: Kamran Khan <Kamran@bluedot.global>; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; [REDACTED]
 [REDACTED] Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; [REDACTED] riha@cepi.net; Ryan Morhard <Ryan.Morhard@weforum.org>; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; [REDACTED] gmleung@hku.hk; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish
 [REDACTED] [REDACTED] [REDACTED]
 [REDACTED] [REDACTED] ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>

Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Likewise wish I could be there. The need for the commission could not be more evident! I know that the experiences we are all living through we be an important element in the eventual report.

Stephen C. Redd, MD
RADM, USPHS

From: Kamran Khan <Kamran@bluedot.global>

Sent: Wednesday, March 11, 2020 9:28:26 AM

To: Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahim Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minInv.nl <c.bruschke@minInv.nl>;

Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>;

cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)

(b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>;

dandona@uw.edu <dandona@uw.edu>; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>;

(b)(6) (b)(6) riha@cepi.net <riha@cepi.net>;

Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; Redd, Stephen (CDC/DDPHSIS/OD)

<scr1@cdc.gov>; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6)

(b)(6) gmleung@hku.hk <gmleung@hku.hk>; Chikwe Ihekweazu

<chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>;

Ziad Memish (b)(6); (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) ephjiv@nus.edu.sg

<ephjiv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong

<NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen

Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice

Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>;

gmleung@hku.hk <gmleung@hku.hk>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>;

Deborah_ng@ncid.sg <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>

Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Colleagues –

I also want to send my sincere regrets – with each passing day I am pulled deeper into hospital and public health COVID-19 emergency readiness and response activities. With very long work days and a 12 hour time difference it will be difficult for me to join the calls late night my time in Toronto. I am deeply committed to this important work but unfortunately the timing is presenting challenges. Appreciate your understanding.

Kamran

Kamran Khan MD MPH FRCPC
Physician-Scientist
Department of Medicine
Division of Infectious Diseases
Li Ka Shing Knowledge Institute
St. Michael's Hospital

Professor
Faculty of Medicine, Division of Infectious Diseases
Dalla Lana School of Public Health
University of Toronto

Founder and CEO, BlueDot
www.bluedot.global

From: "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>

Date: Wednesday, March 11, 2020 at 6:48 AM

To: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera <xaguilera@udd.cl>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "briands@who.int" <briands@who.int>, "FALL, Ibrahima Soce" <socef@who.int>, David Heymann <David.Heymann@lshtm.ac.uk>, "Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, 余宏杰 <cfetpyhj@vip.sina.com>,

(b)(6) (b)(6) (b)(6)

(b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>,

"dandona@uw.edu" <dandona@uw.edu>, Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>, Peter Horby (b)(6) "riha@cepi.net" <riha@cepi.net>,

"Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov"

<scr1@cdc.gov>, Sean Cleghorn <sean.cleghorn@lancet.com>, (b)(6)

(b)(6) Kamran Khan <Kamran@bluedot.global>, "gmluong@hku.hk" <gmluong@hku.hk>, Chikwe Ihekweazu <chikwe.ihkweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) "ephjv@nus.edu.sg" <ephjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "John N. Nkengasong" <NkengasongJ@africa-union.org>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>, Olivia OH <Olivia_OH@moh.gov.sg>, Beatrice Bernard <Beatrice@bluedot.global>, "Zalinah KADIS (MCI)" <Zalinah_KADIS@mci.gov.sg>, "gmluong@hku.hk" <gmluong@hku.hk>
Cc: "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "Nur ASHIKIN (MOH)" <Nur_ASHIKIN@moh.gov.sg>, (b)(6) (b)(6), "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "Muhammad AKMAL (MOH)" <MUHAMMAD_Akmal@moh.gov.sg>, "Deborah_ng@ncid.sg" <Deborah_ng@ncid.sg>, Olivia OH <Olivia_OH@moh.gov.sg>
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Colleagues

I am very disappointed to miss the meeting this week. To be clear, this is due to the emerging situation in the UK and the need to support the response, and is no reflection on the situation in Singapore. As a consequence, I also won't be able to dial in as offered, but I wanted to wish you all well and reiterate that I am keen to contribute off line afterwards.

Best wishes to all
 Mike

#hello my name is...

Michael Jacobs | Consultant & Hon. Associate Professor of Infectious Diseases
 Royal Free London NHS Foundation Trust, Pond Street, London NW3 2QG, UK
 T: +44 (0)20 7794 0500 (b)(6)
 E: michael.jacobs@ucl.ac.uk (or michael.jacobs@nhs.net for patient confidential emails)

From: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>

Date: Tuesday, 10 March 2020 at 15:42

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera <xaguilera@udd.cl>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "BRIAND, Sylvie" <briands@who.int>, "FALL, Ibrahima Soce" <socef@who.int>, David Heymann

David.Heymann@lshtm.ac.uk, "Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, "cfetpyhj@vip.sina.com" <cfetpyhj@vip.sina.com>, (b)(6)

(b)(6) (b)(6) (b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, "dandona@uw.edu" <dandona@uw.edu>, "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>, Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>, (b)(6) (b)(6) "riha@cepi.net" <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "Cleghorn, Sean (ELS-LOW)" <sean.cleghorn@lancet.com>, (b)(6) (b)(6) Kamran Khan <Kamran@bluedot.global>, "gmluong@hku.hk" <gmluong@hku.hk>, Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish (b)(6)

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, "ephjv@nus.edu.sg" <ephjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "John N. Nkengasong" <NkengasongJ@africa-union.org>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>, Beatrice Bernard <Beatrice@bluedot.global>, "Zalinah KADIS (MCI)" <Zalinah_KADIS@mci.gov.sg>, "gmluong@hku.hk" <gmluong@hku.hk>

Cc: "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "Nur ASHIKIN (MOH)" <Nur_ASHIKIN@moh.gov.sg>, Vernon Lee (b)(6) "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "Muhammad AKMAL (MOH)" <MUHAMMAD_Akmal@moh.gov.sg>, "Deborah_ng@ncid.sg" <Deborah_ng@ncid.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>

Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness Day 1	Topic: Lancet ID Commission on Pandemic Preparedness Day 2
Time: Mar 12, 2020 08:00 AM Singapore	Time: Mar 13, 2020 08:00 AM Singapore
Join Zoom Meeting	Join Zoom Meeting
(b)(6)	
Meeting ID: (b)(6)	Meeting ID: (b)(6)
Password: (b)(6)	Password: (b)(6)
One tap mobile	One tap mobile
(b)(6) US (San Jose) (b)(6) US (New York)	(b)(6) US (San Jose) (b)(6) US (New York)
Dial by your location	Dial by your location
(b)(6) US (San Jose) (b)(6) US (New York)	(b)(6) US (San Jose) (b)(6) US (New York)
Meeting ID: (b)(6)	Meeting ID: (b)(6)
Find your local number:	Find your local number:
(b)(6)	(b)(6)

Table 2. Working documents

No.	Section	Summary of Content	Action required
	Introduction	(i.e. ecology to changing risk)	
1	<i>Introduction to the current risks and state of preparedness</i>	Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world	Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
	Public Health Ecology		
2a	<i>A new ecology and changing imperative</i>	Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology	Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700

words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

<p>Building flexible 3preparedness components Lead: Daniel</p> <p>Info / big data - Risk 4assessment of diseases Lead: Kamran Khan</p> <p>Pharmaceutical and non- 5pharmaceutical interventions Lead: Richard</p> <p>Strategic 6communication s and advocacy Lead: Karen Tan</p>	<p>Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership</p> <p>Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease</p> <p>How do interventions need to change for the new ecology: Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process</p> <p>Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology</p>	<p>Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures? Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.</p>
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Next Steps

7 Next steps	Recommendations, timeline and measurables	Nil; to be discussed in Singapore in March 2020 Survey on new dates
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Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>;
Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL,
Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;
Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk;

cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihhekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password (b)(6)

One tap mobile

(b)(6) # US (San Jose)
 (b)(6) # US (New York)

Dial by your location

(b)(6) US (San Jose)

(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmleung@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6); Vernon

LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: *Restricted*

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 13 February 2020 1:59 PM

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)

<Constance_LOW@moh.gov.sg>; Vernon Lee <(b)(6)>; Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

(Y/N)?

Still attending?

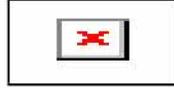
Booked air tickets?

If not attending in person, okay
for teleconference?

Regards,
Yijun

MOH EMS

(b)(6)



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From: Constance LOW (MOH)
Sent: Fri, 10 Jan 2020 11:12:08 +0000
To: BRIAND, Sylvie;FALL, Ibrahima Soce;John N. Nkengasong;David Heymann;annelies.wilder-smith@lshtm.ac.uk;xaguilera@udd.cl;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@
 (b)(6)
 m;Karen TAN (MCI);dandona@uw.edu;Jacobs,
 (b)(6)
 rg;Redd, Stephen (b)(6)
 Khan;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad (b)(6)
Cc:
 (b)(6)
 jun LIN (MOH);ephpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);Vernon Lee;ID Commissioners Lancet;Wen Qing YEO (MOH)
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: *Restricted*

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,
 Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)
Sent: Wednesday, 23 October 2019 11:53 AM
To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>;
 (b)(6) (b)(6) (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erond@lshtm.ac.uk' <Ngozi.Erond@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov'

<scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>;

(b)(6) (b)(6)
Cc: (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) (b)(6)
 (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg'
 <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)
 <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee'
 (b)(6) 'ID Commissioners Lancet' (b)(6)
Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID
 Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,
 Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 9 October 2019 8:08 AM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondue@lshtm.ac.uk; (b)(6)
 riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;
 (b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) ID Commissioners Lancet (b)(6)

Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)
- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,
Constance, Deborah, Vincent and Yijun

[MOH EMS](#)

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Chikwe Ihekweazu
Sent: Wed, 11 Mar 2020 23:16:09 +0000
To: Yijun LIN (MOH);Annelise Wilder-Smith;Ximena Aguilera;Constance LOW (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
 [REDACTED] (b)(6) TAN
 (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi [REDACTED] (b)(6) Stephen
 (CDC/DDPHSIS/OD);Cleghorn, Sean [REDACTED] (b)(6)
 Khan;gmleung@hku.hk;eduardo.carmo@saude.gov.br;Ziad [REDACTED] (b)(6)
 ail.com;ephpvj@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);John N. Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH);Olivia OH (MOH);Beatrice Bernard;Zalindah KADIS (MCI)
Cc: Constance LOW (MOH);Nur ASHIKIN (MOH);Vernon Lee;Vernon LEE (MOH);Muhammad AKMAL (MOH);Deborah_ng@ncid.sg;Olivia OH (MOH)
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Colleagues

I regret that I will no longer be able to join this meeting by teleconference.

Following the two cases in Nigeria, we are managing a lot of pressure both from government and the public. I recognise the critical importance of this group and regret my inability to join the meeting at this time.

I look forward to outputs from the meeting and hopefully, things get calm soon for me to contribute more.

Best wishes

Chikwe

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Wednesday, March 11, 2020 10:44 AM

To: Annelise Wilder-Smith; Ximena Aguilera; Constance LOW (MOH); BRIAND, Sylvie; FALL, Ibrahima Soce; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com;

[REDACTED] (b)(6) [REDACTED] (b)(6) Karen TAN (MCI); dandona@uw.edu; Jacobs, Michael; Ngozi Erundu; [REDACTED] (b)(6) riha@cepi.net;

Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW);

[REDACTED] (b)(6) Kamran Khan; gmleung@hku.hk; Chikwe Ihekweazu; eduardo.carmo@saude.gov.br; Ziad Memish; [REDACTED] (b)(6)

[REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) ephpvj@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH); Vernon LEE (MOH); John N. Nkengasong; ID Commissioners Lancet; Wen Qing YEO (MOH); Olivia OH (MOH); Beatrice Bernard; Zalindah KADIS (MCI); gmleung@hku.hk

Cc: Constance LOW (MOH); Nur ASHIKIN (MOH); Vernon Lee; Vernon LEE (MOH); Muhammad AKMAL (MOH); Deborah_ng@ncid.sg; Olivia OH (MOH)

Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6) (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6); Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>

Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**
 Time: Mar 12, 2020 08:00 AM Singapore

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 2]**
 Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

Join Zoom Meeting

(b)(6)

Meeting ID:
 Password:

Meeting ID:
 Password:

One tap mobile

US (San Jose)
 # US (New York)

One tap mobile

JS (San Jose)
 JS (New York)

Dial by your location

US (San Jose)
 US (New York)

Dial by your location

US (San Jose)
 US (New York)

Meeting ID:

Meeting ID:

Find your local number:

Find your local number:

Table 2. Working documents

No.	Section	Summary of Content	Action required
	Introduction	(i.e. ecology to changing risk)	

- 1 *Introduction to the current risks and state of preparedness*
- Describe current risks posed by emerging epidemic threats
 - Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world
- **Peter and Bethan** to draft the introduction section in bullet points or prose where relevant;

Public Health Ecology

- 2 *A new ecology and a changing imperative*
- Define public health ecology
 - Link ecology to disruptions i.e. what risks to be targeted at based on the ecology
- **Vernon and team** to draft the section in bullet points or prose where relevant;
- Also to provide the diagrams (for Lancet illustrator);
- **Vernon** to produce draft write-up of a commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

- 3 Building flexible preparedness components
Lead: Daniel
- Novel solutions / approach to building
- Sustainability,
 - Adequate health services to manage surge,
 - Increase Collaboration and Partnership
- 4 Info / big data - Risk assessment of diseases
Lead: Kamran Khan
- Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease
- How do interventions need to change for the new ecology:
- Pharmaceutical;
 - Non pharmaceutical e.g. - border control, IPC, failures in regulatory process
- Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease
- What has to be true for this to work?
- What would be the expected impact?
- Are there any examples of successes or failures?
- 5 Pharmaceutical and non-pharmaceutical interventions
Lead: Richard
- Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.**
- 6 Strategic communications and advocacy
Lead: Karen Tan
- Comms as a tool to manage epidemic threats.
- What are the new comms activities that are needed in the new ecology

Next Steps

- 7 Next steps
- Recommendations, timeline and measurables
- Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.g

(b)(6)

Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erundu

(b)(6)

@cdc.gov; Cleghorn, Sean (ELS-LOW) (b)(6)

Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along alaptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) # US (San Jose)
(b)(6) # US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heymann@lshtm.ac.uk>; Jacobs, Michael

(b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk; Redd, Stephen (CDC/DDPHSIS/OD) [REDACTED] (b)(6)
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee [REDACTED] (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

[MOH EMS](#)

[REDACTED] (b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon Lee [REDACTED] (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by **14 Feb 2020**.

Thank you and we appreciate your understanding.

(Y/N)?

Still attending?

Booked air tickets?

If not attending in person, okay for teleconference?

Regards,
Yijun

[MOH EMS](#)

(b)(6)



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From: Gershman, Lynn E. (CDC/DDPHSIS/OD)
Sent: Thu, 2 Jan 2020 17:41:47 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD)
Subject: FW: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Lancet dates – need to change your leave....

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: Wednesday, October 23, 2019 8:17 AM
To: Gershman, Lynn E. (CDC/DDPHSIS/OD) <veu4@cdc.gov>
Subject: Fwd: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

For planning.

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Tuesday, October 22, 2019 23:53

To: BRIAND, Sylvie; FALL, Ibrahima Soce; John N. Nkengasong; David Heymann; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl;

Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)

(b)(6) Karen TAN (MCI); dandona@uw.edu; Jacobs, Michael;

Ngozi.Erondur@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org;

Redd, Stephen (CDC/DDPHSIS/OD); sean.cleghorn@lancet.com; (b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH); ephpjv@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH);

Vernon LEE (MOH); Vernon Lee; ID Commissioners Lancet

Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,

Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 9 October 2019 8:08 AM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl;

Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6)

riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

(b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) ID Commissioners Lancet (b)(6)

Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)
- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,

Constance, Deborah, Vincent and Yijun

[MOH EMS](#)

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Yijun LIN (MOH)
Sent: Thu, 12 Mar 2020 14:30:34 +0000
To: Annelise Wilder-Smith;Ximena Aguilera;Constance LOW (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
 [redacted] (b)(6) TAN
 (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi
 [redacted] (b)(6) Stephen
 (CDC/DDPHSIS/OD);Cleghorn, Sean [redacted] (b)(6)
 Khan;gmleung@hku.hk;Chikwe lhekweazu;eduardo.carmo@saude.gov.br;Ziad
 [redacted] (b)(6)
 ail.com;ephpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);John N. Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH);Olivia OH (MOH);Beatrice Bernard;Zalinah KADIS (MCI);gmleung@hku.hk
Cc: Constance LOW (MOH);Nur ASHIKIN (MOH);Vernon Lee;Vernon LEE (MOH);Muhammad AKMAL (MOH);Deborah_ng@ncid.sg;Olivia OH (MOH);Wycliffe WEI (MOH)
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 2]**
 Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

[redacted] (b)(6)



Meeting ID: [redacted] (b)(6)

Password: [redacted] (b)(6)

One tap mobile

[redacted] (b)(6) # US (San Jose)
 [redacted] (b)(6) # US (New York)

Dial by your location

(b)(6) US (San Jose)
 (b)(6) US (New York)
 Meeting ID: (b)(6)
 Find your local number: (b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
 Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahim Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
 (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6); 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6)
 (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
(b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6); Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness Day 1	Topic: Lancet ID Commission on Pandemic Preparedness Day 2
Time: Mar 12, 2020 08:00 AM Singapore	Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

Join Zoom Meeting

(b)(6)

Meeting ID:
 Password:

Meeting ID:
 Password:

One tap mobile

(b)(6)	US (San Jose) US (New York)
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One tap mobile

(b)(6)	US (San Jose) US (New York)
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Dial by your location

(b)(6)	US (San Jose) US (New York)
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Dial by your location

(b)(6)	US (San Jose) US (New York)
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Meeting ID:

Meeting ID:

Find your local number:

Find your local number:

Table 2. Working documents

No.	Section	Summary of Content	Action required
	Introduction (i.e. ecology to changing risk)		
1	<i>Introduction to the current risks and state of preparedness</i>	<ul style="list-style-type: none"> Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in 	<ul style="list-style-type: none"> Peter and Bethan to draft the introduction section in bullet points or prose where relevant;

the changing world

Public Health Ecology

- 2 *A new ecology and a changing imperative*
- << File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >>
- Define public health ecology
 - Link ecology to disruptions i.e. what risks to be targeted at based on the ecology
 - **Vernon and team** to draft the section in bullet points or prose where relevant;
 - Also to provide the diagrams (for Lancet illustrator);
 - **Vernon** to produce draft write-up of a commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

- 3 Building flexible preparedness components
Lead: Daniel
- Novel solutions / approach to building
- Sustainability,
 - Adequate health services to manage surge,
 - Increase Collaboration and Partnership
- 4 Info / big data - Risk assessment of diseases
Lead: Kamran Khan
- Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease
- Workgroups 3-6 to expand pointers** (e.g. 3-5 pages) for the section based on the following guiding questions:
- What has to be true for this to work?
 - What would be the expected impact?
 - Are there any examples of successes or failures?
- 5 Pharmaceutical and non-pharmaceutical interventions
Lead: Richard
- << File: Lancet Commission Brainstorming Session v3.docx >>
- How do interventions need to change for the new ecology:
- Pharmaceutical;
 - Non pharmaceutical e.g. - border control, IPC, failures in regulatory process
- Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.**
- 6 Strategic communications and advocacy
Lead: Karen Tan
- << File: Lancet article_final.docx >>
- Comms as a tool to manage epidemic threats.
- What are the new comms activities that are needed in the new ecology

Next Steps

- 7 Next steps
- Recommendations, timeline and measurables
- Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahim Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;

Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6); (b)(6) Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net;

Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;

(b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihhekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>;

ephpv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong

<NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen

Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice

Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness [Day 1]

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) # US (San Jose)
(b)(6) # US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erondul@lshtm.ac.uk; [REDACTED] Cleghorn, Sean (ELSL-LOW) <sean.cleghorn@lancet.com>; Ziad Memish [REDACTED] John N. Nkengasong <NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; [REDACTED]
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee <[REDACTED]>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

[MOH EMS](#)

[REDACTED]

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon Lee [REDACTED] Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

(Y/N)?

Still attending?
Booked air tickets?
If not attending in
person, okay for
teleconference?

Regards,
Yijun

MOH EMS

(b)(6)



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From: Brusckke, dr. C.J.M. (Christianne)
Sent: Thu, 12 Mar 2020 07:17:38 +0000
To: BRIAND, Sylvie
Cc: Redd, Stephen (CDC/DDPHSIS/OD);Kamran Khan;Jacobs, Michael;Yijun LIN (MOH);Annelise Wilder-Smith;Ximena Aguilera;Constance LOW (MOH);FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;Daniel.Bausch@phe.gov.uk;deanmed@hku.hk;cfetpyhj@vip.sina.c
(b)(6) TAN (MCI);dandona@uw.edu;Ngozi
(b)(6) Sean (ELS-
(b)(6) lhekweazu;eduardo.carmo@saude.gov.br;Ziad
(b)(6)
 ail.com;ephpvj@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);John N. Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH);Olivia OH (MOH);Beatrice Bernard;Zalinah KADIS (MCI);Nur ASHIKIN (MOH);vernonljm;Muhammad AKMAL (MOH);Deborah_ng@ncid.sg
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)
Attachments: image001.jpg, image002.png

Dear All

I am trying to connect however I do not get connected and my whole PC blocks.

Will keep trying for the moment

regards

Christianne

Dr Christianne Brusckke, DVM, PhD

Chief Veterinary Officer

Ministry of Agriculture, Nature and Food Quality

PO [Box 20401](#)

[2500 EK The Hague](#)

[The Netherlands](#)

Visiting Address : [Bezuidenhoutseweg 73](#), The Hague

Telephone [+ 31 70 3798903](#)

Fax [+ 31 70 3786134](#)

Cellphone (b)(6)

Email (b)(6) [@minlnv.nl](#)

Op 12 mrt. 2020 om 08:16 heeft BRIAND, Sylvie <briands@who.int> het volgende geschreven:

Dear colleagues,

I am also very sorry to miss this meeting. Given the current situation with COVID-19 , we are very busy to address the many requests for technical assistance.

I will try to contribute through other means.

I wish you fruitful discussions.

Best regards

Sylvie

Dr Sylvie C. Briand, MD, MPH, PhD

Director

Infectious Hazard Management (IHM) Department | WHO Health Emergencies (WHE) Programme

World Health Organization | 20, avenue Appia, 1211 Geneva 27, Switzerland | briands@who.int

Tel +41 22 791 2372 – Mobile (b)(6)

Twitter:@SCBriand

<image002.png>

<http://www.who.int/csr/disease/en/>

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>

Sent: Wednesday, March 11, 2020 2:49 PM

To: Kamran Khan <Kamran@bluedot.global>; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@MOH.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <david.heyman@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) gmleung <gmleung@hku.hk>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) ephjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@MOH.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@MOH.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@MOH.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@MOH.gov.sg>; Olivia OH (MOH) <Olivia_OH@MOH.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@MOH.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@MOH.gov.sg>; vernonljm (b)(6) Vernon LEE (MOH) <Vernon_LEE@MOH.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@MOH.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@MOH.gov.sg>
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Likewise wish I could be there. The need for the commission could not be more evident! I know that the experiences we are all living through we be an important element in the eventual report.

Stephen C. Redd, MD
 RADM, USPHS

From: Kamran Khan <Kamran@bluedot.global>
Sent: Wednesday, March 11, 2020 9:28:26 AM
To: Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahim Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minInv.nl <c.bruschke@minInv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
 (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) (b)(6) gmleung@hku.hk <gmleung@hku.hk>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; Ziad Memish (b)(6); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) ephjv@nus.edu.sg <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah ng@ncid.sg <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Colleagues –

I also want to send my sincere regrets – with each passing day I am pulled deeper into hospital and public health COVID-19 emergency readiness and response activities. With very long work days and a 12 hour time difference it will be difficult for me to join the calls late night my time in Toronto. I am deeply committed to this important work but unfortunately the timing is presenting challenges. Appreciate your understanding.

Kamran

Kamran Khan MD MPH FRCPC
 Physician-Scientist
 Department of Medicine
 Division of Infectious Diseases
 Li Ka Shing Knowledge Institute
 St. Michael's Hospital

Professor
 Faculty of Medicine, Division of Infectious Diseases
 Dalla Lana School of Public Health
 University of Toronto

Founder and CEO, BlueDot
www.bluedot.global

From: "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>
Date: Wednesday, March 11, 2020 at 6:48 AM
To: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera <xaguilera@udd.cl>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "briands@who.int" <briands@who.int>, "FALL, Ibrahima Soce" <socef@who.int>, David Heymann <David.Heymann@lshtm.ac.uk>, "Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, 余宏杰 <cfetpyhj@vip.sina.com>, (b)(6) (b)(6) (b)(6)
 (b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, "dandona@uw.edu" <dandona@uw.edu>, Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>, Peter Horby (b)(6) "riha@cepi.net" <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, Sean Cleghorn <sean.cleghorn@lancet.com>, (b)(6)
 (b)(6) Kamran Khan <Kamran@bluedot.global>, "gmluong@hku.hk" <gmluong@hku.hk>, Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) "ephjv@nus.edu.sg" <ephjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "John N. Nkengasong" <NkengasongJ@africa-union.org>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>, Olivia OH <Olivia_OH@moh.gov.sg>, Beatrice Bernard <Beatrice@bluedot.global>, "Zalinah KADIS (MCI)" <Zalinah_KADIS@mci.gov.sg>,"

"gmluong@hku.hk" <gmluong@hku.hk>

Cc: "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "Nur ASHIKIN (MOH)" <Nur_ASHIKIN@moh.gov.sg>, [REDACTED] (b)(6) [REDACTED] (b)(6) "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "Muhammad AKMAL (MOH)" <MUHAMMAD_Akmal@moh.gov.sg>, "Deborah_ng@ncid.sg" <Deborah_ng@ncid.sg>, Olivia OH <Olivia_OH@moh.gov.sg>

Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Colleagues

I am very disappointed to miss the meeting this week. To be clear, this is due to the emerging situation in the UK and the need to support the response, and is no reflection on the situation in Singapore. As a consequence, I also won't be able to dial in as offered, but I wanted to wish you all well and reiterate that I am keen to contribute off line afterwards.

Best wishes to all
Mike

<image001.jpg>

Michael Jacobs | Consultant & Hon. Associate Professor of Infectious Diseases
Royal Free London NHS Foundation Trust, Pond Street, London NW3 2QG, UK
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E: michael.jacobs@ucl.ac.uk (or michael.jacobs@nhs.net for patient confidential emails)

From: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>

Date: Tuesday, 10 March 2020 at 15:42

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera <xaguilera@udd.cl>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "BRIAND, Sylvie" <briands@who.int>, "FALL, Ibrahima Soce" <socef@who.int>, David Heymann <David.Heymann@lshtm.ac.uk>, "Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, "cfetpyhj@vip.sina.com" <cfetpyhj@vip.sina.com>, [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, "dandona@uw.edu" <dandona@uw.edu>, "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>, Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>, [REDACTED] (b)(6) [REDACTED] (b)(6) "riha@cepi.net" <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "Cleghorn, Sean (ELS-LOW)" <sean.cleghorn@lancet.com>, [REDACTED] (b)(6) [REDACTED] (b)(6) Kamran Khan <Kamran@bluedot.global>, "gmluong@hku.hk" <gmluong@hku.hk>, Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish [REDACTED] (b)(6)

(b)(6)	(b)(6)	(b)(6)
(b)(6)	(b)(6)	(b)(6)
(b)(6)	(b)(6)	"Yijun LIN (MOH)"

<LIN_Yijun@MOH.gov.sg>, "ephjv@nus.edu.sg" <ephjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "John N. Nkengasong" <NkengasongJ@africa-union.org>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>, Beatrice Bernard <Beatrice@bluedot.global>, "Zalinah KADIS (MCI)" <Zalinah_KADIS@mci.gov.sg>, "gmleung@hku.hk" <gmleung@hku.hk>

Cc: "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "Nur ASHIKIN (MOH)" <Nur_ASHIKIN@moh.gov.sg>, Vernon Lee (b)(6) "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "Muhammad AKMAL (MOH)" <MUHAMMAD_Akmal@moh.gov.sg>, "Deborah ng@ncid.sg" <Deborah_ng@ncid.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>

Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness **Day 1**
 Time: Mar 12, 2020 08:00 AM Singapore

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**
 Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile
 (b)(6) US (San Jose)
 US (New York)

Dial by your location
 (b)(6) US (San Jose)
 US (New York)

Meeting ID: (b)(6)

Find your local number:
 (b)(6)

Password: (b)(6)

One tap mobile
 (b)(6) US (San Jose)
 US (New York)

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 US (New York)

Meeting ID: (b)(6)

Find your local number:
 (b)(6)

Table 2. Working documents

No.	Section	Summary of Content	Action required
	Introduction	(i.e. ecology to changing risk)	
1	<i>Introduction to current risks and state of preparedness</i>	Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world	Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
	Public Health Ecology		
2a	<i>A new ecology and changing imperative</i>	Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology	Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
	Looking forward - Design for the future	(i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)	
3	Building flexible preparedness components Info / big data - Risk	Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context.	Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures?
4	assessment of diseases Lead: Kamran Khan	Travel risk and spread of disease	

<p>Pharmaceutical and non-pharmaceutical interventions</p> <p>Lead: Richard</p>	<p>How do interventions need to change for the new ecology:</p> <p>Pharmaceutical;</p> <p>Non pharmaceutical e.g. - border control, IPC, failures in regulatory process</p>	<p>Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.</p>
<p>Strategic communication and advocacy</p> <p>Lead: Karen Tan</p>	<p>Comms as a tool to manage epidemic threats.</p> <p>What are the new comms activities that are needed in the new ecology</p>	

Next Steps

7 Next steps Recommendations, timeline and measurables Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

MOH EMS

[3S-id=2e6aa2bf-2970-44fc-9493-8a510b0d5376:531ed8c6]

MOH EMS

[3S-id=e95de6a0-7da4-4fbf-84c6-397bc4b8408f:531ed8c6]

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>;

Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL,

Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;

Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk;

cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi

Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net;

Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;

(b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu

<chikwe.ihhekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

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(b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>;

ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong

<NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen

Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice

Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(5)

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(b)(5) # US (San Jose)
US (New York)

Dial by your location

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US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

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Topic: Lancet ID Commission on Pandemic Preparedness **[Day 2]**

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
US (New York)

Dial by your location

(b)(6) US (San Jose)
 (b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
 Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon

LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: *Restricted*

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 13 February 2020 1:59 PM

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)

<Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by **14 Feb 2020**.

Thank you and we appreciate your understanding.

(Y/N)?

Still attending?

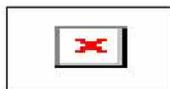
Booked air tickets?

If not attending in person, okay
for teleconference?

Regards,
Yijun

[MOH EMS](#)

(b)(6)



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#hello my name is...



#hello my name is...



Ontario Health Organization



From: Richard Hatchett
Sent: Tue, 7 Jan 2020 15:04:29 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD)
Cc: Uzicanin, Amra (CDC/DDID/NCEZID/DGMQ)
Subject: RE: check in

Dear Steve,

Happy New Year and thank you for following up with Marty and Amra and for reaching out. I've begun drafting a few pieces and had hoped to make more progress on this over the holidays than I did, but such, I guess, is the nature of family life 😊

Obviously, we'd be delighted to get a first draft as soon as we can but are grateful for the support and very much appreciate anything they can contribute.

I confess I lost the thread on the follow up call as well (Rebeka has been out on a long holiday), so thanks for the prompt. The rest of this week has filled up, as weeks do, but how do Monday or Tuesday morning look for you? I will be in Oslo, so +6h from Atlanta and happy to work around your schedule.

Best regards,
Richard

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: 07 January 2020 14:49
To: Richard Hatchett <[REDACTED] (b)(6)>
Cc: Uzicanin, Amra (CDC/DDID/NCEZID/DGMQ) <aau5@cdc.gov>
Subject: check in

Richard,

Touching base here. I've been in communication with Marty and Amra Uzicanin and they are interested (willing?) to draft a section on community mitigation measures. Their target date is later than you'd hoped—late Feb. I will see if we can accelerate that.

I'm also emailing because I have lost the thread for the follow up call, that I think was scheduled for this week. Let me know when the group is scheduled to reconvene.

thanks

Stephen C. Redd, MD
RADM, USPHS
CDC Deputy Director
Public Health Service and Implementation Science

From: BRIAND, Sylvie
Sent: Thu, 12 Mar 2020 07:12:15 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD); Kamran Khan; Jacobs, Michael; Yijun LIN (MOH); Annelise Wilder-Smith; Ximena Aguilera; Constance LOW (MOH); FALL, Ibrahima Soce; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6); Karen TAN (MCI); dandona@uw.edu; Ngozi (b)(6) Sean (ELS- (b)(6) lhekweazu; eduardo.carmo@saude.gov.br; Ziad (b)(6) ail.com; ephpjv@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH); Vernon LEE (MOH); John N. Nkengasong; ID Commissioners Lancet; Wen Qing YEO (MOH); Olivia OH (MOH); Beatrice Bernard; Zalinah KADIS (MCI)
Cc: Constance LOW (MOH); Nur ASHIKIN (MOH); vernonljm; Vernon LEE (MOH); Muhammad AKMAL (MOH); Deborah_ng@ncid.sg; Olivia OH (MOH)
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear colleagues,

I am also very sorry to miss this meeting. Given the current situation with COVID-19, we are very busy to address the many requests for technical assistance. I will try to contribute through other means.

I wish you fruitful discussions.
 Best regards

Sylvie

Dr Sylvie C. Briand, MD, MPH, PhD
 Director
 Infectious Hazard Management (IHM) Department | WHO Health Emergencies (WHE) Programme
 World Health Organization | 20, avenue Appia, 1211 Geneva 27, Switzerland | briands@who.int
 Tel +41 22 791 2372 – Mobile + (b)(6)
 Twitter: @SCBriand



<http://www.who.int/csr/disease/en/>

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: Wednesday, March 11, 2020 2:49 PM
To: Kamran Khan <Kamran@bluedot.global>; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena

Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@MOH.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <david.heyman@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) gmleung <gmleung@hku.hk>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@MOH.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@MOH.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@MOH.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@MOH.gov.sg>; Olivia OH (MOH) <Olivia_OH@MOH.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@MOH.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@MOH.gov.sg>; vernonljm (b)(6) Vernon LEE (MOH) <Vernon_LEE@MOH.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@MOH.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@MOH.gov.sg>
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Likewise wish I could be there. The need for the commission could not be more evident! I know that the experiences we are all living through we be an important element in the eventual report.

Stephen C. Redd, MD
 RADM, USPHS

From: Kamran Khan <Kamran@bluedot.global>
Sent: Wednesday, March 11, 2020 9:28:26 AM
To: Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minInv.nl <c.bruschke@minInv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)@gmail.com>; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) (b)(6) gmleung@hku.hk <gmleung@hku.hk>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) ephpjv@nus.edu.sg <ehpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet [REDACTED] (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmlung@hku.hk <gmlung@hku.hk>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee [REDACTED] (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>

Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Colleagues –

I also want to send my sincere regrets – with each passing day I am pulled deeper into hospital and public health COVID-19 emergency readiness and response activities. With very long work days and a 12 hour time difference it will be difficult for me to join the calls late night my time in Toronto. I am deeply committed to this important work but unfortunately the timing is presenting challenges. Appreciate your understanding.

Kamran

Kamran Khan MD MPH FRCPC
Physician-Scientist
Department of Medicine
Division of Infectious Diseases
Li Ka Shing Knowledge Institute
St. Michael's Hospital

Professor
Faculty of Medicine, Division of Infectious Diseases
Dalla Lana School of Public Health
University of Toronto

Founder and CEO, BlueDot
www.bluedot.global

From: "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>
Date: Wednesday, March 11, 2020 at 6:48 AM
To: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera <xaguilera@udd.cl>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "briands@who.int" <briands@who.int>, "FALL, Ibrahima Soco" <socef@who.int>, David Heymann <David.Heymann@lshtm.ac.uk>

"Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, 余宏杰 <cfetpyhj@vip.sina.com>, (b)(6), (b)(6), (b)(6), (b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, "dandona@uw.edu" <dandona@uw.edu>, Ngozi Erongu <Ngozi.Erongu@lshtm.ac.uk>, Peter Horby (b)(6) "riha@cepi.net" <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, Sean Cleghorn <sean.cleghorn@lancet.com>, (b)(6), (b)(6) Kamran Khan <Kamran@bluedot.global>, "gmleung@hku.hk" <gmleung@hku.hk>, Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish (b)(6), (b)(6), (b)(6), (b)(6), (b)(6), (b)(6), (b)(6), (b)(6) "ephjv@nus.edu.sg" <ephjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "John N. Nkengasong" <NkengasongJ@africa-union.org>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>, Olivia OH <Olivia_OH@moh.gov.sg>, Beatrice Bernard <Beatrice@bluedot.global>, "Zalinah KADIS (MCI)" <Zalinah_KADIS@mci.gov.sg>, "gmleung@hku.hk" <gmleung@hku.hk>

Cc: "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "Nur ASHIKIN (MOH)" <Nur_ASHIKIN@moh.gov.sg>, (b)(6), (b)(6) "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "Muhammad AKMAL (MOH)" <MUHAMMAD_Akmal@moh.gov.sg>, "Deborah ng@ncid.sg" <Deborah_ng@ncid.sg>, Olivia OH <Olivia_OH@moh.gov.sg>

Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Colleagues

I am very disappointed to miss the meeting this week. To be clear, this is due to the emerging situation in the UK and the need to support the response, and is no reflection on the situation in Singapore. As a consequence, I also won't be able to dial in as offered, but I wanted to wish you all well and reiterate that I am keen to contribute off line afterwards.

Best wishes to all
Mike

#hello my name is...

Michael Jacobs | Consultant & Hon. Associate Professor of Infectious Diseases
Royal Free London NHS Foundation Trust, Pond Street, London NW3 2QG, UK

T: +44 (0)20 7794 0500 (b)(6)

E: michael.jacobs@ucl.ac.uk (or michael.jacobs@nhs.net for patient confidential emails)

From: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>

Date: Tuesday, 10 March 2020 at 15:42

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera <xaguilera@udd.cl>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "BRIAND, Sylvie" <briands@who.int>, "FALL, Ibrahim Soce" <socef@who.int>, David Heymann <David.Heymann@lshtm.ac.uk>, "Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minInv.nl" <c.bruschke@minInv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, "cfetpyhj@vip.sina.com" <cfetpyhj@vip.sina.com>, (b)(6)

(b)(6) (b)(6) (b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, "dandona@uw.edu" <dandona@uw.edu>, "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>, Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>, (b)(6) (b)(6) "riha@cepi.net" <riha@cepi.net>,"

"Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov"

<scr1@cdc.gov>, "Cleghorn, Sean (ELS-LOW)" <sean.cleghorn@lancet.com>,"

(b)(6) (b)(6) Kamran Khan

<Kamran@bluedot.global>, "gmleung@hku.hk" <gmleung@hku.hk>, Chikwe Ihekweazu

<chikwe.iheweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br"

<eduardo.carmo@saude.gov.br>, Ziad Memish (b)(6)

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(b)(6) (b)(6) "Yijun LIN (MOH)"

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<Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon

LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "John N. Nkengasong" <NkengasongJ@africa-union.org>,"

ID Commissioners Lancet (b)(6) "Wen Qing YEO

(MOH)" <YEO_Wen_Qing@moh.gov.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>,"

Beatrice Bernard <Beatrice@bluedot.global>, "Zalinah KADIS (MCI)"

<Zalinah_KADIS@mci.gov.sg>, "gmleung@hku.hk" <gmleung@hku.hk>

Cc: "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "Nur ASHIKIN (MOH)"

<Nur_ASHIKIN@moh.gov.sg>, Vernon Lee (b)(6) "Vernon LEE (MOH)"

<Vernon_LEE@moh.gov.sg>, "Muhammad AKMAL (MOH)"

<MUHAMMAD_Akmal@moh.gov.sg>, "Deborah ng@ncid.sg" <Deborah_ng@ncid.sg>,"

"Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>

Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness **Day 1**
 Time: Mar 12, 2020 08:00 AM Singapore

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**
 Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

Join Zoom Meeting

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 Password: (b)(6)

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 (b)(6) # US (New York)

One tap mobile
 (b)(6) # US (San Jose)
 (b)(6) # US (New York)

Dial by your location
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 (b)(6) US (New York)
 Meeting ID: (b)(6)
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 (b)(6) US (New York)
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Table 2. Working documents

No.	Section	Summary of Content	Action required
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Introduction (i.e. ecology to changing risk)

Describe current risks posed by emerging epidemic threats
 1 *Introduction to the current risks and state of preparedness* Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world
Peter and Bethan to draft the introduction section in bullet points or prose where relevant;

Public Health Ecology

A new ecology and changing imperative Define public health ecology
 Link ecology to disruptions i.e. what risks to be targeted at based on the ecology
Vernon and team to draft the section in bullet points or prose where relevant;
 Also to provide the diagrams (for Lancet illustrator);
Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

Building flexible preparedness components
 3 *Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership*
Lead: Daniel
 Info / big data - Risk
 4 *Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access on data equity and access. Thinking about tech in that context.*
Lead: Kamran Khan
 Pharmaceutical and non-pharmaceutical interventions
 5 *How do interventions need to change for the new ecology: Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process*
Lead: Richard
 Strategic communication and advocacy
 6 *Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology*
Lead: Karen Tan

Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:
 What has to be true for this to work?
 What would be the expected impact?
 Are there any examples of successes or failures?
Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.

Next Steps

7 Next steps Recommendations, timeline and measurables
 Nil; to be discussed in Singapore in March 2020
 Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)
From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. **Teleconferencing instructions**

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

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(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

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Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

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(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmleung@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; [REDACTED] (b)(6)
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee [REDACTED] (b)(6) Vernon
 LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)
 <MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

MOH EMS

[REDACTED] (b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)
 <Constance_LOW@moh.gov.sg>; Vernon Lee [REDACTED] (b)(6) Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by **14 Feb 2020**.

Thank you and we appreciate your understanding.

(Y/N)?

Still attending?

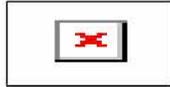
Booked air tickets?

If not attending in person, okay
for teleconference?

Regards,
Yijun

[MOH EMS](#)

(b)(6)



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From: Stefano Malvolti
Sent: Mon, 23 Mar 2020 15:19:27 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: CEPI Mid-term review, survey

Dear Colleague,

As stated in the email you have received some minutes ago from Frederik Kristensen, please find below the link to activate the online survey aimed at reviewing the performance of the Coalition for Epidemic Preparedness Innovation (CEPI) in the first 2 years since its creation. The review looks at CEPI's initial progresses towards the goals identified in its 2017-2022 strategy.

The link will expire on April 3rd and once you have started the survey you will have 7 days to complete your responses.

Please note that MMGH and Qualtrics, the company providing the technical platform for this survey, are fully compliant with the European Data Protection Regulations.

If you have any questions, please contact Stefano Malvolti malvoltis@mmglobalhealth.org or Melissa Malhame malhamem@mmglobalhealth.org

Follow this link to the Survey:

[Take the Survey](#)

Or copy and paste the URL below into your internet browser:

https://mmghconsulting.eu.qualtrics.com/jfe/form/SV_1SRWStWbfnxX3WR?Q_DL=cUVGwMdM8UOoj0V_1SRWStWbfnxX3WR_MLRP_cMGSgBNf7XLqlY9&Q_CHL=email

Follow the link to opt out of future emails:

[Click here to unsubscribe](#)

From: Ximena Aguilera
Sent: Thu, 12 Mar 2020 18:10:14 +0000
To: 'Yijun LIN (MOH)'; 'Annelise Wilder-Smith'; 'Constance LOW (MOH)'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'David Heymann'; 'Amadou.SALL@pasteur.sn'; 'c.bruschke@minInv.nl'; 'Daniel.Bausch@phe.gov.uk'; 'deanmed (b)(6) TAN (MCI)'; 'dandona@uw.edu'; 'Jacobs, Michael'; 'Ngozi Erondu (b)(6)'; 'riha@cepi.net'; 'Ryan.Morhard@weforum.org'; 'Redd, Stephen (CDC/DDPHSIS/OD)'; 'Cleghorn, Sean (b)(6)'; 'Khan'; 'gmleung@hku.hk'; 'Chikwe Ihekweazu'; 'eduardo.carmo@saude.gov.br'; 'Ziad (b)(6)'; '(b)(6)'; 'ephpyjv@nus.edu.sg'; 'Deborah NG (MOH)'; 'Felicia HONG (MOH)'; 'Vernon LEE (MOH)'; 'John N. Nkengasong'; 'ID Commissioners Lancet'; 'Wen Qing YEO (MOH)'; 'Olivia OH (MOH)'; 'Beatrice Bernard'; 'Zalinah KADIS (MCI)'; 'gmleung@hku.hk'
Cc: 'Constance LOW (MOH)'; 'Nur ASHIKIN (MOH)'; 'Vernon Lee'; 'Vernon LEE (MOH)'; 'Muhammad AKMAL (MOH)'; 'Deborah_ng@ncid.sg'; 'Olivia OH (MOH)'; 'Wycliffe WEI (MOH)'
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Thank you, I will be there,

Best regards,

Ximena

De: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Enviado el: Thursday, March 12, 2020 11:31 AM
Para: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) ephpyjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk
CC: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)
<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>;
Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH)
<Wycliffe_WEI@moh.gov.sg>

Asunto: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

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Meeting ID: (b)(6)

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(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)**Sent:** Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) <(b)(6)@gmail.com>; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondur' <Ngozi.Erondur@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihhekweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6); (b)(6) <(b)(6)@gmail.com>; (b)(6) (b)(6) (b)(6) (b)(6); (b)(6); (b)(6) <(b)(6)@gmail.com>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6); Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>

Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness Day 1	Topic: Lancet ID Commission on Pandemic Preparedness Day 2
Time: Mar 12, 2020 08:00 AM Singapore	Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

Join Zoom Meeting

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Meeting ID:

Meeting ID:

Password:

Password:

One tap mobile

One tap mobile

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Dial by your location

Dial by your location

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Table 2. Working documents

No.	Section	Summary of Content	Action required
	Introduction (i.e. ecology to changing risk)		
	<i>Introduction to the current risks and state of preparedness</i>	Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world	Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
	Public Health Ecology		

A new ecology and a changing imperative
 2 Define public health ecology
 Link ecology to disruptions i.e. what risks to be targeted at based on the ecology
 << File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >>

Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator);
Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

3 Building flexible preparedness components
 Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership
Lead: Daniel

4 Info / big data - Risk assessment of diseases
 Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease
Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:
 What has to be true for this to work?
 What would be the expected impact?
 Are there any examples of successes or failures?
Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.

5 Pharmaceutical and non-pharmaceutical interventions
 How do interventions need to change for the new ecology:
 Pharmaceutical;
 Non pharmaceutical e.g. - border control, IPC, failures in regulatory process
 << File: Lancet Commission Brainstorming Session v3.docx >>

6 Strategic communications and advocacy
 Comms as a tool to manage epidemic threats.
 What are the new comms activities that are needed in the new ecology
Lead: Karen Tan
 << File: Lancet article_final.docx >>

Next Steps

7 Next steps Recommendations, timeline and measurables Nil; to be discussed in Singapore in March 2020 Survey on new dates

Regards,
 Yijun

[MOH EMS](#)

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>**Sent:** 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihkweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructionsTopic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

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Meeting ID: (b)(6)

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Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

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(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

[MOH EMS](#)

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6)

- Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)
<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael
<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean

(ELS-LOW) <sean.cleghorn@lancet.com>; Ziad Memish <(b)(6)>; John N. Nkengasong <NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; <(b)(6)>
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee <(b)(6)>
 Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

MOH EMS

<(b)(6)>

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon Lee <(b)(6)> Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

(Y/N)
?

Still attending?

Booked air tickets?

If not attending in person,
okay for teleconference?

Regards,
Yijun

[MOH EMS](#)

(b)(6)



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United Kingdom, Registration No. 1982084, Registered in England and Wales.

From: Rebeka Yasmin
Sent: Thu, 9 Jan 2020 12:06:55 +0000
To: Annelise Wilder-Smith;ximena aguilera;Amadou.SALL@pasteur.sn;John Nkengasong (Dr);Redd, Stephen (CDC/DDPHSIS/OD);Daniel Bausch;Yijun LIN (MOH);David Heymann;Peter (b)(6) LOW (b)(6)
 LEE (MOH);Vernon Lee;Donnelly, Christl A
Cc: Richard Hatchett
Subject: RE: Lancet WG 5 call - availability request

Dear all,

We would like to arrange the next working group call for early next week. Please can you confirm whether either of the options below work for you?

Tuesday 14 January

0730 DC/09.30 Chile/ 12.00 London and Senegal/ 15.00 Addis Ababa

Wednesday 15 January

10.30 DC/12.30 Chile/15.30 London and Senegal/18.30 Addis Ababa

Best regards,

Rebeka

From: Rebeka Yasmin
Sent: 26 November 2019 16:00
To: Richard Hatchett <richard.hatchett@cepi.net>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6)
Subject: RE: Lancet WG 5 call - availability request

Dear all,

You should now all have access to the SharePoint folder. If you are still unable to gain access to the documents, please email me and let me know.

The next call will be scheduled for late next week. I've listed some potential times below, please can you confirm whether they work for you?

Thursday 5 December 8am DC/10am Chile/1pm London & Senegal/4pm Ethiopia

Friday 6 December at 11am DC/1pm Chile/4pm London and Senegal/7pm Ethiopia

Thank you,

Rebeka

From: Richard Hatchett <richard.hatchett@cepi.net>

Sent: 24 November 2019 23:30

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heymann@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee <(b)(6)>

Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>

Subject: LAncet WG 5 call notes and next steps

Dear all,

Some of you have continued to have trouble with the SharePoint site and if any of you still can't access it on the link that I sent Friday (which try cutting and pasting into your web browser rather than clicking), please let my Executive Assistant, Ms. Rebeka Yasmin, know and she or CEPI IT can troubleshoot with you. Rebeka will be able to assist on Monday. In the interim, I have attached the latest draft of the document that Peter and David and I have worked up to guide further progress, as well as a summary of Friday's call. If Sharepoint is working, all documents are available at

(b)(6)

The major output of the call was that we want to start getting ideas and some draft text down on paper. We'll obviously need to massage and edit what we collectively assemble so that it speaks with one voice, but beginning to develop some of the vignettes and themes in a more comprehensive way will help us both gather momentum and clarify our focus.

We'll organize another call in about two weeks' time, but much of the progress can be managed via e-mail and small writing teams. For those who weren't able to join the call today, I would welcome your self-identifying if there are any particular areas where you would like to make contributions and highlighting any potential vignettes that illustrate the themes we will be amplifying.

Best regards,
Richard

RICHARD HATCHETT
CEO



+4479 564 53 146

richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK

Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

From: Ximena Aguilera
Sent: Thu, 9 Jan 2020 14:05:44 +0000
To: 'Rebeka Yasmin'; 'Annelise Wilder-Smith'; Amadou.SALL@pasteur.sn; 'John Nkengasong (Dr)'; 'Redd, Stephen (CDC/DDPHSIS/OD)'; 'Daniel Bausch'; 'Yijun LIN (MOH)'; 'David Heymann'; 'Peter Horby'; [REDACTED] (b)(6) 'Constance LOW (MOH)'; [REDACTED] (b)(6) 'Vernon LEE (MOH)'; 'Vernon Lee'; 'Donnelly, Christl A'
Cc: 'Richard Hatchett'
Subject: RE: Lancet WG 5 call - availability request

Dear Rebeka,

I am afraid I will not be able to participate. I will be traveling to [REDACTED] (b)(6) next week, without roaming.
 I am very sorry, and I will be available for the rest of January.

Best regards,

Ximena

Dra. Ximena Aguilera Sanhueza

Directora
 CEPS | Centro de Epidemiología y Políticas de Salud
 Facultad de Medicina Clínica Alemana - Universidad del Desarrollo
 Dirección postal: Las Condes 12438, Lo Barnechea. Santiago Chile CP 771-0162
 Fono: (56-2) 23279308
 E-mail: xaguilera@udd.cl



De: Rebeka Yasmin <rebeka.yasmin@cepi.net>
Enviado el: jueves, 9 de enero de 2020 9:07
Para: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; [REDACTED] (b)(6) Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; [REDACTED] (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee [REDACTED] (b)(6) Donnelly, Christl A <c.donnelly@imperial.ac.uk>
CC: Richard Hatchett <richard.hatchett@cepi.net>
Asunto: RE: Lancet WG 5 call - availability request

Dear all,

We would like to arrange the next working group call for early next week. Please can you confirm whether either of the options below work for you?

Tuesday 14 January

0730 DC/09.30 Chile/ 12.00 London and Senegal/ 15.00 Addis Ababa

Wednesday 15 January

10.30 DC/12.30 Chile/15.30 London and Senegal/18.30 Addis Ababa

Best regards,

Rebeka

From: Rebeka Yasmin

Sent: 26 November 2019 16:00

To: Richard Hatchett <richard.hatchett@cepi.net>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>;

(b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee

(b)(6)

Subject: RE: Lancet WG 5 call - availability request

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Thursday 5 December 8am DC/10am Chile/1pm London & Senegal/4pm Ethiopia

Friday 6 December at 11am DC/1pm Chile/4pm London and Senegal/7pm Ethiopia

Thank you,

Rebeka

From: Richard Hatchett <richard.hatchett@cepi.net>

Sent: 24 November 2019 23:30

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6)

Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>

Subject: LAncet WG 5 call notes and next steps

Dear all,

Some of you have continued to have trouble with the SharePoint site and if any of you still can't access it on the link that I sent Friday (which try cutting and pasting into your web browser rather than clicking), please let my Executive Assistant, Ms. Rebeka Yasmin, know and she or CEPI IT can troubleshoot with you. Rebeka will be able to assist on Monday. In the interim, I have attached the latest draft of the document that Peter and David and I have worked up to guide further progress, as well as a summary of Friday's call. If Sharepoint is working, all documents are available at

(b)(6)

The major output of the call was that we want to start getting ideas and some draft text down on paper. We'll obviously need to massage and edit what we collectively assemble so that it speaks with one voice, but beginning to develop some of the vignettes and themes in a more comprehensive way will help us both gather momentum and clarify our focus.

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Best regards,

Richard

RICHARD HATCHETT

CEO

CEPI New vaccines
for a safer world

(b)(6)

richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK

Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

From: Annelise Wilder-Smith
Sent: Thu, 9 Jan 2020 14:16:18 +0000
To: Ximena Aguilera;'Rebeka Yasmin';Amadou.SALL@pasteur.sn;'John Nkengasong (Dr)';Redd, Stephen (CDC/DDPHSIS/OD)';'Daniel Bausch';'Yijun LIN (MOH)';David Heymann;'Peter (b)(6) LOW (MOH)';zmemish@yahoo.com;'Vernon LEE (MOH)';'Vernon Lee';Donnelly, Christl A
Cc: 'Richard Hatchett'
Subject: Re: Lancet WG 5 call - availability request

Dear Rebeka,
 Either of the options work for me.
 Kind regards, Annelies

--

From: Ximena Aguilera Sanhueza <xaguilera@udd.cl>
Date: Thursday, 9 January 2020 at 3:05 PM
To: 'Rebeka Yasmin' <rebeka.yasmin@cepi.net>, Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, Dr John Nkengasong <NkengasongJ@africa-union.org>, "'Redd, Stephen (CDC/DDPHSIS/OD)'" <scr1@cdc.gov>, 'Daniel Bausch' <daniel.bausch@phe.gov.uk>, "'Yijun LIN (MOH)'" <LIN_Yijun@MOH.gov.sg>, David Heymann <David.Heymann@LSHTM.ac.uk>, Peter Horby <peter.horby@ndm.ox.ac.uk>, Peter Horby (b)(6) "'Constance LOW (MOH)'" <Constance LOW@moh.gov.sg>, Ziad Memish (b)(6) "'Vernon LEE (MOH)'" <Vernon LEE@moh.gov.sg>, Vernon Lee (b)(6) "Donnelly, Christl A" <c.donnelly@imperial.ac.uk>
Cc: Richard Hatchett <richard.hatchett@cepi.net>
Subject: RE: Lancet WG 5 call - availability request

Dear Rebeka,

I am afraid I will not be able to participate. I will be traveling to (b)(6) next week, without roaming.

I am very sorry, and I will be available for the rest of January.

Best regards,

Ximena

Dra. Ximena Aguilera Sanhueza
 Directora
 CEPS|Centro de Epidemiología y Políticas de Salud
 Facultad de Medicina Clínica Alemana - Universidad del Desarrollo
 Dirección postal: Las Condes 12438, Lo Barnechea. Santiago Chile CP 771-0162
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De: Rebeka Yasmin <rebeka.yasmin@cepi.net>

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Para: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; (b)(6) Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6) Donnelly, Christl A <c.donnelly@imperial.ac.uk>

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<peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>;
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 (b)(6) >

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Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov;
 Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David
 Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW
 (MOH) <Constance_LOW@moh.gov.sg>; (b)(6) Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Vernon Lee <(b)(6)>

Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>

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(b)(6)

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Best regards,
Richard

RICHARD HATCHETT
CEO



(b)(6)

richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK
Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

From: Annelise Wilder-Smith
Sent: Fri, 10 Jan 2020 16:39:16 +0000
To: Ximena Aguilera;'Constance LOW (MOH)';'BRIAND, Sylvie';'FALL, Ibrahima Soce';'John N. Nkengasong';David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
 (b)(6) TAN
 (MCI)';dandona@uw.edu;'Jacobs, Michael';Ngozi
 (b)(6) Redd, Stephen
 (b)(6) Khan';'Chikwe Ihekweazu';eduardo.carmo@saude.gov.br;'Ziad (b)(6)
Cc:
 (b)(6)
 ijun LIN (MOH)';ephpjv@nus.edu.sg;'Deborah NG (MOH)';'Felicia HONG (MOH)';'Vernon LEE (MOH)';'Vernon Lee';'ID Commissioners Lancet';'Wen Qing YEO (MOH)'
Subject: Re: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

The dates are saved as 12 and 13 March 2020. Given the Hong Kong unrest combined now with some fears about the Wuhan pneumonia outbreak (even if unfounded), and given that time is short to get our flights sorted out, I wonder whether we should settle for a meeting in Singapore instead of Hong Kong?

Warm regards, Annelies

Annelies Wilder-Smith MD PhD
 Professor of Emerging Infectious Diseases
 Department of Disease Control
 London School of Hygiene and Tropical Medicine
 &
 Editor-in-Chief, Journal of Travel Medicine
 &
 Chair, Lancet Commission on arboviral diseases
 &
 WHO Consultant, Vaccines for arboviruses
 &
 ZikaPLAN, Scientific Coordinator

From: Ximena Aguilera Sanhueza <xaguilera@udd.cl>
Date: Friday, 10 January 2020 at 4:27 PM
To: "'Constance LOW (MOH)'" <Constance_LOW@moh.gov.sg>, "'BRIAND, Sylvie'" <briands@who.int>, Ibrahima-soce FALL <socef@who.int>, Dr John Nkengasong <NkengasongJ@africa-union.org>, David Heymann <David.Heymann@LSHTM.ac.uk>, Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, deanmed <deanmed@hku.hk>, Yu Hongjie <cfetpyhj@vip.sina.com>, jane halton (b)(6)
 (b)(6) (b)(6) "'Karen TAN (MCI)'" <Karen_TAN@mci.gov.sg>, Lalit Dandona <dandona@uw.edu>, "'Jacobs, Michael'" <michael.jacobs@ucl.ac.uk>, Ngozi Erondy <Ngozi.Erondy@lshtm.ac.uk>, Peter Horby (b)(6) Richard Hatchett <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov"

<scr1@cdc.gov>, "Cleghorn, Sean (ELS-CAM)" <sean.cleghorn@lancet.com>,
 (b)(6) (b)(6) 'Kamran Khan'
 <Kamran@bluedot.global>, 'Chikwe Ihekweazu' <chikwe.ihkweazu@ncdc.gov.ng>,
 "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish
 (b)(6) (b)(6) (b)(6)
Cc: (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) (b)(6)@gmail.com"
 (b)(6) ""Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, "ephpjv@nus.edu.sg"
 <ephpjv@nus.edu.sg>, ""Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, ""Felicia HONG (MOH)"
 <Felicia_HONG@moh.gov.sg>, ""Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Vernon Lee
 (b)(6) 'ID Commissioners Lancet' (b)(6) ""Wen
 Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID
 Commission in March 2020
 Thanks, saved

Ximena

De: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>
Enviado el: viernes, 10 de enero de 2020 8:12
Para: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong
 <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-
 smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl;
 Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs,
 Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondue@lshtm.ac.uk; (b)(6)
 riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;
 (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu
 <chikwe.ihkweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish
 (b)(6) (b)(6)
CC: (b)(6) (b)(6) (b)(6)
 (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG
 (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE
 (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6) ID Commissioners Lancet
 (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>
Asunto: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID
 Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the
 administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,
Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 23 October 2019 11:53 AM

To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhi@vip.sina.com>;

(b)(6) ' (b)(6) (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erondou@lshtm.ac.uk' <Ngozi.Erondou@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>;

(b)(6) (b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) (b)(6) @gmail.com'

{ (b)(6) } Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6); 'ID Commissioners Lancet' (b)(6)

Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,
Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 9 October 2019 8:08 AM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong

<NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl;

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riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

(b)(6)

Cc: (b)(6) (b)(6) (b)(6)

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Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification:Restricted

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)
- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,
Constance, Deborah, Vincent and Yijun

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)]

From: Ziad Memish
Sent: Fri, 10 Jan 2020 07:22:04 +0000
To: Ximena Aguilera;'Rebeka Yasmin';Amadou.SALL@pasteur.sn;'John Nkengasong (Dr)';Redd, Stephen (CDC/DDPHSIS/OD)';'Daniel Bausch';'Yijun LIN (MOH)';David Heymann;'Peter [REDACTED] (b)(6) LOW (MOH)';'Vernon LEE (MOH)';'Vernon Lee';Donnelly, Christl A;Annelise Wilder-Smith
Cc: 'Richard Hatchett'
Subject: Re: Lancet WG 5 call - availability request

Dear Rebeka,

[REDACTED] (b)(6) during that week but I will make time and should be available for both dates. Can you please send me the docs as I'm still having difficulties with the SharePoint

Sincerely,
Ziad Memish, MD, FRCPC, FACP
 Senior Infectious Disease Consultant
 Director, Research Centre
 King Saud Medical City
 Ministry of Health
 Riyadh, Kingdom of Saudi Arabia
 Tel. No [REDACTED] (b)(6) Ex [REDACTED] (b)(6)
 Email: [REDACTED] (b)(6)@ksmc.med.sa

On Thursday, January 9, 2020, 05:16:25 PM GMT+3, Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk> wrote:

Dear Rebeka,
 Either of the options for me.
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From: Ximena Aguilera Sanhueza <xaguilera@udd.cl>
Date: Thursday, 9 January 2020 at 3:05 PM
To: 'Rebeka Yasmin' <rebeka.yasmin@cepi.net>, Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, Dr John Nkengasong <NkengasongJ@africa-union.org>, "'Redd, Stephen (CDC/DDPHSIS/OD)'" <scr1@cdc.gov>, 'Daniel Bausch' <daniel.bausch@phe.gov.uk>, "'Yijun LIN (MOH)'" <LIN_Yijun@MOH.gov.sg>, David Heymann <David.Heymann@LSHTM.ac.uk>, Peter Horby <peter.horby@ndm.ox.ac.uk>, Peter Horby [REDACTED] (b)(6) "'Constance LOW (MOH)'" <Constance_LOW@moh.gov.sg>, Ziad Memish [REDACTED] (b)(6) "'Vernon LEE (MOH)'" <Vernon_LEE@moh.gov.sg>, Vernon Lee [REDACTED] (b)(6) >, "Donnelly, Christl A" <c.donnelly@imperial.ac.uk>
Cc: Richard Hatchett <richard.hatchett@cepi.net>
Subject: RE: Lancet WG 5 call - availability request

Dear Rebeka,

I am afraid I will not be able to participate. I will be traveling to (b)(6) next week, without roaming.

I am very sorry, and I will be available for the rest of January.

Best regards,

Ximena

Dra. Ximena Aguilera Sanhueza

Directora

CEPS|Centro de Epidemiología y Políticas de Salud

Facultad de Medicina Clínica Alemana - Universidad del Desarrollo

Dirección postal: Las Condes 12438, Lo Barnechea. Santiago Chile CP 771-0162

Fono: (b)(6)

E-mail: xaguilera@udd.cl



De: Rebeka Yasmin <rebeka.yasmin@cepi.net>

Enviado el: jueves, 9 de enero de 2020 9:07

Para: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk> (b)(6); Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; (b)(6); Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6) Donnelly, Christl A <c.donnelly@imperial.ac.uk>

CC: Richard Hatchett <richard.hatchett@cepi.net>

Asunto: RE: Lancet WG 5 call - availability request

Dear all,

We would like to arrange the next working group call for early next week. Please can you confirm whether either of the options below work for you?

Tuesday 14 January

0730 DC/09.30 Chile/ 12.00 London and Senegal/ 15.00 Addis Ababa

Wednesday 15 January

10.30 DC/12.30 Chile/15.30 London and Senegal/18.30 Addis Ababa

Best regards,

Rebeka

From: Rebeka Yasmin
Sent: 26 November 2019 16:00
To: Richard Hatchett <richard.hatchett@cepi.net>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6)
Subject: RE: Lancet WG 5 call - availability request

Dear all,

You should now all have access to the SharePoint folder. If you are still unable to gain access to the documents, please email me and let me know.

The next call will be scheduled for late next week. I've listed some potential times below, please can you confirm whether they work for you?

Thursday 5 December 8am DC/10am Chile/1pm London & Senegal/4pm Ethiopia

Friday 6 December at 11am DC/1pm Chile/4pm London and Senegal/7pm Ethiopia

Thank you,

Rebeka

From: Richard Hatchett <richard.hatchett@cepi.net>
Sent: 24 November 2019 23:30
To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguiler a <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6)
Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>
Subject: LAncet WG 5 call notes and next steps

Dear all,

Some of you have continued to have trouble with the SharePoint site and if any of you still can't access it on the link that I sent Friday (which try cutting and pasting into your web browser rather than clicking), please let my Executive Assistant, Ms. Rebeka Yasmin, know and she or CEPI IT can troubleshoot with you. Rebeka will be able to assist on Monday. In the interim, I have attached the latest draft of the document that Peter and David and I have worked up to guide further progress, as well as a summary of Friday's call. If Sharepoint is working, all documents are available at

(b)(6)

The major output of the call was that we want to start getting ideas and some draft text down on paper. We'll obviously need to massage and edit what we collectively assemble so that it speaks with one voice, but beginning to develop some of the vignettes and themes in a more comprehensive way will help us both gather momentum and clarify our focus.

We'll organize another call in about two weeks' time, but much of the progress can be managed via e-mail and small writing teams. For those who weren't able to join the call today, I would welcome your self-identifying if there are any particular areas where you would like to make contributions and highlighting any potential vignettes that illustrate the themes we will be amplifying.

Best regards,

Richard

RICHARD HATCHETT

CEO



(b)(6)

richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK

Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

From: Ximena Aguilera
Sent: Fri, 10 Jan 2020 15:27:25 +0000
To: 'Constance LOW (MOH)'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'John N. Nkengasong'; 'David Heymann'; annelies.wilder-smith@lshtm.ac.uk; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; dean (b)(6) TAN (MCI)'; dandona@uw.edu; 'Jacobs, (b)(6) rg; Redd, Stephen (b)(6) Khan'; 'Chikwe Ihekweazu'; eduardo.carmo@saude.gov.br; Ziad (b)(6)
Cc: (b)(6)
 ijun LIN (MOH)'; ephpjv@nus.edu.sg; 'Deborah NG (MOH)'; 'Felicia HONG (MOH)'; 'Vernon LEE (MOH)'; 'Vernon Lee'; 'ID Commissioners Lancet'; 'Wen Qing YEO (MOH)'
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Thanks, saved

Ximena

De: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>
Enviado el: viernes, 10 de enero de 2020 8:12
Para: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6)
CC: (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6) ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>
Asunto: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: *Restricted*

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,
Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 23 October 2019 11:53 AM

To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>;

(b)(6) (b)(6) (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erondou@lshtm.ac.uk' <Ngozi.Erondou@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>;

(b)(6) (b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee'

(b)(6) 'ID Commissioners Lancet' (b)(6)

Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,
Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 9 October 2019 8:08 AM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erundu@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

(b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) ID Commissioners Lancet (b)(6)

Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: *Restricted*

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)
- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,
Constance, Deborah, Vincent and Yijun

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Vernon Lee

Sent: Fri, 10 Jan 2020 23:04:11 +0000

To: Annelise Wilder-Smith; Ximena Aguilera; 'Constance LOW (MOH)'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'John N. Nkengasong'; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.
(b)(6) Karen TAN
 (MCI)'; dandona@uw.edu; 'Jacobs, Michael'; Ngozi
(b)(6) Stephen
(b)(6) Khan'; 'Chikwe lhekweazu'; eduardo.carmo@saude.gov.br; 'Ziad Memish'

Cc:
(b)(6)
 ijun LIN (MOH)'; ephpjv@nus.edu.sg; 'Deborah NG (MOH)'; 'Felicia HONG (MOH)'; 'Vernon LEE (MOH)'; 'ID Commissioners Lancet'; 'Wen Qing YEO (MOH)'

Subject: Re: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Thanks Annelise. Let me speak to Gabriel about it.

Get [Outlook for iOS](#)

From: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>

Sent: Saturday, January 11, 2020 12:39:16 AM

To: Ximena Aguilera <xaguilera@udd.cl>; 'Constance LOW (MOH)' <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; David Heymann <David.Heymann@LSHTM.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minlnv.nl <c.bruschke@minlnv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; (b)(6)
(b)(6) (b)(6) (b)(6) 'Karen TAN (MCI)' <Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; Ngozi Erongdu <Ngozi.Erongdu@lshtm.ac.uk>; (b)(6)
(b)(6) riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org

<Ryan.Morhard@weforum.org>; scr1@cdc.gov <scr1@cdc.gov>; sean.cleghorn@lancet.com
 <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran
 Khan' <Kamran@bluedot.global>; 'Chikwe Ihekweazu' <chikwe.ihekweazu@ncdc.gov.ng>;
 eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; 'Ziad Memish'

(b)(6) (b)(6) (b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) (b)(6)

(b)(6) 'Yijun LIN (MOH)' <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg

<ehpjv@nus.edu.sg>; 'Deborah NG (MOH)' <Deborah_NG@moh.gov.sg>; 'Felicia HONG (MOH)'

<Felicia_HONG@moh.gov.sg>; 'Vernon LEE (MOH)' <Vernon_LEE@moh.gov.sg>; 'Vernon Lee'

(b)(6) 'ID Commissioners Lancet' (b)(6) 'Wen

Qing YEO (MOH)' <YEO_Wen_Qing@moh.gov.sg>

Subject: Re: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID
 Commission in March 2020

The dates are saved as 12 and 13 March 2020. Given the Hong Kong unrest combined now with
 some fears about the Wuhan pneumonia outbreak (even if unfounded), and given that time is
 short to get our flights sorted out, I wonder whether we should settle for a meeting in
 Singapore instead of Hong Kong?

Warm regards, Annelies

Annelies Wilder-Smith MD PhD

Professor of Emerging Infectious Diseases

Department of Disease Control

London School of Hygiene and Tropical Medicine

&

Editor-in-Chief, Journal of Travel Medicine

&

Chair, Lancet Commission on arboviral diseases

&

WHO Consultant, Vaccines for arboviruses

&

ZikaPLAN, Scientific Coordinator

From: Ximena Aguilera Sanhueza <xaguilera@udd.cl>

Date: Friday, 10 January 2020 at 4:27 PM

To: "'Constance LOW (MOH)'" <Constance_LOW@moh.gov.sg>, "'BRIAND, Sylvie'" <briands@who.int>, Ibrahima-soce FALL <socef@who.int>, Dr John Nkengasong <NkengasongJ@africa-union.org>, David Heymann <David.Heymann@LSHTM.ac.uk>, Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, deanmed <deanmed@hku.hk>, Yu Hongjie <cfetpyhj@vip.sina.com>, jane halton (b)(6), (b)(6), (b)(6) "'Karen TAN (MCI)'" <Karen_TAN@mci.gov.sg>, Lalit Dandona <dandona@uw.edu>, "'Jacobs, Michael'" <michael.jacobs@ucl.ac.uk>, Ngozi Erondú <Ngozi.Erondú@lshtm.ac.uk>, Peter Horby (b)(6) Richard Hatchett <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "Cleghorn, Sean (ELS-CAM)" <sean.cleghorn@lancet.com>, (b)(6), (b)(6) 'Kamran Khan' <Kamran@bluedot.global>, 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish (b)(6), (b)(6), (b)(6)
Cc: (b)(6), (b)(6), (b)(6), (b)(6), (b)(6), (b)(6) @gmail.com", (b)(6) "'Yijun LIN (MOH)'" <LIN_Yijun@MOH.gov.sg>, "ephpv@nus.edu.sg" <ephpv@nus.edu.sg>, "'Deborah NG (MOH)'" <Deborah_NG@moh.gov.sg>, "'Felicia HONG (MOH)'" <Felicia_HONG@moh.gov.sg>, "'Vernon LEE (MOH)'" <Vernon_LEE@moh.gov.sg>, Vernon Lee (b)(6) ID Commissioners Lancet' (b)(6), "'Wen Qing YEO (MOH)'" <YEO_Wen_Qing@moh.gov.sg>

Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Thanks, saved

Ximena

De: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Enviado el: viernes, 10 de enero de 2020 8:12

Para: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heymann@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondou@lshtm.ac.uk; (b)(6)
riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;
 (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish
 (b)(6) (b)(6)
cc: (b)(6) (b)(6) (b)(6)
 (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6) ID Commissioners Lancet
 (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>

Asunto: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,
 Yijun and Constance

[MOH EMS](#)

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 23 October 2019 11:53 AM

To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>;

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(b)(6)

(b)(6)

Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erondou@lshtm.ac.uk' <Ngozi.Erondou@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>;

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(b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6)

(b)(6)

(b)(6)

(b)(6)

(b)(6)

Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee'

(b)(6)

'ID Commissioners Lancet' (b)(6)

Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: *Restricted*

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,

Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 9 October 2019 8:08 AM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

(b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) ID Commissioners Lancet (b)(6)

Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)
- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,

Constance, Deborah, Vincent and Yijun

[MOH EMS](#)

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Backes, Brianna (CDC/DDPHSIS/CGH/DGHT)
Sent: Thu, 23 Jul 2020 20:34:18 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Thank you! Just sent another update for 4 PM.

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Thursday, July 23, 2020 3:30 PM
To: Backes, Brianna (CDC/DDPHSIS/CGH/DGHT) <puh8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

tomorrow after 2 PM can work for me

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

From: Backes, Brianna (CDC/DDPHSIS/CGH/DGHT) <puh8@cdc.gov>
Sent: Thursday, July 23, 2020 4:08 PM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Hi Dr. Damon,

Apologies for the struggles with scheduling! If you let me know a few 15 minute windows today or tomorrow that will work for you, I can find a time with Ben and Olga.

Thanks,

Bri

From: Dahl, Benjamin A. (CDC/DDPHSIS/CGH/GID) <bid5@cdc.gov>
Sent: Thursday, July 23, 2020 3:05 PM
To: Hyde, Terri (CDC/DDPHSIS/CGH/GID) <tkh4@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Cc: Backes, Brianna (CDC/DDPHSIS/CGH/DGHT) <puh8@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Ok, makes sense Dr. Hyde. I am flexible and will wait to hear from Dr. Damon.

From: Hyde, Terri (CDC/DDPHSIS/CGH/GID) <tkh4@cdc.gov>
Sent: Thursday, July 23, 2020 4:04 PM
To: Dahl, Benjamin A. (CDC/DDPHSIS/CGH/GID) <bid5@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Cc: Backes, Brianna (CDC/DDPHSIS/CGH/DGHT) <puh8@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

I have personal meetings at 7-8 and then 8-15-9.
Sorry I won't be able to join at that time.

From: Dahl, Benjamin A. (CDC/DDPHSIS/CGH/GID) <bid5@cdc.gov>
Sent: Thursday, July 23, 2020 4:02 PM
To: Hyde, Terri (CDC/DDPHSIS/CGH/GID) <tkh4@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Cc: Backes, Brianna (CDC/DDPHSIS/CGH/DGHT) <puh8@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

7:45? Right before the call with RJ?

From: Hyde, Terri (CDC/DDPHSIS/CGH/GID) <tkh4@cdc.gov>
Sent: Thursday, July 23, 2020 3:39 PM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Cc: Dahl, Benjamin A. (CDC/DDPHSIS/CGH/GID) <bid5@cdc.gov>; Backes, Brianna (CDC/DDPHSIS/CGH/DGHT) <puh8@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Please arrange for Inger's schedule as her input is more important on this than mine. 😊

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Thursday, July 23, 2020 3:38 PM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Hyde, Terri (CDC/DDPHSIS/CGH/GID) <tkh4@cdc.gov>
Cc: Dahl, Benjamin A. (CDC/DDPHSIS/CGH/GID) <bid5@cdc.gov>; Backes, Brianna (CDC/DDPHSIS/CGH/DGHT) <puh8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

I cannot make a call at 5 PM today. Apologies

Inger

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Thursday, July 23, 2020 1:58 PM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Hyde, Terri (CDC/DDPHSIS/CGH/GID) <tkh4@cdc.gov>
Cc: Dahl, Benjamin A. (CDC/DDPHSIS/CGH/GID) <bid5@cdc.gov>; Backes, Brianna (CDC/DDPHSIS/CGH/DGHT) <puh8@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Inger and Terri,

Thank you very much. Would you be ok if we find 15-min on the calendar for us to touch base on this? In the interim, this is a version of the proposed agenda we received today. I am adding Ben Dahl (Dep of Science in the ITF) and Bri Backes (my SA) for their awareness.

Kind regards,

Olga

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Monday, July 20, 2020 7:37 PM
To: Hyde, Terri (CDC/DDPHSIS/CGH/GID) <tkh4@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

(b)(5)

Perhaps more will be known by late July. Nathalie Thornberg would be a good discussant per the assumptions and yet to be knowns

Happy to help out as needed

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From: Hyde, Terri (CDC/DDPHSIS/CGH/GID) <tkh4@cdc.gov>
Sent: Monday, July 20, 2020 7:25:11 PM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Adding Inger Damon here. My expertise is in vaccine roll out and certainly not in serologic levels from the vaccine.

Terri Hyde, MD MPH
Global Immunization Division

Office 1-404-639-8764
Mobile (b)(6)
E-mail thyde@cdc.gov

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Monday, July 20, 2020 5:04:47 PM
To: Hyde, Terri (CDC/DDPHSIS/CGH/GID) <tkh4@cdc.gov>
Subject: FW: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Terri,

I hope your day is going well. Do you have time to chat about the request below more? Ben and I would love to hear more about what you think is the best way to approach and who we should include for discussions going forward.

Best,

Olga

Olga L Henao, PhD. MPH
International Task Force Lead
2019 Novel Coronavirus Response
U.S. Centers for Disease Control and Prevention
1600 Clifton Road
Atlanta, GA 30329-4018
t: 404-639-3393 / m (b)(6)
ohenao@cdc.gov

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Sent: Monday, July 20, 2020 5:49 AM
To: Bennett, Sarah D. (CDC/DDPHSIS/CGH/GID) <iyk3@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Marston, Barbara J. (CDC/DDPHSIS/CGH/DPDM) <bxm5@cdc.gov>
Cc: Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>; Hyde, Terri (CDC/DDPHSIS/CGH/GID) <tkh4@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>
Subject: FW: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Dear ITF leadership friends:

Please see the following invitation to participate in a webinar moderated by China CDC Director and China WHO Representative. They are requesting an expert for a panel on the topic of Immune response and its significance on vaccination. We are inquiring if it also might be possible to have persons other than this expert also join the webinar, which will be from 8AM to 10:30 AM Atlanta time on July 30.

Do you think you could help us to identify someone to serve on this panel. I know it is pretty last minute, but we are hoping that US CDC can be a participant in this international panel.

Thank you very much for your consideration.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Monday, July 20, 2020 1:52 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar - 30th July

Dear RJ,

China CDC would like to host a 2.5 hours Webinar (online seminar) "Dancing with the COVID-19: response strategies in the New Normal Era" on Thursday July 30 at 8:00 pm, Beijing time.

The aims of this online event is to provide a forum for senior experts and frontline responders from global public health & academic institutes to meet and exchange their experiences and knowledge in the field of understanding of this novel infectious disease threat and how best to respond it. **The Webinar will have 2 panel discussions, focusing on “Reopening & restarting strategies in the setting of COVID-19 pandemic” and “Immunity response and its significance on vaccination” . Each panelist is expected to give an approximately 3-minute comment on one specific topic, followed by interaction with the audience and the other panelists of the session for approximately 30 minutes.**

I am writing on behalf of Prof. George Fu Gao, Director General of China CDC, to invite a US CDC expert as a **panelist** on the topic of **“Immunity response and its significance on vaccination”** .

We also intend to invite directors/senior experts from ECDC, KCDC, NIID Japan, PHE etc. to join the two panels. Please find more details in the attached agenda.

Could you please help us to recommend the right person? Many thanks!

With best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

From: John N. Nkengasong
Sent: Sat, 11 Jan 2020 23:44:46 +0000
To: Vernon Lee
Cc: Annelise Wilder-Smith;Ximena Aguilera;Constance LOW (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
 (b)(6) TAN
 (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi
 (b)(6) Stephen
 (b)(6) Khan;Chikwe
 Ihekweazu;eduardo.carmo@saude.gov.br;Ziad
 (b)(6)
 ail.com;Yijun LIN (MOH);ephpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);ID Commissioners Lancet;Wen Qing YEO (MOH)
Subject: Re: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Waiting for the final decision.
 Best wishes,
 John

Sent from my iPhone

On Jan 10, 2020, at 6:04 PM, Vernon Lee <(b)(6)> wrote:

Thanks Annelise. Let me speak to Gabriel about it.

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From: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>

Sent: Saturday, January 11, 2020 12:39:16 AM

To: Ximena Aguilera <xaguilera@udd.cl>; 'Constance LOW (MOH)' <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; David Heymann <David.Heymann@LSHTM.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minlnv.nl <c.bruschke@minlnv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; (b)(6)
 (b)(6) (b)(6) (b)(6) 'Karen TAN (MCI)' <Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; (b)(6)
 (b)(6) riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; scr1@cdc.gov <scr1@cdc.gov>; sean.cleghorn@lancet.com <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'Chikwe Ihekweazu' <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; 'Ziad Memish'

(b)(6) (b)(6) (b)(6)
Cc: (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) (b)(6)
 (b)(6) 'Yijun LIN (MOH)' <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg
 <ephpjv@nus.edu.sg>; 'Deborah NG (MOH)' <Deborah_NG@moh.gov.sg>; 'Felicia HONG (MOH)'
 <Felicia_HONG@moh.gov.sg>; 'Vernon LEE (MOH)' <Vernon_LEE@moh.gov.sg>; 'Vernon Lee'
 (b)(6) 'ID Commissioners Lancet' (b)(6) 'Wen
 Qing YEO (MOH)' <YEO_Wen_Qing@moh.gov.sg>

Subject: Re: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID
 Commission in March 2020

The dates are saved as 12 and 13 March 2020. Given the Hong Kong unrest combined now with
 some fears about the Wuhan pneumonia outbreak (even if unfounded), and given that time is
 short to get our flights sorted out, I wonder whether we should settle for a meeting in
 Singapore instead of Hong Kong?

Warm regards, Annelies

Annelies Wilder-Smith MD PhD
 Professor of Emerging Infectious Diseases
 Department of Disease Control
 London School of Hygiene and Tropical Medicine
 &
 Editor-in-Chief, Journal of Travel Medicine
 &
 Chair, Lancet Commission on arboviral diseases
 &
 WHO Consultant, Vaccines for arboviruses
 &
 ZikaPLAN, Scientific Coordinator

From: Ximena Aguilera Sanhueza <xaguilera@udd.cl>

Date: Friday, 10 January 2020 at 4:27 PM

To: "'Constance LOW (MOH)'" <Constance_LOW@moh.gov.sg>, "'BRIAND, Sylvie'" <briands@who.int>, Ibrahim-soce FALL <socef@who.int>, Dr John Nkengasong <NkengasongJ@africa-union.org>, David Heymann <David.Heymann@LSHTM.ac.uk>, Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, deanmed <deanmed@hku.hk>, Yu Hongjie <cfetpyhj@vip.sina.com>, jane halton (b)(6)
 (b)(6) (b)(6) "'Karen TAN (MCI)'" <Karen_TAN@mci.gov.sg>, Lalit Dandona <dandona@uw.edu>, "'Jacobs, Michael'" <michael.jacobs@ucl.ac.uk>, Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>, Peter Horby (b)(6) Richard Hatchett <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "Cleghorn, Sean (ELS-CAM)" <sean.cleghorn@lancet.com>, (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>, 'Chikwe Ihekweazu' <chikwe.ihekweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish

(b)(6) (b)(6) (b)(6)
Cc: (b)(6) (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) (b)(6)
 (b)(6) "'Yijun LIN (MOH)'" <LIN_Yijun@MOH.gov.sg>, "ephpjv@nus.edu.sg" <ephpjv@nus.edu.sg>, "'Deborah NG (MOH)'" <Deborah_NG@moh.gov.sg>, "'Felicia HONG (MOH)'" <Felicia_HONG@moh.gov.sg>, "'Vernon LEE (MOH)'" <Vernon_LEE@moh.gov.sg>, Vernon Lee

(b)(6) 'ID Commissioners Lancet' (b)(6) "'Wen Qing YEO (MOH)'" <[YEO Wen Qing@moh.gov.sg](mailto:YEO_Wen_Qing@moh.gov.sg)>

Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Thanks, saved

(b)(6) (b)(6)
(b)(6)

De: Constance LOW (MOH) <(b)(6)> (b)(6)

Enviado el: viernes, 10 de enero de 2020 8:12

Para: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl;

Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondudu@lshtm.ac.uk; (b)(6)

riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

(b)(6) Kamran Khan <Kamran@(b)(6)>

<chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6) (b)(6)

CC: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpijv@nus.edu.sg; Deborah NG

(MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE

(MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee <(b)(6)>; ID Commissioners Lancet

(b)(6) Wen Qing YEO (MOH) <[YEO Wen Qing@moh.gov.sg](mailto:YEO_Wen_Qing@moh.gov.sg)>

Asunto: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,

Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 23 October 2019 11:53 AM

To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong'

<NkengasongJ@africa-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>;
 (b)(6) (b)(6) (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erond@lshtm.ac.uk' <Ngozi.Erond@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>;
 (b)(6) (b)(6)
Cc: (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) (b)(6)
 (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) 'ID Commissioners Lancet' (b)(6)
Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,
 Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 9 October 2019 8:08 AM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

(b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG

(MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' [redacted (b)(6)] ID Commissioners Lancet [redacted (b)(6)]

Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)
- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,
Constance, Deborah, Vincent and Yijun

MOH EMS

This email may contain sensitive information. Please file appropriately.

[redacted (b)(6)]

From: Vernon LEE (MOH)
Sent: Mon, 13 Jan 2020 03:32:26 +0000
To: Rebeka Yasmin
Cc: Annelise Wilder-Smith;ximena aguilera;Amadou.SALL@pasteur.sn;John Nkengasong (Dr);Redd, Stephen (CDC/DDPHSIS/OD);Daniel Bausch;Yijun LIN (MOH);David Heymann;Peter (b)(6) LOW (b)(6) Lee;Donnelly, Christl A;Richard Hatchett
Subject: Re: Lancet ID Commission - Working Group 5 call

Apologies I can't join in this call, but thanks to all for the hard work!

Sent from my iPad

> On 11 Jan 2020, at 12:35 AM, Rebeka Yasmin <rebeka.yasmin@cepi.net> wrote:

>

> Join Zoom Meeting

> (b)(6)

> Meeting ID: (b)(6)

> Password: (b)(6)

>

> Dial by your location

>

> (b)(6) US Toll-free
> (b)(6) US Toll-free

>

> (b)(6) United Kingdom
> (b)(6) United Kingdom

> (b)(6) United Kingdom Toll-free

>

> (b)(6) Chile
> (b)(6) Chile

> (b)(6) Chile Toll-free

>

> Meeting ID: (b)(6)

> Find your local number: (b)(6)

>

> Join by SIP

> (b)(6) >

>

> Join by H.323

> (b)(6) (US West)

> (b)(6) (US East)

> (b)(6) (China)

> (b)(6) (India Mumbai)

> (b)(6) (India Hyderabad)

> (b)(6) (EMEA)

> (b)(6) (Australia)

> (b)(6) (Hong Kong)

> (b)(6) (Brazil)

> (b)(6) (Canada)

> (b)(6) (Japan)

> Meeting ID: (b)(6)

> Password: (b)(6)
> <meeting.ics>

From: Vernon Lee
Sent: Sun, 12 Jan 2020 09:41:03 +0000
To: John N. Nkengasong
Cc: Annelise Wilder-Smith;Ximena Aguilera;Constance LOW (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
(b)(6) TAN
(MCI);dandona@uw.edu;Jacobs, Michael;Ngozi
(b)(6) Stephen
(b)(6) Khan;Chikwe
Ihekweazu;eduardo.carmo@saude.gov.br;Ziad
(b)(6)
ail.com;Yijun LIN (MOH);ephpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);ID Commissioners Lancet;Wen Qing YEO (MOH)
Subject: Re: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Dear everyone,

Apologies for the change and this is not one that we take lightly.

I've discussed this with Gabriel and we feel that given the unusual and unforeseen circumstances in Hong Kong, that we will look at hold the meeting in Singapore. I'm going to confirm some details with the Singapore institutions tomorrow for funding and hosting, and will get back to all with final instructions.

This change is because some institutions have issues with travel to Hong Kong and there are some travel advisories in place that invalidates things such as travel insurance, making travel complicated.

I understand that they are some of you who have booked tickets to Hong Kong and are planning other meetings there. What we can do is to also fund travel round trip travel from Hong Kong to Singapore if the tickets cannot be changed. Do let us know if this applies to you.

I will get back to everyone all soon as possible.

Best regards

Vernon

Get [Outlook for iOS](#)

From: John N. Nkengasong <NkengasongJ@africa-union.org>

Sent: Sunday, January 12, 2020 7:44:46 AM

To: Vernon Lee (b)(6)

Cc: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>;

Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL,

Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;

Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minlnv.nl

<c.bruschke@minlnv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk

<deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; (b)(6)

(b)(6) (b)(6) (b)(6) Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; (b)(6)

(b)(6) riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org

<Ryan.Morhard@weforum.org>; scr1@cdc.gov <scr1@cdc.gov>; sean.cleghorn@lancet.com

<sean.cleghorn@lancet.com>; (b)(6) (b)(6) Kamran

Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>;

eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; Ziad Memish (b)(6)

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@moh.gov.sg>; ephpjv@nus.edu.sg

<ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; ID Commissioners

Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>

Subject: Re: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID

Commission in March 2020

Waiting for the final decision.

Best wishes,

John

Sent from my iPhone

On Jan 10, 2020, at 6:04 PM, Vernon Lee [REDACTED] wrote:

Thanks Annelise. Let me speak to Gabriel about it.

Get [Outlook for iOS](#)

From: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>

Sent: Saturday, January 11, 2020 12:39:16 AM

To: Ximena Aguilera <xaguilera@udd.cl>; 'Constance LOW (MOH)' <Constance_LOW@moh.gov.sg>;

'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong'

<NkengasongJ@africa-union.org>; David Heymann <David.Heymann@LSHTM.ac.uk>;

Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minlnv.nl

<c.bruschke@minlnv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk

<deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; [REDACTED]

[REDACTED] [REDACTED] [REDACTED] 'Karen TAN (MCI)'

<Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; 'Jacobs, Michael'

<michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; [REDACTED]

[REDACTED] riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org

<Ryan.Morhard@weforum.org>; scr1@cdc.gov <scr1@cdc.gov>; sean.cleghorn@lancet.com

<sean.cleghorn@lancet.com>; [REDACTED] [REDACTED] 'Kamran

Khan' <Kamran@bluedot.global>; 'Chikwe Ihekweazu' <chikwe.ihekweazu@ncdc.gov.ng>;

eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; 'Ziad Memish'

[REDACTED] [REDACTED] [REDACTED]

Cc: [REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED] 'Yijun LIN (MOH)' <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg

<ephpjv@nus.edu.sg>; 'Deborah NG (MOH)' <Deborah_NG@moh.gov.sg>; 'Felicia HONG (MOH)'

<Felicia_HONG@moh.gov.sg>; 'Vernon LEE (MOH)' <Vernon_LEE@moh.gov.sg>; 'Vernon Lee'

[REDACTED] 'ID Commissioners Lancet' [REDACTED] 'Wen

Qing YEO (MOH)' <YEO_Wen_Qing@moh.gov.sg>

Subject: Re: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

The dates are saved as 12 and 13 March 2020. Given the Hong Kong unrest combined now with some fears about the Wuhan pneumonia outbreak (even if unfounded), and given that time is short to get our flights sorted out, I wonder whether we should settle for a meeting in Singapore instead of Hong Kong?

Warm regards, Annelies

Annelies Wilder-Smith MD PhD
 Professor of Emerging Infectious Diseases
 Department of Disease Control
 London School of Hygiene and Tropical Medicine
 &
 Editor-in-Chief, Journal of Travel Medicine
 &
 Chair, Lancet Commission on arboviral diseases
 &
 WHO Consultant, Vaccines for arboviruses
 &
 ZikaPLAN, Scientific Coordinator

From: Ximena Aguilera Sanhueza <xaguilera@udd.cl>

Date: Friday, 10 January 2020 at 4:27 PM

To: "'Constance LOW (MOH)'" <Constance_LOW@moh.gov.sg>, "'BRIAND, Sylvie'" <briands@who.int>, Ibrahima-soce FALL <socef@who.int>, Dr John Nkengasong <NkengasongJ@africa-union.org>, David Heymann <David.Heymann@LSHTM.ac.uk>, Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, deanmed <deanmed@hku.hk>, Yu Hongjie <cfetpyhj@vip.sina.com>, jane halton [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) "'Karen TAN (MCI)'" <Karen_TAN@mci.gov.sg>, Lalit Dandona <dandona@uw.edu>, "'Jacobs, Michael'" <michael.jacobs@ucl.ac.uk>, Ngozi Erondudu <Ngozi.Erondudu@lshtm.ac.uk>, Peter Horby [REDACTED] (b)(6) [REDACTED] (b)(6) Richard Hatchett <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov"

<scr1@cdc.gov>, "Cleghorn, Sean (ELS-CAM)" <sean.cleghorn@lancet.com>,
 (b)(6) (b)(6) 'Kamran Khan'

<Kamran@bluedot.global>, 'Chikwe Ihekweazu' <chikwe.ihkweazu@ncdc.gov.ng>,
 "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish

(b)(6) (b)(6) (b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) (b)(6)

(b)(6) "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, "ephpjv@nus.edu.sg"

<ephpjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)"

<Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Vernon Lee

(b)(6) D Commissioners Lancet' (b)(6) "Wen

Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>

Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID
 Commission in March 2020

Thanks, saved

Ximena

De: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Enviado el: viernes, 10 de enero de 2020 8:12

Para: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong
 <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-
 smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl;
 Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs,
 Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6)

riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

(b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu

<chikwe.ihkweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6) (b)(6)

cc: (b)(6) (b)(6) (b)(6)

(b)(6); Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG

(MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee [REDACTED] ID Commissioners Lancet [REDACTED] Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>

Asunto: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,

Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

[REDACTED]

From: Constance LOW (MOH)

Sent: Wednesday, 23 October 2019 11:53 AM

To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>;

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erondul@lshtm.ac.uk' <Ngozi.Erondul@lshtm.ac.uk>

<Ngozi.Erondul@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net'
 <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov'
 <scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>;

(b)(6) (b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) (b)(6)

(b)(6) }; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg'
 <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)
 <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee'

(b)(6) D Commissioners Lancet' (b)(6)

Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID
 Commission in March 2020

Message Classification:Restricted

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020
 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,

Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 9 October 2019 8:08 AM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong
 <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-
 smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl;

Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)

[REDACTED] (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondou@lshtm.ac.uk; [REDACTED] (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

[REDACTED] (b)(6)

Cc: [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6)

[REDACTED] (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' [REDACTED] (b)(6) ID Commissioners Lancet [REDACTED] (b)(6)

Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification:Restricted

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)
- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,

Constance, Deborah, Vincent and Yijun

MOH EMS

This email may contain sensitive information. Please file appropriately.

[REDACTED] (b)(6)]

From: Gershman, Lynn E. (CDC/DDPHSIS/OD)
Sent: Tue, 14 Jan 2020 21:55:59 +0000
To: Ingargiola, Brendan (CDC/DDPHSIS/OD);Redd, Stephen (CDC/DDPHSIS/OD)
Subject: RE: Lancet ID Commission - Working Group 5 call

I would recommend trying to log into this one a few minutes early since this is a Zoom Meeting. (Brendan - If you need assistance, Wallace Jones, Desi Alexander or Tim Burkitt would probably be your best POCs) There is also a call in number if Zoom doesn't work for you. I tested it and was able to get right to the meeting room, but couldn't test sound – and I think that maybe where we had issues in the past.

Kindest Regards,

Lynn

Wisdom is knowing the right path to take; Integrity is taking it.

-----Original Appointment-----

From: Rebeka Yasmin <rebeka.yasmin@cepi.net>
Sent: Friday, January 10, 2020 11:36 AM
To: Rebeka Yasmin; Annelise Wilder-Smith; ximena aguilera; Amadou.SALL@pasteur.sn; John Nkengasong (Dr); Redd, Stephen (CDC/DDPHSIS/OD); Daniel Bausch; Yijun LIN (MOH); David Heymann; Peter Horby; (b)(6) Constance LOW (MOH); (b)(6) Vernon LEE (MOH); Vernon Lee; Donnelly, Christl A; Richard Hatchett
Subject: Lancet ID Commission - Working Group 5 call
When: Wednesday, January 15, 2020 3:30 PM-4:30 PM (UTC+00:00) Dublin, Edinburgh, Lisbon, London.
Where: Zoom details enclosed

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

Dial by your location

(b)(6) US Toll-free
 (b)(6) US Toll-free

(b)(6) United Kingdom
 (b)(6) United Kingdom

(b)(6) United Kingdom Toll-free

(b)(6) Chile
Chile

(b)(6) Chile Toll-free

Meeting ID: (b)(6)

Find your local number: (b)(6)

Join by SIP

(b)(6)

Join by H.323

(b)(6) (US West)

(b)(6) (US East)

(b)(6) (China)

(b)(6) (India Mumbai)

(b)(6) (India Hyderabad)

(b)(6) (EMEA)

(b)(6) (Australia)

(b)(6) (Hong Kong)

(b)(6) (Brazil)

(b)(6) (Canada)

(b)(6) (Japan)

Meeting ID: (b)(6)

Password (b)(6)

From: John N. Nkengasong
Sent: Wed, 15 Jan 2020 15:39:23 +0000
To: Ximena Aguilera
Cc: Rebeka Yasmin;Annelise Wilder-Smith;Amadou.SALL@pasteur.sn;Redd, Stephen (CDC/DDPHSIS/OD);Daniel Bausch;Yijun LIN (MOH);David Heymann;Peter (b)(6) LOW (b)(6) LEE (MOH);Vernon Lee;Donnelly, Christl A;Richard Hatchett
Subject: Re: Lancet WG 5 call - availability request
Attachments: image001.png, image002.jpg

Sent from my iPhone

On Jan 9, 2020, at 9:06 AM, Ximena Aguilera <xaguilera@udd.cl> wrote:
Next week is okay for me - Thursday or Friday next week as I am traveling beginning of week.
John

Dear Rebeka,

I am afraid I will not be able to participate. I will be traveling to (b)(6) next week, without roaming.

I am very sorry, and I will be available for the rest of January.

Best regards,

Ximena

Dra. Ximena Aguilera Sanhueza

Directora

CEPS|Centro de Epidemiología y Políticas de Salud

Facultad de Medicina Clínica Alemana - Universidad del Desarrollo

Dirección postal: Las Condes 12438, Lo Barnechea. Santiago Chile CP 771-0162

Fono: (56-2) 23279308

E-mail: xaguilera@udd.cl

<image002.jpg>

De: Rebeka Yasmin <rebeka.yasmin@cepi.net>

Enviado el: jueves, 9 de enero de 2020 9:07

Para: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby

<peter.horby@ndm.ox.ac.uk>; [REDACTED] Constance LOW (MOH)
 <Constance_LOW@moh.gov.sg>; [REDACTED] Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Vernon Lee [REDACTED] Donnelly, Christl A
 <c.donnelly@imperial.ac.uk>
CC: Richard Hatchett <richard.hatchett@cepi.net>
Asunto: RE: Lancet WG 5 call - availability request

Dear all,

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Tuesday 14 January

0730 DC/09.30 Chile/ 12.00 London and Senegal/ 15.00 Addis Ababa

Wednesday 15 January

10.30 DC/12.30 Chile/15.30 London and Senegal/18.30 Addis Ababa

Best regards,

Rebeka

From: Rebeka Yasmin

Sent: 26 November 2019 16:00

To: Richard Hatchett <richard.hatchett@cepi.net>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; [REDACTED] Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee [REDACTED]

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Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>

Subject: LAncet WG 5 call notes and next steps

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(b)(6) [link](#).

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Best regards,
Richard

RICHARD HATCHETT
CEO

<[image001.png](#)>

+4479 564 53 146

richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK

Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

CEPI New vaccines
for a safer world







Facultad de Medicina

Ciudad Autónoma - Universidad del Desarrollo

Centro de Epidemiología y Políticas de Salud

CEPS

From: Richard Hatchett
Sent: Wed, 15 Jan 2020 16:18:23 +0000
To: Ziad Memish;Annelise Wilder-Smith
Cc: Rebeka Yasmin;ximena aguilera;Amadou.SALL@pasteur.sn;John Nkengasong (Dr);Redd, Stephen (CDC/DDPHSIS/OD);Daniel Bausch;Yijun LIN (MOH);David Heymann;Peter (b)(6) LOW (MOH);Vernon LEE (MOH);Vernon Lee;Donnelly, Christl
 A
Subject: RE: Lancet WG 5 call - availability request

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

Dial by your location

(b)(6) JS Toll-free
(b)(6) JS Toll-free

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(b)(6) United Kingdom
(b)(6) United Kingdom Toll-free

(b)(6) Chile
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- (b)(6) (India Mumbai)
- (b)(6) (India Hyderabad)
- (b)(6) (EMEA)
- (b)(6) (Australia)
- (b)(6) (Hong Kong)
- (b)(6) (Brazil)
- (b)(6) (Canada)
- (b)(6) (Japan)

Meeting ID
 Password

From: Ziad Memish
Sent: 15 January 2020 15:33
To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>
Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>; ximena aguiler a <xaguiler a@udd.cl>;
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 Donnelly, Christl A <c.donnelly@imperial.ac.uk>; Richard Hatchett
 <richard.hatchett@cepi.net>
Subject: Re: Lancet WG 5 call - availability request

Same here please. Im in Edinbrough
 Ziad

Sent from my iPhone

On Jan 15, 2020, at 3:32 PM, Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk> wrote:

Kindly let me know the dial in information for the call that is starting now.

Many thanks, Annelies

Annelies Wilder-Smith MD PhD
 Professor of Emerging Infectious Diseases
 Department of Disease Control
 London School of Hygiene and Tropical Medicine
 &
 Editor-in-Chief, Journal of Travel Medicine
 &
 Chair, Lancet Commission on arboviral diseases
 &
 WHO Consultant, Vaccines for arboviruses
 &
 ZIKAPLAN, Scientific Coordinator

From: Rebeka Yasmin <rebeka.yasmin@cepi.net>
Date: Thursday, 9 January 2020 at 1:06 PM
To: Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera Sanhueza <xaguilera@udd.cl>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, Dr John Nkengasong <NkengasongJ@africa-union.org>, "Redd, Stephen (CDC/DDPHSIS/OD)" <scr1@cdc.gov>, Daniel Bausch <daniel.bausch@phe.gov.uk>, "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, David Heymann <David.Heymann@LSHTM.ac.uk>, Peter Horby <peter.horby@ndm.ox.ac.uk>, Peter Horby <(b)(6)> "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, Ziad Memish <(b)(6)> "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Vernon Lee <(b)(6)>, "Donnelly, Christl A" <c.donnelly@imperial.ac.uk>
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<image001.png>

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Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK

Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

<image001.png>

From: Annelise Wilder-Smith
Sent: Wed, 15 Jan 2020 15:31:57 +0000
To: Rebeka Yasmin;ximena aguilera;Amadou.SALL@pasteur.sn;John Nkengasong (Dr);Redd, Stephen (CDC/DDPHSIS/OD);Daniel Bausch;Yijun LIN (MOH);David Heymann;Peter (b)(6) LOW (b)(6) LEE (MOH);Vernon Lee;Donnelly, Christl A
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<(b)(6)>

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richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK
Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

From: John N. Nkengasong
Sent: Wed, 10 Jun 2020 08:37:30 +0000
To: Vernon Lee
Cc: Wycliffe WEI (MOH);Annelise Wilder-Smith;Ximena Aguilera;BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
 [REDACTED] (b)(6) TAN
 (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi
 [REDACTED] (b)(6) Stephen
 (CDC/DDPHSIS/OD);Cleghorn, Sean [REDACTED] (b)(6)
 Khan;gmleung@hku.hk;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad
 [REDACTED] (b)(6)
 ail.com;ephpjv@nus.edu.sg;ID Commissioners Lancet;Wen Qing YEO (MOH);Beatrice Bernard;Zalinah KADIS (MCI);Constance LOW (MOH);Vernon LEE (MOH);Deborah NG (MOH);Deborah Ng Hee Ling (NCID);Olivia OH (MOH);Felicia HONG (MOH)
Subject: Re: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear Vernon,
 Thanks for the update. I agree that we need to come together again soon via conference call to discuss the best way forward.
 Best wishes,
 John

On Jun 10, 2020, at 5:47 AM, Vernon Lee [REDACTED] (b)(6) wrote:

Dear Commissions,
 Hope you're safe during this challenging time.
 Apologies for the silence for a while due to the local COVID situation.
 As countries are now opening up and we're entering a different global phase of the pandemic, am writing to catch up with everyone on the development of the chapters, and if we could still write something about the COVID situation from the pandemic preparedness standpoint that would add to the literature on the topic.
 We'll be sending around the notes from the earlier discussions, and also the timelines of the Commission report drafts that we were hoping to develop by mid-year.
 Would also like to schedule a teleconference with everyone to discuss further about the timelines and development of the chapters. We'll come back with some proposed dates.
 Best regards,
 Vernon

From: Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>
Sent: Wednesday, April 15, 2020 2:01 PM
To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>;

'David Heymann' <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minInv.nl <c.bruschke@minInv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
 (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; scr1@cdc.gov <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; gmleung@hku.hk <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) ephpjb@nus.edu.sg <ephpjb@nus.edu.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; (b)(6) (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>

Subject: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear commissioners,

To discuss possible responses of the Lancet ID Pandemic Preparedness commission to the ongoing COVID-19 outbreak, we are organizing an ad-hoc meeting via video-conference on Zoom as suggested by some members of the commission.

The details of the meeting are as follows:

Date: 16 Apr 2020, Thursday

Time: 9:00am (CL GMT-4) / 2:00pm (UK GMT+1) / 9:00pm (HK SGP GMT+8)

Duration: 1 hour

Zoom Meeting ID: (b)(6)

Password: (b)(6)

Zoom Meeting Link:

(b)(6)

You can let me know if you would be able to join us for this meeting, and we hope to see you then.

Thank you.

On behalf of the secretariat,
Wycliffe

Other Ways to Connect to Zoom:

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) # US (Chicago)
(b)(6) # US (Houston)

Dial by your location

(b)(6) US (Chicago)
(b)(6) US (Houston)
(b)(6) US (New York)
(b)(6) US (San Jose)
(b)(6) US
(b)(6) US

Meeting ID: (b)(6)

Find your local number: (b)(6)

Join by SIP

(b)(6)

Join by H.323

(b)(6) (US West)
(b)(6) (US East)
(b)(6) (China)
(b)(6) (India Mumbai)
(b)(6) (India Hyderabad)
(b)(6) (EMEA)
(b)(6) (Australia)
(b)(6) (Hong Kong)
(b)(6) (Brazil)
(b)(6) (Canada)
(b)(6) (Japan)

Meeting ID: (b)(6)

Password: (b)(6)

From: Wycliffe Wei Enli (MOHH)

Sent: Sunday, 22 March 2020 4:21 pm

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>;

'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6)
 (b)(6) (b)(6) (b)(6) 'Karen TAN (MCI'
 <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael'
 <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6)
 (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org'
 <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW'
 <sean.cleghorn@lancet.com>; (b)(6) (b)(6)
 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu'
 <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>;
 'Ziad Memish' (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) 'ephpjv@nus.edu.sg'
 <ephpjv@nus.edu.sg>; 'Vernon LEE (MOH' <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong'
 <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6)
 'Wen Qing YEO (MOH' <YEO_Wen_Qing@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>;
 'Zalinah KADIS (MCI' <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: 'Constance LOW (MOH' <Constance_LOW@moh.gov.sg>; 'Nur ASHIKIN (MOH'
 <Nur_ASHIKIN@moh.gov.sg>; (b)(6) 'Vernon LEE (MOH'
 <Vernon_LEE@moh.gov.sg>; 'Muhammad AKMAL (MOH' <MUHAMMAD_Akmal@moh.gov.sg>;
 'Deborah NG (MOH' <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>;
 'Olivia OH (MOH' <Olivia_OH@moh.gov.sg>; 'Wycliffe WEI (MOH' <Wycliffe_WEI@moh.gov.sg>;
 'Constance LOW (MOH' <Constance_LOW@moh.gov.sg>; 'Felicia HONG (MOH'
 <Felicia_HONG@moh.gov.sg>; 'Olivia OH (MOH' <Olivia_OH@moh.gov.sg>
Subject: [Notes of Meeting] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

It was our pleasure to have hosted the meeting from 12 – 13 Mar 2020 and we thank all of you who managed to join us.

We have recorded notes from the meeting discussions and attach them here for your reference. We have also included another document to highlight key points and to provide an outline of the report with corresponding assignments.

Thank you once again, and we wish you well in this challenging time.

On behalf of the secretariat,
 Wycliffe

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 12 March 2020 10:31 pm

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl;

Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>;
 (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; gmlung@hku.hk; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) ephpjv@nus.edu.sg;
 Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmlung@hku.hk
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness Day 2	
Time: Mar 13, 2020 08:00 AM Singapore	
Join Zoom Meeting	
(b)(6)	
Meeting ID:	(b)(6)
Password:	(b)(6)
One tap mobile	
(b)(6)	US (San Jose)
(b)(6)	US (New York)
Dial by your location	
(b)(6)	US (San Jose)

(b)(6)	JS (New York)
Meeting ID:	(b)(6)
Find your local number:	(b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minInv.nl' <c.bruschke@minInv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
(b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6)
Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minInv.nl' <c.bruschke@minInv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
(b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihkweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

- 1) For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
- 2) For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 1</p> <p>Time: Mar 12, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p style="text-align: center;">(b)(6)</p> <p>Meeting ID: <input type="text" value="(b)(6)"/></p> <p>Password: <input type="text" value="(b)(6)"/></p> <p>One tap mobile</p> <p style="text-align: center;">(b)(6) US (San Jose) US (New York)</p> <p>Dial by your location</p> <p style="text-align: center;">(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: <input type="text" value="(b)(6)"/></p> <p>Find your local number:</p> <p style="text-align: center;"><input type="text" value="(b)(6)"/></p>	<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 2</p> <p>Time: Mar 13, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p style="text-align: center;">(b)(6)</p> <p>Meeting ID: <input type="text" value="(b)(6)"/></p> <p>Password: <input type="text" value="(b)(6)"/></p> <p>One tap mobile</p> <p style="text-align: center;">(b)(6) # US (San Jose) # US (New York)</p> <p>Dial by your location</p> <p style="text-align: center;">(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: <input type="text" value="(b)(6)"/></p> <p>Find your local number:</p> <p style="text-align: center;"><input type="text" value="(b)(6)"/></p>
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Table 2. Working documents

Section	Summary of Content	Action required
Introduction (i.e. ecology to changing risk)		

	Section	Summary of Content	Action required
1	<i>Introduction to the current risks and state of preparedness</i>	<ul style="list-style-type: none"> Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world 	<ul style="list-style-type: none"> Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
Public Health Ecology			
2	<p><i>A new ecology and a changing imperative</i></p> <p><< File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >></p>	<ul style="list-style-type: none"> Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology 	<ul style="list-style-type: none"> Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)			
3	<p>Building flexible preparedness components</p> <p>Lead: Daniel</p>	<p>Novel solutions / approach to building</p> <ul style="list-style-type: none"> Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership 	<p>Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:</p> <ul style="list-style-type: none"> What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures? <p>Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.</p>
4	<p>Info / big data - Risk assessment of diseases</p> <p>Lead: Kamran Khan</p>	<p>Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease</p>	
5	<p>Pharmaceutical and non-pharmaceutical interventions</p> <p>Lead: Richard</p> <p><< File: Lancet Commission Brainstorming Session v3.docx >></p>	<p>How do interventions need to change for the new ecology:</p> <ul style="list-style-type: none"> Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process 	
6	<p>Strategic communications and advocacy</p> <p>Lead: Karen Tan</p> <p><< File: Lancet article_final.docx >></p>	<p>Comms as a tool to manage epidemic threats.</p> <p>What are the new comms activities that are needed in the new ecology</p>	

	Section	Summary of Content	Action required
	Next Steps		
7	Next steps	Recommendations, timeline and measurables	Nil; to be discussed in Singapore in March 2020 Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a) Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness [Day 1]

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
US (New York)

Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
US (New York)

Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>
Sent: Thursday, 20 February 2020 10:09 PM
To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -
 Contact (b)(6) Bruschke, dr. C.J.M. (Christianne) <c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (EL-LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong <NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by **14 Feb 2020**.

Thank you and we appreciate your understanding.

	(Y/N)?
Still attending?	
Booked air tickets?	
If not attending in person, okay for teleconference?	

Regards,
Yijun

[MOH EMS](#)

(b)(6)

From: Vernon Lee
Sent: Wed, 10 Jun 2020 02:47:17 +0000
To: Wycliffe WEI (MOH); 'Annelise Wilder-Smith'; 'Ximena Aguilera'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'David Heymann'; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.
 [REDACTED] (b)(6) TAN
 (MCI); dandona@uw.edu; 'Jacobs, Michael'; 'Ngozi Erondu' [REDACTED] (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; Redd, Stephen (CDC/DDPHSIS/OD); 'Cleghorn, Sean' [REDACTED] (b)(6)
 Khan'; gmleung@hku.hk; 'Chikwe Ihekweazu'; eduardo.carmo@saude.gov.br; 'Ziad [REDACTED] (b)(6)
 ail.com; ephpjv@nus.edu.sg; Nkengasong, John (CDC africa-union.org); 'ID Commissioners Lancet'; Wen Qing YEO (MOH); 'Beatrice Bernard'; Zalinah KADIS (MCI)
Cc: Constance LOW (MOH); Vernon LEE (MOH); Deborah NG (MOH); Deborah Ng Hee Ling (NCID); Olivia OH (MOH); Constance LOW (MOH); Felicia HONG (MOH); Olivia OH (MOH)
Subject: Re: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear Commissions,

Hope you're safe during this challenging time.

Apologies for the silence for a while due to the local COVID situation.

As countries are now opening up and we're entering a different global phase of the pandemic, am writing to catch up with everyone on the development of the chapters, and if we could still write something about the COVID situation from the pandemic preparedness standpoint that would add to the literature on the topic.

We'll be sending around the notes from the earlier discussions, and also the timelines of the Commission report drafts that we were hoping to develop by mid-year.

Would also like to schedule a teleconference with everyone to discuss further about the timelines and development of the chapters. We'll come back with some proposed dates.

Best regards,

Vernon

From: Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>

Sent: Wednesday, April 15, 2020 2:01 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minInv.nl <c.bruschke@minInv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; [REDACTED] (b)(6) [REDACTED] (b)(6)
 [REDACTED] (b)(6) [REDACTED] (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; [REDACTED] (b)(6) [REDACTED] (b)(6) riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; scr1@cdc.gov <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; [REDACTED] (b)(6) [REDACTED] (b)(6) 'Kamran Khan'

<Kamran@bluedot.global>; gmleung@hku.hk <gmleung@hku.hk>; 'Chikwe Ihekweazu'
 <chikwe.ihékweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>;
 'Ziad Memish' (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) ephpv@nus.edu.sg
 <ephpv@nus.edu.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners
 Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>;
 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)
 <Nur_ASHIKIN@moh.gov.sg>; (b)(6) (b)(6) Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah
 NG (MOH) <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID <deborah_ng@ncid.sg>; Olivia OH
 (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>; Constance LOW
 (MOH) <Constance_LOW@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Olivia OH
 (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear commissioners,

To discuss possible responses of the Lancet ID Pandemic Preparedness commission to the ongoing COVID-19 outbreak, we are organizing an ad-hoc meeting via video-conference on Zoom as suggested by some members of the commission.

The details of the meeting are as follows:

Date: 16 Apr 2020, Thursday
Time: 9:00am (CL GMT-4) / 2:00pm (UK GMT+1) / 9:00pm (HK SGP GMT+8)
Duration: 1 hour

Zoom Meeting ID: (b)(6)
Password: (b)(6)
Zoom Meeting Link:
 (b)(6)

You can let me know if you would be able to join us for this meeting, and we hope to see you then.

Thank you.

On behalf of the secretariat,
Wycliffe

Other Ways to Connect to Zoom:

Meeting ID: (b)(6)
 Password: (b)(6)

One tap mobile

(b)(6)	# US (Chicago)
	# US (Houston)

Dial by your location

(b)(6)	US (Chicago)
	US (Houston)
	US (New York)
	US (San Jose)
	US
	US

Meeting ID: (b)(6)

Find your local number: (b)(6)

Join by SIP

(b)(6)

Join by (b)(6)

(b)(6)	(US West)
(b)(6)	(US East)
(b)(6)	(China)
(b)(6)	(India Mumbai)
(b)(6)	(India Hyderabad)
(b)(6)	(EMEA)
(b)(6)	(Australia)
(b)(6)	(Hong Kong)
(b)(6)	(Brazil)
(b)(6)	Canada
(b)(6)	(Japan)

Meeting ID: (b)(6)

Password: (b)(6)

From: Wycliffe Wei Enli (MOHH)**Sent:** Sunday, 22 March 2020 4:21 pm

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6); (b)(6); (b)(6); (b)(6) 'Karen TAN (MCI)' <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; (b)(6); (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6); (b)(6); 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmlung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihhekweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6); (b)(6); (b)(6)

'eyesofchinablue@gmail.com' [REDACTED] [REDACTED]
 [REDACTED] [REDACTED] [REDACTED] 'ephjv@nus.edu.sg'
 <ephjv@nus.edu.sg>; 'Vernon LEE (MOH' <Vernon.LEE@moh.gov.sg>; 'John N. Nkengasong'
 <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' [REDACTED]
 'Wen Qing YEO (MOH' <YEO_Wen_Qing@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>;
 'Zalinah KADIS (MCI' <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: 'Constance LOW (MOH' <Constance_LOW@moh.gov.sg>; 'Nur ASHIKIN (MOH'
 <Nur_ASHIKIN@moh.gov.sg>; [REDACTED] 'Vernon LEE (MOH'
 <Vernon.LEE@moh.gov.sg>; 'Muhammad AKMAL (MOH' <MUHAMMAD_Akmal@moh.gov.sg>;
 'Deborah NG (MOH' <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>;
 'Olivia OH (MOH' <Olivia_OH@moh.gov.sg>; 'Wycliffe WEI (MOH' <Wycliffe_WEI@moh.gov.sg>;
 'Constance LOW (MOH' <Constance_LOW@moh.gov.sg>; 'Felicia HONG (MOH'
 <Felicia_HONG@moh.gov.sg>; 'Olivia OH (MOH' <Olivia_OH@moh.gov.sg>
Subject: [Notes of Meeting] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

It was our pleasure to have hosted the meeting from 12 – 13 Mar 2020 and we thank all of you who managed to join us.

We have recorded notes from the meeting discussions and attach them here for your reference. We have also included another document to highlight key points and to provide an outline of the report with corresponding assignments.

Thank you once again, and we wish you well in this challenging time.

On behalf of the secretariat,
 Wycliffe

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 12 March 2020 10:31 pm
To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; [REDACTED] [REDACTED] Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; peter.horby@gmail.com; riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; [REDACTED] Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk; Chikwe Ihekweazu <chikwe.ihkweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish <zmemish@yahoo.com>; ConstanceLow77@gmail.com; [REDACTED] [REDACTED] [REDACTED] ephjv@nus.edu.sg;
 Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon.LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet

(b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>;
 Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah
 KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmluong@hku.hk
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)
 <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee <(b)(6)>; Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>;
 Deborah ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH)
 <Wycliffe_WEI@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar
 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness Day 2	
Time: Mar 13, 2020 08:00 AM Singapore	
Join Zoom Meeting	
(b)(6)	
Meeting ID:	(b)(6)
Password:	(b)(6)
One tap mobile	
(b)(6)	US (San Jose)
(b)(6)	US (New York)
Dial by your location	
(b)(6)	US (San Jose)
(b)(6)	US (New York)
Meeting ID:	(b)(6)
Find your local number:	(b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,

Yijun

MOH EMS

[3S-id=7ade4388-60c7-4274-bf7f-7223be0a8abe:531ed8c6]

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minInv.nl' <c.bruschke@minInv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
(b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6); 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6)
Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
Yijun

MOH EMS

[3S-id=d9fbab4f-46f6-4cdd-b770-214cf61c3fc4:531ed8c6]

From: Yijun LIN (MOH)**Sent:** Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
 (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondur' <Ngozi.Erondur@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihhekweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

- 1) For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)

- 2) For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 1</p> <p>Time: Mar 12, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p>(b)(6)</p> <p>Meeting ID: (b)(6)</p> <p>Password: (b)(6)</p> <p>One tap mobile</p> <p>(b)(6) US (San Jose) US (New York)</p> <p>Dial by your location</p> <p>(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: (b)(6)</p> <p>Find your local number:</p> <p>(b)(6)</p>	<p>Topic: Lancet ID Commission on Pandemic Preparedness Day 2</p> <p>Time: Mar 13, 2020 08:00 AM Singapore</p> <p>Join Zoom Meeting</p> <p>(b)(6)</p> <p>Meeting ID: (b)(6)</p> <p>Password: (b)(6)</p> <p>One tap mobile</p> <p>(b)(6) US (San Jose) US (New York)</p> <p>Dial by your location</p> <p>(b)(6) US (San Jose) US (New York)</p> <p>Meeting ID: (b)(6)</p> <p>Find your local number:</p> <p>(b)(6)</p>
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Table 2. Working documents

Section	Summary of Content	Action required
Introduction (i.e. ecology to changing risk)		
1	<p><i>Introduction to the current risks and state of preparedness</i></p> <ul style="list-style-type: none"> Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world 	<ul style="list-style-type: none"> Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
Public Health Ecology		

	Section	Summary of Content	Action required
2	<p><i>A new ecology and a changing imperative</i></p> <p><< File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >></p>	<ul style="list-style-type: none"> Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology 	<ul style="list-style-type: none"> Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)			
3	<p>Building flexible preparedness components</p> <p>Lead: Daniel</p>	<p>Novel solutions / approach to building</p> <ul style="list-style-type: none"> Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership 	<p>Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:</p> <ul style="list-style-type: none"> What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures? <p>Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.</p>
4	<p>Info / big data - Risk assessment of diseases</p> <p>Lead: Kamran Khan</p>	<p>Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease</p>	
5	<p>Pharmaceutical and non-pharmaceutical interventions</p> <p>Lead: Richard</p> <p><< File: Lancet Commission Brainstorming Session v3.docx >></p>	<p>How do interventions need to change for the new ecology:</p> <ul style="list-style-type: none"> Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process 	
6	<p>Strategic communications and advocacy</p> <p>Lead: Karen Tan</p> <p><< File: Lancet article_final.docx >></p>	<p>Comms as a tool to manage epidemic threats.</p> <p>What are the new comms activities that are needed in the new ecology</p>	
Next Steps			
7	Next steps	Recommendations, timeline and measurables	

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

[3S-id=e95de6a0-7da4-4fbf-84c6-397bc4b8408f:531ed8c6]

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>**Sent:** 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahimia Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a) Teleconferencing instructionsTopic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: 094224

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) JS (San Jose)
(b)(6) JS (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish [REDACTED] John N. Nkengasong <NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmluong@hku.hk; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; [REDACTED] Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee [REDACTED] Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

[MOH EMS](#)

[REDACTED]

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon Lee [REDACTED] Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

	(Y/N)?
Still attending?	
Booked air tickets?	

If not attending in person, okay for teleconference?	
---	--

Regards,
Yijun

[MOH EMS](#)

(b)(6)

Elsevier Limited. Registered Office: The Boulevard, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom, Registration No. 1982084, Registered in England and Wales.

From: Peter Horby
Sent: Wed, 15 Jan 2020 13:47:48 +0000
To: Rebeka Yasmin
Cc: Richard Hatchett;Annelise Wilder-Smith;ximena aguilera;Amadou.SALL@pasteur.sn;John Nkengasong (Dr);Redd, Stephen (CDC/DDPHSIS/OD);Daniel Bausch;Yijun LIN (MOH);David Heymann;Constance LOW [REDACTED] LEE (MOH);Vernon Lee
Subject: Re: Lancet WG 5 call - availability request

Dear Rebekah,
 Apologies but I probably cannot make the call today, as it now clashes with a WHO call about the novel coronavirus.
 Peter

On 26 Nov 2019, at 15:59, Rebeka Yasmin <rebeka.yasmin@cepi.net> wrote:

Dear all,

You should now all have access to the SharePoint folder. If you are still unable to gain access to the documents, please email me and let me know.

The next call will be scheduled for late next week. I've listed some potential times below, please can you confirm whether they work for you?

Thursday 5 December 8am DC/10am Chile/1pm London & Senegal/4pm Ethiopia

Friday 6 December at 11am DC/1pm Chile/4pm London and Senegal/7pm Ethiopia

Thank you,

Rebeka

From: Richard Hatchett <richard.hatchett@cepi.net>
Sent: 24 November 2019 23:30
To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; [REDACTED] Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee [REDACTED]
Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>
Subject: LAncet WG 5 call notes and next steps

Dear all,

Some of you have continued to have trouble with the SharePoint site and if any of you still can't access it on the link that I sent Friday (which try cutting and pasting into your web browser rather than clicking), please let my Executive Assistant, Ms. Rebeka Yasmin, know and she or CEPI IT can troubleshoot with you. Rebeka will be able to assist on Monday. In the interim, I have attached the latest draft of the document that Peter and David and I have worked up to guide further progress, as well as a summary of Friday's call. If Sharepoint is working, all documents are available at (b)(6)

The major output of the call was that we want to start getting ideas and some draft text down on paper. We'll obviously need to massage and edit what we collectively assemble so that it speaks with one voice, but beginning to develop some of the vignettes and themes in a more comprehensive way will help us both gather momentum and clarify our focus.

We'll organize another call in about two weeks' time, but much of the progress can be managed via e-mail and small writing teams. For those who weren't able to join the call today, I would welcome your self-identifying if there are any particular areas where you would like to make contributions and highlighting any potential vignettes that illustrate the themes we will be amplifying.

Best regards,
Richard

RICHARD HATCHETT
CEO

[<image003.png>](#)

(b)(6)
richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK
Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

From: Daniel Bausch
Sent: Wed, 15 Jan 2020 18:38:33 +0000
To: Richard Hatchett;Ziad Memish;Annelise Wilder-Smith
Cc: Rebeka Yasmin;ximena aguilera;Amadou.SALL@pasteur.sn;John Nkengasong (Dr);Redd, Stephen (CDC/DDPHSIS/OD);Yijun LIN (MOH);David Heymann;Peter [redacted] LOW (MOH);Vernon LEE (MOH);Vernon Lee;Donnelly, Christl A
Subject: RE: Lancet WG 5 call - availability request

Apologies all. In Goma, DRC and connection failed me.

Regards,
D.

From: Richard Hatchett <richard.hatchett@cepi.net>
Sent: 15 January 2020 16:18
To: Ziad Memish [redacted] Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>
Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@moh.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; [redacted] Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee [redacted] Donnelly, Christl A <c.donnelly@imperial.ac.uk>
Subject: RE: Lancet WG 5 call - availability request

Join Zoom Meeting

[redacted] (b)(6)

Meeting ID: [redacted] (b)(6)

Password: [redacted] (b)(6)

Dial by your location

(b)(6)	US Toll-free
(b)(6)	US Toll-free

(b)(6)	United Kingdom
(b)(6)	United Kingdom
(b)(6)	United Kingdom Toll-free

(b)(6)	Chile
(b)(6)	Chile
(b)(6)	Chile Toll-free

Meeting ID: [redacted] (b)(6)

Find your local number

Join by SIP

Join by

(US West)

(US East)

(China)

(India Mumbai)

(India Hyderabad)

(EMEA)

(Australia)

(Hong Kong)

(Brazil)

Canada

(Japan)

Meeting ID:

Password:

From: Ziad Memish

Sent: 15 January 2020 15:33

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>

Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>; ximena aguiler a <xaguilera@udd.cl>;
Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; Redd, Stephen
 (CDC/DDPHSIS/OD) <scr1@cdc.gov>; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH)
 <LIN_Yijun@moh.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby
 <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH)
 <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee
 Donnelly, Christl A <c.donnelly@imperial.ac.uk>; Richard Hatchett
 <richard.hatchett@cepi.net>

Subject: Re: Lancet WG 5 call - availability request

Same here please. Im in Edinbrough

Ziad

Sent from my iPhone

On Jan 15, 2020, at 3:32 PM, Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk> wrote:

Kindly let me know the dial in information for the call that is starting now.

Many thanks, Annelies

Annelies Wilder-Smith MD PhD
 Professor of Emerging Infectious Diseases
 Department of Disease Control
 London School of Hygiene and Tropical Medicine
 &
 Editor-in-Chief, Journal of Travel Medicine
 &
 Chair, Lancet Commission on arboviral diseases
 &
 WHO Consultant, Vaccines for arboviruses
 &
 ZikaPLAN, Scientific Coordinator

From: Rebeka Yasmin <rebeka.yasmin@cepi.net>
Date: Thursday, 9 January 2020 at 1:06 PM
To: Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera Sanhueza <xaguilera@udd.cl>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, Dr John Nkengasong <NkengasongJ@africa-union.org>, "Redd, Stephen (CDC/DDPHSIS/OD)" <scr1@cdc.gov>, Daniel Bausch <daniel.bausch@phe.gov.uk>, "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, David Heymann <David.Heymann@LSHTM.ac.uk>, Peter Horby <peter.horby@ndm.ox.ac.uk>, Peter Horby <(b)(6)> "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, Ziad Memish <(b)(6)> "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Vernon Lee <(b)(6)> "Donnelly, Christl A" <c.donnelly@imperial.ac.uk>
Cc: Richard Hatchett <richard.hatchett@cepi.net>
Subject: RE: Lancet WG 5 call - availability request

Dear all,

We would like to arrange the next working group call for early next week. Please can you confirm whether either of the options below work for you?

Tuesday 14 January

0730 DC/09.30 Chile/ 12.00 London and Senegal/ 15.00 Addis Ababa

Wednesday 15 January

10.30 DC/12.30 Chile/15.30 London and Senegal/18.30 Addis Ababa

Best regards,

Rebeka

From: Rebeka Yasmin

Sent: 26 November 2019 16:00

To: Richard Hatchett <richard.hatchett@cepi.net>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>;
(b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee
(b)(6)

Subject: RE: Lancet WG 5 call - availability request

Dear all,

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Thank you,

Rebeka

From: Richard Hatchett <richard.hatchett@cepi.net>

Sent: 24 November 2019 23:30

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6)

Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>

Subject: LAncet WG 5 call notes and next steps

Dear all,

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Friday's call. If Sharepoint is working, all documents are available at

(b)(6)

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We'll organize another call in about two weeks' time, but much of the progress can be managed via e-mail and small writing teams. For those who weren't able to join the call today, I would welcome your self-identifying if there are any particular areas where you would like to make contributions and highlighting any potential vignettes that illustrate the themes we will be amplifying.

Best regards,
Richard

RICHARD HATCHETT
CEO

[<image001.png>](#)



(b)(6)

richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK
Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

[<image001.png>](#)

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From: Vernon Lee
Sent: Sat, 18 Jan 2020 08:58:35 +0000
To: Constance LOW (MOH);Daniel Bausch;John N. Nkengasong;Redd, Stephen (CDC/DDPHSIS/OD);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;annelies.wilder-smith@lshtm.ac.uk;xaguilera@udd.cl;Amadou.SALL@pasteur.sn;c.bruschke@minInv.nl;deanmed@hku.
 [REDACTED] TAN
 (MCI);dandona@uw.edu;Jacobs,
 [REDACTED]
 [REDACTED] - Contact;Chikwe Ihekweazu;Kamran Khan;eduardo.carmo@saude.gov.br;Ziad Memish;Donnelly, Christl A;gmleung@hku.hk
Cc:
 [REDACTED]
 jun LIN (MOH);ephpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG
 [REDACTED] Qing YEO (MOH);sean.cleghorn@lancet.com;ID Commissioners Lancet
Subject: Re: Lancet ID Commission updates

Hi everyone,

We've had a few questions about the March 12-13 meeting.

The meeting on March 12-13 (Thursday and Friday) is confirmed and the venue will be in Singapore.

Appreciate your patience as we finalise some of the details with the sponsoring institution, and we'll send you the invites with the travel reimbursement details very soon so that you can book your flights for those who require the exact reimbursement details. We'll be booking the hotel rooms similar as before, so you will just have to let us know how many nights you'll be in town for.

On another note, there's going to be a lot of activity on preparedness this year, with WHO, the GPMB, and many other countries making it a priority area. In this regard, we are hoping that we can complete our report as planned before the end of the year, and also to write some other articles that can be packaged together with the report. We can discuss in further detail when we meet.

See you all in Singapore, March 12-13!

Best regards,

Vernon

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Wednesday, January 15, 2020 9:15 AM

To: Vernon Lee [REDACTED] Daniel Bausch <Daniel.Bausch@phe.gov.uk>; John N. Nkengasong <Nkengasongj@africa-union.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk <annelies.wilder-smith@lshtm.ac.uk>; xaguilera@udd.cl <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minInv.nl <c.bruschke@minInv.nl>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; [REDACTED] (b)(6)

[REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk <Ngozi.Erond@lshtm.ac.uk>; (b)(6) (b)(6) riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; (b)(6) - Contact (b)(6) Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; Kamran Khan <Kamran@bluedot.global>; eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; Ziad Memish (b)(6) Donnelly, Christl A <c.donnelly@imperial.ac.uk>; gmleung@hku.hk <gmleung@hku.hk>
Cc: (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; (b)(6) (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; sean.cleghorn@lancet.com <sean.cleghorn@lancet.com>; ID Commissioners Lancet (b)(6)
Subject: RE: Lancet ID Commission updates

Message Classification: Restricted

Dear Commissioners,

Hope everyone had a good break and is doing well.

We are re-attaching the draft of the first 2 chapters for comments and we look forward to receiving updates from workgroups 3 to 6 by end of Jan pls.

Thanks and best regards,
 Vernon and team

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Vernon Lee (b)(6)
Sent: Thursday, 5 December 2019 3:24 PM
To: Daniel Bausch <Daniel.Bausch@phe.gov.uk>; John N. Nkengasong <NkengasongJ@africa-union.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; BRIAND, Sylvie <briands@who.int>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; FALL, Ibrahima Soce <socef@who.int>; ID Commissioners Lancet (b)(6) David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; (b)(6) - Contact (b)(6) Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; Kamran Khan <Kamran@bluedot.global>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) Donnelly, Christl A <c.donnelly@imperial.ac.uk>
Cc: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>;

(b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>;

sean.cleghorn@lancet.com

Subject: Re: Lancet ID Commission updates

Dear Commissioners,

Hope you're doing well.

I'm attaching the draft of the first 2 chapters that the teams have been working on. They are still work in progress but much work has been done, and I wanted to update you and also see if you have any comments as we continue to work on these.

We look forward to receiving the updates from workgroups 3 to 6 by end Dec/early Jan.

Happy holidays and hope to see everyone soon.

Best regards,

Vernon

From: Annelise Wilder-Smith
Sent: Wed, 22 Jan 2020 05:36:27 +0000
To: John N. Nkengasong;Ximena Aguilera
Cc: Rebeka Yasmin;Amadou.SALL@pasteur.sn;Redd, Stephen (CDC/DDPHSIS/OD);Daniel Bausch;Yijun LIN (MOH);David Heymann;Constance LOW (b)(6) LEE (MOH);Vernon Lee;Donnelly, Christl A;Richard Hatchett
Subject: coronavirus Wuhan

Dear Lancet Commission on preparedness,
 We have a new pandemic at hand. Yesterday I listened to the clinical descriptions by a Chinese physician who is intricately involved in the clinical management. Totally reminiscent of SARS.
 This paper analysed the travel patterns and the most likely first "receiving" countries/ cities of the Wuhan coronavirus:

[Pneumonia of Unknown Etiology in Wuhan, China: Potential for International Spread Via Commercial Air Travel](#). Bogoch II, Watts A, Thomas-Bachli A, Huber C, Kraemer MUG, Khan K.J Travel Med. 2020 Jan 14. pii: taaa008. doi: 10.1093/jtm/taaa008.

If you look at their table, exactly what they predicted has happened....

Kind regards, Annelies

From: Dr John Nkengasong <NkengasongJ@africa-union.org>
Date: Wednesday, 15 January 2020 at 4:39 PM
To: Ximena Aguilera Sanhueza <xaguilera@udd.cl>
Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>, Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, "Redd, Stephen (CDC/DDPHSIS/OD)" <scr1@cdc.gov>, Daniel Bausch <daniel.bausch@phe.gov.uk>, "Yijun LIN (MOH)" <LIN_Yijun@moh.gov.sg>, David Heymann <David.Heymann@LSHTM.ac.uk>, Peter Horby <peter.horby@ndm.ox.ac.uk>, Peter Horby (b)(6) "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, Ziad Memish (b)(6) "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Vernon Lee (b)(6) "Donnelly, Christl A" <c.donnelly@imperial.ac.uk>, Richard Hatchett <richard.hatchett@cepi.net>
Subject: Re: Lancet WG 5 call - availability request

Sent from my iPhone

On Jan 9, 2020, at 9:06 AM, Ximena Aguilera <xaguilera@udd.cl> wrote:
 Next week is okay for me - Thursday or Friday next week as I am traveling beginning of week.
 John
 Dear Rebeka,

I am afraid I will not be able to participate. I will be traveling (b)(6) next week, without roaming.

I am very sorry, and I will be available for the rest of January.

Best regards,

Ximena

Dra. Ximena Aguilera Sanhueza

Directora

CEPS|Centro de Epidemiología y Políticas de Salud

Facultad de Medicina Clínica Alemana - Universidad del Desarrollo

Dirección postal: Las Condes 12438, Lo Barnechea. Santiago Chile CP 771-0162

Fono: (b)(6)

E-mail: xaguilera@udd.cl

<image002.jpg>

De: Rebeka Yasmin <rebeka.yasmin@cepi.net>

Enviado el: jueves, 9 de enero de 2020 9:07

Para: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; (b)(6) Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6) Donnelly, Christl A <c.donnelly@imperial.ac.uk>

CC: Richard Hatchett <richard.hatchett@cepi.net>

Asunto: RE: Lancet WG 5 call - availability request

Dear all,

We would like to arrange the next working group call for early next week. Please can you confirm whether either of the options below work for you?

Tuesday 14 January

0730 DC/09.30 Chile/ 12.00 London and Senegal/ 15.00 Addis Ababa

Wednesday 15 January

10.30 DC/12.30 Chile/15.30 London and Senegal/18.30 Addis Ababa

Best regards,

Rebeka

From: Rebeka Yasmin

Sent: 26 November 2019 16:00

To: Richard Hatchett <richard.hatchett@cepi.net>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>

smith@lshtm.ac.uk>; ximena aguiler a <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman n@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>;

(b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee

(b)(6)

Subject: RE: Lancet WG 5 call - availability request

Dear all,

You should now all have access to the SharePoint folder. If you are still unable to gain access to the documents, please email me and let me know.

The next call will be scheduled for late next week. I've listed some potential times below, please can you confirm whether they work for you?

Thursday 5 December 8am DC/10am Chile/1pm London & Senegal/4pm Ethiopia

Friday 6 December at 11am DC/1pm Chile/4pm London and Senegal/7pm Ethiopia

Thank you,

Rebeka

From: Richard Hatchett <richard.hatchett@cepi.net>

Sent: 24 November 2019 23:30

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguiler a <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman n@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6)

Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>

Subject: LANCet WG 5 call notes and next steps

Dear all,

Some of you have continued to have trouble with the SharePoint site and if any of you still can't access it on the link that I sent Friday (which try cutting and pasting into your web browser rather than clicking), please let my Executive Assistant, Ms. Rebeka Yasmin, know and she or CEPI IT can troubleshoot with you. Rebeka will be able to assist on Monday. In the interim, I have attached the latest draft of the document that Peter and David and I have worked up to guide further progress, as well as a summary of Friday's call. If Sharepoint is working, all documents are available at

(b)(6)

The major output of the call was that we want to start getting ideas and some draft text down on paper. We'll obviously need to massage and edit what we collectively assemble so that it speaks with one voice, but beginning to develop some of the vignettes and themes in a more comprehensive way will help us both gather momentum and clarify our focus.

We'll organize another call in about two weeks' time, but much of the progress can be managed via e-mail and small writing teams. For those who weren't able to join the call today, I would welcome your self-identifying if there are any particular areas where you would like to make contributions and highlighting any potential vignettes that illustrate the themes we will be amplifying.

Best regards,
Richard

RICHARD HATCHETT
CEO

[<image001.png>](#)

(b)(6)
richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK
Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

From: jane halton
Sent: Wed, 24 Jun 2020 12:52:09 +0000
To: Daniel Bausch
Cc: Yijun Lin;Annelise Wilder-Smith;Ximena Aguilera;BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;deanmed@hku.hk;cfetpyhj@vip.sina.com (b)(6)
 (b)(6) TAN (MCI;dandona@uw.edu;Jacobs, Michael;Ngozi
 (b)(6) @cepi.net;Ryan.Morhard@weforum.org;Redd, Stephen
 (CDC/DDPHSIS/OD);Cleghorn, Sean (b)(6) - Contact;Kamran
 Khan;gmleung@hku.hk;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad
 (b)(6)
 edu.sg;Vernon LEE (MOH;Nkengasong, John (CDC africa-union.org);ID Commissioners Lancet;Wen Qing
 YEO (MOH;Beatrice Bernard;Zalinah KADIS (MCI;Constance LOW (MOH;Nur ASHIKIN
 (b)(6) AKMAL (MOH;Deborah NG (MOH;Deborah Ng Hee Ling
 (NCID);Olivia OH (MOH;Wycliffe WEI (MOH;Felicia HONG (MOH;Yijun LIN (MOH)
Subject: Re: Lancet commission ID meeting 24 Jun 2020

Greetings

I too may not be able to attend as it will be past midnight here. Look forward to hearing outcomes,

Regards

Jane

Sent from my iPad

On 24 Jun 2020, at 10:43 pm, Daniel Bausch <Daniel.Bausch@phe.gov.uk> wrote:

Dear all,

Speaking in the Africa CDC COVID-19 Vaccine conference this afternoon as well as some other pressing issues to resolve on the UK side. Will join our Lancet Commission call if I can finish all that in time.

Although I can't claim that we've made incredible progress on our section (usual COVID-19 time sink, with which I know all familiar), Ngozi and I have recently regrouped and recommitted to moving it forward.

Best,
Dan

-----Original Appointment-----

From: wycliffe.wei@mohh.com.sg <wycliffe.wei@mohh.com.sg> **On Behalf Of** Yijun Lin
Sent: 20 June 2020 06:24

To: Yijun Lin; Annelise Wilder-Smith; Ximena Aguilera; BRIAND, Sylvie; FALL, Ibrahima Soce; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel Bausch; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI; dandona@uw.edu; Jacobs, Michael; Ngozi Erundu; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW; (b)(6) - Contact; Kamran Khan; gmleung@hku.hk; Chikwe Ihekweazu; eduardo.carmo@saude.gov.br; Ziad Memish; (b)(6) (b)(6) (b)(6) ephpjv@nus.edu.sg; Vernon LEE (MOH; John N. Nkengasong; ID Commissioners Lancet; Wen Qing YEO (MOH; Beatrice Bernard; Zalinah KADIS (MCI; gmleung@hku.hk; Constance LOW (MOH; Nur ASHIKIN (MOH; (b)(6) Vernon LEE (MOH; Muhammad AKMAL (MOH; Deborah NG (MOH; Deborah Ng Hee Ling (NCID); Olivia OH (MOH; Wycliffe WEI (MOH; Constance LOW (MOH; Felicia HONG (MOH; Olivia OH (MOH; (b)(6) Yijun LIN (MOH)

Subject: Lancet commission ID meeting 24 Jun 2020

When: 24 June 2020 22:00 to 25 June 2020 00:30 (UTC+08:00) Kuala Lumpur, Singapore.

Where: (b)(6)

Dear Commissioners,

This is the accompanying calendar invite for the meeting.

Topic: Lancet commission ID meeting 24 Jun 2020

Time: Jun 24, 2020 10:00 PM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (Houston)

(b)(6) US (New York)

Dial by your location

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 US (Houston)
 US (New York)
 US (San Jose)
 US (Tacoma)
 US (Germantown)
 US (Chicago)

Meeting ID: (b)(6)

Password: (b)(6)

Find your local number: (b)(6)

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Join by (b)(6)

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(b)(6) (US East)

(b)(6) (India Mumbai)

(b)(6) (India Hyderabad)

(b)(6) (EMEA)

(b)(6) (Australia)

(b)(6) (Hong Kong SAR)

(b)(6) (Brazil)

(b)(6) (Canada)

(b)(6) (Japan)

Meeting ID: (b)(6)

Password: (b)(6) << File: Zoom-Meeting.ics >>

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From: Vernon LEE (MOH)
Sent: Sat, 27 Jun 2020 09:57:54 +0000
To: wycliffe.wei@mohh.com.sg;Annelise Wilder-Smith;Ximena Aguilera;BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minInv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
 [REDACTED] (b)(6) TAN
 (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi Erondu;riha@cepi.net;Ryan.Morhard@weforum.org;Redd, Stephen (CDC/DDPHSIS/OD);Cleghorn, Sean
 [REDACTED] (b)(6) Khan;gmleung@hku.hk;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad
 [REDACTED] (b)(6)
 ail.com;ephjv@nus.edu.sg;Nkengasong, John (CDC africa-union.org);ID Commissioners Lancet;Wen Qing YEO (MOH);Beatrice Bernard;Zalinah KADIS (MCI);gmleung@hku.hk;peter.horby@ndm.ox.ac.uk
Cc: Constance LOW (MOH);Nur ASHIKIN
 [REDACTED] (b)(6) AKMAL (MOH);Deborah NG (MOH);Deborah Ng Hee Ling (NCID);Olivia OH (MOH);Wycliffe WEI (MOH);Constance LOW (MOH);Felicia HONG (MOH);Olivia OH
 [REDACTED] (b)(6) LIN (MOH)
Subject: RE: [Notes from Meeting and Follow-Up] Lancet ID Commission

Message Classification: *Restricted*

Thanks so much everyone for the participation and the help so far.

We understand that COVID-19 is keeping everyone busy and therefore have asked the groups to develop a 2-pager on the pertinent points for the report.

Some groups have already done substantial work and therefore the submission could be a more detailed chapter beyond the 2 pages.

We hope that the groups are able to adhere to this deadline so that we can review the drafts and provide inputs before expanding on the content.

If there's any issues with the group assignments pls feel free to suggest changes.

Cheers,
 Vernon

MOH EMS

[REDACTED] (b)(6)

From: Wycliffe Wei Enli (MOHH) <wycliffe.wei@mohh.com.sg>
Sent: Saturday, 27 June 2020 4:35 PM
To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; [REDACTED] (b)(6)
 [REDACTED] (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs,

Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk; Chikwe Ihekweazu <chikwe.ihkweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) ephpjv@nus.edu.sg; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk; peter.horby@ndm.ox.ac.uk
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Notes from Meeting and Follow-Up] Lancet ID Commission

Dear Commissioners,

Thanks to all who managed to attend the meeting. We have written up notes from the meeting on 24 Jun 2020, which is attached below.

2. As discussed, groups would each write up a 2-page document on the key messages pertaining to their assigned section. This need not be a polished document and could even be in bullet points. The deadline for this would be **July 15, 2020 (Wed)**.
3. The aim of this is to put important points down on paper. These would then be reviewed and refined, before being further worked into complete chapters.
4. The notes of meeting, a summary of discussion points organised by revised report sections and assignment of commissioners to sections are attached for reference and to guide the write-up. Please note that there are updates to the assignment of commissioners to sections; all commission members are now assigned to sections.
5. Please send me the write-ups when completed and we would collate them for further consideration.

Thank you.

Attachments

A. Notes of Meeting for 24 Jun 2020

B. Comments for each chapter to take note of

Summary of previous discussion points organised by revised report sections

C. Assignment of Commissioners to Sections of the Report

Best regards,
Wycliffe

From: Wycliffe Wei Enli (MOHH)
Sent: Saturday, 20 June 2020 1:11 pm
Subject: [Meeting Details] Lancet ID Commission

Dear commissioners,

Thank you for the responses. As most are available, we will meet as previously proposed. The meeting details are as follows:

24 Jun 2020 (Wed)
Start Time: 1000hrs GMT-4 | 1500hrs GMT+1 | 1600hrs GMT+2 | 2200hrs GMT+8
Duration: 1 hour

Zoom Meeting Details

(b)(6)

Meeting ID: (b)(6)
Password: (b)(6)

The meeting will discuss the timelines and progress of the report.

The materials from previous meetings are attached below in the email thread, for your reference. We look forward to seeing you at the meeting.

On behalf of the secretariat,
Wycliffe

<< File: Zoom-Meeting.ics >>

Join Zoom Meeting
(b)(6)

Meeting ID: (b)(6)
Password: (b)(6)

One tap mobile
(b)(6) (b)(6) US (Houston)
+1 (b)(6) US (New York)

Dial by your location

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US (Houston)
US (New York)
US (San Jose)
US (Tacoma)
US (Germantown)
US (Chicago)

Meeting ID: (b)(6)

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Find your local number (b)(6)

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(b)(6) (India Mumbai)

(b)(6) (India Hyderabad)

(b)(6) (EMEA)

(b)(6) (Australia)

(b)(6) (Hong Kong SAR)

(b)(6) (Brazil)

(b)(6) (Canada)

(b)(6) (Japan)

Meeting ID: (b)(6)

Password: (b)(6)

From: Wycliffe Wei Enli (MOHH)
Sent: Wednesday, 17 June 2020 11:33 pm
Subject: [Upcoming Meeting] Lancet ID Commission

Dear commissioners,

To further discuss the timelines and progress of the report, we are scheduling a teleconference in the coming week and would like to check on your availability.

We are proposing to meet next week at the following time,

24 Jun 2020 (Wed)

Start Time: 1000hrs GMT-4 | 1600hrs GMT+2 | 2200hrs GMT+8

Duration: 1 hour

May I request that you indicate your availability [here](#) on a Google Form by the end of this week please.

Attached below in the forwarded email thread are materials from the previous meetings, namely the notes of meeting and drafts of the previous sections, for your reference.

Thank you, and I look forward to your responses. The online meeting details will then be confirmed in a subsequent email.

On behalf of the secretariat,
Wycliffe

From: Vernon Lee (b)(6)
Sent: Wednesday, 10 June 2020 10:47 am
Subject: Re: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear Commissions,

Hope you're safe during this challenging time.
Apologies for the silence for a while due to the local COVID situation.

As countries are now opening up and we're entering a different global phase of the pandemic, am writing to catch up with everyone on the development of the chapters, and if we could still write something about the COVID situation from the pandemic preparedness standpoint that would add to the literature on the topic.

We'll be sending around the notes from the earlier discussions, and also the timelines of the Commission report drafts that we were hoping to develop by mid-year.

Would also like to schedule a teleconference with everyone to discuss further about the timelines and development of the chapters. We'll come back with some proposed dates.

Best regards,
Vernon



From: Wycliffe WEI (MOH) <[Wycliffe WEI@moh.gov.sg](mailto:Wycliffe_WEI@moh.gov.sg)>
Sent: Wednesday, April 15, 2020 2:01 PM
Subject: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear commissioners,

To discuss possible responses of the Lancet ID Pandemic Preparedness commission to the ongoing COVID-19 outbreak, we are organizing an ad-hoc meeting via video-conference on Zoom as suggested by some members of the commission.

The details of the meeting are as follows:

Date: 16 Apr 2020, Thursday
Time: 9:00am (CL GMT-4) / 2:00pm (UK GMT+1) / 9:00pm (HK SGP GMT+8)
Duration: 1 hour

You can let me know if you would be able to join us for this meeting, and we hope to see you then.

Thank you.

Notes of Ad-Hoc Meeting in << File: 2020-04-16_Lancet ID Commission on Pandemic Preparedness_.docx >>
April 2020

From: Wycliffe Wei Enli (MOHH) <wycliffe.wei@mohh.com.sg>
Sent: Sunday, 22 March 2020 4:21 pm
Subject: [Notes of Meeting] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

It was our pleasure to have hosted the meeting from 12 – 13 Mar 2020 and we thank all of you who managed to join us.

We have recorded notes from the meeting discussions and attach them here for your reference. We have also included another document to highlight key points and to provide an outline of the report with corresponding assignments.

Thank you once again, and we wish you well in this challenging time.

Notes of Meeting, Day 1	<< File: Notes of meeting-Day1.pdf >>
Notes of Meeting, Day 2	<< File: Notes of meeting-Day2.pdf >>
Outline of Report and Assignments	<< File: Outline-Assignments.pdf >>

On behalf of the secretariat,
Wycliffe

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Tuesday, 10 March 2020 11:43 PM
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness **Day 1**
 Time: Mar 12, 2020 08:00 AM Singapore

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**
 Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

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Join Zoom Meeting

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Meeting ID: (b)(6)
 Password: 094224

Meeting ID: (b)(6)
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 US (New York)

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Table 2. Working documents



Introduction (i.e. ecology to changing risk)

<p><i>Introduction to the current risks and state of preparedness</i></p>	<p>Describe current risks posed by emerging epidemic threats</p> <p>Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world</p>	<p>Peter and Bethan to draft the introduction section in bullet points or prose where relevant;</p>
---	---	--

Public Health Ecology

A new ecology and a changing imperative

2

<< File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >>

Define public health ecology
Link ecology to disruptions i.e. what risks to be targeted at based on the ecology

Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); **Vernon** to produce draft write-up of a commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

3 Building flexible preparedness components
Lead: Daniel

Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership

4 Info / big data - Risk assessment of diseases
Lead: Kamran Khan

Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease

Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:

Pharmaceutical and non-pharmaceutical interventions

5 **Lead: Richard**
<< File: Lancet Commission Brainstorming Session v3.docx >>

How do interventions need to change for the new ecology:
Pharmaceutical;
Non pharmaceutical e.g. - border control, IPC, failures in regulatory process

What has to be true for this to work?
What would be the expected impact?
Are there any examples of successes or failures?

Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.

Strategic communications and advocacy

Lead: Karen Tan
6 << File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >>

Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology

Next Steps

7 Next steps Recommendations, timeline and measurables

Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

[MOH EMS](#)

(b)(6)

From: Daniel Bausch
Sent: Wed, 24 Jun 2020 12:43:06 +0000
To: Yijun Lin;Annelise Wilder-Smith;Ximena Aguilera;BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;deanmed@hku.hk;cfetpyhj@vip.sina.com;sj [REDACTED] TAN (MCI;dandona@uw.edu;Jacobs, Michael;Ngozi [REDACTED] riha@cepi.net;Ryan.Morhard@weforum.org;Redd, Stephen (CDC/DDPHSIS/OD);Cleghorn, Sean [REDACTED] - Contact;Kamran Khan;gmleung@hku.hk;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad [REDACTED] edu.sg;Vernon LEE (MOH;Nkengasong, John (CDC africa-union.org);ID Commissioners Lancet;Wen Qing YEO (MOH;Beatrice Bernard;Zalinah KADIS (MCI;gmleung@hku.hk;Constance LOW (MOH;Nur ASHIKIN [REDACTED] LEE (MOH;Muhammad AKMAL (MOH;Deborah NG (MOH;Deborah Ng Hee Ling (NCID);Olivia OH (MOH;Wycliffe WEI (MOH;Constance LOW (MOH;Felicia HONG (MOH;Olivia OH [REDACTED] LIN (MOH)
Subject: RE: Lancet commission ID meeting 24 Jun 2020

Dear all,

Speaking in the Africa CDC COVID-19 Vaccine conference this afternoon as well as some other pressing issues to resolve on the UK side. Will join our Lancet Commission call if I can finish all that in time.

Although I can't claim that we've made incredible progress on our section (usual COVID-19 time sink, with which I know all familiar), Ngozi and I have recently regrouped and recommitted to moving it forward.

Best,
 Dan

-----Original Appointment-----

From: wycliffe.wei@mohh.com.sg <wycliffe.wei@mohh.com.sg> **On Behalf Of** Yijun Lin

Sent: 20 June 2020 06:24

To: Yijun Lin; Annelise Wilder-Smith; Ximena Aguilera; BRIAND, Sylvie; FALL, Ibrahima Soce; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel Bausch; deanmed@hku.hk; cfetpyhj@vip.sina.com; [REDACTED] [REDACTED] Karen TAN (MCI; dandona@uw.edu; Jacobs, Michael; Ngozi Erondou; [REDACTED] riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW; [REDACTED] - Contact; Kamran Khan; gmleung@hku.hk; Chikwe Ihekweazu; eduardo.carmo@saude.gov.br; Ziad Memish; [REDACTED] [REDACTED] [REDACTED] ephpjv@nus.edu.sg; Vernon LEE (MOH; John N. Nkengasong; ID Commissioners Lancet; Wen Qing YEO (MOH; Beatrice Bernard; Zalinah KADIS (MCI; gmleung@hku.hk; Constance LOW (MOH; Nur ASHIKIN (MOH; [REDACTED] Vernon LEE (MOH; Muhammad AKMAL (MOH; Deborah NG (MOH; Deborah Ng Hee Ling (NCID); Olivia OH (MOH; Wycliffe WEI (MOH; Constance LOW (MOH; Felicia HONG (MOH; Olivia OH (MOH; [REDACTED] Yijun LIN (MOH)

Subject: Lancet commission ID meeting 24 Jun 2020

When: 24 June 2020 22:00 to 25 June 2020 00:30 (UTC+08:00) Kuala Lumpur, Singapore.

Where: [REDACTED]

Dear Commissioners,

This is the accompanying calendar invite for the meeting.

Topic: Lancet commission ID meeting 24 Jun 2020

Time: Jun 24, 2020 10:00 PM Singapore

Join Zoom Meeting

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Password: (b)(6)

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US (Houston)
US (New York)
US (San Jose)
US (Tacoma)
US (Germantown)
US (Chicago)

Meeting ID: (b)(6)

Password: (b)(6)

Find your local number: (b)(6)

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(b)(6) (US West)

(b)(6) (US East)

(b)(6) (India Mumbai)

(b)(6) (India Hyderabad)

(b)(6) (EMEA)

(b)(6) (Australia)

(b)(6) (Hong Kong SAR)

(b)(6) (Brazil)

(b)(6) (Canada)

(b)(6) (Japan)

Meeting ID: (b)(6)

Password: (b)(6) << File: Zoom-Meeting.ics >>

The information contained in the EMail and any attachments is confidential and intended solely and for the attention and use of the named addressee(s). It may not be disclosed to any other person without the express authority of Public Health England, or the intended recipient, or both. If you are not the intended recipient, you must not disclose, copy, distribute or retain this message or any part of it. This footnote also confirms that this EMail has been swept for computer viruses by Symantec.Cloud, but please re-sweep any attachments before opening or saving. <http://www.gov.uk/PHE>

From: Vernon Lee
Sent: Wed, 15 Jul 2020 08:40:57 +0000
To: Vernon LEE (MOH); wycliffe.wei@mohh.com.sg; Annelise Wilder-Smith; Ximena Aguilera; BRIAND, Sylvie; FALL, Ibrahima Soce; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.
 [REDACTED] (b)(6) TAN
 (MCI); dandona@uw.edu; Jacobs, Michael; Ngozi Erond; riha@cepi.net; Ryan.Morhard@weforum.org; Redd, Stephen (CDC/DDPHSIS/OD); Cleghorn, Sean
 [REDACTED] (b)(6) Khan; gmleung@hku.hk; Chikwe Ihekweazu; eduardo.carmo@saude.gov.br; Ziad
 [REDACTED] (b)(6)
 ail.com; ephpjv@nus.edu.sg; Nkengasong, John (CDC africa-union.org); ID Commissioners Lancet; Wen Qing YEO (MOH); Beatrice Bernard; Zalinah KADIS (MCI); gmleung@hku.hk; peter.horby@ndm.ox.ac.uk; Marc Ho
Cc: Constance LOW (MOH); Nur ASHIKIN (MOH); Muhammad AKMAL (MOH); Deborah NG (MOH); Deborah Ng Hee Ling (NCID); Olivia OH (MOH); Wycliffe WEI (MOH); Constance LOW (MOH); Felicia HONG (MOH); Olivia OH (MOH); Yijun LIN (MOH)
Subject: Re: [Notes from Meeting and Follow-Up] Lancet ID Commission
Attachments: Lancet Urban Preparedness Outline 15 Jul 2020.docx

Hi Commissioners and friends,

Hope the chapters are going on well.

I'm attaching the draft bullet points of the urban preparedness chapter that Marc and I have done for everyone, and specifically those with an interest in urban health, comments.

Hope to receive the other chapters soon.

Cheers,

Vernon

From: Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>

Sent: Saturday, June 27, 2020 5:57 PM

To: wycliffe.wei@mohh.com.sg <wycliffe.wei@mohh.com.sg>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;

Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minlnv.nl

<c.bruschke@minlnv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; [REDACTED] (b)(6)

[REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi Erond <Ngozi.Erond@lshtm.ac.uk>; riha@cepi.net

<riha@cepi.net>; Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; scr1@cdc.gov

<scr1@cdc.gov>; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; [REDACTED] (b)(6)

[REDACTED] (b)(6) Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk

<gmleung@hku.hk>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>;

eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; Ziad Memish [REDACTED] (b)(6)

[REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6)

[REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6)

[REDACTED] (b)(6) ephpjv@nus.edu.sg <ephpjv@nus.edu.sg>; John N. Nkengasong

<NkengasongJ@africa-union.org>; ID Commissioners Lancet [REDACTED] Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk <gmleung@hku.hk>; peter.horby@ndm.ox.ac.uk <peter.horby@ndm.ox.ac.uk>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; [REDACTED] [REDACTED] Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; [REDACTED] [REDACTED] Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: RE: [Notes from Meeting and Follow-Up] Lancet ID Commission

Message Classification: *Restricted*

Thanks so much everyone for the participation and the help so far.

We understand that COVID-19 is keeping everyone busy and therefore have asked the groups to develop a 2-pager on the pertinent points for the report.

Some groups have already done substantial work and therefore the submission could be a more detailed chapter beyond the 2 pages.

We hope that the groups are able to adhere to this deadline so that we can review the drafts and provide inputs before expanding on the content.

If there's any issues with the group assignments pls feel free to suggest changes.

Cheers,
Vernon

MOH EMS

[REDACTED]

From: Wycliffe Wei Enli (MOHH) <wycliffe.wei@mohh.com.sg>

Sent: Saturday, 27 June 2020 4:35 PM

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl;

Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; [REDACTED]

[REDACTED] Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>; riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;

[REDACTED] Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED] ephjv@nus.edu.sg; Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners

Lancet [REDACTED] (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk; peter.horby@ndm.ox.ac.uk
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; [REDACTED] (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; [REDACTED] (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Notes from Meeting and Follow-Up] Lancet ID Commission

Dear Commissioners,

Thanks to all who managed to attend the meeting. We have written up notes from the meeting on 24 Jun 2020, which is attached below.

2. As discussed, groups would each write up a 2-page document on the key messages pertaining to their assigned section. This need not be a polished document and could even be in bullet points. The deadline for this would be **July 15, 2020 (Wed)**.
3. The aim of this is to put important points down on paper. These would then be reviewed and refined, before being further worked into complete chapters.
4. The notes of meeting, a summary of discussion points organised by revised report sections and assignment of commissioners to sections are attached for reference and to guide the write-up. Please note that there are updates to the assignment of commissioners to sections; all commission members are now assigned to sections.
5. Please send me the write-ups when completed and we would collate them for further consideration.

Thank you.

Attachments

A. Notes of Meeting for 24 Jun 2020

B. Comments for each chapter to take note of

Summary of previous discussion points organised by revised report sections

C. Assignment of Commissioners to Sections of the Report

Best regards,
 Wycliffe

From: Wycliffe Wei Enli (MOHH)
Sent: Saturday, 20 June 2020 1:11 pm
Subject: [Meeting Details] Lancet ID Commission

Dear commissioners,

Thank you for the responses. As most are available, we will meet as previously proposed. The meeting details are as follows:

24 Jun 2020 (Wed)
Start Time: 1000hrs GMT-4 | 1500hrs GMT+1 | 1600hrs GMT+2 | 2200hrs GMT+8
Duration: 1 hour

Zoom Meeting Details

(b)(6)
Meeting ID: (b)(6)
Password: (b)(6)

The meeting will discuss the timelines and progress of the report.

The materials from previous meetings are attached below in the email thread, for your reference. We look forward to seeing you at the meeting.

On behalf of the secretariat,
Wycliffe

<< File: Zoom-Meeting.ics >>

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 - (b)(6) (US East)
 - (b)(6) (India Mumbai)
 - (b)(6) (India Hyderabad)
 - (b)(6) (EMEA)
 - (b)(6) (Australia)
 - (b)(6) (Hong Kong SAR)
 - (b)(6) (Brazil)
 - (b)(6) (Canada)
 - (b)(6) (Japan)
- Meeting ID:
- Password:

From: Wycliffe Wei Enli (MOHH)
Sent: Wednesday, 17 June 2020 11:33 pm
Subject: [Upcoming Meeting] Lancet ID Commission

Dear commissioners,

To further discuss the timelines and progress of the report, we are scheduling a teleconference in the coming week and would like to check on your availability.

We are proposing to meet next week at the following time,

24 Jun 2020 (Wed)
 Start Time: 1000hrs GMT-4 | 1600hrs GMT+2 | 2200hrs GMT+8
 Duration: 1 hour

May I request that you indicate your availability [here](#) on a Google Form by the end of this week please.

Attached below in the forwarded email thread are materials from the previous meetings, namely the notes of meeting and drafts of the previous sections, for your reference.

Thank you, and I look forward to your responses. The online meeting details will then be confirmed in a subsequent email.

On behalf of the secretariat,
Wycliffe

From: Vernon Lee
Sent: Wednesday, 10 June 2020 10:47 am
Subject: Re: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear Commissions,

Hope you're safe during this challenging time.
Apologies for the silence for a while due to the local COVID situation.

As countries are now opening up and we're entering a different global phase of the pandemic, am writing to catch up with everyone on the development of the chapters, and if we could still write something about the COVID situation from the pandemic preparedness standpoint that would add to the literature on the topic.

We'll be sending around the notes from the earlier discussions, and also the timelines of the Commission report drafts that we were hoping to develop by mid-year.

Would also like to schedule a teleconference with everyone to discuss further about the timelines and development of the chapters. We'll come back with some proposed dates.

Best regards,
Vernon



From: Wycliffe WEI (MOH) <[Wycliffe WEI@moh.gov.sg](mailto:Wycliffe_WEI@moh.gov.sg)>

Sent: Wednesday, April 15, 2020 2:01 PM

Subject: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear commissioners,

To discuss possible responses of the Lancet ID Pandemic Preparedness commission to the ongoing COVID-19 outbreak, we are organizing an ad-hoc meeting via video-conference on Zoom as suggested by some members of the commission.

The details of the meeting are as follows:

Date: 16 Apr 2020, Thursday

Time: 9:00am (CL GMT-4) / 2:00pm (UK GMT+1) / 9:00pm (HK SGP GMT+8)

Duration: 1 hour

You can let me know if you would be able to join us for this meeting, and we hope to see you then.

Thank you.

Notes of Ad-Hoc Meeting in << File: 2020-04-16_Lancet ID Commission on Pandemic
April 2020 Preparedness_.docx >>

From: Wycliffe Wei Enli (MOHH) <wycliffe.wei@mohh.com.sg>
Sent: Sunday, 22 March 2020 4:21 pm
Subject: [Notes of Meeting] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

It was our pleasure to have hosted the meeting from 12 – 13 Mar 2020 and we thank all of you who managed to join us.

We have recorded notes from the meeting discussions and attach them here for your reference. We have also included another document to highlight key points and to provide an outline of the report with corresponding assignments.

Thank you once again, and we wish you well in this challenging time.

Notes of Meeting, Day 1	<< File: Notes of meeting-Day1.pdf >>
Notes of Meeting, Day 2	<< File: Notes of meeting-Day2.pdf >>
Outline of Report and Assignments	<< File: Outline-Assignments.pdf >>

On behalf of the secretariat,
Wycliffe

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Tuesday, 10 March 2020 11:43 PM
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table 1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness **Day 1**
 Time: Mar 12, 2020 08:00 AM Singapore

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**
 Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

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Join Zoom Meeting

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 US (New York)

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Table 2. Working documents



Introduction (i.e. ecology to changing risk)

Introduction to the current risks and state of preparedness Describe current risks posed by emerging epidemic threats. **Peter and Bethan** to draft the introduction section in bullet points or prose where relevant; Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world

Public Health Ecology

A new ecology and a changing imperative Define public health ecology. Link ecology to disruptions i.e. what risks to be targeted at based on the ecology. **Vernon and team** to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); **Vernon** to produce draft write-up of a commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

<p>Building flexible 3preparedness components Lead: Daniel</p>	<p>Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership</p>	
<p>Info / big data - Risk 4assessment of diseases Lead: Kamran Khan</p>	<p>Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease</p>	<p>Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:</p>
<p>Pharmaceutical and non- pharmaceutical interventions Lead: Richard</p>	<p>How do interventions need to change for the new ecology:</p>	<p>What has to be true for this to work? What would be the expected impact?</p>
<p>5<< File: Lancet Commission Brainstorming Session v3.docx >></p>	<p>Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process</p>	<p>Are there any examples of successes or failures?</p>
<p>Strategic communications and advocacy Lead: Karen Tan << File: Lancet</p>	<p>Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology</p>	<p>Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.</p>
<p>6Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >></p>		

Next Steps

<p>7 Next steps Recommendations, timeline and measurables</p>	<p>Nil; to be discussed in Singapore in March 2020 Survey on new dates</p>
---	--

Regards,
Yijun

[MOH EMS](#)

(b)(6)

(b)(4)

(b)(4)

(b)(4)

From: Wycliffe Wei Enli (MOHH)
Sent: Fri, 17 Jul 2020 03:01:05 +0000
To: (b)(6) LEE (MOH);Annelise Wilder-Smith;Ximena Aguilera;BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.(b)(6) TAN (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi Erondur;riha@cepi.net;Ryan.Morhard@weforum.org;Redd, Stephen (CDC/DDPHSIS/OD);Cleghorn, Sean (b)(6) Khan;gmleung@hku.hk;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad (b)(6) ail.com;ephpjv@nus.edu.sg;Nkengasong, John (CDC africa-union.org);ID Commissioners Lancet;Wen Qing YEO (MOH);Beatrice Bernard;Zalinah KADIS (MCI);gmleung@hku.hk;peter.horby@ndm.ox.ac.uk;Marc Ho
Cc: Constance LOW (MOH);Nur ASHIKIN (MOH);Muhammad AKMAL (MOH);Deborah NG (MOH);Deborah Ng Hee Ling (NCID);Olivia OH (MOH);Wycliffe WEI (MOH);Constance LOW (MOH);Felicia HONG (MOH);Olivia OH (MOH);Yijun LIN (MOH)
Subject: [Write-Ups] Lancet ID Commission

Dear Commissioners,

We are hoping to get the two-page chapter write-ups / key points in this week. If you can send them to me, I would be able to collate them. Thank you.

Best regards,
Wycliffe

From: Vernon Lee (b)(6)
Sent: Wednesday, 15 July 2020 4:41 pm
To: Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Wycliffe Wei Enli (MOHH) <wycliffe.wei@mohh.com.sg>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondur <Ngozi.Erondur@lshtm.ac.uk>; riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) ephpjv@nus.edu.sg; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk; peter.horby@ndm.ox.ac.uk; Marc Ho <(b)(6)>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: Re: [Notes from Meeting and Follow-Up] Lancet ID Commission

Email is from external source.
 Do not click on links or open files if unsure of sender.

Hi Commissioners and friends,

Hope the chapters are going on well.

I'm attaching the draft bullet points of the urban preparedness chapter that Marc and I have done for everyone, and specifically those with an interest in urban health, comments.

Hope to receive the other chapters soon.

Cheers,
 Vernon

From: Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>
Sent: Saturday, June 27, 2020 5:57 PM
To: wycliffe.wei@mohh.com.sg <wycliffe.wei@mohh.com.sg>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahim Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minlnv.nl <c.bruschke@minlnv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; (b)(6)
 (b)(6) (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondudu <Ngozi.Erondudu@lshtm.ac.uk>; riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; scr1@cdc.gov <scr1@cdc.gov>; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6)
 (b)(6) Kamran Khan <Kamran@bluedot.global>; gmlung@hku.hk <gmlung@hku.hk>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>;

eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; Ziad Memish (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) (b)(6)
 (b)(6) ephpjv@nus.edu.sg <ephpjv@nus.edu.sg>; John N. Nkengasong
 <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen
 Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah
 KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk <gmleung@hku.hk>;
peter.horby@ndm.ox.ac.uk <peter.horby@ndm.ox.ac.uk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)
 <Nur_ASHIKIN@moh.gov.sg>; (b)(6) (b)(6) Muhammad
 AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>;
 Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>;
 Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>; Constance LOW (MOH)
 <Constance_LOW@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Olivia OH (MOH)
 <Olivia_OH@moh.gov.sg>; (b)(6) (b)(6) Yijun LIN (MOH)
 <LIN_Yijun@MOH.gov.sg>
Subject: RE: [Notes from Meeting and Follow-Up] Lancet ID Commission

Message Classification: Restricted

Thanks so much everyone for the participation and the help so far.

We understand that COVID-19 is keeping everyone busy and therefore have asked the groups to develop a 2-pager on the pertinent points for the report. Some groups have already done substantial work and therefore the submission could be a more detailed chapter beyond the 2 pages.

We hope that the groups are able to adhere to this deadline so that we can review the drafts and provide inputs before expanding on the content.

If there's any issues with the group assignments pls feel free to suggest changes.

Cheers,
Vernon

MOH EMS

(b)(6)

From: Wycliffe Wei Enli (MOHH) <wycliffe.wei@mohh.com.sg>
Sent: Saturday, 27 June 2020 4:35 PM
To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>;
 BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann
 <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl;
Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs,
 Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; riha@cepi.net;
Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;

(b)(6) Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk; Chikwe Ihekweazu <chikwe.ihhekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) ephpv@nus.edu.sg; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk; peter.horby@ndm.ox.ac.uk
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Deborah Ng Hee Ling (NCID) <deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Subject: [Notes from Meeting and Follow-Up] Lancet ID Commission

Dear Commissioners,

Thanks to all who managed to attend the meeting. We have written up notes from the meeting on 24 Jun 2020, which is attached below.

2. As discussed, groups would each write up a 2-page document on the key messages pertaining to their assigned section. This need not be a polished document and could even be in bullet points. The deadline for this would be **July 15, 2020 (Wed)**.
3. The aim of this is to put important points down on paper. These would then be reviewed and refined, before being further worked into complete chapters.
4. The notes of meeting, a summary of discussion points organised by revised report sections and assignment of commissioners to sections are attached for reference and to guide the write-up. Please note that there are updates to the assignment of commissioners to sections; all commission members are now assigned to sections.
5. Please send me the write-ups when completed and we would collate them for further consideration.

Thank you.

Attachments

A. Notes of Meeting for 24 Jun 2020

B. Comments for each chapter to take note of

Summary of previous discussion points organised by revised report sections

C. Assignment of Commissioners to Sections of the Report

Best regards,
Wycliffe

From: Wycliffe Wei Enli (MOHH)
Sent: Saturday, 20 June 2020 1:11 pm
Subject: [Meeting Details] Lancet ID Commission

Dear commissioners,

Thank you for the responses. As most are available, we will meet as previously proposed. The meeting details are as follows:

24 Jun 2020 (Wed)
Start Time: 1000hrs GMT-4 | 1500hrs GMT+1 | 1600hrs GMT+2 | 2200hrs GMT+8
Duration: 1 hour

Zoom Meeting Details

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

The meeting will discuss the timelines and progress of the report.

The materials from previous meetings are attached below in the email thread, for your reference. We look forward to seeing you at the meeting.

On behalf of the secretariat,
Wycliffe

<< File: Zoom-Meeting.ics >>

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (Houston)
(b)(6) US (New York)

Dial by your location

(b)(6) US (Houston)
(b)(6) US (New York)

(b)(6) US (San Jose)
 (b)(6) US (Tacoma)
 (b)(6) US (Germantown)
 (b)(6) US (Chicago)
 Meeting ID: (b)(6)
 Password: (b)(6)
 Find your local number: (b)(6)

(b)(6)
 (b)(6)

Join by (b)(6)
 (b)(6) (US West)
 (b)(6) (US East)
 (b)(6) (India Mumbai)
 (b)(6) (India Hyderabad)
 (b)(6) (EMEA)
 (b)(6) (Australia)
 (b)(6) (Hong Kong SAR)
 (b)(6) (Brazil)
 (b)(6) (Canada)
 (b)(6) (Japan)
 Meeting ID: (b)(6)
 Password: (b)(6)

From: Wycliffe Wei Enli (MOHH)
Sent: Wednesday, 17 June 2020 11:33 pm
Subject: [Upcoming Meeting] Lancet ID Commission

Dear commissioners,

To further discuss the timelines and progress of the report, we are scheduling a teleconference in the coming week and would like to check on your availability.

We are proposing to meet next week at the following time,

24 Jun 2020 (Wed)
 Start Time: 1000hrs GMT-4 | 1600hrs GMT+2 | 2200hrs GMT+8
 Duration: 1 hour

May I request that you indicate your availability [here](#) on a Google Form by the end of this week please.

Attached below in the forwarded email thread are materials from the previous meetings, namely the notes of meeting and drafts of the previous sections, for your reference.

Thank you, and I look forward to your responses. The online meeting details will then be confirmed in a subsequent email.

On behalf of the secretariat,
 Wycliffe

From: Vernon Lee (b)(6)
Sent: Wednesday, 10 June 2020 10:47 am
Subject: Re: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear Commissions,

Hope you're safe during this challenging time.
Apologies for the silence for a while due to the local COVID situation.

As countries are now opening up and we're entering a different global phase of the pandemic, am writing to catch up with everyone on the development of the chapters, and if we could still write something about the COVID situation from the pandemic preparedness standpoint that would add to the literature on the topic.

We'll be sending around the notes from the earlier discussions, and also the timelines of the Commission report drafts that we were hoping to develop by mid-year.

Would also like to schedule a teleconference with everyone to discuss further about the timelines and development of the chapters. We'll come back with some proposed dates.

Best regards,
Vernon



From: Wycliffe WEI (MOH) <Wycliffe.WEI@moh.gov.sg>
Sent: Wednesday, April 15, 2020 2:01 PM
Subject: [Ad-Hoc Meeting on 16 Apr] Lancet ID Commission on Pandemic Preparedness

Dear commissioners,

To discuss possible responses of the Lancet ID Pandemic Preparedness commission to the ongoing COVID-19 outbreak, we are organizing an ad-hoc meeting via video-conference on Zoom as suggested by some members of the commission.

The details of the meeting are as follows:

Date: 16 Apr 2020, Thursday
Time: 9:00am (CL GMT-4) / 2:00pm (UK GMT+1) / 9:00pm (HK SGP GMT+8)
Duration: 1 hour

You can let me know if you would be able to join us for this meeting, and we hope to see you then.

Thank you.

Notes of Ad-Hoc Meeting in << File: 2020-04-16_Lancet ID Commission on Pandemic
April 2020 Preparedness_.docx >>

From: Wycliffe Wei Enli (MOHH) <wycliffe.wei@mohh.com.sg>
Sent: Sunday, 22 March 2020 4:21 pm
Subject: [Notes of Meeting] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

It was our pleasure to have hosted the meeting from 12 – 13 Mar 2020 and we thank all of you who managed to join us.

We have recorded notes from the meeting discussions and attach them here for your reference. We have also included another document to highlight key points and to provide an outline of the report with corresponding assignments.

Thank you once again, and we wish you well in this challenging time.

Notes of Meeting, Day 1	<< File: Notes of meeting-Day1.pdf >>
Notes of Meeting, Day 2	<< File: Notes of meeting-Day2.pdf >>
Outline of Report and Assignments	<< File: Outline-Assignments.pdf >>

On behalf of the secretariat,
Wycliffe

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Tuesday, 10 March 2020 11:43 PM
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness **Day 1**
 Time: Mar 12, 2020 08:00 AM Singapore

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**
 Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID:
 Password: 094224

Join Zoom Meeting

(b)(6)

Meeting ID:
 Password:

One tap mobile

(b)(6) US (San Jose)
 US (New York)

One tap mobile

(b)(6) US (San Jose)
 US (New York)

Dial by your location

(b)(6) US (San Jose)
 US (New York)

Meeting ID:

Find your local number:

Dial by your location

(b)(6) S (San Jose)
 S (New York)

Meeting ID:

Find your local number:

Table 2. Working documents

No.	Section	Summary of Content	Action required
-----	---------	--------------------	-----------------

Introduction (i.e. ecology to changing risk)

1	<i>Introduction to the current risks and state of preparedness</i>	Describe current risks posed by emerging epidemic threats	Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
		Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world	

Public Health Ecology

A new ecology and a changing imperative

2

<< File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >>

Define public health ecology

Link ecology to disruptions i.e. what risks to be targeted at based on the ecology

Vernon and team to draft the section in bullet points or prose where relevant;

Also to provide the diagrams (for Lancet illustrator);

Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

³ Building flexible preparedness components
Lead: Daniel

Novel solutions / approach to building Sustainability,
Adequate health services to manage surge,
Increase Collaboration and Partnership

⁴ Info / big data - Risk assessment of diseases
Lead: Kamran Khan

Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease

Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:

What has to be true for this to work?

What would be the expected impact?

Are there any examples of successes or failures?

Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.

Pharmaceutical and non-pharmaceutical interventions

⁵ **Lead: Richard**
<< File: Lancet Commission Brainstorming Session v3.docx >>

How do interventions need to change for the new ecology:

Pharmaceutical;

Non pharmaceutical e.g. - border control, IPC, failures in regulatory process

Strategic communications and advocacy

Lead: Karen Tan
<< File: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx >>

Comms as a tool to manage epidemic threats.

What are the new comms activities that are needed in the new ecology

Next Steps

7 Next steps Recommendations, timeline and measurables

Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)
Sent: Thu, 23 Jan 2020 08:47:31 +0000
To: BRIAND, Sylvie;FALL, Ibrahima Soce;John N. Nkengasong;David Heymann;annelies.wilder-smith@lshtm.ac.uk;xaguilera@udd.cl;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@
 [redacted] (b)(6)
 m;Karen TAN (MCI);dandona@uw.edu;Jacobs,
 [redacted] (b)(6)
 rg;Redd, Stephen [redacted] (b)(6)
 Khan;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad [redacted] (b)(6)
Cc:
 [redacted] (b)(6)
 phpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);Vernon Lee;Constance LOW (MOH);ID Commissioners Lancet;Wen Qing YEO (MOH)
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020
Attachments: 2nd Lancet meeting participants & agenda_draft.docx

Dear Commissioners,

Apologies for the delay and we appreciate your patience on this.

We would like for you to reconfirm your attendance for the 2nd meeting of the Lancet ID Commission which will be held in Singapore from 12 – 13 Mar 2020. Do let us know whether you will be coming by **Monday, 27 Jan** pls.

As per previous practice, commissioners would be given a fixed sum upon arrival to pay for air tickets, daily expenses and airport transfer. The invitation letters will be sent next week and you may proceed to make your travel arrangements then.

We're attaching the draft meeting agenda for early info pls.

Thank you.

Regards,
 Yijun

MOH EMS

[redacted] (b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>
Sent: Friday, 10 January 2020 7:12 PM
To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; [redacted] (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erondu@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihhekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6)
Cc: (b)(6) (b)(6) (b)(6)
 (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6) ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: *Restricted*

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,
 Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 23 October 2019 11:53 AM

To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6) (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erondu@lshtm.ac.uk' <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>; (b)(6) (b)(6)

Cc: (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) 'ID Commissioners Lancet' (b)(6)

Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,
Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

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From: Constance LOW (MOH)

Sent: Wednesday, 9 October 2019 8:08 AM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erundu@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

(b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) ID Commissioners Lancet (b)(6)

Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)

- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,
Constance, Deborah, Vincent and Yijun

[MOH EMS](#)

This email may contain sensitive information. Please file appropriately.

(b)(6)

**Lancet ID Commission on Pandemic Preparedness
Second Commissioners Meeting
Singapore, 12 – 13 Mar 2020**

Program

12 Mar

- 0900am Opening by Chair of the Commission
Welcome speech by Dean of the Faculty of Medicine, NUS
Introductions by Commissioners
Declarations of conflicts of interest
- 0930am Overview of the draft report and general discussions
- 1015 Photo taking followed by tea break
- 1045 Updates of the different working groups (15 minutes each)
i) Introduction
ii) Ecology - A new ecology and a changing imperative
iii) Looking forward – Design for the future
iv) Info / big data - Risk assessment of diseases
v) Interventions in the new ecology
vi) Strategic communications and advocacy
- 1215pm Identify new work group members
- 1230 Lunch
- 1330 Breakout into working groups for further development on the
content of the 4 working groups (Tea break in between)
- 1630 Summary and end of day 1
- 1800 Gather at Hotel Lobby for Welcome Dinner (Venue TBD)

13 Mar

- 0830am** **Gather at Grand Copthorne Waterfront Hotel Meeting Room**
(TBC)
- 0900am Breakout into working groups for discussion on the content of
each working group
- 1030 Tea Break
- 1045 Presentation by each working group (20 minutes each), feedback,
and agreement on final working groups

1200pm	Lunch
1315	Discussion on the chapters on next steps, and measurable recommendations / outcomes of the Commission (Tea break in between)
1630	Summary and next steps

Working groups:

Introduction	Bethan McDonald Peter Horby
Ecology - A new ecology and a changing imperative	David Heymann Michael Jacobs Ryan Morhad Sylvie Briand Vernon Lee
1. Looking forward – Design for the future	Daniel Bausch David Heymann Jane Halton John Nkengasong Vernon Lee
2. Info / big data - Risk assessment of diseases	Kamran Khan Christl Donnelly
3. Interventions in the new ecology	Amandou Sall Annelies Wilder-Smith Hongjie Yu Peter Horby Michael Jacobs Richard Hatchett Stephen Redd Ximena Aguilera
4. Strategic communications and advocacy	Karen Tan
5. Next steps - Recommendations, timeline and measurables	

List of Commissioners

Commissioners who have indicated attendance

Chair:

Vernon Lee Ministry of Health, Singapore

Co-chairs:

David Heymann London School of Hygiene & Tropical Medicine, Chatham House

Annelies Wilder-Smith London School of Hygiene & Tropical Medicine

Ximena Aguilera University of Desarrollo, Chile

Commissioners:

Amadou Sall Institut Pasteur Senegal

Bethan McDonald Oxford University

Chikwe Ihekweazu Nigeria CDC

Christianne Brusckhe Ministry of Agriculture, Nature and Food Quality, The Netherlands

Christl Donnelly Imperial College London, University of Oxford

Daniel Bausch Public Health England; London School of Hygiene & Tropical Medicine, London

Eduardo Hage Carmo Oswaldo Cruz Foundation, Brazil

Gabriel Leung Hong Kong University of Li Ka Shing Faculty of Medicine

Hongjie Yu Fudan University

Ibrahima Socé WHO Headquarters

Joanne Liu Mediciens Sans Frontieres

John Nkengasong Africa Centres for Disease Control

Kamran Khan St. Michael's Hospital; University of Toronto; BlueDot

Karen Tan Ministry of Communications and Information, Singapore

Michael Jacobs University College London

Ngozi Erondu London School of Hygiene & Tropical Medicine

Peter Horby University of Oxford

Ryan Morhard World Economic Forum

Stephen C. Redd Centers for Disease Control and Prevention (US CDC)

Sylvie Briand WHO Headquarters

Ziad Memish Alfaisal University, Saudi Arabia; Prince mohammed bin Abdulaziz hospital, Ministry of Health

Lancet ID Journal

Sean Cleghorn Editor, Lancet ID Journal

Commissioners who are unable to attend

(b)(6)

From: Gershman, Lynn E. (CDC/DDPHSIS/OD)
Sent: Thu, 23 Jan 2020 11:14:01 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD)
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Thanks!

Kindest Regards,

Lynn

Wisdom is knowing the right path to take; Integrity is taking it.

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: Thursday, January 23, 2020 4:26 AM
To: Gershman, Lynn E. (CDC/DDPHSIS/OD) <veu4@cdc.gov>
Subject: Fwd: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

There is some chance that this will be delayed because of the ongoing outbreak, but this is the plan, for now.

Stephen C. REDD, M.D.
 RADM, USPHS

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, January 23, 2020 03:49
To: BRIAND, Sylvie; FALL, Ibrahima Soce; John N. Nkengasong; David Heymann; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI); dandona@uw.edu; Jacobs, Michael; Ngozi.Erondou@lshtm.ac.uk; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; Redd, Stephen (CDC/DDPHSIS/OD); sean.cleghorn@lancet.com; (b)(6) Kamran Khan; Chikwe Ihekweazu; eduardo.carmo@saude.gov.br; Ziad Memish; (b)(6)
Cc: (b)(6) (b)(6) Yijun.ln@gmail.com; (b)(6) ephpjv@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH); Vernon LEE (MOH); Vernon Lee; Constance LOW (MOH); ID Commissioners Lancet; Wen Qing YEO (MOH)
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Dear Commissioners,

Apologies for the delay and we appreciate your patience on this.

We would like for you to reconfirm your attendance for the 2nd meeting of the Lancet ID Commission which will be held in Singapore from 12 – 13 Mar 2020. Do let us know whether you will be coming by **Monday, 27 Jan** pls.

As per previous practice, commissioners would be given a fixed sum upon arrival to pay for air tickets, daily expenses and airport transfer. The invitation letters will be sent next week and you may proceed to make your travel arrangements then.

We're attaching the draft meeting agenda for early info pls.

Thank you.

Regards,
Yijun

MOH EMS

[3S-id=a756300e-d3bb-4bc6-aad2-bd3a89953b99:531ed8c6]

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Friday, 10 January 2020 7:12 PM

To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6)

riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

(b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6) (b)(6)

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(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6) ID Commissioners Lancet

(b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>

Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification: Restricted

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,
Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 23 October 2019 11:53 AM

To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@afrika-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>;

(b)(6) (b)(6) (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erondou@lshtm.ac.uk' <Ngozi.Erondou@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>;

(b)(6) (b)(6)

Cc: (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) 'jxxm0349@gmail.com'

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee'

(b)(6) 'ID Commissioners Lancet' (b)(6)

Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

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Cc: (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) ID Commissioners Lancet (b)(6)
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MOH EMS

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(b)(6)

From: Eduardo Hage Carmo
Sent: Sat, 14 Mar 2020 01:59:58 +0000
To: Ximena Aguilera;'Yijun LIN (MOH)';'Annelise Wilder-Smith';'Constance LOW (MOH)';'BRIAND, Sylvie';'FALL, Ibrahima Soce';'David Heymann';Amadou.SALL@pasteur.sn;c.bruschke@minInv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
 [REDACTED] (b)(6) TAN
 (MCI)';dandona@uw.edu;'Jacobs, Michael';'Ngozi Erondu [REDACTED] (b)(6)';riha@cepi.net;Ryan.Morhard@weforum.org;Redd, Stephen (CDC/DDPHSIS/OD)';'Cleghorn, Sean [REDACTED] (b)(6)';Khan';gmleung@hku.hk;'Chikwe Ihekweazu';'Ziad [REDACTED] (b)(6)';ail.com;ephpjv@nus.edu.sg;'Deborah NG (MOH)';'Felicia HONG (MOH)';'Vernon LEE (MOH)';'John N. Nkengasong';'ID Commissioners Lancet';'Wen Qing YEO (MOH)';'Olivia OH (MOH)';'Beatrice Bernard';'Zalinah KADIS (MCI)'
Cc: 'Nur ASHIKIN (MOH)';'Vernon Lee';'Muhammad AKMAL (MOH)';Deborah_ng@ncid.sg;'Wycliffe WEI (MOH)'
Subject: RES: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear colleagues

Unfortunately it was not possible to participate in the meeting via teleconference due to the COVID situation in my country and a number of activities that I have assumed, including participation in the EOC of 3 national institutions. I hope that this meeting have been very productive and I reiterate that I hope to contribute to the next steps.

Best regards
 Eduardo

De: Ximena Aguilera [xaguilera@udd.cl]

Enviado: quinta-feira, 12 de março de 2020 15:10

Para: 'Yijun LIN (MOH)'; 'Annelise Wilder-Smith'; 'Constance LOW (MOH)'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'David Heymann'; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; [REDACTED] (b)(6) [REDACTED] (b)(6) 'Karen TAN (MCI)'; dandona@uw.edu; 'Jacobs, Michael'; 'Ngozi Erondu'; [REDACTED] (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; 'Cleghorn, Sean (ELS-LOW)'; [REDACTED] (b)(6) 'Kamran Khan'; gmleung@hku.hk; 'Chikwe Ihekweazu'; Eduardo Hage Carmo; 'Ziad Memish'; [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) ephpjv@nus.edu.sg; 'Deborah NG (MOH)'; 'Felicia HONG (MOH)'; 'Vernon LEE (MOH)'; 'John N. Nkengasong'; 'ID Commissioners Lancet'; 'Wen Qing YEO (MOH)'; 'Olivia OH (MOH)'; 'Beatrice Bernard'; 'Zalinah KADIS (MCI)'; gmleung@hku.hk
Cc: 'Constance LOW (MOH)'; 'Nur ASHIKIN (MOH)'; 'Vernon Lee'; 'Vernon LEE (MOH)'; 'Muhammad AKMAL (MOH)'; Deborah_ng@ncid.sg; 'Olivia OH (MOH)'; 'Wycliffe WEI (MOH)'
Assunto: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Thank you, I will be there,

Best regards,

Ximena

De: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Enviado el: Thursday, March 12, 2020 11:31 AM

Para: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; gmleung@hku.hk; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk
CC: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>

Asunto: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the Americas and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 2]**

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

🔗

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
US (New York)

Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) <(b)(6)>; (b)(6) <(b)(6)>; Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) <(b)(6)>; 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) <(b)(6)>; 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' <(b)(6)>; (b)(6) <(b)(6)>; (b)(6) <(b)(6)>; (b)(6) <(b)(6)>; (b)(6) <(b)(6)>; (b)(6) <(b)(6)>; (b)(6) <(b)(6)>; 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' <(b)(6)>; Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' <(b)(6)>; Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>;
 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
 Yijun

MOH EMS

[3S-id=d9fbab4f-46f6-4cdd-b770-214cf61c3fc4:531ed8c6]

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; <(b)(6)> <(b)(6)> <(b)(6)> <dr.joanne.liu@gmail.com>; Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk> <(b)(6)> <(b)(6)> 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'sctrl@cdc.gov' <sctrl@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; <(b)(6)> <(b)(6)>; 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' <(b)(6)> <(b)(6)> <(b)(6)> <(b)(6)> <eyesofchinablue@gmail.com>; <(b)(6)> <(b)(6)> <(b)(6)> Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' <(b)(6)>; Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' <(b)(6)> Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness **Day 1**
 Time: Mar 12, 2020 08:00 AM Singapore

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**
 Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

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Meeting ID: (b)(6)

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 US (New York)

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 JS (New York)

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Find your local number:

(b)(6)

Dial by your location

(b)(6) JS (San Jose)
 JS (New York)

Meeting ID: (b)(6)

Find your local number:

(b)(6)

Table 2. Working documents

No.	Section	Summary of Content	Action required
-----	---------	--------------------	-----------------

Introduction (i.e. ecology to changing risk)

Introduction to the epidemic threats Describe current risks posed by emerging **Peter and Bethan** to draft the introduction section in bullet points or prose where relevant;

1current risks and state of preparedness Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world

Public Health Ecology

A new ecology and a changing imperative Define public health ecology

2 << File: Lancet Commission risks to be targeted at based on the IntroBM_VL & Ecology_VL 5 ecology Dec 2019.docx >> Link ecology to disruptions i.e. what 5 ecology

Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); **Vernon** to produce draft write-up of a commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

3 Building flexible preparedness components Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership

Lead: Daniel

4 Info / big data - Risk assessment of diseases Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease

Lead: Kamran Khan

5 Pharmaceutical and non-pharmaceutical interventions How do interventions need to change for the new ecology: Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process

Lead: Richard

5 << File: Lancet Commission Brainstorming Session v3.docx >>

Strategic communications and advocacy Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology

Lead: Karen Tan

<< File: Lancet article_final.docx >>

Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:
What has to be true for this to work?
What would be the expected impact?
Are there any examples of successes or failures?
Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.

Next Steps

7 Next steps Recommendations, timeline and measurables

Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

[MOH EMS](#)

[3S-id=2e6aa2bf-2970-44fc-9493-8a510b0d5376:531ed8c6]

[MOH EMS](#)

[3S-id=e95de6a0-7da4-4fbf-84c6-397bc4b8408f:531ed8c6]

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. **Teleconferencing instructions**

Topic: Lancet ID Commission on Pandemic Preparedness [Day 1]

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

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Password: 094224

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(b)(6) US (New York)

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(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

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(b)(6) US (New York)

Dial by your location

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(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon

LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,

Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 13 February 2020 1:59 PM

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)

<Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by **14 Feb 2020**.

Thank you and we appreciate your understanding.

(Y/N)
?

Still attending?

Booked air tickets?

If not attending in person,
okay for teleconference?

Regards,
Yijun

[MOH EMS](#)

(b)(6)

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From: Ziad Memish
Sent: Sat, 14 Mar 2020 03:18:30 +0000
To: Eduardo Hage Carmo
Cc: Ximena Aguilera; Yijun LIN (MOH); Annelise Wilder-Smith; Constance LOW (MOH); BRIAND, Sylvie; FALL, Ibrahima Soce; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.
 [REDACTED] (b)(6) TAN
 (MCI); dandona@uw.edu; Jacobs, Michael; Ngozi [REDACTED] (b)(6) com; riha@cepi.net; Ryan.Morhard@weforum.org; Redd, Stephen (CDC/DDPHSIS/OD); Cleghorn, Sean [REDACTED] (b)(6) Khan; gmleung@hku.hk; Chikwe [REDACTED] (b)(6) mail.com; ephpjv@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH); Vernon LEE (MOH); John N. Nkengasong; ID Commissioners Lancet; Wen Qing YEO (MOH); Olivia OH (MOH); Beatrice Bernard; Zalinah KADIS (MCI); Nur ASHIKIN (MOH); Vernon Lee; Muhammad AKMAL (MOH); Deborah_ng@ncid.sg; Wycliffe WEI (MOH)
Subject: Re: RES: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear All,
 So sorry for not being able to join as well and happy to be involved in any further effort
 Sincerely,
 Ziad

Sent from my iPhone

On Mar 14, 2020, at 5:00 AM, Eduardo Hage Carmo <Eduardo.Carmo@saude.gov.br> wrote:

Dear colleagues

Unfortunately it was not possible to participate in the meeting via teleconference due to the COVID situation in my country and a number of activities that I have assumed, including participation in the EOC of 3 national institutions. I hope that this meeting have been very productive and I reiterate that I hope to contribute to the next steps.

Best regards
 Eduardo

De: Ximena Aguilera [xaguilera@udd.cl]

Enviado: quinta-feira, 12 de março de 2020 15:10

Para: 'Yijun LIN (MOH)'; 'Annelise Wilder-Smith'; 'Constance LOW (MOH)'; 'BRIAND, Sylvie'; 'FALL, Ibrahima Soce'; 'David Heymann'; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; [REDACTED] (b)(6) [REDACTED] (b)(6) 'Karen TAN (MCI)'; dandona@uw.edu; 'Jacobs, Michael'; 'Ngozi Erundu'; [REDACTED] (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; 'Cleghorn, Sean (ELS-LOW)'; [REDACTED] (b)(6) 'Kamran Khan'; gmleung@hku.hk; 'Chikwe Ihekweazu'; Eduardo Hage Carmo; 'Ziad Memish'; [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) ephpjv@nus.edu.sg; 'Deborah NG (MOH)'; 'Felicia HONG (MOH)'; 'Vernon LEE (MOH)'; 'John N. Nkengasong'; 'ID Commissioners Lancet'; 'Wen Qing YEO (MOH)';

'Olivia OH (MOH)'; 'Beatrice Bernard'; 'Zalinah KADIS (MCI)'; gmlung@hku.hk

Cc: 'Constance LOW (MOH)'; 'Nur ASHIKIN (MOH)'; 'Vernon Lee'; 'Vernon LEE (MOH)'; 'Muhammad AKMAL (MOH)'; Deborah_ng@ncid.sg; 'Olivia OH (MOH)'; 'Wycliffe WEI (MOH)'

Assunto: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Thank you, I will be there,

Best regards,

Ximena

De: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Enviado el: Thursday, March 12, 2020 11:31 AM

Para: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahim Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; gmlung@hku.hk; Chikwe Ihekweazu <chikwe.ihhekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) ephpju@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmlung@hku.hk
CC: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; Deborah_ng@ncid.sg; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Wycliffe WEI (MOH) <Wycliffe_WEI@moh.gov.sg>

Asunto: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear all,

Thanks for participating in Day 1 of the meeting. As we have made good progress in our discussions, the meeting will wrap up ahead of schedule.

For those dialling in from the [Americas](#) and others who wish to participate, you may join in from **9AM to 12 Noon** (Singapore Time).

We regret that we will not be holding the afternoon teleconferencing session:

Teleconferencing details are below:

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

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(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

We will circulate the summary of the meeting discussions soon.

Thank you very much for participating.

Regards,
Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Wednesday, 11 March 2020 6:44 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; (b)(6) (b)(6)
(b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu' <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'sctrl@cdc.gov' <sctrl@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; (b)(6) (b)(6) 'Kamran Khan' <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu'

<chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>;
 'Ziad Memish' (b)(6) (b)(6) <(b)(6)>
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) 'ephjv@nus.edu.sg'
 <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)
 <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N.
 Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet'
 (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>;
 Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah
 KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)
 <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>;
 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar
 2020)

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
 Yijun

MOH EMS

(b)(6)

From: Yijun LIN (MOH)

Sent: Tuesday, 10 March 2020 11:43 PM

To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera'
 <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie'
 <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann'
 <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>;
 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk'
 <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com'
 <cfetpyhj@vip.sina.com>; (b)(6) (b)(6);
 (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>;
 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erundu'
 <Ngozi.Erundu@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net'
 <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov'
 <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>;
 (b)(6) (b)(6) 'Kamran Khan'
 <Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu'
 <chikwe.iheweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>;
 'Ziad Memish' (b)(6) (b)(6) <(b)(6)>
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) Yijun LIN (MOH)
 <LIN_Yijun@MOH.gov.sg>; 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH)

<Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' <(b)(6)>; Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' <(b)(6)> Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness **Day 1**
 Time: Mar 12, 2020 08:00 AM Singapore

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**
 Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

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	US (New York)

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Table 2. Working documents

No.	Section	Summary of Content	Action required
-----	---------	--------------------	-----------------

Introduction (i.e. ecology to changing risk)

		Describe current risks posed by emerging epidemic threats	Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
1	<i>current risks and state of preparedness</i>	Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world	

Public Health Ecology

	<i>A new ecology and a changing imperative</i>	Define public health ecology	Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator);
2	<< File: Lancet Commission IntroBM_VL & Ecology_VL Dec 2019.docx >>	Link ecology to disruptions i.e. what risks to be targeted at based on the 5 ecology	Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

3	Building flexible preparedness components Lead: Daniel	Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership	Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures?
4	Info / big data - Risk assessment of diseases Lead: Kamran Khan	Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease	
5	Pharmaceutical and non-pharmaceutical interventions Lead: Richard << File: Lancet Commission Brainstorming	How do interventions need to change for the new ecology: Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process	Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.

Session v3.docx

>>

Strategic

communications
and advocacy

Lead: Karen Tan

<< File: Lancet
article_final.docx

>>

Comms as a tool to manage epidemic threats.

What are the new comms activities that are needed in the new
ecology

Next Steps

7 Next steps Recommendations, timeline and measurables

Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,

Yijun

MOH EMS

(b)(6)

MOH EMS

[3S-id=e95de6a0-7da4-4fbf-84c6-397bc4b8408f:531ed8c6]

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>;

Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL,

Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;

Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk;

cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi

Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net;

Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;

(b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu

<chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>;

ephjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong

<NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen

Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice

Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. **Teleconferencing instructions**

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

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Meeting ID: (b)(6)

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Topic: Lancet ID Commission on Pandemic Preparedness **[Day 2]**

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

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(b)(6) US (New York)

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 (b)(6) US (New York)

Meeting ID: (b)(6)

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Regards,
 Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmleung@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon

LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 13 February 2020 1:59 PM

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)

<Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

(Y/N)
?

Still attending?

Booked air tickets?

If not attending in person,
okay for teleconference?

Regards,
Yijun

MOH EMS

(b)(6)

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From: Wolfe, Mitchell (CDC/OD)
Sent: Mon, 27 Jan 2020 18:27:11 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD)
Subject: FW: Coronavirus - Impromptu meeting/call tomorrow afternoon

Hi Steve,

FYI. I'm not sure this is something we want to attend with all going on, but wanted to send to you to be sure.

Mitchell Wolfe, MD, MPH
 RADM, USPHS
 Chief Medical Officer, Office of the Director
 Centers for Disease Control and Prevention
 Ph: (202) 245-0600

From: Jeremy Konyndyk (jkonyndyk@CGDEV.ORG) <jkonyndyk@CGDEV.ORG>
Sent: Monday, January 27, 2020 1:16 PM
To: peggy@hbfam.net; james.lawler@unmc.edu; Ali.Khan@unmc.edu; David Brett-Major <david.brett-major@navigatinghealthrisks.com>; dhanfling@iqt.org; Thomas Inglesby <tinglesby@jhu.edu>; matthew.j.hepburn.civ@mail.mil; jnuzzo1@jhu.edu; Nicole Lurie <nicole.lurie@cepi.net>; Kerr, Lawrence (HHS/OS/OGA) <Lawrence.Kerr@hhs.gov>; Wolfe, Mitchell (CDC/OD) <msw6@cdc.gov>; Madad, Syra (CDC nychhc.org) <Syra.Madad@nychhc.org>; lborio@iqt.org; George, Dylan <dgeorge@iqt.org>; scovitchjr@state.gov; Prashant Yadav (pyadav@CGDEV.ORG) <pyadav@CGDEV.ORG>; Amanda Glassman (aglassman@CGDEV.ORG) <AGlassman@CGDEV.ORG>; Guenael Rodier (b)(6) (b)(6)
Cc: Noor Shakfeh (nshakfeh@CGDEV.ORG) <nshakfeh@CGDEV.ORG>; Rebecca Katz <Rebecca.Katz@georgetown.edu>; 'Beth Cameron' <cameron@nti.org>; Jaime Yassif <yassif@nti.org>
Subject: Coronavirus - Impromptu meeting/call tomorrow afternoon

Greetings colleagues -

Along with Beth Cameron of NTI and Rebecca Katz of Georgetown, I would like to invite you to join an informal, not-for-attribution brainstorming session **tomorrow from 3-4:30pm EST** on US and global readiness for a potential Coronavirus pandemic.

The emerging information on nCoV-2019 indicates a virus with extremely dangerous potential: it appears highly human-to-human transmissible, may exhibit instances of asymptomatic spread, and has demonstrated a concerning fatality rate. In China the virus is already straining health systems to the limit, has depleted medical supplies, and has prompted drastic control measures by the government. Experts are now suggesting that the outbreak may no longer be controllable within China, and meanwhile each day additional new cases are showing up in more countries around the world. It is important to anticipate a contingency in which the outbreak cannot be contained. If other countries begin seeing outbreaks that mirror China's, health systems and supply chains could be quickly overwhelmed. It is unlikely that new medical

countermeasures will become rapidly available, meaning that control or mitigation strategies will need to rely on existing systems and capabilities.

CGD, NTI, and Georgetown are therefore convening a small high level brainstorming session tomorrow afternoon to begin considering policy recommendations for a scenario of uncontrolled spread. This session will aim to discuss:

- Priority measure to enhance the readiness of US hospitals and public health systems
- Consideration of crisis standards of care, and thresholds at which they should be triggered
- Considerations for a distributed, community-based approach to isolation and care in areas where health systems become overwhelmed
- Other priority vulnerabilities as identified by participants
- How these issues should best be messaged to policymakers and the public

Given the short notice, we anticipate most people will need to join by phone or video. Call-in details are below. For those who would like to join in-person, please feel free to come to CGD - 2055 L Street, Washington DC.

To RSVP, please send a note to me and Noor Shakfeh (copied) letting us know if you can make it, and whether you intend to attend in person.

Warm regards,

Jeremy Konyndyk

Video conference details below:

Meeting URL

(b)(6)

Meeting ID

(b)(6)

Want to dial in from a phone?

Dial one of the following numbers:

(b)(6)

(US (San Jose))

(US (Primary, San Jose))

(see all numbers -

(b)(6)

Enter the meeting ID and passcode followed by #

Connecting from a room system?

Dial: (b)(6) and enter your meeting ID & passcode

From: Wolfe, Mitchell (CDC/OD)
Sent: Mon, 27 Jan 2020 18:32:30 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD)
Subject: RE: Coronavirus - Impromptu meeting/call tomorrow afternoon

I am attending a briefing for the incoming AMB to Brazil at that time so was hoping to stay doing that. If you could go, it's great. As far as what else may come, I don't really know who knows, but I'm pretty sure I know it's not me. My most recent, successful tactic is to email Anne, Sherri, and Kyle.

Mitchell Wolfe, MD, MPH
RADM, USPHS
Chief Medical Officer, Office of the Director
Centers for Disease Control and Prevention
Ph: (202) 245-0600

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: Monday, January 27, 2020 1:31 PM
To: Wolfe, Mitchell (CDC/OD) <msw6@cdc.gov>
Subject: RE: Coronavirus - Impromptu meeting/call tomorrow afternoon

I tend to agree. It would be good to hear what people say and try to feed what's relevant into the response.

I'll be up there, so could do it if we decide it's the most important thing. In other words, we probably need someone who has the big picture to know who goes where. Would Kyle have a better idea of what else is coming our way?

From: Wolfe, Mitchell (CDC/OD) <msw6@cdc.gov>
Sent: Monday, January 27, 2020 13:27
To: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Subject: FW: Coronavirus - Impromptu meeting/call tomorrow afternoon

Hi Steve,

FYI. I'm not sure this is something we want to attend with all going on, but wanted to send to you to be sure.

Mitchell Wolfe, MD, MPH
RADM, USPHS
Chief Medical Officer, Office of the Director
Centers for Disease Control and Prevention
Ph: (202) 245-0600

From: Jeremy Konyndyk (jkonyndyk@CGDEV.ORG) <jkonyndyk@CGDEV.ORG>
Sent: Monday, January 27, 2020 1:16 PM

To: peggy@hbfam.net; james.lawler@unmc.edu; Ali.Khan@unmc.edu; David Brett-Major <david.brett-major@navigatinghealthrisks.com>; dhanfling@igt.org; Thomas Inglesby <tinglesby@jhu.edu>; matthew.j.hepburn.civ@mail.mil; jnuzzo1@jhu.edu; Nicole Lurie <nicole.lurie@cepi.net>; Kerr, Lawrence (HHS/OS/OGA) <Lawrence.Kerr@hhs.gov>; Wolfe, Mitchell (CDC/OD) <[msw6@cdc.gov](mailto:mw6@cdc.gov)>; Madad, Syra (CDC nychhc.org) <Syra.Madad@nychhc.org>; lborio@igt.org; George, Dylan <dgeorge@igt.org>; scovitchjr@state.gov; Prashant Yadav (pyadav@CGDEV.ORG) <pyadav@CGDEV.ORG>; Amanda Glassman (aglassman@CGDEV.ORG) <AGlassman@CGDEV.ORG>; Guenael Rodier (guenael.rodier@outlook.com) <guenael.rodier@outlook.com>
Cc: Noor Shakfeh (nshakfeh@CGDEV.ORG) <nshakfeh@CGDEV.ORG>; Rebecca Katz <Rebecca.Katz@georgetown.edu>; 'Beth Cameron' <cameron@nti.org>; Jaime Yassif <yassif@nti.org>
Subject: Coronavirus - Impromptu meeting/call tomorrow afternoon

Greetings colleagues -

Along with Beth Cameron of NTI and Rebecca Katz of Georgetown, I would like to invite you to join an informal, not-for-attribution brainstorming session **tomorrow from 3-4:30pm EST** on US and global readiness for a potential Coronavirus pandemic.

The emerging information on nCoV-2019 indicates a virus with extremely dangerous potential: it appears highly human-to-human transmissible, may exhibit instances of asymptomatic spread, and has demonstrated a concerning fatality rate. In China the virus is already straining health systems to the limit, has depleted medical supplies, and has prompted drastic control measures by the government. Experts are now suggesting that the outbreak may no longer be controllable within China, and meanwhile each day additional new cases are showing up in more countries around the world. It is important to anticipate a contingency in which the outbreak cannot be contained. If other countries begin seeing outbreaks that mirror China's, health systems and supply chains could be quickly overwhelmed. It is unlikely that new medical countermeasures will become rapidly available, meaning that control or mitigation strategies will need to rely on existing systems and capabilities.

CGD, NTI, and Georgetown are therefore convening a small high level brainstorming session tomorrow afternoon to begin considering policy recommendations for a scenario of uncontrolled spread. This session will aim to discuss:

- Priority measure to enhance the readiness of US hospitals and public health systems
- Consideration of crisis standards of care, and thresholds at which they should be triggered
- Considerations for a distributed, community-based approach to isolation and care in areas where health systems become overwhelmed
- Other priority vulnerabilities as identified by participants
- How these issues should best be messaged to policymakers and the public

Given the short notice, we anticipate most people will need to join by phone or video. Call-in details are below. For those who would like to join in-person, please feel free to come to CGD - 2055 L Street, Washington DC.

To RSVP, please send a note to me and Noor Shakfeh (copied) letting us know if you can make it, and whether you intend to attend in person.

Warm regards,

Jeremy Konyndyk

Video conference details below:

Meeting URL

(b)(6)

Meeting ID

(b)(6)

Want to dial in from a phone?

Dial one of the following numbers:

(b)(6) (US (San Jose))
(b)(6) (US (Primary, San Jose))

(see all numbers - (b)(6))

Enter the meeting ID and passcode followed by #

Connecting from a room system?

Dial: (b)(6) and enter your meeting ID & passcode

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 18 Mar 2020 10:33:44 +0000
Subject: RE: CEPI partners with Hong Kong University for COVID-19 vaccine and Moderna announces first in-human trial of their vaccine candidate

- Ъ ` A a A a @ Ъ яяяя

From: Olson, Victoria (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 14 Apr 2020 13:49:16 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); Fleming, Deymon (CDC/DDID/NCEZID/DHCPP); Pearson, Christine (CDC/DDID/NCEZID/DHCPP)
Subject: FW: Updates from the Division

From: Olson, Victoria (CDC/DDID/NCEZID/DHCPP)
Sent: Tuesday, April 14, 2020 9:46 AM
To: Hutson, Christina (CDC/DDID/NCEZID/DHCPP) <zuu6@cdc.gov>; Li, Yu (CDC/DDID/NCEZID/DHCPP) <lay4@cdc.gov>; Lowe, David (CDC/DDID/NCEZID/DHCPP) <nqu9@cdc.gov>; Nakazawa, Yoshinori J. (CDC/DDID/NCEZID/DHCPP) <inp7@cdc.gov>; Olson, Victoria (CDC/DDID/NCEZID/DHCPP) <vao9@cdc.gov>; Panayampalli, Subbian Satheshkumar (CDC/DDID/NCEZID/DHCPP) <xdv3@cdc.gov>; Petersen, Brett W. (CDC/DDID/NCEZID/DHCPP) <ige3@cdc.gov>; Reynolds, Mary (CDC/DDID/NCEZID/DHCPP) <nzr6@cdc.gov>; Simmons, Elsie (CDC/DDID/NCEZID/DHCPP) <emm1@cdc.gov>; Wu, Xianfu (CDC/DDID/NCEZID/DHCPP) <xaw6@cdc.gov>
Subject: Updates from the Division

Hello all,

Here are the latest updates from the Division that I have:

(b)(5)

(b)(5)

(b)(5)

Let me know if you have any questions,
Vicki

Victoria A. Olson, Ph.D.

Microbiologist
Chief, Poxvirus and Rabies Branch
Division of High-Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention
MS H18-1
1600 Clifton Rd. NE
Atlanta, GA 30333

(404)639-0452 work
(b)(6) cell

From: Richard Hatchett
Sent: Tue, 14 Apr 2020 12:07:51 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Cc: Nick Jackson;Paul Kristiansen;Debra Yeskey;Melanie Saville
Subject: RE: quick question

P.S. If not this, it might be good to set up a call with you and your team to discuss other potential enabling science collaborations between CEPI and CDC!

From: Richard Hatchett
Sent: 14 April 2020 13:07
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Cc: Nick Jackson <nick.jackson@cepi.net>; Paul Kristiansen <paul.kristiansen@cepi.net>; Debra Yeskey <debra.yeskey@cepi.net>; Melanie Saville <melanie.saville@cepi.net>
Subject: RE: quick question

Dear Inger,

Thanks for reaching out and let's get your scientists off their hands!

Adding Nick Jackson, Paul Kristiansen, and Deb Yeskey (as well as Mel), who can advise on whether we're doing this and how we might take advantage of such capabilities if available. Would love to partner with you on this or any other projects that my technical team thinks could accelerate vaccine development.

Best regards,
Richard

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: 14 April 2020 13:03
To: Richard Hatchett <richard.hatchett@cepi.net>
Subject: quick question

Richard – [REDACTED] (b)(5)

[REDACTED] (b)(5)

[REDACTED] (b)(5) If you want to direct me to the Sharepoint site, that's fine. Or refer me to someone else at CEPI.

I am asking because as my scientists sit on their hands, this might be a useful contribution we could make.

Hope you are doing well –

Inger

Inger Damon MD PhD
Director Division of High Consequence Pathogens and Pathology (DHCPP)
National Center for Emerging and Zoonotic Diseases (NCEZID)
Centers for Disease Control and Prevention
Atlanta, GA

From: William Dowling
Sent: Thu, 16 Apr 2020 17:56:18 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: Biosafety level of SARS-CoV-2?

Hi Inger

I have had some inquiries, based on the urgent need for vaccine and drug testing , whether there is any thought at CDC about allowing experiments at BSL2, with enhanced precautions. Is this a possibility? I am guessing nor but thought I would ask.

Thanks
Bill

William Dowling, PhD
Non-Clinical Vaccine Development Leader

CEPI New vaccines
for a safer world

(+1) 202 800-3148 (o)

(b)(6) (m)

William.dowling@cepi.net

1901 Pennsylvania Ave, NW, Suite 1003, Washington, DC 20006 USA

www.cepi.net



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From: William Dowling
Sent: Thu, 16 Apr 2020 18:16:25 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: RE: Biosafety level of SARS-CoV-2?

Thank you. I can think of several reasons why this would not be approved, but some PIs have asked about it.

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Thursday, April 16, 2020 2:13 PM
To: William Dowling <william.dowling@cepi.net>
Subject: Re: Biosafety level of SARS-CoV-2?

I will ask around

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
NCEZID
CDC

From: William Dowling <william.dowling@cepi.net>
Sent: Thursday, April 16, 2020 1:56:18 PM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: Biosafety level of SARS-CoV-2?

Hi Inger

I have had some inquiries, based on the urgent need for vaccine and drug testing , whether there is any thought at CDC about allowing experiments at BSL2, with enhanced precautions. Is this a possibility? I am guessing nor but thought I would ask.

Thanks

Bill

William Dowling, PhD
Non-Clinical Vaccine Development Leader

CEPI New vaccines
for a safer world

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(b)(6) (m)

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From: Helfand, Rita (CDC/DDID/NCEZID/OD)
Sent: Fri, 10 Jan 2020 14:57:19 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: RE: CEPI call

Great, thanks

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Friday, January 10, 2020 9:57 AM
To: Helfand, Rita (CDC/DDID/NCEZID/OD) <rz7@cdc.gov>
Subject: Re: CEPI call

Connie S. is now NIAID

Sue would know

Inger K Damon MD PhD
 Director, Division of High Consequence Pathogens and Pathology
 NCEZID
 CDC

From: Helfand, Rita (CDC/DDID/NCEZID/OD) <rz7@cdc.gov>
Sent: Friday, January 10, 2020 4:54:19 PM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: CEPI call

“Ana Maria appears to want the R and D blueprint to run this.” Of course she does...

Ray was wondering who may know what vaccine work (b)(5) (AM asked him). Do you know who may know or who would have the right contact? I thought Nicki/Darrin or Hilary may but...

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Friday, January 10, 2020 9:46 AM
To: Patel, Anita (CDC/DDID/NCIRD/OD) <bop1@cdc.gov>; Helfand, Rita (CDC/DDID/NCEZID/OD) <rz7@cdc.gov>; Gerber, Susan I. (CDC/DDID/NCIRD/DVD) <bhx1@cdc.gov>
Cc: Arthur, Ray (CDC/DDPHSIS/CGH/DGHP) <rca8@cdc.gov>
Subject: CEPI call

Emailed Richard, Anita.

CEPI call: So far discussion is being led by Ana Maria, epi is same as what you outlined, discussion of the blueprint, etc.

(b)(5)

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
NCEZID
CDC

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Friday, January 10, 2020 4:31 PM
To: Patel, Anita (CDC/DDID/NCIRD/OD); Helfand, Rita (CDC/DDID/NCEZID/OD); Gerber, Susan I. (CDC/DDID/NCIRD/DVD)
Subject: Re: GCM

I don't know what their process is, Anita.
Best to ask Richard.

Happy to facilitate an introduction

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
NCEZID
CDC

From: Patel, Anita (CDC/DDID/NCIRD/OD) <bop1@cdc.gov>
Sent: Friday, January 10, 2020 4:30:17 PM
To: Helfand, Rita (CDC/DDID/NCEZID/OD) <rzh7@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: GCM

Thanks Rita

Hi Inger,
we would like to have someone from the response also included on future advisory calls for novel coronavirus. I was going to reach to Richard to ask if we could have an additional seat on the advisory committee along with Inger. Any concerns with that?

Best,
Anita

Anita Patel, PharmD, MS
Incident Manager

Novel Coronavirus 2020 Response
Centers for Disease Control and Prevention

Office: +1-404-639-2425

Mobile: (b)(6)

Email: apatel7@cdc.gov

From: Helfand, Rita (CDC/DDID/NCEZID/OD) <rz7@cdc.gov>

Sent: Friday, January 10, 2020 9:25 AM

To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>

Cc: Patel, Anita (CDC/DDID/NCIRD/OD) <bop1@cdc.gov>; Helfand, Rita (CDC/DDID/NCEZID/OD) <rz7@cdc.gov>

Subject: RE: GCM

Glad to hear it! We were wondering (copying Anita). Jeremy, AM, and Maria ran the call. I'm copying Anita so she can correct/weigh in. (on our side, it was me, Anita Patel, Steve Lindstrom, Sue Gerber, John Watson, Shah Roohi, and Ray in Geneva, who said AM was 'on')

(b)(5)

(b)(5)

Rita

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>

Sent: Friday, January 10, 2020 9:15 AM

To: Helfand, Rita (CDC/DDID/NCEZID/OD) <rz7@cdc.gov>

Subject: GCM

Rita

Any updates from GCM meeting on new coronavirus? I am supposed to be on CEPI call in 20 minutes

Inger K Damon MD PhD

Director, Division of High Consequence Pathogens and Pathology

NCEZID

CDC

From: Stig Tollefsen
Sent: Thu, 19 Mar 2020 13:52:30 +0000
To: Barrett, Alan;Alash'le Abimiku;Alloueche, Ali;christian.brechot;cbrechot;happic;Schmaljohn, Connie (NIH/NIAID) [E];Daniel Brasseur;mimi darko (b)(6);hrees;Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);James Robinson;Jean Lang;Van Hoof, Johan [JRDBE];John Edmunds;Josie Golding;kneuzil;Jansen, Kathrin;Kenji Shibuya;Michel De Wilde;Levine, Myron;Bryant, Paula (NIH/NIAID) [E];Penny Heaton;Peter Smith;Krause, Philip (FDA/CBER);Ralf Clemens;Stanley Plotkin;Tom Kariuki;SATHIYAMOORTHY, Vaseeharan;yves.levy
Cc: smrivas;oumunna;Ryanto.Ryanto;graca; (b)(6);om (b)(6) Susie Cornell;Malik, Sabahat Z. (CDC/DDID/NCEZID/DHCPP);Camille.Bayrat;Van Tulden, Karin [JRDBE];DEgorugwu;markay.hopps;Zottoli, Jessica;shinoyamaz;Small, Dottie;Mary Burke;admin@vaxconsult.com;Anita Chami;bruniquelv;benassiv;Richard Hatchett;Frederik Kristensen;Melanie Saville;Joseph Simmonds-Issler;Nicole Lurie;Jakob Cramer;Nick Jackson;Mike Whelan;Paul Kristiansen;Svein Rune Andersen;Debra Yeskey;Gabrielle Breugelmans;Ingrid Kromann;Shanni Dhoofer;Rebeka Yasmin;Graca, Gerri;Lang, Jean /FR
Subject: CEPI SAC-meeting face to face Oslo August 2020

Dear SAC members,

We hope this email reaches you well.

Hopefully the situation worldwide will normalize within a couple of months and we are planning to arrange a face to face SAC meeting in Oslo August 12-13, 2020.

You will soon receive a placeholder for the meeting. We will start planning the logistics for the meeting as well as developing the agenda.

We hope to see you all in Oslo in August.

Stay healthy and active until then.

On behalf of the secretariat
 Stig

STIG TOLLEFSEN

Head of Strategic Science



(+47) 901 50 770
 stig.tollefsen@cepi.net

Visiting address: Marcus Thranes gate 2, 0473 Oslo, Norway
Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

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From: Kester, Kent /US
Sent: Fri, 10 Jul 2020 11:20:27 +0000
To: Pavlin, Julie;Khabbaz, Rima (CDC/DDID/NCEZID/OD);Peter Daszak
Cc: Goodtree, Hannah;Alison Andre
Subject: RE: December workshop

An in-person event would be optimal if we can do it in February. Of course, who knows what the situation will be in late 2020/early 2021.

From: Pavlin, Julie <JPavlin@nas.edu>
Sent: Thursday, July 9, 2020 7:33 PM
To: 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rfk1@cdc.gov>; Peter Daszak <daszak@ecohealthalliance.org>; Kester, Kent /US <Kent.Kester@sanofi.com>
Cc: Goodtree, Hannah <HGoodtree@nas.edu>; Alison Andre <andre@ecohealthalliance.org>
Subject: [EXTERNAL] December workshop

EXTERNAL : Real sender is JPavlin@nas.edu

Hi all,

A quick question. We cannot have in-person meetings through the rest of the year. Since we pushed our vaccine workshop to August, 6 months later would be Feb. Do we want to push our One Health workshop to Feb in the hopes of having it in person (who knows if it will be possible even then), or just stick with Dec?

We can also ask the entire Forum if you would like us to poll them.

Thanks!

Julie

Julie A. Pavlin, MD, PhD, MPH
 Director, Board on Global Health
 Health and Medicine Division – Find us at nationalacademies.org/HMD
 The National Academies of Sciences, Engineering, and Medicine
 500 Fifth Street, NW
 Washington, DC 20001
 Phone: 202-334-2171

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From: Kester, Kent /US
Sent: Sat, 25 Jul 2020 22:36:14 +0000
To: Pavlin, Julie;'Peter Daszak';Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Alison Andre;Goodtree, Hannah;Minicucci, Charles
Subject: RE: Draft closed session agenda

Julie—

Looks good to me. And as to working in the Standing Committee aspect, I'm fine with whatever works the best from a logistical standpoint.

Kent

From: Pavlin, Julie <JPavlin@nas.edu>
Sent: Saturday, July 25, 2020 4:20 PM
To: 'Peter Daszak' <daszak@ecohealthalliance.org>; Kester, Kent /US <Kent.Kester@sanofi.com>; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rpk1@cdc.gov>
Cc: Alison Andre <andre@ecohealthalliance.org>; Goodtree, Hannah <HGoodtree@nas.edu>; Minicucci, Charles <CMinicucci@nas.edu>
Subject: [EXTERNAL] Draft closed session agenda

EXTERNAL : Real sender is jpavlin@nas.edu

Hi Peter, Kent and Rima,

Attached is a draft agenda for the closed session on August 28th. Let me know what you think. Scheduled for 2-5PM, and then we're going to have the OHAC meeting separately the following week.

Harvey Fineberg has blocked the entire time on his calendar for now, pending on when we want to talk about the Standing Committee and if they have any items they won't be getting to that the Forum could take on. I have that at the end. I can move it to the beginning, middle, add more time, etc. Just let me know.

Thanks and hope you're staying safe (and cool!).

Julie

Julie A. Pavlin, MD, PhD, MPH
Director, Board on Global Health
Health and Medicine Division – Find us at nationalacademies.org/HMD
The National Academies of Sciences, Engineering, and Medicine
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Washington, DC 20001
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From: Pavlin, Julie
Sent: Mon, 27 Jul 2020 16:25:07 +0000
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD);Kester, Kent /US;'Peter Daszak'
Cc: Alison Andre;Goodtree, Hannah;Minicucci, Charles
Subject: RE: Draft closed session agenda

And we just heard from Alan Tennenberg asking if we can have the meeting earlier in the day as that is 9PM-midnight his time.

I think we picked the best time we could – but let us know if you are available earlier.

From: Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>
Sent: Monday, July 27, 2020 12:22 PM
To: Kester, Kent /US <Kent.Kester@sanofi.com>; Pavlin, Julie <JPavlin@nas.edu>; 'Peter Daszak' <daszak@ecohealthalliance.org>
Cc: Alison Andre <andre@ecohealthalliance.org>; Goodtree, Hannah <HGoodtree@nas.edu>; Minicucci, Charles <CMinicucci@nas.edu>
Subject: RE: Draft closed session agenda

Hi Julie. Agree with Kent, the agenda looks good; great that we have Harvey on, as you have him seems good but whichever way works best is fine. Rima

From: Kester, Kent /US <Kent.Kester@sanofi.com>
Sent: Saturday, July 25, 2020 6:36 PM
To: Pavlin, Julie <JPavlin@nas.edu>; 'Peter Daszak' <daszak@ecohealthalliance.org>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>
Cc: Alison Andre <andre@ecohealthalliance.org>; Goodtree, Hannah <HGoodtree@nas.edu>; Minicucci, Charles <CMinicucci@nas.edu>
Subject: RE: Draft closed session agenda

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Kent

From: Pavlin, Julie <JPavlin@nas.edu>
Sent: Saturday, July 25, 2020 4:20 PM
To: 'Peter Daszak' <daszak@ecohealthalliance.org>; Kester, Kent /US <Kent.Kester@sanofi.com>; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rfk1@cdc.gov>
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Julie

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From: Kester, Kent /US
Sent: Mon, 27 Jul 2020 16:38:45 +0000
To: Pavlin, Julie;Khabbaz, Rima (CDC/DDID/NCEZID/OD);'Peter Daszak'
Cc: Alison Andre;Goodtree, Hannah;Minicucci, Charles
Subject: RE: Draft closed session agenda

No issues for me related to timing.

From: Pavlin, Julie <JPavlin@nas.edu>
Sent: Monday, July 27, 2020 12:25 PM
To: 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rfk1@cdc.gov>; Kester, Kent /US <Kent.Kester@sanofi.com>; 'Peter Daszak' <daszak@ecohealthalliance.org>
Cc: Alison Andre <andre@ecohealthalliance.org>; Goodtree, Hannah <HGoodtree@nas.edu>; Minicucci, Charles <CMinicucci@nas.edu>
Subject: [EXTERNAL] RE: Draft closed session agenda

EXTERNAL : Real sender is JPavlin@nas.edu

And we just heard from Alan Tennenberg asking if we can have the meeting earlier in the day as that is 9PM-midnight his time.
 I think we picked the best time we could – but let us know if you are available earlier.

From: Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>
Sent: Monday, July 27, 2020 12:22 PM
To: Kester, Kent /US <Kent.Kester@sanofi.com>; Pavlin, Julie <JPavlin@nas.edu>; 'Peter Daszak' <daszak@ecohealthalliance.org>
Cc: Alison Andre <andre@ecohealthalliance.org>; Goodtree, Hannah <HGoodtree@nas.edu>; Minicucci, Charles <CMinicucci@nas.edu>
Subject: RE: Draft closed session agenda

Hi Julie. Agree with Kent, the agenda looks good; great that we have Harvey on, as you have him seems good but whichever way works best is fine. Rima

From: Kester, Kent /US <Kent.Kester@sanofi.com>
Sent: Saturday, July 25, 2020 6:36 PM
To: Pavlin, Julie <JPavlin@nas.edu>; 'Peter Daszak' <daszak@ecohealthalliance.org>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>
Cc: Alison Andre <andre@ecohealthalliance.org>; Goodtree, Hannah <HGoodtree@nas.edu>; Minicucci, Charles <CMinicucci@nas.edu>
Subject: RE: Draft closed session agenda

Julie—

Looks good to me. And as to working in the Standing Committee aspect, I'm fine with whatever works the best from a logistical standpoint.

Kent

From: Pavlin, Julie <JPavlin@nas.edu>
Sent: Saturday, July 25, 2020 4:20 PM
To: 'Peter Daszak' <daszak@ecohealthalliance.org>; Kester, Kent /US <Kent.Kester@sanofi.com>; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rfk1@cdc.gov>
Cc: Alison Andre <andre@ecohealthalliance.org>; Goodtree, Hannah <HGoodtree@nas.edu>; Minicucci, Charles <CMinicucci@nas.edu>
Subject: [EXTERNAL] Draft closed session agenda

EXTERNAL : Real sender is jpavlin@nas.edu

Hi Peter, Kent and Rima,

Attached is a draft agenda for the closed session on August 28th. Let me know what you think. Scheduled for 2-5PM, and then we're going to have the OHAC meeting separately the following week.

Harvey Fineberg has blocked the entire time on his calendar for now, pending on when we want to talk about the Standing Committee and if they have any items they won't be getting to that the Forum could take on. I have that at the end. I can move it to the beginning, middle, add more time, etc. Just let me know.

Thanks and hope you're staying safe (and cool!).

Julie

Julie A. Pavlin, MD, PhD, MPH
 Director, Board on Global Health
 Health and Medicine Division – Find us at nationalacademies.org/HMD
 The National Academies of Sciences, Engineering, and Medicine
 500 Fifth Street, NW
 Washington, DC 20001
 Phone: 202-334-2171

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From: Pavlin, Julie
Sent: Fri, 31 Jul 2020 16:00:08 +0000
To: 'Peter Daszak';Khabbaz, Rima (CDC/DDID/NCEZID/OD);'Kester, Kent /US'
Cc: Goodtree, Hannah;Minicucci, Charles;'Alison Andre'
Subject: RE: Upcoming meeting
Attachments: DRAFT August Vaccines Agenda 7.28.2020.docx

Also the latest draft agenda for the workshop. [Talk now.](#)

From: Pavlin, Julie
Sent: Wednesday, July 29, 2020 7:11 PM
To: 'Peter Daszak' <daszak@ecohealthalliance.org>; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rfk1@cdc.gov>; Kester, Kent /US <Kent.Kester@sanofi.com>
Cc: Goodtree, Hannah <HGoodtree@nas.edu>; Minicucci, Charles <CMinicucci@nas.edu>; Alison Andre <andre@ecohealthalliance.org>
Subject: Upcoming meeting

Hi Peter, Rima and Kent,

Attached is the agenda for our meeting on Friday. Let me know if there is anything else you would like added to it.

I'm also attaching a prospectus on an updated global health report – goes beyond infectious diseases, but is obviously pushed by the COVID and has a lot of that in there – so something we would like to get input from the forum on.

Talk to you on Friday!

Julie

Julie A. Pavlin, MD, PhD, MPH
Director, Board on Global Health
Health and Medicine Division – Find us at nationalacademies.org/HMD
The National Academies of Sciences, Engineering, and Medicine
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**The Critical Public Health Value of Vaccines – Tackling Issues of Access
and Hesitancy**
A Workshop

DRAFT Agenda
AUGUST 17 - 20, 2020

Washington, DC

Objectives:

This virtual meeting is the second of a series of two workshops on the critical public health value of vaccines. The workshop series will feature invited presentations and discussions on the following topics. This four day workshop will explore health systems, research opportunities, communication strategies, and policies that could be considered to address access, perceptions, attitudes, and behaviors toward vaccination.

Specifically, this workshop will feature invited presentations and discussions on the following topics:

- The global impact of declining immunization rates on vaccine-preventable diseases from lack of access and confidence;
- Trends and indicators to monitor attitudes surrounding vaccine safety and efficacy, including a focus on regional and cultural differences;
- The complex determinants of vaccination that hinder or promote vaccine uptake;
- The role of health systems and professionals in improving access, influencing vaccine behavior, protecting at-risk communities from vaccine-preventable

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

disease outbreaks, and preserving and building confidence in immunization strategies and practices;

- The role of media, anti-vaccine networks, and online misinformation in reinforcing anxieties about vaccine safety and drivers of vaccine hesitancy;
- Strategies to enhance community-based approaches and community engagement efforts for improving access and reducing vaccine hesitancy;
- Communication approaches that would help assuage anxieties about vaccine safety and strengthen public trust in science and health professionals;
- The ethics and effectiveness of legislation that aim to address vaccine hesitancy; and
- Potential priority actions as well as partnerships and collaborations among policy makers, health professionals, national and international health organizations, parents, and community groups to increase immunization access and vaccine confidence.

Workshop speakers and discussants will contribute perspectives from government, academia, private, and nonprofit sectors.

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

DAY 1 – MONDAY, August 17 2020

11:00 am – 2:00pm

11:00am **Welcome Remarks**
PETER DASZAK, *Chair of the Forum on Microbial Threats*
President
EcoHealth Alliance

Workshop Overview and Goals

HEIDI LARSON, *Workshop Co-Chair*
Professor of Anthropology, Risk and Decision Science
Director, The Vaccine Confidence Project
London School of Hygiene & Tropical Medicine

Moderator: Matthew Zahn, Orange County Health Care Agency, Workshop Co-Chair

Keynote Addresses

The Global Impact of COVID-19 on Vaccination Uptake and Access

TBD

The Global State of Vaccine Confidence: How Do We Enhance the Uptake of Vaccines?

SAAD B. OMER (**confirmed for webinar**)

Director

Yale Institute for Global Health

11:45am **Q&A**

Session I: Improving Access and Closing the Global Immunization Gap

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

12:00pm Session I objectives:

- Assess the current state of vaccine-preventable diseases globally, delineating the key barriers to dissemination and uptake of vaccines.
- Examine evidence-based strategies to improve access to vaccines and increase immunization coverage, globally and locally.

Moderator: Noni MacDonald, Dalhousie University

Applying an Equity Lens in Immunization to Close the Global Immunization Gap

ANURADHA GUPTA (confirmed for webinar)

Deputy Chief Executive Officer

Gavi, The Vaccine Alliance

Reducing Barriers and Increasing Vaccine Uptake Among Adults

LITJEN (L.J.) TAN (confirmed for webinar)

Chief Strategy Officer

Immunization Action Coalition

Commented [EA1]: I moved this up here since it's not really a case presentation like the others below

Case Presentations

Using mHealth Interventions to Improve Vaccination Coverage

MOMIN ABDUL KAZI (confirmed for webinar)

Assistant Professor

The Aga Khan University, Pakistan

The Role of Community-Based Pharmacy Interventions in Increasing Vaccine Access

JEFF GOAD (confirmed for webinar)

Chair, Department of Pharmacy Practice

Chapman University School of Pharmacy

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

1:00pm **Q&A**

1:45pm **Observations from Day 1**
HEIDI LARSON, *Workshop Co-Chair*
Professor of Anthropology, Risk and Decision Science
Director, The Vaccine Confidence Project
London School of Hygiene & Tropical Medicine

2:00pm **Adjourn**

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

DAY 2 – TUESDAY, August 18 2020

10:00 am – 12:00pm

Session II: Assessing Global and Local Drivers of Vaccine Hesitancy

Session II Objectives:

- Examine trends in hesitant attitudes toward vaccination and the impact on declining immunization rates.
- Evaluate the complex determinants and drivers of vaccine uptake, including sociocultural factors that influence perceptions, attitudes, and behaviors towards vaccination.
- Explore methods to monitor and measure vaccine hesitancy to better address concerns, and to sustain confidence in vaccination.

10:00am

Welcome and Recap Day 1

MATTHEW ZAHN, *Workshop Co-Chair*

Medical Director, Division of Epidemiology and Assessment

Orange County Health Care Agency

Moderator: Alison Buttenheim, University of Pennsylvania

Case Presentation

**Vaccine-Attributable Severe Dengue in the Philippines
and the Impact on National Immunization Programs**

STEFAN FLASCHE (**confirmed for webinar**)

Associate Professor

London School of Hygiene and Tropical Medicine

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF ACCESS AND HESITANCY

Measuring Behavioral and Social Drivers of Vaccination

JULIE LEASK (confirmed for webinar)

Visiting Professorial Fellow

National Centre for Immunisation Research and Surveillance

Understanding Drivers of Vaccine Hesitancy Among Adults

JULIE BETTINGER (confirmed for webinar)

Associate Professor

Vaccine Evaluation Center

Commented [AE2]: This presentation will provide examples of specific outbreak events or diseases and associated populations.
Ex: Tdap for pregnant women; meningococcal for college students.

TBD

NOEL BREWER

Professor of Health Behavior

Gillings School of Global Public Health and Lineberger Comprehensive Cancer Center

University of North Carolina

11:00am Q&A

11:45am **Observations from Day 2**
MATTHEW ZAHN, *Workshop Co-Chair*
Medical Director, Division of Epidemiology and Assessment
Orange County Health Care Agency

12:00pm **Adjourn**

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

DAY 3 – WEDNESDAY, August 19 2020

11:00am – 2:00pm

**Session III: Employing a Systems Approach to Building Confidence and Increasing
Uptake**

Session III – Part A Objectives:

- Explore opportunities in research, communication, legislation, and technology in influencing vaccine behavior, improving access, and building confidence in immunization practices.

11:00am

Welcome and Recap Day 2

WALTER ORENSTEIN

Professor and Associate Director

Emory Vaccine Center

Moderator: Chandy C. John, Indiana University School of Medicine

Legal Approaches to Promoting Parental Compliance with Childhood Immunization

Recommendations

DORIT REISS (*confirmed for webinar*)

Professor of Law

University of California Hastings College of the Law

Impact of Eliminating Non-Medical Exemptions in California

MICHELLE MELLO (*confirmed for webinar*)

Professor of Law and Medicine

Stanford University

Harnessing Cultural Insights to Increase Vaccination Uptake and Compliance

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF ACCESS AND HESITANCY

DAN CARUCCI (confirmed for webinar)
Global Medical Director
McCann Health

The Role of Physicians in Building Vaccine Confidence and Acceptance

TODD WOLYNN (confirmed for webinar)
Chief Executive Officer
Kids Plus Pediatrics

Strategies for Improving Healthcare Providers' Communication about Vaccination

SEAN O'LEARY (confirmed for webinar)
Associate Professor
University of Colorado, Denver

12:00pm Q&A

12:30pm Session III – Part B Objectives:

- Discuss how community-based approaches and strategies can effectively and ethically be employed to reduce vaccine hesitancy and increase vaccine confidence.

Moderator: Rafael Obregon, UNICEF, Paraguay

Social Mobilization as a Strategy to Increase Vaccine Acceptance and Uptake

MOHAMED JALLOH (confirmed for webinar)
Senior Behavioral Epidemiologist
U.S. Centers for Disease Control and Prevention (CDC)

Adaptation of the COM-B Model to Increase Vaccination Acceptance and Uptake

CATHERINE JACKSON (confirmed for webinar)

Commented [AE3]: Should we have separate titles for parts A and B?

Commented [AE4]: I moved this here to make room for Sean's presentation in part A but if he's unavailable and there are no alternates, this can be moved back up. It works in both sessions.

It does however make this session longer so we either sacrifice Q&A time or go till 2:30pm. I adjusted the time for 30 minutes Q&A for each.

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF ACCESS AND HESITANCY

Director
Valid Research Limited

The Immunity Community: A Community Engagement Strategy to Boost Vaccine Confidence

CLARISSA HSU (confirmed for webinar)
Assistant Investigator
Kaiser Permanente Washington Health Research Institute

Engaging with Faith Communities to Increase Vaccine Acceptance and Uptake: A Charedi Orthodox Jewish Community Example

LOUISE LETLEY (confirmed for webinar)
Nurse Manager for Research, Immunisation Operations,
Public Health England

Engaging with Immigrant Communities to Increase Vaccine Acceptance and Uptake: A Somali-American Community Example

PATSY STINCHFIELD (confirmed for webinar)
Senior Director, Infection Prevention and Control
Children’s Minnesota

1:25pm **Q&A**

1:55pm **Observations from Day 3**
WALTER ORENSTEIN
Professor and Associate Director
Emory Vaccine Center

2:00pm **Adjourn**

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

DAY 4 – THURSDAY, August 20 2020

11:00am – 1:30pm

Session IV: Moving Forward: Optimizing the Utilization of Vaccines

- 11:00am Session IV – Part A Objective:
- Discuss the impact of vaccines in mitigating the effects of emerging threats during an outbreak.
- Welcome and Recap Day 2**
TBD
- Moderator: Kent Kester, Sanofi Pasteur (Vice-Chair of the Forum on Microbial Threats)*
- 11:10am Plenary Presentation
New Vaccines in the Midst of an Outbreak
NICOLE LURIE (confirmed for webinar)
Strategic Advisor to the CEO
Coalition for Epidemic Preparedness Innovations (CEPI)
- 11:25am **Q&A**
-
- 11:45am Session IV – Part B Objectives:
- Discuss approaches to strengthen public trust in science and public health programs.
 - Synthesize priority actions that could ensure that immunization programs reach the last mile.

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

Moderator: Alison Bутtenheim (University of Pennsylvania)

Panel: Inoculating Against Misinformation and Rebuilding the Public's Trust in Science

SANDER VAN DER LINDEN (**confirmed for webinar**)

Director

Cambridge Social Decision-Making Laboratory

IMRAN KHAN (**confirmed for webinar**)

Head of Public Engagement

Wellcome Trust

ETHAN LINDENBERGER (**confirmed for webinar**)

Activist

KASISOMAYAJULA VISWANATH (**confirmed for webinar**)

Lee Kum Kee Professor of Health Communication

Harvard T. H. Chan School of Public Health

SPEAKER TBD

Google

12:30pm **Visionary Statements on Priorities in Building Vaccine Acceptance and Uptake for the
Next Generation**

Moderator: Amanda Cohn, U.S. Centers for Disease Control and Prevention

PETER HOTEZ (**confirmed for webinar**)

Dean, National School of Tropical Medicine

Baylor College of Medicine

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

NARENDRA ARORA (**confirmed for webinar**)

Executive Director

Inclen

MONIKA NAUS (**confirmed for webinar**)

Medical Director

Communicable Diseases & Immunization Service

BC Centre for Disease Control

JEAN-MARC OLIVE (**confirmed for webinar**)

Independent Consultant

12:55pm **Panel Discussion and Audience Q&A**

1:20pm **Closing Remarks**

PETER DASZAK, *Chair of the Forum on Microbial Threats*

President

EcoHealth Alliance

1:30pm **Adjourn**

From: Kester, Kent /US
Sent: Tue, 17 Mar 2020 20:26:51 +0000
To: Amponsah, Edith;Peter Daszak;Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: 'andre@ecohealthalliance.org';Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);Louchie, Vivian /US;Pavlin, Julie;Goodtree, Hannah;Buckley, Gillian
Subject: RE: FMT Leadership Meeting - March 27th

Still OK for me.

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Tuesday, March 17, 2020 3:36 PM
To: Peter Daszak <daszak@ecohealthalliance.org>; Rima F. Khabbaz <rfk1@cdc.gov>; Kester, Kent /US <Kent.Kester@sanofi.com>
Cc: 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: [EXTERNAL] FMT Leadership Meeting - March 27th

EXTERNAL : Real sender is EAmponsah@nas.edu

Dear Peter, Rima, and Kent,

With the current COVID-19 outbreak at the center of attention currently, we understand many people's schedules and availability have changed. I am writing to confirm that we are still meeting virtually via zoom next Friday from 1-2:30pm ET for our regular leadership meetings.

Please let us know if you're still available (or not) by responding to this email.

Thank you,

Edith Amponsah, MPH, IBCLC

Research Associate

Forum on Microbial Threats

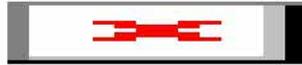
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From: Alison Andre
Sent: Tue, 17 Mar 2020 20:46:08 +0000
To: Amponsah, Edith;Peter Daszak;Khabbaz, Rima (CDC/DDID/NCEZID/OD);Kent Kester
Cc: Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);'vivian.louchie@sanofipasteur.com';Pavlin, Julie;Goodtree, Hannah;Buckley, Gillian
Subject: Re: FMT Leadership Meeting - March 27th

This time still works for Peter.

Best,
Alison

From: "Amponsah, Edith" <EAmponsah@nas.edu>
Date: Tuesday, March 17, 2020 at 3:35 PM
To: Peter Daszak <daszak@ecohealthalliance.org>, "Rima F. Khabbaz" <rfk1@cdc.gov>, Kent Kester <Kent.Kester@sanofi.com>
Cc: Alison Andre <andre@ecohealthalliance.org>, "'vjk1@cdc.gov'" <vjk1@cdc.gov>, "'vivian.louchie@sanofipasteur.com'" <vivian.louchie@sanofipasteur.com>, "Pavlin, Julie" <JPavlin@nas.edu>, "Goodtree, Hannah" <HGoodtree@nas.edu>, "Buckley, Gillian" <GBuckley@nas.edu>
Subject: FMT Leadership Meeting - March 27th

Dear Peter, Rima, and Kent,

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Please let us know if you're still available (or not) by responding to this email.

Thank you,

Edith Amponsah, MPH, IBCLC

Research Associate
Forum on Microbial Threats
Health and Medicine Division
The National Academies of Sciences, Engineering, and Medicine

500 Fifth Street, NW

Phone: 202-334-3222

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From: Kester, Kent /US
Sent: Fri, 20 Mar 2020 19:43:30 +0000
To: Peter Daszak;Amponsah, Edith;Alison Andre;Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);Louchie, Vivian /US;Pavlin, Julie;Goodtree, Hannah;Buckley, Gillian
Subject: RE: FMT Leadership Meeting - March 27th

I'm good after 1530 on the 27th.

From: Peter Daszak <daszak@ecohealthalliance.org>
Sent: Friday, March 20, 2020 2:29 PM
To: Amponsah, Edith <EAmponsah@nas.edu>; Alison Andre <andre@ecohealthalliance.org>; Rima F. Khabbaz <rfk1@cdc.gov>; Kester, Kent /US <Kent.Kester@sanofi.com>
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Subject: [EXTERNAL] RE: FMT Leadership Meeting - March 27th
Importance: High

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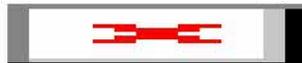
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From: Peter Daszak
Sent: Fri, 20 Mar 2020 18:29:06 +0000
To: Amponsah, Edith;Alison Andre;Khabbaz, Rima (CDC/DDID/NCEZID/OD);Kent Kester
Cc: Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);'vivian.louchie@sanofipasteur.com';Pavlin, Julie;Goodtree, Hannah;Buckley, Gillian
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Phone: 202-334-3222

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Sent: Sat, 21 Mar 2020 00:00:19 +0000
To: 'Kester, Kent /US'; Peter Daszak; Amponsah, Edith; Alison Andre; Khabbaz, Rima (CDC/DDID/NCEZID/OD)
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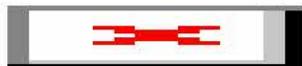
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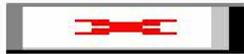
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Great. Hannah will send an updated calendar invite on Monday.

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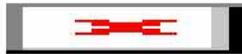
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Thanks, Rima

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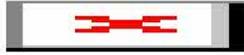
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Sent: Thursday, March 19, 2020 11:17 AM

To: Alison Andre <andre@ecohealthalliance.org>; Peter Daszak <daszak@ecohealthalliance.org>; Rima F. Khabbaz <rfk1@cdc.gov>; Kent Kester <Kent.Kester@sanofi.com>

Cc: 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'vivian.louchie@sanofipasteur.com' <vivian.louchie@sanofipasteur.com>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>

Subject: Re: FMT Leadership Meeting - March 27th

Thanks all - I will send a short agenda early next week.

Talk soon,

Edith

From: Alison Andre <andre@ecohealthalliance.org>

Sent: Tuesday, March 17, 2020 4:46 PM

To: Amponsah, Edith; Peter Daszak; Rima F. Khabbaz; Kent Kester

Cc: 'vjk1@cdc.gov'; 'vivian.louchie@sanofipasteur.com'; Pavlin, Julie; Goodtree, Hannah; Buckley, Gillian

Subject: Re: FMT Leadership Meeting - March 27th

This time still works for Peter.

Best,
 Alison

From: "Amponsah, Edith" <EAmponsah@nas.edu>

Date: Tuesday, March 17, 2020 at 3:35 PM

To: Peter Daszak <daszak@ecohealthalliance.org>, "Rima F. Khabbaz" <rfk1@cdc.gov>, Kent Kester <Kent.Kester@sanofi.com>

Cc: Alison Andre <andre@ecohealthalliance.org>, "vjk1@cdc.gov" <vjk1@cdc.gov>, "vivian.louchie@sanofipasteur.com" <vivian.louchie@sanofipasteur.com>, "Pavlin, Julie" <JPavlin@nas.edu>, "Goodtree, Hannah" <HGoodtree@nas.edu>, "Buckley, Gillian" <GBuckley@nas.edu>

Subject: FMT Leadership Meeting - March 27th

Dear Peter, Rima, and Kent,

With the current COVID-19 outbreak at the center of attention currently, we understand many people's schedules and availability have changed. I am writing to confirm that we are still meeting virtually via zoom next Friday from 1-2:30pm ET for our regular leadership meetings.

Please let us know if you're still available (or not) by responding to this email.

Thank you,

Edith Amponsah, MPH, IBCLC

Research Associate
Forum on Microbial Threats
Health and Medicine Division
The National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW
Phone: 202-334-3222
www.nationalacademies.org/HMD



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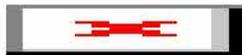
From: Amponsah, Edith
Sent: Tue, 24 Mar 2020 21:01:18 +0000
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Kester, Kent /US; Peter Daszak; Alison Andre; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR); Louchie, Vivian /US; Pavlin, Julie; Goodtree, Hannah; Buckley, Gillian
Subject: Re: FMT Leadership Meeting - March 27th
Attachments: FMT Leadership Call Agenda_Mar27.docx

Hello Kent, Peter, and Rima,
 Please find attached here an agenda for our call on Friday.
 Please let me know if you have any questions or concerns.
 Best,
 Edith

From: Amponsah, Edith
Sent: Saturday, March 21, 2020 9:40 AM
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Kester, Kent /US; Peter Daszak; Alison Andre; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR); Louchie, Vivian /US; Pavlin, Julie; Goodtree, Hannah; Buckley, Gillian
Subject: Re: FMT Leadership Meeting - March 27th

Great. Hannah will send an updated calendar invite on Monday.

Thank you,
Edith Amponsah, MPH, IBCLC
 Research Associate
 Forum on Microbial Threats
 Health and Medicine Division
 The National Academies of Sciences, Engineering, and Medicine
[500 Fifth Street, NW](#)
 Phone: [202-334-3222](tel:202-334-3222)
www.nationalacademies.org/HMD



On Mar 21, 2020, at 08:38, Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov> wrote:

3:30 pm or later should work for me too.

Thanks, Rima

Get [Outlook for iOS](#)

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Saturday, March 21, 2020 7:12:17 AM
To: Kester, Kent /US <Kent.Kester@sanofi.com>
Cc: Peter Daszak <daszak@ecohealthalliance.org>; Alison Andre <andre@ecohealthalliance.org>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vj1@cdc.gov>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: Re: FMT Leadership Meeting - March 27th

Works for us on our end. Rima?

Thank you,

Edith Amponsah, MPH, IBCLC

Research Associate

Forum on Microbial Threats

Health and Medicine Division

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On Mar 20, 2020, at 15:44, Kester, Kent /US <Kent.Kester@sanofi.com> wrote:

I'm good after 1530 on the 27th.

From: Peter Daszak <daszak@ecohealthalliance.org>

Sent: Friday, March 20, 2020 2:29 PM

To: Amponsah, Edith <EAmponsah@nas.edu>; Alison Andre <andre@ecohealthalliance.org>; Rima F. Khabbaz <rfk1@cdc.gov>; Kester, Kent /US <Kent.Kester@sanofi.com>

Cc: 'vjk1@cdc.gov' <vjk1@cdc.gov>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>

Subject: [EXTERNAL] RE: FMT Leadership Meeting - March 27th

Importance: High

EXTERNAL : Real sender is daszak@ecohealthalliance.org

Hi everyone,

Sorry to do this but can we push the meeting back a bit if possible? I've got to be on a virtual conference with USAID that I can't get out of from 1-3pm that day. They changed the date, so that's why I had said this time/date would work.

I can definitely do 3:30 onwards on the 27th, and I have plenty of other times/dates the week after.

Many apologies and much appreciated if you can change...

Cheers,

Peter

Peter Daszak
President

EcoHealth Alliance
460 West 34th Street
New York, NY 10001
USA

Tel.: +1-212-380-4474
Website: www.ecohealthalliance.org
Twitter: [@PeterDaszak](https://twitter.com/PeterDaszak)

EcoHealth Alliance develops science-based solutions to prevent pandemics and promote conservation

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Cc: 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'vivian.louchie@sanofipasteur.com' <vivian.louchie@sanofipasteur.com>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: Re: FMT Leadership Meeting - March 27th

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To: Amponsah, Edith; Peter Daszak; Rima F. Khabbaz; Kent Kester
Cc: 'vjk1@cdc.gov'; 'vivian.louchie@sanofipasteur.com'; Pavlin, Julie; Goodtree, Hannah; Buckley, Gillian
Subject: Re: FMT Leadership Meeting - March 27th

This time still works for Peter.

Best,
Alison

From: "Amponsah, Edith" <EAmponsah@nas.edu>
Date: Tuesday, March 17, 2020 at 3:35 PM
To: Peter Daszak <daszak@ecohealthalliance.org>, "Rima F. Khabbaz" <rfk1@cdc.gov>, Kent Kester <Kent.Kester@sanofi.com>
Cc: Alison Andre <andre@ecohealthalliance.org>, "'vjk1@cdc.gov'" <vjk1@cdc.gov>, "'vivian.louchie@sanofipasteur.com'" <vivian.louchie@sanofipasteur.com>, "Pavlin, Julie" <JPavlin@nas.edu>, "Goodtree, Hannah" <HGoodtree@nas.edu>, "Buckley, Gillian" <GBuckley@nas.edu>
Subject: FMT Leadership Meeting - March 27th

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Thank you,

Edith Amponsah, MPH, IBCLC

Research Associate

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The National Academies of
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FORUM ON MICROBIAL THREATS - LEADERSHIP CALL #9

Friday, March 27, 2020

3:30 – 5:00 pm (EST)

PARTICIPANTS

MEMBERS: Peter Daszak, Kent Kester, Rima Khabbaz

STAFF: Julie Pavlin, Gillian Buckley, Edith Amponsah, and Hannah Goodtree

MEETING MATERIALS

- Sponsorship list

AGENDA ITEMS

1. Admin
 - Welcome Rima
 - Rotating off: Jay Siegel
 - Reappointment: Marcos Espinal, Eva Harris, Kumanan Rasanathan, Peter Sands, Thomas Scott, Suerie Moon.
2. 2019 Annual Report
3. Forum Workshop Updates
 - Innovations Workshop
 - Proceedings in review
 - Vaccines Workshop
 - Planning committee calls underway
 - Staff updating agenda
 - Change in venue
 - Contingency plan for workshop
 - June 2020 workshop
 - Systematizing the One Health Approach in Preparedness and Response Efforts for Infectious Disease Outbreaks
4. Forum Sponsorship Updates
 - Upcoming sponsor renewals
 - CDC (July)
 - Merck (June)
 - Updates from our last conversation
5. OHAC
 - World One Health Congress 2020 – postponed to the end of October
 - 2 deliverables in progress-priority actions during COVID-19 pandemic
6. Other Activities
 - NASEM activities regarding COVID-19
 - How can FMT engage in these activities
7. Next steps and action items

From: Gershman, Lynn E. (CDC/DDPHSIS/OD)
Sent: Mon, 13 Jan 2020 12:08:55 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD)
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Got it – thanks!

kindest Regards,

Lynn

Wisdom is knowing the right path to take; Integrity is taking it.

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: Sunday, January 12, 2020 6:28 AM
To: Gershman, Lynn E. (CDC/DDPHSIS/OD) <veu4@cdc.gov>
Subject: Fwd: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Change of destination

Stephen C. REDD, M.D.
 RADM, USPHS

From: Vernon Lee [redacted] (b)(6)
Sent: Sunday, January 12, 2020 04:41
To: John N. Nkengasong
Cc: Annelise Wilder-Smith; Ximena Aguilera; Constance LOW (MOH); BRIAND, Sylvie; FALL, Ibrahima Soce; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; [redacted] (b)(6) [redacted] (b)(6) Karen TAN (MCI); dandona@uw.edu; Jacobs, Michael; Ngozi Erondue; [redacted] (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; Redd, Stephen (CDC/DDPHSIS/OD); sean.cleghorn@lancet.com; [redacted] (b)(6) Kamran Khan; Chikwe Ihekweazu; eduardo.carmo@saude.gov.br; Ziad Memish; [redacted] (b)(6) [redacted] (b)(6) [redacted] (b)(6) [redacted] (b)(6) Yijun LIN (MOH); ephpjv@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH); Vernon LEE (MOH); ID Commissioners Lancet; Wen Qing YEO (MOH)
Subject: Re: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Dear everyone,

Apologies for the change and this is not one that we take lightly.

I've discussed this with Gabriel and we feel that given the unusual and unforeseen circumstances in Hong Kong, that we will look at hold the meeting in Singapore. I'm going to confirm some details with the Singapore institutions tomorrow for funding and hosting, and will get back to all with final instructions.

This change is because some institutions have issues with travel to Hong Kong and there are some travel advisories in place that invalidates things such as travel insurance, making travel complicated.

I understand that they are some of you who have booked tickets to Hong Kong and are planning other meetings there. What we can do is to also fund travel round trip travel from Hong Kong to Singapore if the tickets cannot be changed. Do let us know if this applies to you.

I will get back to everyone all soon as possible.

Best regards
Vernon

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From: John N. Nkengasong <NkengasongJ@africa-union.org>
Sent: Sunday, January 12, 2020 7:44:46 AM
To: Vernon Lee <(b)(6)>
Cc: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minlnv.nl <c.bruschke@minlnv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; (b)(6)
 (b)(6) (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu <dandona@uw.edu>; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6)
 (b)(6) riha@cepi.net <riha@cepi.net>; Ryan.Morhard@weforum.org <Ryan.Morhard@weforum.org>; scr1@cdc.gov <scr1@cdc.gov>; sean.cleghorn@lancet.com <sean.cleghorn@lancet.com>; (b)(6) (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; Ziad Memish (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) jxxm0349@gmail.com <jxxm0349@gmail.com>; Yijun LIN (MOH) <LIN_Yijun@moh.gov.sg>; ephpjv@nus.edu.sg <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>
Subject: Re: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Waiting for the final decision.
Best wishes,
John

Professor of Emerging Infectious Diseases
 Department of Disease Control
 London School of Hygiene and Tropical Medicine
 &
 Editor-in-Chief, Journal of Travel Medicine
 &
 Chair, Lancet Commission on arboviral diseases
 &
 WHO Consultant, Vaccines for arboviruses
 &
 ZIKAPLAN, Scientific Coordinator

From: Ximena Aguilera Sanhueza <xaguilera@udd.cl>

Date: Friday, 10 January 2020 at 4:27 PM

To: "'Constance LOW (MOH)'" <Constance_LOW@moh.gov.sg>, "'BRIAND, Sylvie'" <briands@who.int>, Ibrahima-soce FALL <socef@who.int>, Dr John Nkengasong <NkengasongJ@africa-union.org>, David Heymann <David.Heymann@LSHTM.ac.uk>, Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, deanmed <deanmed@hku.hk>, Yu Hongjie <cfetpyhj@vip.sina.com>, jane halton (b)(6), (b)(6), (b)(6) "'Karen TAN (MCI)'" <Karen_TAN@mci.gov.sg>, Lalit Dandona <dandona@uw.edu>, "'Jacobs, Michael'" <michael.jacobs@ucl.ac.uk>, Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>, Peter Horby (b)(6) Richard Hatchett <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "Cleghorn, Sean (ELS-CAM)" <sean.cleghorn@lancet.com>, (b)(6), (b)(6) 'Kamran Khan' <Kamran@bluedot.global>, 'Chikwe Ihekweazu' <chikwe.iheweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish (b)(6), (b)(6), (b)(6)
Cc: (b)(6), (b)(6), (b)(6), (b)(6), (b)(6), (b)(6), (b)(6) "'Yijun LIN (MOH)'" <LIN_Yijun@MOH.gov.sg>, "ephjv@nus.edu.sg" <ephjv@nus.edu.sg>, "'Deborah NG (MOH)'" <Deborah_NG@moh.gov.sg>, "'Felicia HONG (MOH)'" <Felicia_HONG@moh.gov.sg>, "'Vernon LEE (MOH)'" <Vernon_LEE@moh.gov.sg>, Vernon Lee (b)(6) 'ID Commissioners Lancet' <(b)(6)> "'Wen Qing YEO (MOH)'" <YEO_Wen_Qing@moh.gov.sg>
Subject: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Thanks, saved

Ximena

De: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Enviado el: viernes, 10 de enero de 2020 8:12

Para: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong

<NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6)

riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;

(b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6) (b)(6)

CC: (b)(6) (b)(6) (b)(6)

(b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6)

ID Commissioners Lancet

(b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>

Asunto: RE: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification:Restricted

Dear Commissioners,

Thank you for your patience. Please bear with us a little longer as we are still working out the administrative details. We will send it out as soon as possible.

Have a good weekend ahead.

Thanks and best regards,
Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)

Sent: Wednesday, 23 October 2019 11:53 AM

To: 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'David Heymann' <david.heyman@lshtm.ac.uk>; 'annelies.wilder-smith@lshtm.ac.uk' <annelies.wilder-smith@lshtm.ac.uk>; 'xaguilera@udd.cl' <xaguilera@udd.cl>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>;

(b)(6) (b)(6) (b)(6)

(b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu'

<dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi.Erond@lshtm.ac.uk'

<Ngozi.Erond@lshtm.ac.uk>; (b)(6) (b)(6) 'riha@cepi.net'

<riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov'

<scr1@cdc.gov>; 'sean.cleghorn@lancet.com' <sean.cleghorn@lancet.com>;

(b)(6) (b)(6)
Cc: (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) (b)(6)
 (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephpjv@nus.edu.sg' <ephpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) 'ID Commissioners Lancet' (b)(6)
Subject: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification:Restricted

Dear Commissioners,

Thank you all for your replies. The dates for the upcoming meeting will be 12 and 13 March 2020 (Thursday and Friday). More details will be shared closer the dates.

Thanks and best regards,
 Yijun and Constance

MOH EMS

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Constance LOW (MOH)
Sent: Wednesday, 9 October 2019 8:08 AM
To: BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; John N. Nkengasong <NkengasongJ@africa-union.org>; David Heymann <david.heyman@lshtm.ac.uk>; annelies.wilder-smith@lshtm.ac.uk; xaguilera@udd.cl; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6)
 (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6)
riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; sean.cleghorn@lancet.com;
 (b)(6)
Cc: (b)(6) (b)(6) (b)(6)
 (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'Vernon Lee' (b)(6) ID Commissioners Lancet (b)(6)
Subject: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020

Message Classification:Restricted

Dear Commissioners,

Due to some unforeseen circumstances, we would need to reschedule the meeting dates in March 2020. The new proposed dates are:

- 9 to 10 March 2020 (Monday to Tuesday)
- 12 to 13 March 2020 (Thursday to Friday)

Appreciate your reply by 11 Oct 2019 pls.

Thanks and best regards,
Constance, Deborah, Vincent and Yijun

[MOH EMS](#)

This email may contain sensitive information. Please file appropriately.

(b)(6)

From: Gershman, Lynn E. (CDC/DDPHSIS/OD)
Sent: Wed, 8 Jan 2020 18:23:18 +0000
To: Redd, Stephen (CDC/DDPHSIS/OD)
Subject: RE: check in

Did you hear back from Richard?

Kindest Regards,

Lynn

Wisdom is knowing the right path to take; Integrity is taking it.

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: Tuesday, January 7, 2020 11:55 AM
To: Richard Hatchett <richard.hatchett@cepi.net>
Cc: Gershman, Lynn E. (CDC/DDPHSIS/OD) <veu4@cdc.gov>
Subject: RE: check in

For Monday, I'm available from 4:30 to 6PM your time; Tuesday 3 to 4PM. There's not a special urgency, but it would be good to check in. Also, let me know if there are other places I could help.

Steve

From: Richard Hatchett <richard.hatchett@cepi.net>
Sent: Tuesday, January 7, 2020 10:04
To: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Cc: Uzicanin, Amra (CDC/DDID/NCEZID/DGMQ) <aau5@cdc.gov>
Subject: RE: check in

Dear Steve,

Happy New Year and thank you for following up with Marty and Amra and for reaching out. I've begun drafting a few pieces and had hoped to make more progress on this over the holidays than I did, but such, I guess, is the nature of family life 😊

Obviously, we'd be delighted to get a first draft as soon as we can but are grateful for the support and very much appreciate anything they can contribute.

I confess I lost the thread on the follow up call as well (Rebeka has been out on a long holiday), so thanks for the prompt. The rest of this week has filled up, as weeks do, but how do Monday or Tuesday morning look for you? I will be in Oslo, so +6h from Atlanta and happy to work around your schedule.

Best regards,
Richard

From: Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>
Sent: 07 January 2020 14:49
To: Richard Hatchett <richard.hatchett@cepi.net>
Cc: Uzicanin, Amra (CDC/DDID/NCEZID/DGMQ) <aau5@cdc.gov>
Subject: check in

Richard,

Touching base here. I've been in communication with Marty and Amra Uzicanin and they are interested (willing?) to draft a section on community mitigation measures. Their target date is later than you'd (b)(5) late Feb. I will see if we can accelerate that.

I'm also emailing because I have lost the thread for the follow up call, that I think was scheduled for this week. Let me know when the group is scheduled to reconvene.

thanks

Stephen C. Redd, MD
RADM, USPHS
CDC Deputy Director
Public Health Service and Implementation Science

From: Rebeka Yasmin
Sent: Wed, 15 Jan 2020 15:36:35 +0000
To: Ziad Memish;Annelise Wilder-Smith
Cc: ximena aguilera;Amadou.SALL@pasteur.sn;John Nkengasong (Dr);Redd, Stephen (CDC/DDPHSIS/OD);Daniel Bausch;Yijun LIN (MOH);David Heymann;Peter [redacted] (b)(6) LOW (MOH);Vernon LEE (MOH);Vernon Lee;Donnelly, Christl A;Richard Hatchett
Subject: RE: Lancet WG 5 call - availability request

Dear all

For those who are struggling to join, please try again using the following details –

Join Zoom Meeting

[redacted] (b)(6)

Meeting ID: [redacted] (b)(6)

Password: [redacted] (b)(6)

Dial by your location

[redacted] (b)(6) US Toll-free

[redacted] (b)(6) US Toll-free

[redacted] (b)(6) United Kingdom
[redacted] (b)(6) United Kingdom

[redacted] (b)(6) United Kingdom Toll-free

[redacted] (b)(6) Chile
[redacted] (b)(6) Chile

[redacted] (b)(6) Chile Toll-free

Meeting ID: [redacted] (b)(6)

Find your local number [redacted] (b)(6)

From: Ziad Memish [redacted] (b)(6)

Sent: 15 January 2020 15:33

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>

Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>; ximena aguilera <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@moh.gov.sg>; David Heymann <david.heyman@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; [redacted] (b)(6) Constance LOW (MOH)

<Constance_LOW@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee
 (b)(6) Donnelly, Christl A <c.donnelly@imperial.ac.uk>; Richard Hatchett
 <richard.hatchett@cepi.net>

Subject: Re: Lancet WG 5 call - availability request

Same here please. Im in Edinbrough
 Ziad

Sent from my iPhone

On Jan 15, 2020, at 3:32 PM, Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk> wrote:

Kindly let me know the dial in information for the call that is starting now.

Many thanks, Annelies

Annelies Wilder-Smith MD PhD
 Professor of Emerging Infectious Diseases
 Department of Disease Control
 London School of Hygiene and Tropical Medicine
 &
 Editor-in-Chief, Journal of Travel Medicine
 &
 Chair, Lancet Commission on arboviral diseases
 &
 WHO Consultant, Vaccines for arboviruses
 &
 ZIkaPLAN, Scientific Coordinator

From: Rebeka Yasmin <rebeka.yasmin@cepi.net>

Date: Thursday, 9 January 2020 at 1:06 PM

To: Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera Sanhueza
 <xaguilera@udd.cl>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, Dr John Nkengasong
 <NkengasongJ@africa-union.org>, "Redd, Stephen (CDC/DDPHSIS/OD)" <scr1@cdc.gov>, Daniel Bausch
 <daniel.bausch@phe.gov.uk>, "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, David Heymann
 <David.Heymann@LSHTM.ac.uk>, Peter Horby <peter.horby@ndm.ox.ac.uk>, Peter Horby
 (b)(6) "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, Ziad Memish
 (b)(6) "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Vernon Lee
 (b)(6) "Donnelly, Christl A" <c.donnelly@imperial.ac.uk>

Cc: Richard Hatchett <richard.hatchett@cepi.net>

Subject: RE: Lancet WG 5 call - availability request

Dear all,

We would like to arrange the next working group call for early next week. Please can you confirm whether either of the options below work for you?

Tuesday 14 January

0730 DC/09.30 Chile/ 12.00 London and Senegal/ 15.00 Addis Ababa

Wednesday 15 January

10.30 DC/12.30 Chile/15.30 London and Senegal/18.30 Addis Ababa

Best regards,

Rebeka

From: Rebeka Yasmin

Sent: 26 November 2019 16:00

To: Richard Hatchett <richard.hatchett@cepi.net>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguiler a <xaguilera@udd.cl>; Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov; Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David Heymann <david.heyman n@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; zmemish@yahoo.com; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Vernon Lee

(b)(6)

Subject: RE: Lancet WG 5 call - availability request

Dear all,

You should now all have access to the SharePoint folder. If you are still unable to gain access to the documents, please email me and let me know.

The next call will be scheduled for late next week. I've listed some potential times below, please can you confirm whether they work for you?

Thursday 5 December 8am DC/10am Chile/1pm London & Senegal/4pm Ethiopia

Friday 6 December at 11am DC/1pm Chile/4pm London and Senegal/7pm Ethiopia

Thank you,

Rebeka

From: Richard Hatchett <richard.hatchett@cepi.net>
Sent: 24 November 2019 23:30
To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; ximena aguiler a <xaguilera@udd.cl>;
Amadou.SALL@pasteur.sn; John Nkengasong (Dr) <NkengasongJ@africa-union.org>; scr1@cdc.gov;
Daniel Bausch <daniel.bausch@phe.gov.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; David
Heymann <david.hey mann@lshtm.ac.uk>; Peter Horby <peter.horby@ndm.ox.ac.uk>; Constance LOW
(MOH) <Constance_LOW@moh.gov.sg>; (b)(6) Vernon LEE (MOH)
<Vernon_LEE@moh.gov.sg>; Vernon Lee (b)(6)
Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>
Subject: LAncet WG 5 call notes and next steps

Dear all,

Some of you have continued to have trouble with the SharePoint site and if any of you still can't access it on the link that I sent Friday (which try cutting and pasting into your web browser rather than clicking), please let my Executive Assistant, Ms. Rebeka Yasmin, know and she or CEPI IT can troubleshoot with you. Rebeka will be able to assist on Monday. In the interim, I have attached the latest draft of the document that Peter and David and I have worked up to guide further progress, as well as a summary of Friday's call. If Sharepoint is working, all documents are available at

(b)(6)

The major output of the call was that we want to start getting ideas and some draft text down on paper. We'll obviously need to massage and edit what we collectively assemble so that it speaks with one voice, but beginning to develop some of the vignettes and themes in a more comprehensive way will help us both gather momentum and clarify our focus.

We'll organize another call in about two weeks' time, but much of the progress can be managed via e-mail and small writing teams. For those who weren't able to join the call today, I would welcome your self-identifying if there are any particular areas where you would like to make contributions and highlighting any potential vignettes that illustrate the themes we will be amplifying.

Best regards,
Richard

RICHARD HATCHETT
CEO

<[image001.png](#)>

+4479 564 53 146
richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK
Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

<image001.png>

From: Ziad Memish
Sent: Wed, 15 Jan 2020 15:33:01 +0000
To: Annelise Wilder-Smith
Cc: Rebeka Yasmin;ximena aguilera;Amadou.SALL@pasteur.sn;John Nkengasong (Dr);Redd, Stephen (CDC/DDPHSIS/OD);Daniel Bausch;Yijun LIN (MOH);David Heymann;Peter [REDACTED] (b)(6) LOW (MOH);Vernon LEE (MOH);Vernon Lee;Donnelly, Christl A;Richard Hatchett
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 Ziad

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 London School of Hygiene and Tropical Medicine
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 &
 WHO Consultant, Vaccines for arboviruses
 &
 ZIKAPLAN, Scientific Coordinator

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Date: Thursday, 9 January 2020 at 1:06 PM
To: Annelies Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera Sanhuesa <xaguilera@udd.cl>, Dr Amadou Alpha SALL <Amadou.SALL@pasteur.sn>, Dr John Nkengasong <NkengasongJ@africa-union.org>, "Redd, Stephen (CDC/DDPHSIS/OD)" <scr1@cdc.gov>, Daniel Bausch <daniel.bausch@phe.gov.uk>, "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, David Heymann <David.Heymann@LSHTM.ac.uk>, Peter Horby <peter.horby@ndm.ox.ac.uk>, Peter Horby [REDACTED] (b)(6) "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, Ziad Memish [REDACTED] (b)(6) "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, Vernon Lee [REDACTED] (b)(6) "Donnelly, Christl A" <c.donnelly@imperial.ac.uk>
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(b)(6)

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Cc: Rebeka Yasmin <rebeka.yasmin@cepi.net>

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RICHARD HATCHETT
CEO

<[image001.png](#)>

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richard.hatchett@cepi.net

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Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

<image001.png>

From: Ziad Memish
Sent: Fri, 24 Jan 2020 18:18:16 +0000
To: annelies.wilder-smith@lshtm.ac.uk;ximena aguilera;Amadou.SALL@pasteur.sn;NkengasongJ@africa-union.org;Redd, Stephen (CDC/DDPHSIS/OD);Daniel Bausch;David Heymann;Peter

(b)(6)

Christl A;Marc Salzone

Subject: Re: Lancet Id Commission SharePoint access

Thank you for your note. Every time I press the link I get redirected to my outlook account. I wonder if you can assist

Sincerely,
Ziad

On Friday, January 24, 2020, 01:39:37 PM GMT+3, Marc Salzone <marc.salzone@cepi.net> wrote:

Good day

I have been asked to contact yourselves in relation to the external access of the above mentioned SharePoint site. I can see that some have already accepted the invites sent out previously and are listed as members, whilst others I have been told are having issues accessing the site.

If you could please let me know at which point you are experiencing problems and where possible, send screen shots or copy the URL you are having issues accessing.

Marc Salzone

IT Support

CEPI New vaccines
for a safer world

(+47) 413 68 576

marc.salzone@cepi.net

Visiting address: Marcus Thranes gate 2, 0473 Oslo, Norway

Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

www.cepi.net



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From: Marc Salzone
Sent: Fri, 24 Jan 2020 10:39:34 +0000
To: annelies.wilder-smith@lshtm.ac.uk;ximena aguilera;Amadou.SALL@pasteur.sn;NkengasongJ@africa-union.org;Redd, Stephen (CDC/DDPHSIS/OD);Daniel Bausch;David Heymann;Peter Horby; [REDACTED] (b)(6);Constance_LOW@moh.gov.s [REDACTED] (b)(6);Vernon_LEE@moh.gov.sg;Donnelly, Christl A
Subject: Lancet Id Commission SharePoint access

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Marc Salzone

IT Support



(+47) 413 68 576

marc.salzone@cepi.net

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Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

www.cepi.net



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From: Yijun LIN (MOH)
Sent: Tue, 10 Mar 2020 15:42:43 +0000
To: Annelise Wilder-Smith;Ximena Aguilera;Constance LOW (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.hk;cfetpyhj@vip.sina.com (b)(6) com;dr.joanne (b)(6) com;Karen TAN (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi Erondu; (b)(6) ;riha@cepi.net;Ryan.Morhard@weforum.org;Redd, Stephen (CDC/DDPHSIS/OD);Cleghorn, Sean (ELS-LOW;betha (b)(6) com;Kamran Khan;gmleung@hku.hk;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad Memish; (b)(6) com (b)(6) com (b)(6) com;jxxm0349@gmail.com;Yijun LIN (MOH);ephpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);John N. Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH);Olivia OH (MOH);Beatrice Bernard;Zalinah KADIS (MCI);gmleung@hku.hk
Cc: Constance LOW (MOH);Nur ASHIKIN (MOH);Vernon Lee;Vernon LEE (MOH);Muhammad AKMAL (MOH);Deborah_ng@ncid.sg;Olivia OH (MOH)
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)
Attachments: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx, Lancet Commission Brainstorming Session v3.docx, Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness **Day 1**
Time: Mar 12, 2020 08:00 AM Singapore

Topic: Lancet ID Commission on Pandemic Preparedness **Day 2**
Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: 094224

One tap mobile

(b)(6)

US (San Jose)
US (New York)

Dial by your location

(b)(6)

US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number:

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6)

US (San Jose)
US (New York)

Dial by your location

(b)(6)

US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number:

(b)(6)

Table 2. Working documents

No.	Section	Summary of Content	Action required
Introduction (i.e. ecology to changing risk)			
1	<i>Introduction to the current risks and state of preparedness</i>	<ul style="list-style-type: none"> Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world 	<ul style="list-style-type: none"> Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
Public Health Ecology			
2	<i>A new ecology and a changing imperative</i>	<ul style="list-style-type: none"> Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology 	<ul style="list-style-type: none"> Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)			
3	Building flexible preparedness components Lead: Daniel	Novel solutions / approach to building <ul style="list-style-type: none"> Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership 	Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: <ul style="list-style-type: none"> What has to be true for this to work? What would be the expected impact? Are there any examples of successes

- 4 Info / big data - Risk assessment of diseases
Lead: Kamran Khan
- 5 Pharmaceutical and non-pharmaceutical interventions
Lead: Richard
- 6 Strategic communications and advocacy
Lead: Karen Tan
- Info, data, modelling, AI etc., can have or failures?
tremendous impact on preparedness
Chairs of each workgroup to reach out
and surveillance. Global equity and
to members and designate a member
to expand pointers for the section.
access hangs on data equity and
access. Thinking about tech in that
context. Travel risk and spread of
disease
How do interventions need to change
for the new ecology:
• Pharmaceutical;
• Non pharmaceutical e.g. - border
control, IPC, failures in regulatory
process
Comms as a tool to manage epidemic
threats.
What are the new comms activities
that are needed in the new ecology

Next Steps

- 7 Next steps Recommendations, timeline and measurables Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;

Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net;

Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;

(b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>;

ephjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong

<NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen

Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice

Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee [redacted] Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness [Day 1]

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

[redacted] (b)(6)

Meeting ID: [redacted] (b)(6)

Password: [redacted] (b)(6)

One tap mobile

[redacted] (b)(6) US (San Jose)
[redacted] (b)(6) US (New York)

Dial by your location

[redacted] (b)(6) US (San Jose)
[redacted] (b)(6) US (New York)

Meeting ID: [redacted] (b)(6)

Find your local number: [redacted] (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

[redacted] (b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
US (New York)

Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

[MOH EMS](#)

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon

LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
Constance

[MOH EMS](#)

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>
Sent: Thursday, 13 February 2020 1:59 PM
Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

(Y/N)?

- Still attending?
- Booked air tickets?
- If not attending in person, okay for teleconference?

Regards,
Yijun

[MOH EMS](#)

(b)(6)



(b)(4)

From: Jacobs, Michael
Sent: Wed, 11 Mar 2020 10:48:11 +0000
To: Yijun LIN (MOH);Annelise Wilder-Smith;Ximena Aguilera;Constance LOW (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.hk;cfetpyhj@vip.sina.com (b)(6) (b)(6);Karen TAN (MCI);dandona@uw.edu;Ngozi Erondu (b)(6);riha@cepi.net;Ryan.Morhard@weforum.org;Redd, Stephen (CDC/DDPHSIS/OD);Cleghorn, Sean (ELS-LOW;bethan (b)(5).com;Kamran Khan;gmleung@hku.hk;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad (b)(6) (b)(5) ephpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);John N. Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH);Olivia OH (MOH);Beatrice Bernard;Zalinah KADIS (MCI);gmleung@hku.hk
Cc: Constance LOW (MOH);Nur ASHIKIN (MOH);Vernon Lee;Vernon LEE (MOH);Muhammad AKMAL (MOH);Deborah_ng@ncid.sg;Olivia OH (MOH)
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Colleagues

I am very disappointed to miss the meeting this week. To be clear, this is due to the emerging situation in the UK and the need to support the response, and is no reflection on the situation in Singapore. As a consequence, I also won't be able to dial in as offered, but I wanted to wish you all well and reiterate that I am keen to contribute off line afterwards.

Best wishes to all
 Mike

#hello my name is...

Michael Jacobs | Consultant & Hon. Associate Professor of Infectious Diseases
 Royal Free London NHS Foundation Trust, Pond Street, London NW3 2QG, UK
 T: +44 (0)20 7794 0500 x34640
 E: michael.jacobs@ucl.ac.uk (or michael.jacobs@nhs.net for patient confidential emails)

From: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>
Date: Tuesday, 10 March 2020 at 15:42
To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera <xaguilera@udd.cl>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "BRIAND, Sylvie" <briands@who.int>, "FALL, Ibrahima Soce" <socef@who.int>, David Heymann <David.Heymann@lshtm.ac.uk>, "Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk"

<Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, "cfetpyhj@vip.sina.com" <cfetpyhj@vip.sina.com>, (b)(6)
 (b)(6) (b)(6) (b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, "dandona@uw.edu" <dandona@uw.edu>, "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>, Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>, (b)(6) (b)(6) "riha@cepi.net" <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "Cleghorn, Sean (ELS-LOW)" <sean.cleghorn@lancet.com>, (b)(6) (b)(6) Kamran Khan <Kamran@bluedot.global>, "gmleung@hku.hk" <gmleung@hku.hk>, Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, "ephpjv@nus.edu.sg" <ephpjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "John N. Nkengasong" <NkengasongJ@africa-union.org>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>, Beatrice Bernard <Beatrice@bluedot.global>, "Zalinah KADIS (MCI)" <Zalinah_KADIS@mci.gov.sg>, "gmleung@hku.hk" <gmleung@hku.hk>
Cc: "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "Nur ASHIKIN (MOH)" <Nur_ASHIKIN@moh.gov.sg>, Vernon Lee (b)(6) "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "Muhammad AKMAL (MOH)" <MUHAMMAD_Akmal@moh.gov.sg>, "Deborah_ng@ncid.sg" <Deborah_ng@ncid.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness Day 1 Time: Mar 12, 2020 08:00 AM Singapore	Topic: Lancet ID Commission on Pandemic Preparedness Day 2 Time: Mar 13, 2020 08:00 AM Singapore
Join Zoom Meeting	Join Zoom Meeting
(b)(6)	
Meeting ID: (b)(6) Password: (b)(6)	Meeting ID: (b)(6) Password: (b)(6)
One tap mobile (b)(6) # US (San Jose) (b)(6) # US (New York)	One tap mobile (b)(6) US (San Jose) (b)(6) US (New York)
Dial by your location (b)(6) US (San Jose) (b)(6) US (New York) Meeting ID: (b)(6) Find your local number: (b)(6)	Dial by your location (b)(6) US (San Jose) (b)(6) US (New York) Meeting ID: (b)(6) Find your local number: (b)(6)

Table 2. Working documents

No.	Section	Summary of Content	Action required
		Introduction (i.e. ecology to changing risk)	
1	<i>Introduction to current risks and state of preparedness</i>	Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world	Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
	Public Health Ecology		
2a	<i>A new ecology and changing imperative</i>	Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology	Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

<p>Building flexible 3preparedness components Lead: Daniel</p> <p>Info / big data - Risk 4assessment of diseases Lead: Kamran Khan</p> <p>Pharmaceutical 5and non- pharmaceutical interventions Lead: Richard</p> <p>Strategic 6communication s and advocacy Lead: Karen Tan</p>	<p>Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership</p> <p>Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease</p> <p>How do interventions need to change for the new ecology: Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process</p> <p>Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology</p>	<p>Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions: What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures? Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.</p>
--	---	---

Next Steps

7 Next steps Recommendations, timeline and measurables

Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

[3S-id=e95de6a0-7da4-4fbf-84c6-397bc4b8408f:531ed8c6]

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>;
Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL,
Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;
Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk;
cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI)
<Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi
Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net;
Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;
(b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu

<chikwe.iheweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>;
ephjiv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)
 <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong
 <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen
 Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice
 Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)
 <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee <(b)(6)>; Vernon LEE (MOH)
 <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness **Day 1**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6)	JS (San Jose)
	JS (New York)

Dial by your location

(b)(6)	US (San Jose)
	US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

+++++

Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
US (New York)

Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

MOH EMS

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmluong@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon

LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
Constance

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 13 February 2020 1:59 PM

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)

<Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

(Y/N)?

Still attending?

Booked air tickets?

If not attending in person, okay
for teleconference?

Regards,
Yijun

MOH EMS

(b)(6)



Elsevier Limited. Registered Office: The Boulevard, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom, Registration No. 1982084, Registered in England and Wales.

From: Yijun LIN (MOH)
Sent: Wed, 11 Mar 2020 10:43:46 +0000
To: Annelise Wilder-Smith;Ximena Aguilera;Constance LOW (MOH);BRIAND, Sylvie;FALL, Ibrahima Soce;David Heymann;Amadou.SALL@pasteur.sn;c.bruschke@minlnv.nl;Daniel.Bausch@phe.gov.uk;deanmed@hku.
 [REDACTED] TAN
 (MCI);dandona@uw.edu;Jacobs, Michael;Ngozi
 [REDACTED] Stephen
 (CDC/DDPHSIS/OD);Cleghorn, Sean [REDACTED]
 Khan;gmleung@hku.hk;Chikwe Ihekweazu;eduardo.carmo@saude.gov.br;Ziad
 [REDACTED]
 ail.com;ephpjv@nus.edu.sg;Deborah NG (MOH);Felicia HONG (MOH);Vernon LEE (MOH);John N. Nkengasong;ID Commissioners Lancet;Wen Qing YEO (MOH);Olivia OH (MOH);Beatrice Bernard;Zalinah KADIS (MCI);gmleung@hku.hk
Cc: Constance LOW (MOH);Nur ASHIKIN (MOH);Vernon Lee;Vernon LEE (MOH);Muhammad AKMAL (MOH);Deborah_ng@ncid.sg;Olivia OH (MOH)
Subject: RE: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)
Attachments: Lancet Commission IntroBM_VL & Ecology_VL 5 Dec 2019.docx, Lancet Commission Brainstorming Session v3.docx, Lancet article_final.docx

Dear all,

Pls refer to the updated files below.

Thank you.

Regards,
 Yijun

[MOH EMS](#)

[3S-id=d9fbab4f-46f6-4cdd-b770-214cf61c3fc4:531ed8c6]

From: Yijun LIN (MOH)
Sent: Tuesday, 10 March 2020 11:43 PM
To: 'Annelise Wilder-Smith' <annelies.wilder-smith@lshtm.ac.uk>; 'Ximena Aguilera' <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; 'BRIAND, Sylvie' <briands@who.int>; 'FALL, Ibrahima Soce' <socef@who.int>; 'David Heymann' <David.Heymann@lshtm.ac.uk>; 'Amadou.SALL@pasteur.sn' <Amadou.SALL@pasteur.sn>; 'c.bruschke@minlnv.nl' <c.bruschke@minlnv.nl>; 'Daniel.Bausch@phe.gov.uk' <Daniel.Bausch@phe.gov.uk>; 'deanmed@hku.hk' <deanmed@hku.hk>; 'cfetpyhj@vip.sina.com' <cfetpyhj@vip.sina.com>; [REDACTED] [REDACTED]
 'dr.joanne.liu@gmail.com' <dr.joanne.liu@gmail.com>; Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; 'dandona@uw.edu' <dandona@uw.edu>; 'Jacobs, Michael' <michael.jacobs@ucl.ac.uk>; 'Ngozi Erondu' <Ngozi.Erondu@lshtm.ac.uk>; [REDACTED] [REDACTED] 'riha@cepi.net' <riha@cepi.net>; 'Ryan.Morhard@weforum.org' <Ryan.Morhard@weforum.org>; 'scr1@cdc.gov' <scr1@cdc.gov>; 'Cleghorn, Sean (ELS-LOW)' <sean.cleghorn@lancet.com>; [REDACTED] <bethan.mcdonald@gmail.com>; 'Kamran Khan'

<Kamran@bluedot.global>; 'gmleung@hku.hk' <gmleung@hku.hk>; 'Chikwe Ihekweazu' <chikwe.ihekweazu@ncdc.gov.ng>; 'eduardo.carmo@saude.gov.br' <eduardo.carmo@saude.gov.br>; 'Ziad Memish' (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; 'ephjv@nus.edu.sg' <ephjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; 'John N. Nkengasong' <NkengasongJ@africa-union.org>; 'ID Commissioners Lancet' <(b)(6)>; Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; 'Beatrice Bernard' <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; 'gmleung@hku.hk' <gmleung@hku.hk>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; 'Vernon Lee' (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>; 'Deborah_ng@ncid.sg' <Deborah_ng@ncid.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness Day 1	Topic: Lancet ID Commission on Pandemic Preparedness Day 2
Time: Mar 12, 2020 08:00 AM Singapore	Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

Password: (b)(6)

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(b)(6) # US (San Jose)
US (New York)

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(b)(6) US (San Jose)
US (New York)

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(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number:

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Dial by your location

(b)(6) US (San Jose)
US (New York)

Meeting ID: (b)(6)

Find your local number:

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Table 2. Working documents

No.	Section	Summary of Content	Action required
Introduction (i.e. ecology to changing risk)			
1	<i>Introduction to the current risks and state of preparedness</i>	<ul style="list-style-type: none"> Describe current risks posed by emerging epidemic threats Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world 	<ul style="list-style-type: none"> Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
Public Health Ecology			
2	<i>A new ecology and a changing imperative</i>	<ul style="list-style-type: none"> Define public health ecology Link ecology to disruptions i.e. what risks to be targeted at based on the ecology 	<ul style="list-style-type: none"> Vernon and team to draft the section in bullet points or prose where relevant; Also to provide the diagrams (for Lancet illustrator); Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)
Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)			
3	Building flexible preparedness components Lead: Daniel	<p>Novel solutions / approach to building</p> <ul style="list-style-type: none"> Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership <p>Info, data, modelling, AI etc., can have tremendous impact on preparedness and surveillance. Global equity and access hangs on data equity and access. Thinking about tech in that context. Travel risk and spread of disease</p>	<p>Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:</p> <ul style="list-style-type: none"> What has to be true for this to work? What would be the expected impact? Are there any examples of successes or failures? <p>Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.</p>
4	Info / big data - Risk assessment of diseases Lead: Kamran Khan		

- 5 Pharmaceutical and non-pharmaceutical interventions
Lead: Richard
- 6 Strategic communications and advocacy
Lead: Karen Tan
- How do interventions need to change for the new ecology:
- Pharmaceutical;
 - Non pharmaceutical e.g. - border control, IPC, failures in regulatory process
- Comms as a tool to manage epidemic threats.
- What are the new comms activities that are needed in the new ecology

Next Steps

- 7 Next steps Recommendations, measurables timeline and Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>;

Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI)

<Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net;

Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>;

(b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish

(b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>;

ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH)

<Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong

<NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen

Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice

Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>

Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH)

<Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. Teleconferencing instructions

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: 094224

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

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Topic: Lancet ID Commission on Pandemic Preparedness **[Day 2]**

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
 (b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
 Yijun & Constance

[MOH EMS](#)

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Brusckhe, dr. C.J.M. (Christianne)

<c.j.m.brusckhe@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael
 <michael.jacobs@ucl.ac.uk>; Ngozi.Erondul@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmlung@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon

LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
 Constance

[MOH EMS](#)

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 13 February 2020 1:59 PM

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)

<Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

(Y/N)?

Still attending?

Booked air tickets?

If not attending in person, okay for teleconference?

Regards,
Yijun

MOH EMS

(b)(6)



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(b)(4)

From: Redd, Stephen (CDC/DDPHSIS/OD)
Sent: Thu, 9 Jan 2020 12:36:41 +0000
To: Gershman, Lynn E. (CDC/DDPHSIS/OD)
Subject: FW: Lancet WG 5 call - availability request
Attachments: image001.png

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From: Redd, Stephen (CDC/DDPHSIS/OD)
Sent: Wed, 15 Jan 2020 15:43:22 +0000
To: Stephen Redd - CD [redacted] (b)(6)
Subject: FW: Lancet WG 5 call notes and next steps
Attachments: Lancet WG 5 Call Summary_221119.docx, Lancet Commission Brainstorming Session v3.docx, image001.png

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From: Redd, Stephen (CDC/DDPHSIS/OD)
Sent: Wed, 15 Jan 2020 15:35:05 +0000
To: Annelise Wilder-Smith;Rebeka Yasmin;ximena
aguilera;Amadou.SALL@pasteur.sn;John Nkengasong (Dr);Daniel Bausch;Yijun LIN (MOH);David
Heymann;Peter Horby (b)(6) Constance LOW (b)(6)
LEE (MOH);Vernon Lee;Donnelly, Christl A
Cc: Richard Hatchett
Subject: RE: Lancet WG 5 call - availability request
Attachments: image001.png

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From: Redd, Stephen (CDC/DDPHSIS/OD)
Sent: Thu, 23 Jan 2020 15:27:31 +0000
To: Liburd, Leandris C. (CDC/DDPHSIS/OMHHE/OD);Montero, Jose (CDC/DDPHSIS/CSTLTS/OD)
Cc: Fuld, Jennifer (CDC/OD/OADPS);Daniel, Katherine Lyon (CDC/DDPHSIS/OD)
Subject: Fwd: Request: NIMHD Seeking Feedback on PhenX

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From: Redd, Stephen (CDC/DDPHSIS/OD)
Sent: Thu, 23 Jan 2020 09:26:22 +0000
To: Gershman, Lynn E. (CDC/DDPHSIS/OD)
Subject: Fwd: [Save the dates] RE: [Checking on your availabilities pls] Meeting dates for Lancet ID Commission in March 2020
Attachments: 2nd Lancet meeting participants & agenda_draft.docx

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**Lancet ID Commission on Pandemic Preparedness
Second Commissioners Meeting
Singapore, 12 – 13 Mar 2020**

Program

12 Mar

- 0900am Opening by Chair of the Commission
Welcome speech by Dean of the Faculty of Medicine, NUS
Introductions by Commissioners
Declarations of conflicts of interest
- 0930am Overview of the draft report and general discussions
- 1015 Photo taking followed by tea break
- 1045 Updates of the different working groups (15 minutes each)
i) Introduction
ii) Ecology - A new ecology and a changing imperative
iii) Looking forward – Design for the future
iv) Info / big data - Risk assessment of diseases
v) Interventions in the new ecology
vi) Strategic communications and advocacy
- 1215pm Identify new work group members
- 1230 Lunch
- 1330 Breakout into working groups for further development on the
content of the 4 working groups (Tea break in between)
- 1630 Summary and end of day 1
- 1800 Gather at Hotel Lobby for Welcome Dinner (Venue TBD)

13 Mar

- 0830am** **Gather at Grand Copthorne Waterfront Hotel Meeting Room**
(TBC)
- 0900am Breakout into working groups for discussion on the content of
each working group
- 1030 Tea Break
- 1045 Presentation by each working group (20 minutes each), feedback,
and agreement on final working groups

1200pm	Lunch
1315	Discussion on the chapters on next steps, and measurable recommendations / outcomes of the Commission (Tea break in between)
1630	Summary and next steps

Working groups:

Introduction	Bethan McDonald Peter Horby
Ecology - A new ecology and a changing imperative	David Heymann Michael Jacobs Ryan Morhad Sylvie Briand Vernon Lee
1. Looking forward – Design for the future	Daniel Bausch David Heymann Jane Halton John Nkengasong Vernon Lee
2. Info / big data - Risk assessment of diseases	Kamran Khan Christl Donnelly
3. Interventions in the new ecology	Amandou Sall Annelies Wilder-Smith Hongjie Yu Peter Horby Michael Jacobs Richard Hatchett Stephen Redd Ximena Aguilera
4. Strategic communications and advocacy	Karen Tan
5. Next steps - Recommendations, timeline and measurables	

List of Commissioners

Commissioners who have indicated attendance

Chair:

Vernon Lee Ministry of Health, Singapore

Co-chairs:

David Heymann London School of Hygiene & Tropical Medicine, Chatham House

Annelies Wilder-Smith London School of Hygiene & Tropical Medicine

Ximena Aguilera University of Desarrollo, Chile

Commissioners:

Amadou Sall Institut Pasteur Senegal

Bethan McDonald Oxford University

Chikwe Ihekweazu Nigeria CDC

Christianne Brusckhe Ministry of Agriculture, Nature and Food Quality, The Netherlands

Christl Donnelly Imperial College London, University of Oxford

Daniel Bausch Public Health England; London School of Hygiene & Tropical Medicine, London

Eduardo Hage Carmo Oswaldo Cruz Foundation, Brazil

Gabriel Leung Hong Kong University of Li Ka Shing Faculty of Medicine

Hongjie Yu Fudan University

Ibrahima Socé WHO Headquarters

Joanne Liu Mediciens Sans Frontieres

John Nkengasong Africa Centres for Disease Control

Kamran Khan St. Michael's Hospital; University of Toronto; BlueDot

Karen Tan Ministry of Communications and Information, Singapore

Michael Jacobs University College London

Ngozi Erundu London School of Hygiene & Tropical Medicine

Peter Horby University of Oxford

Ryan Morhard World Economic Forum

Stephen C. Redd Centers for Disease Control and Prevention (US CDC)

Sylvie Briand WHO Headquarters

Ziad Memish Alfaisal University, Saudi Arabia; Prince mohammed bin Abdulaziz hospital, Ministry of Health

Lancet ID Journal

Sean Cleghorn Editor, Lancet ID Journal

Commissioners who are unable to attend

Lalit Dandona Public Health Foundation of India

Jane Halton Australia

Richard Hatchett Coalition for Epidemic Preparedness Innovations

From: Redd, Stephen (CDC/DDPHSIS/OD)
Sent: Sun, 15 Mar 2020 08:40:53 +0000
To: stephen.c.redd@nsc.eop.gov
Subject: Fwd: Singapore's measures to contain COVID-19
Attachments: Singapore`s measures to curb COVID-19.pdf

- Б ` А а А а @ Ъ яяь

Interrupting transmission of COVID-19: lessons from containment efforts in Singapore

Vernon J Lee, PhD^{1,2}, Calvin J Chiew, MPH¹, Wei Xin Khong, PhD¹

¹Ministry of Health, Singapore

²Saw Swee Hock School of Public Health, Singapore

Corresponding author: Vernon J Lee, Communicable Diseases Division, Ministry of Health, Singapore, 12 College Road, Singapore 169852, Email: Vernon.LEE@moh.gov.sg

Highlight

Despite multiple importations resulting in local chains of transmission, Singapore has been able to control the COVID-19 outbreak without major disruption to daily living. In this article, we describe the combination of measures taken by Singapore to contain COVID-19 and share some early lessons learnt from the experience.

Keywords:

COVID-19; outbreak; Singapore; coronavirus; mitigation; importation;

Introduction

As of Mar 9, 2020, more than 100,000 COVID-19 cases and 3,800 deaths have been reported globally, including over 28,000 cases and 600 deaths in 100 countries or regions outside China.¹ Countries are now facing emerging outbreaks that threaten to develop into local epidemics if not well contained. China, which had initiated the largest community containment effort in history, has been successful at containing the outbreak, and since mid-February the daily number of new COVID-19 cases has been declining in China.² In the Republic of Korea (ROK) with one of the highest number of infections outside China, the outbreak also appears to have stabilized after application of rigorous measures such as strict contact tracing and large-scale quarantine.

Singapore, a city-state and global travel hub in Southeast Asia, was one of the first countries to be affected by COVID-19, and for a while was the country with the highest COVID-19 numbers outside of China from Feb 5, 2020 to Feb 18, 2020. This was in part due to Singapore's strategy of using a comprehensive surveillance system to detect as many cases as possible, and to contain them at the individual level. Despite early importations resulting in local chains of transmission, the rise in the number of cases has been steady without the exponential growth observed elsewhere. This suggests that this strategy, coupled with community-based measures proportionate to the transmission risk, has been effective in containing spread, and could be considered in countries in the early stages of the outbreak where it is not possible to mount massive community-wide containment efforts.

Singapore's approach

Singapore was one of the worst affected areas in the 2003 SARS outbreak, and since then Singapore has steadily built up its outbreak preparedness, including developing a national pandemic preparedness plan based on risk assessment and calibration of response measures that are proportionate to the risk. This includes holding regular exercises, and building the National Centre for Infectious Diseases (NCID), a 330-bed purpose built infectious diseases management facility with integrated clinical, laboratory and epidemiologic functions.

One of the lessons learnt from SARS is that clear leadership and direction is critical to ensure coordinated response across all sectors. Therefore, a Multi-Ministry Task Force was set up before Singapore had its first COVID-19 case to provide central coordination for a Whole-of-Government handling of the crisis.

Surveillance and containment measures

Singapore's surveillance for COVID-19 aimed to identify as many cases as possible using complementary detection methods. First, a case definition to identify suspect cases, at healthcare facilities or through contact tracing, was established based on clinical and epidemiological criteria, and evolved over time as more information became available. To identify cases in the community that do not fulfill the case definition, an enhanced surveillance system was set up to detect COVID-19 among all cases of pneumonia in hospital and primary care, severely-ill patients in hospital intensive care units and deaths with possible infectious cause, and influenza-like illness (ILI) in sentinel primary care clinics. Finally, doctors were also allowed to test patients whom they viewed with suspicion for clinical or epidemiological reasons. To support the surveillance system, SARS-CoV-2 RT-PCR laboratory testing capacity was scaled up rapidly to all public hospitals in Singapore, and is able to handle 2,200 tests a day for a population of 5.7m. Similarly, ROK has also quickly expanded testing capacities, including setting up drive-through testing stations, and has conducted over 200,000 tests to date.³

All suspected and confirmed cases were immediately isolated in hospital to prevent onward transmission. Contact tracing was also initiated to determine their movement history 14 days prior to symptom onset to isolation to determine possible sources of infection and also to prevent onward transmission among close contacts. Any contact with current or recent symptoms after exposure to the case was referred to hospitals for isolation and testing as part of active case finding. Close contacts who were well were placed under mandatory quarantine for 14 days from their last date of exposure, while other lower-risk contacts were put on phone surveillance.

As of Mar 10, 2020, over 4000 close contacts had been placed under quarantine, and 8 cases developed symptoms while under quarantine and tested positive. To facilitate compliance and reduce hardship, the Quarantine Order Allowance Scheme provides economic assistance. At the same time, the Infectious Diseases Act provides legal power to enforce contact tracing and quarantine, and to prosecute those who do not comply.

Healthcare measures

A network of more than 800 Public Health Preparedness Clinics (PHPCs) was activated to enhance management of respiratory infections in the primary care setting, with subsidies extended to Singapore residents to incentivize them to seek care at these PHPCs. As early COVID-19 disease is mild and undifferentiated, medical practitioners were instructed to provide extended medical leave of up to five days for patients with respiratory symptoms. This allowed possible COVID-19 cases to self-isolate at home to reduce the number of undetected cases seeding community transmission. Those with persistent or worsening symptoms are advised to return to the same doctor for evaluation and referral for testing.

At the hospitals, infection control measures were strengthened, including strict visitor controls, cohorting of patients with pneumonia or respiratory infection, and maintenance of strict infection control practices across all settings with personal protective equipment levels appropriate for the

patient care setting. Movement of patients and doctors between healthcare institutions was also limited to prevent multiple institutions from being affected at the same time.

Border control measures

Apart from detecting cases and containing spread, prevention of imported cases is important to reduce the force of infection from external sources. In Singapore, temperature and health screening of incoming travelers from Wuhan since Jan 3, 2020, and extended to all travellers since Jan 29, 2020, is in place at all ports of entry. Travelers who meet the suspect case definition are conveyed directly to hospital.

Singapore has, as of Mar 4, 2020, advised Singaporeans to defer non-essential travel to mainland China, Republic of Korea (ROK), Northern Italy and Iran and imposed entry restrictions on visitors from the same areas. Returning residents and long-term pass holders with travel history to these affected regions are subject to a 14-day quarantine.

Community and social measures

The community-level approach in Singapore was focused on social responsibility while life continued as usual with precautions. Public education is a key strategy to empower the public, and is done through traditional print and broadcast media, as well as social media. This includes messages on regular handwashing and seeking medical treatment early and staying at home when unwell. The use of masks was only encouraged for ill persons to prevent them from infecting others, and the government distributed four masks to every household. Detailed anonymised information on COVID-19 cases is shared publicly to prevent speculation, while misinformation is quickly debunked and clarified on a government website.

In the workplace, employees are encouraged to monitor their temperature and health regularly, and institutions to step up their business continuity plans, including allowing employees to telecommute where possible and having segregated teams. Advisories to avoid large-scale events of more than 1,000 people are in place, while ongoing events are advised to take precautions such as health screening and turning away ill individuals. Schools have remained open, and have implemented precautionary measures such as reduction of mass assemblies, inter-class and inter-school activities, and staggered meal times. Mass fever screening through thermal temperature scanners is widely instituted at entry to public buildings, such as offices, hotels, community centres and places of worship.

Although these precautions are implemented, relative normalcy of day-to-day life has been maintained in Singapore. Notably, Singapore has not implemented school closures or other major social distancing measures, as there is no evidence of widespread community transmission, and rates of COVID-19 infection among children remain low.⁴ School closures and social distancing have been performed in China and Hong Kong, where containment is also successful. However, Singapore's experience suggests it is possible to avoid major social disruptions and contain the spread of COVID-19, as a sustainable approach over the long term.

Success and Challenges

With the combination of measures, Singapore has been able to interrupt transmission to contain the outbreak. The majority of cases were detected through application of the case definition at the point of medical consult or through contact tracing.⁵ Statistical modeling of the effective reproduction

number has shown it to be consistently below 1, suggesting that containment efforts are successful (Pung et al, unpublished data).

However, several challenges lie ahead. Firstly, the longer the outbreak persists, the more chains of community transmission and missed cases are present, and the more difficult it will be to link cases and contain spread. Contact tracing and quarantine are resource-intensive activities and may not be sustainable in the long run. Secondly, some individuals who continue to work or attend social functions while symptomatic are driving disease spread, leading to substantial community transmission. Thirdly, with global spread, the force of infection from imported cases will be substantial, leading to new waves of infection.

As Singapore is a travel hub with high reliance on trade, sustained border control measures may not be practical with global disease spread, and it may not be feasible to completely shut a country's borders for a prolonged duration. These factors may result in a rise in cases, and additional measures will be required to achieve a balance between containing disease spread and reducing the overall health and socioeconomic impact due to community transmission.

Conclusion

Early detection of cases through surveillance and aggressive contact tracing around known cases has helped to contain spread of the outbreak in Singapore. Together with other healthcare, border and community measures, they allow the COVID-19 outbreak to be managed without major disruption to daily living. Countries could consider these measures for a proportionate response to the risk of COVID-19.

Author contributions:

All authors contributed equally to the literature review, data collection and writing of the manuscript.

Declaration of interests:

We declare no competing interests.

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Table: Summary of measures taken for COVID-19 in Singapore and other countries (as of Mar 10, 2020)

Measure	Singapore	Other Countries (selected)
Surveillance and containment measures		
Case detection	Case definition was established based on clinical and epidemiological criteria, and continuously updated as the COVID-19 situation evolved. Surveillance was enhanced to test COVID-19 in all pneumonia patients, ICU patients and deaths from possible infectious cause, and influenza-like illness (ILI) in sentinel primary care sites. Doctors were also allowed to test patients whom they viewed with suspicion for clinical or epidemiological reasons.	Affected countries instituted various case finding activities using WHO's case definition or a modified version. ⁶ Malaysia, Republic of Korea (ROK) and the United Kingdom incorporated COVID-19 testing for severe acute respiratory illness (SARI) and ILI surveillances. In Japan, Republic of Korea (ROK) and the United States (US), doctors were allowed to test patients at their discretion.
Quarantine & phone surveillance	Symptomatic contacts were referred to hospital. Asymptomatic close contacts were placed under compulsory quarantine for 14 days, while lower-risk contacts were put on phone surveillance.	Mandatory quarantine was required by law in several countries/regions, including Brunei, Hong Kong, Israel, mainland China and ROK.
Laboratory testing	PCR testing for COVID-19 is available at all public hospital laboratories to increase national diagnostic capacity, and other healthcare institutions can send samples for testing at these facilities. Serological tests were used to investigate linkages between cases and clusters.	In Japan and the United States (US), COVID-19 testing was extended to non-public health laboratories. Serological testing using IgM and IgG antibodies was described in mainland China.
Healthcare measures		
Clinical management in primary care	Medical practitioners were instructed to provide extended medical leave of up to five days for patients with respiratory symptoms, and to refer them for further testing if they do not recover. Patients were advised to return to the same doctor if symptoms persist.	In UK, primary care practitioners were advised to avoid face-to-face assessment of suspected cases. Instead, patients should be immediately isolated and referred to the local health authorities via a hotline. ⁷ General practitioners in Australia were similarly advised to refer patients to dedicated health services, undertake remote telemedicine consultation or make safe arrangements to assess possible COVID-19

		patients. ⁸
Infection prevention and control	Infection control measures were strengthened at healthcare institutions, including strict visitor controls, cohorting of patients with pneumonia or respiratory infection, and maintenance of strict infection control practices across all settings. Inter-institution movement of patients and doctors was limited.	Infection control measures recommended by the US Centers for Disease Control to healthcare institutes included limiting points of entry to facilities, prioritizing triage of patients with respiratory symptoms, exploring alternatives to face-to-face triage, limiting visitor access and movement within facility, and managing exposed healthcare workers ⁹ .
Healthcare services	Over 800 Public Health Preparedness Clinics (PHPCs) were activated to enhance management of respiratory infections in the primary care setting, with subsidies extended to Singapore residents.	Australia and China set up “fever clinics” to assess large volume of people for COVID-19 while minimizing risk of transmission to other patients.
Designated hospital	Majority of cases were isolated and treated at the National Centre for Infectious Diseases (NCID), a 330-bed purpose built infectious diseases management facility.	While most countries managed their cases in existing hospitals, China established at least 14 temporary medical facilities designated to treat COVID-19 patients. Two new hospitals with at least 1,000 beds each were also built in Wuhan city.
Border control measures		
Temperature screening	Temperature and health screening for inbound travelers is being conducted at all land, air, and sea checkpoints.	Countries including China are conducting temperature screening of incoming passengers at air, land and sea checkpoints.
Travel advisories & border restrictions	Singaporeans are advised to defer non-essential travel to mainland China, ROK, Northern Italy and Iran, and entry restrictions are imposed on visitors from these regions. Returning residents with travel history to these areas are subject to a 14-day quarantine.	At least 45 countries or regions issued partial or complete travel bans on mainland China, Iran, Italy, ROK or other countries.
Community and social measures		
Schools	Schools have remained open, but implemented precautionary measures such as reduction of mass assemblies, inter-class and inter-school activities, and staggered meal times.	Country/region-wide school closures were announced in Albania, Bulgaria, Iran, Iraq, Italy, Japan, mainland China, Hong Kong, Saudi Arabia, Spain and ROK.
Workplaces	Employees are encouraged to monitor their temperature and health regularly, and institutions are encouraged to step up their business continuity plans, such as telecommuting where possible and having segregated teams.	Hong Kong’s Centre for Health Protection encouraged companies to develop comprehensive policies that include business continuity and operational plans to maintain core services ¹⁰ . In US, employers were recommended to develop contingency plans for situations that may arise during outbreaks ¹¹ .
Public communications	Public education was done through traditional print and broadcast media, as well as social media. Public are advised to practise social responsibility while life continues as usual with precautions. Misinformation is debunked and clarified on a government website.	Most countries delivered public-service announcements promoting social responsibility and set up telephone hotlines for public enquiries. In mainland China, several provinces mandated mask wearing in public spaces.
Lockdown of affected areas	No areas have been locked down to date.	Massive lockdowns were reported in mainland China, Palestine, Saudi Arabia, and Italy. Smaller scale lockdowns were reported

	in ROK, Cyprus and Vietnam.
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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 25 Jun 2020 10:37:14 +0000
To: natasha.halasa@vumc.org
Cc: sharwood@idsociety.org
Subject: CEPI individua;

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 25 Jun 2020 10:40:50 +0000
To: natasha.halasa@vumc.org
Cc: sharwood@idsociety.org
Subject: Re: CEPI individua;

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 25 Jun 2020 11:36:36 +0000
To: natasha.halasa@vumc.org
Cc: sharwood@idsociety.org;Nosanchuk, Josh;Joshua Nosanchuk
Subject: Re: CEPI individua;

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From: Pavlin, Julie
Sent: Fri, 22 May 2020 16:12:58 +0000
To: 'Jonna Mazet'; Amponsah, Edith
Cc: Peter Daszak; Kent Kester; Khabbaz, Rima (CDC/DDID/NCEZID/OD); Goodtree, Hannah; Buckley, Gillian
Subject: RE: OHAC chair discussion

Hi Jonna,

(b)(6) is no longer a forum member (we have a limit of 6 years for at-large members, so unfortunately, she had to depart the forum). As you know, the collaboratives/working groups can (and should) have members who are not forum members. There isn't a restriction on the chair having to be from the forum, but I understand it makes a good link. Given (b)(6) long-standing work with the forum (and as (b)(6), she certainly understands the workings of the forum quite well and I think would still be a good choice.

But happy to hear from our current leadership group on your thoughts as well!

Julie

From: Jonna Mazet <jkmazet@ucdavis.edu>
Sent: Thursday, May 21, 2020 7:32 PM
To: Amponsah, Edith <EAmponsah@nas.edu>
Cc: Peter Daszak <daszak@ecohealthalliance.org>; Kent Kester <Kent.Kester@sanofi.com>; Rima F. Khabbaz <rfk1@cdc.gov>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: Re: OHAC chair discussion

Hi Edith,

Thanks to you all for discussing. I think any of the three suggestions would be good choices. However, I do think the chair should also be an FMT member for optimal functioning. I think that means the only viable choice is (b)(6) if we use that as a guiding principle. I'm not sure if (b)(6) would be interested, given her vice chair role for FMT. Maybe you all have insight on that?

Let me know & I can reach out to gauge her interest,
 Jonna

On Thu, May 21, 2020 at 1:07 PM Amponsah, Edith <EAmponsah@nas.edu> wrote:
 Hello Jonna,

During our FMT leadership call today, we discussed briefly the subject of the next OHAC chair. Dave Rizzo, Liz Mumford, and Mary Wilson were the names that came up. We wanted to gather your thoughts on either of them as the next OHAC chair...or giving them a little nudge to motivate them to take up this role. Let us know what you think.

Best,

Edith Amponsah, MPH, IBCLC

Associate Program Officer

Forum on Microbial Threats

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From: Kester, Kent /US
Sent: Mon, 25 May 2020 13:39:28 +0000
To: Pavlin, Julie;Peter Daszak;Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Amponsah, Edith;Goodtree, Hannah
Subject: RE: Forum meeting

I'm not fully sure of my schedule but this is a good idea. For me, an hour before the workshop would be best.

From: Pavlin, Julie <JPavlin@nas.edu>
Sent: Friday, May 22, 2020 4:56 PM
To: Peter Daszak <daszak@ecohealthalliance.org>; Kester, Kent /US <Kent.Kester@sanofi.com>; Rima F. Khabbaz <rfk1@cdc.gov>
Cc: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>
Subject: [EXTERNAL] Forum meeting

EXTERNAL : Real sender is JPavlin@nas.edu

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the wrong delivery and the mail deletion. Thank you.
.....

From: Pavlin, Julie
Sent: Tue, 26 May 2020 17:08:59 +0000
To: 'Kester, Kent /US'; Peter Daszak; Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Amponsah, Edith; Goodtree, Hannah
Subject: RE: Forum meeting

We will need to get everything ready and doing a trial run of the comms right before – sorry, didn't think about that before. Does anyone have time afterwards?

From: Kester, Kent /US <Kent.Kester@sanofi.com>
Sent: Monday, May 25, 2020 9:39 AM
To: Pavlin, Julie <JPavlin@nas.edu>; Peter Daszak <daszak@ecohealthalliance.org>; Rima F. Khabbaz <rfk1@cdc.gov>
Cc: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>
Subject: RE: Forum meeting

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From: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Sent: Tue, 26 May 2020 17:13:05 +0000
To: Pavlin, Julie;'Kester, Kent /US';Peter Daszak
Сс: Amponsah, Edith;Goodtree, Hannah
Subject: RE: Forum meeting
Attachments: image001.png, image002.png, image003.png, image004.png

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From: Pavlin, Julie
Sent: Tue, 26 May 2020 17:21:14 +0000
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD); 'Kester, Kent /US'; Peter Daszak
Cc: Amponsah, Edith; Goodtree, Hannah
Subject: RE: Forum meeting

I imagine that will be enough time – just to update everyone on where we're at (and BTW chairs, we received guidance over the weekend that we cannot have any in-person meetings through August, so we are definitely switching to virtual for the next workshop).

From: Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>
Sent: Tuesday, May 26, 2020 1:13 PM
To: Pavlin, Julie <JPavlin@nas.edu>; 'Kester, Kent /US' <Kent.Kester@sanofi.com>; Peter Daszak <daszak@ecohealthalliance.org>
Cc: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>
Subject: RE: Forum meeting

I can only do 30 mins or so after.
Rima

From: Pavlin, Julie <JPavlin@nas.edu>
Sent: Tuesday, May 26, 2020 1:09 PM
To: 'Kester, Kent /US' <Kent.Kester@sanofi.com>; Peter Daszak <daszak@ecohealthalliance.org>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>
Cc: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>
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To: Pavlin, Julie <JPavlin@nas.edu>; Peter Daszak <daszak@ecohealthalliance.org>; Rima F. Khabbaz <rfk1@cdc.gov>
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From: Kester, Kent /US
Sent: Tue, 26 May 2020 17:59:08 +0000
To: Pavlin, Julie;Peter Daszak;Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Amponsah, Edith;Goodtree, Hannah
Subject: RE: Forum meeting

I will probably have 30 minutes afterwards.

From: Pavlin, Julie <JPavlin@nas.edu>
Sent: Tuesday, May 26, 2020 1:09 PM
To: Kester, Kent /US <Kent.Kester@sanofi.com>; Peter Daszak <daszak@ecohealthalliance.org>; Rima F. Khabbaz <rfk1@cdc.gov>
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From: Pavlin, Julie
Sent: Thu, 28 May 2020 15:42:33 +0000
To: Goodtree, Hannah; Buckley, Gillian; Amponsah, Edith; 'Tennenberg, MD, MPH. Alan [JRDUS]'; Cassetti, Cristina (NIH/NIAID) [E]; 'david@4sd.info'; Roselle, Gary (CDC va.gov); Jonna Mazet; 'Karen Goraleski'; 'Kent.Kester@sanofi.com'; 'rasanathank@who.int'; Espinal, Dr. Marcos (WDC); 'daszak@ecohealthalliance.org'; 'rmuelle5@its.jnj.com'; 'debabenn@iupui.edu'; 'Mary Radford'; Tejada, Ms. Cecilia (WDC); Sadove, Elizabeth (FDA/OC); 'lolmeda@unicef.org'; 'mzahn@ochca.com'; Mair, Michael (FDA/OC); 'robregon@unicef.org'; Khabbaz, Rima (CDC/DDID/NCEZID/OD); 'Miller, Sally'; Burgess, Timothy; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR); 'Louchie, Vivian /US'; 'Kathleen.Lee@va.gov'; 'Patrick Hickey'
Subject: RE: Reminder: Forum Members Closed Meeting Today at 12 PM EDT

A brief agenda (we will plan a longer meeting with our August workshop):

Open from the chairs/vice-chairs and welcome Rima Khabbaz as new vice-chair
 Any brief COVID updates from your worlds you'd like to share with the group
 Feedback from workshop – and any integral issues we need to include in the next workshop
 Plan for August workshop (moving to virtual)
 December workshop “Systematizing the One Health Approach in Preparedness and Response Efforts for Infectious Disease Outbreaks” – recommendations/volunteers for planning committee
 OHAC – recommendations for chair

From: Goodtree, Hannah <HGoodtree@nas.edu>
Sent: Thursday, May 28, 2020 11:28 AM
To: Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>; Amponsah, Edith <EAmponsah@nas.edu>; 'Tennenberg, MD, MPH. Alan [JRDUS]' <atennenb@ITS.JNJ.com>; 'ccassetti@niaid.nih.gov' <ccassetti@niaid.nih.gov>; 'david@4sd.info' <david@4sd.info>; 'gary.roselle@va.gov' <gary.roselle@va.gov>; Jonna Mazet <jkmazet@ucdavis.edu>; 'Karen Goraleski' <kgoraleski@astmh.org>; 'Kent.Kester@sanofi.com' <Kent.Kester@sanofi.com>; 'rasanathank@who.int' <rasanathank@who.int>; Espinal, Dr. Marcos (WDC) <espinalm@paho.org>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rmuelle5@its.jnj.com' <rmuelle5@its.jnj.com>; 'debabenn@iupui.edu' <debabenn@iupui.edu>; 'Mary Radford' <maradford@ucdavis.edu>; Tejada, Ms. Cecilia (WDC) <tejadace@paho.org>; 'Elizabeth.Sadove@fda.hhs.gov' <Elizabeth.Sadove@fda.hhs.gov>; 'lolmeda@unicef.org' <lolmeda@unicef.org>; 'mzahn@ochca.com' <mzahn@ochca.com>; 'michael.mair@fda.hhs.gov' <michael.mair@fda.hhs.gov>; 'robregon@unicef.org' <robregon@unicef.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'Miller, Sally' <miller.769@osu.edu>; Burgess, Timothy <timothy.burgess@usuhs.edu>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'Louchie, Vivian /US' <Vivian.Louchie@sanofi.com>; 'Kathleen.Lee@va.gov' <Kathleen.Lee@va.gov>; 'Patrick Hickey' <patrick.hickey@usuhs.edu>
Subject: Reminder: Forum Members Closed Meeting Today at 12 PM EDT

Hello Forum Members,

Thank you for joining us for the Virtual Meeting on Vaccine Access and Hesitancy today. Please also join us for a closed session for a quick conversation about today’s meeting and the August workshop. Zoom details were sent out as a calendar invite and can be found below as well. Please let me know if you have any questions or difficulty connecting.



Join Zoom Meeting

Password:

Phone one-tap: US:

Meeting URL:

Join by Telephone

For higher quality, dial a number based on your current location.

Dial:

US:

or (Toll Free) or (Toll Free)

Meeting ID:

Password:

International numbers

Join from an H.323/SIP room system

- H.323: (US West)
 (US East)
 (India Mumbai)
 (India Hyderabad)
 (EMEA)
 (Australia)
 (Hong Kong SAR)
 (Brazil)
 (Canada)

(b)(6) (Japan)

Meeting ID:

Password:

SIP:

Password:

(b)(6)

Skype for Business (Lync)

(b)(6)

Best,
Hannah

Hannah Goodtree

Senior Program Assistant

Board on Global Health

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The National Academies of Sciences, Engineering and Medicine

500 Fifth Street NW

Washington, DC 20001

T: [202.334.1471](tel:202.334.1471)

Email: Hgoodtree@nas.edu

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From: Kester, Kent /US
Sent: Mon, 1 Jun 2020 17:38:32 +0000
To: Amponsah, Edith;Khabbaz, Rima (CDC/DDID/NCEZID/OD);Peter Daszak;'Alison Andre'
Cc: Pavlin, Julie;Goodtree, Hannah;Buckley, Gillian
Subject: RE: New workshop dates and times

Dear Edith—

The proposed dates/times work for me—just need to have final clarity in order to adjust other items on my daily schedule.

Kent

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Monday, June 1, 2020 1:16 PM
To: Kester, Kent /US <Kent.Kester@sanofi.com>; Rima F. Khabbaz <rfk1@cdc.gov>; Peter Daszak <daszak@ecohealthalliance.org>; 'Alison Andre' <andre@ecohealthalliance.org>
Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: [EXTERNAL] New workshop dates and times

EXTERNAL : Real sender is EAmponsah@nas.edu

Hello Rima, Peter, and Kent,

As we discussed during our last meeting, we will be holding the August workshop online over several days. We are thinking of doing it that same week from **Monday August 17th to Thursday August 20th** and having one session a day. Some days will be 2 hours long and others will be 3 hours long. We are thinking of doing from **11 – 1 pm ET** for the shorter sessions and **11-2pm ET** for the longer sessions. Please let us know if those dates and time frames are okay with you all. We can also plan to have our Forum closed session meeting the following week.

Please also complete this doodle [poll](#) with your availability in July, September, and November for the remaining leadership calls of the year.

Please let me know if you have any questions.

Thank you,
Edith Amponsah, MPH, IBCLC
Associate Program Officer
Forum on Microbial Threats
Health and Medicine Division
The National Academies of Sciences, Engineering, and Medicine

500 Fifth Street, NW
Phone: 202-334-3222

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From: Kester, Kent /US
Sent: Mon, 1 Jun 2020 20:19:27 +0000
To: Amponsah, Edith;Khabbaz, Rima (CDC/DDID/NCEZID/OD);Peter Daszak;'Alison Andre'
Cc: Pavlin, Julie;Goodtree, Hannah;Buckley, Gillian
Subject: RE: New workshop dates and times

Thanks—all now on my calendar.

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Monday, June 1, 2020 2:23 PM
To: Kester, Kent /US <Kent.Kester@sanofi.com>; Rima F. Khabbaz <rfk1@cdc.gov>; Peter Daszak <daszak@ecohealthalliance.org>; 'Alison Andre' <andre@ecohealthalliance.org>
Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: [EXTERNAL] RE: New workshop dates and times

EXTERNAL : Real sender is eamponsah@nas.edu

Thank you Kent. As of now (if the dates and times work for Rima and Peter), Monday August 17th would be 11am – 2pm, Tuesday August 18th 11am – 1pm, Wednesday August 19 11am – 2pm, and Thursday August 20 11am – 1:30pm. I've attached a first draft of the reshaped agenda here if it would be helpful.

Also, the presentation by Nickie Lurie on “new vaccines in the midst of an outbreak” you'll be moderating would be on Thursday August 20th at 11:00am but we can shift things around if needed.

Best,
 Edith

From: Kester, Kent /US <Kent.Kester@sanofi.com>
Sent: Monday, June 1, 2020 1:39 PM
To: Amponsah, Edith <EAmponsah@nas.edu>; Rima F. Khabbaz <rfk1@cdc.gov>; Peter Daszak <daszak@ecohealthalliance.org>; 'Alison Andre' <andre@ecohealthalliance.org>
Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: New workshop dates and times

Dear Edith—

The proposed dates/times work for me—just need to have final clarity in order to adjust other items on my daily schedule.

Kent

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Monday, June 1, 2020 1:16 PM
To: Kester, Kent /US <Kent.Kester@sanofi.com>; Rima F. Khabbaz <rfk1@cdc.gov>; Peter Daszak <daszak@ecohealthalliance.org>; 'Alison Andre' <andre@ecohealthalliance.org>
Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: [EXTERNAL] New workshop dates and times

EXTERNAL : Real sender is EAmponsah@nas.edu

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Please also complete this doodle [poll](#) with your availability in July, September, and November for the remaining leadership calls of the year.

Please let me know if you have any questions.

Thank you,
Edith Amponsah, MPH, IBCLC
Associate Program Officer
Forum on Microbial Threats
Health and Medicine Division
The National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW
Phone: 202-334-3222
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From: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Sent: Mon, 1 Jun 2020 18:43:07 +0000
To: Amponsah, Edith;'Kester, Kent /US';Peter Daszak;'Alison Andre'
Сс: Pavlin, Julie;Goodtree, Hannah;Buckley, Gillian
Subject: RE: New workshop dates and times
Attachments: image001.png

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From: Amponsah, Edith
Sent: Tue, 2 Jun 2020 12:48:53 +0000
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD); 'Kester, Kent /US'; Peter Daszak; 'Alison Andre'
Cc: Pavlin, Julie; Goodtree, Hannah; Buckley, Gillian
Subject: RE: New workshop dates and times

Thank you all. Alison confirmed these dates and times work for Peter too so we will share them with the planning committee and the speakers who have already accepted our invitation.

Best,
Edith

From: Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>
Sent: Monday, June 1, 2020 2:43 PM
To: Amponsah, Edith <EAmponsah@nas.edu>; 'Kester, Kent /US' <Kent.Kester@sanofi.com>; Peter Daszak <daszak@ecohealthalliance.org>; 'Alison Andre' <andre@ecohealthalliance.org>
Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: New workshop dates and times

Thank you Edith. These times should work for me.
Rima

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Monday, June 1, 2020 2:23 PM
To: 'Kester, Kent /US' <Kent.Kester@sanofi.com>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>; Peter Daszak <daszak@ecohealthalliance.org>; 'Alison Andre' <andre@ecohealthalliance.org>
Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: New workshop dates and times

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Also, the presentation by Nickie Lurie on “new vaccines in the midst of an outbreak” you'll be moderating would be on Thursday August 20th at 11:00am but we can shift things around if needed.

Best,
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From: Kester, Kent /US <Kent.Kester@sanofi.com>
Sent: Monday, June 1, 2020 1:39 PM

To: Amponsah, Edith <EAmponsah@nas.edu>; Rima F. Khabbaz <rfk1@cdc.gov>; Peter Daszak <daszak@ecohealthalliance.org>; 'Alison Andre' <andre@ecohealthalliance.org>
Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: New workshop dates and times

Dear Edith—

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Kent

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Monday, June 1, 2020 1:16 PM
To: Kester, Kent /US <Kent.Kester@sanofi.com>; Rima F. Khabbaz <rfk1@cdc.gov>; Peter Daszak <daszak@ecohealthalliance.org>; 'Alison Andre' <andre@ecohealthalliance.org>
Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: [EXTERNAL] New workshop dates and times

EXTERNAL : Real sender is EAmponsah@nas.edu

Hello Rima, Peter, and Kent,

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Please let me know if you have any questions.

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Edith Amponsah, MPH, IBCLC
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From: Amponsah, Edith
Sent: Tue, 2 Jun 2020 12:47:10 +0000
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Subject: RE: New workshop dates and times

Thank you Rima. Also a gentle reminder about the doodle poll for the next three leadership calls:

(b)(6)

Thank you,
 Edith

From: Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>
Sent: Monday, June 1, 2020 2:43 PM
To: Amponsah, Edith <EAmponsah@nas.edu>; 'Kester, Kent /US' <Kent.Kester@sanofi.com>; Peter Daszak <daszak@ecohealthalliance.org>; 'Alison Andre' <andre@ecohealthalliance.org>
Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
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Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>

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Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>

Subject: [EXTERNAL] New workshop dates and times

EXTERNAL : Real sender is EAmponsah@nas.edu

Hello Rima, Peter, and Kent,

As we discussed during our last meeting, we will be holding the August workshop online over several days. We are thinking of doing it that same week from **Monday August 17th to Thursday August 20th** and having one session a day. Some days will be 2 hours long and others will be 3 hours long. We are thinking of doing from **11 – 1 pm ET** for the shorter sessions and **11-2pm ET** for the longer sessions. Please let us know if those dates and time frames are okay with you all. We can also plan to have our Forum closed session meeting the following week.

Please also complete this doodle [poll](#) with your availability in July, September, and November for the remaining leadership calls of the year.

Please let me know if you have any questions.

Thank you,

Edith Amponsah, MPH, IBCLC

Associate Program Officer

Forum on Microbial Threats

Health and Medicine Division

The National Academies of Sciences, Engineering, and Medicine

500 Fifth Street, NW

Phone: 202-334-3222

www.nationalacademies.org/HMD

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From: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Sent: Tue, 2 Jun 2020 18:17:38 +0000
To: Amponsah, Edith
Subject: RE: New workshop dates and times
Attachments: image001.png

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From: Amponsah, Edith
Sent: Fri, 27 Mar 2020 19:17:10 +0000
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Kester, Kent /US; Peter Daszak; Alison Andre; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR); Louchie, Vivian /US; Pavlin, Julie; Goodtree, Hannah; Buckley, Gillian
Subject: RE: FMT Leadership Meeting - March 27th
Attachments: Forum on Microbial Threats Sponsorship list -3.27.2020.docx

Hi all, here's the sponsor's list, updated from our last meeting.

Talk soon,
 Edith

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Tuesday, March 24, 2020 5:01 PM
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rpk1@cdc.gov>
Cc: Kester, Kent /US <Kent.Kester@sanofi.com>; Peter Daszak <daszak@ecohealthalliance.org>; Alison Andre <andre@ecohealthalliance.org>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vj1@cdc.gov>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: Re: FMT Leadership Meeting - March 27th

Hello Kent, Peter, and Rima,

Please find attached here an agenda for our call on Friday.

Please let me know if you have any questions or concerns.

Best,
 Edith

From: Amponsah, Edith
Sent: Saturday, March 21, 2020 9:40 AM
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Kester, Kent /US; Peter Daszak; Alison Andre; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR); Louchie, Vivian /US; Pavlin, Julie; Goodtree, Hannah; Buckley, Gillian
Subject: Re: FMT Leadership Meeting - March 27th

Great. Hannah will send an updated calendar invite on Monday.

Thank you,
Edith Amponsah, MPH, IBCLC
 Research Associate
 Forum on Microbial Threats
 Health and Medicine Division
 The National Academies of Sciences, Engineering, and Medicine
[500 Fifth Street, NW](#)
 Phone: [202-334-3222](tel:202-334-3222)

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On Mar 21, 2020, at 08:38, Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov> wrote:

3:30 pm or later should work for me too.
Thanks, Rima

Get [Outlook for iOS](#)

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Saturday, March 21, 2020 7:12:17 AM
To: Kester, Kent /US <Kent.Kester@sanofi.com>
Cc: Peter Daszak <daszak@ecohealthalliance.org>; Alison Andre <andre@ecohealthalliance.org>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: Re: FMT Leadership Meeting - March 27th

Works for us on our end. Rima?

Thank you,
Edith Amponsah, MPH, IBCLC
 Research Associate
 Forum on Microbial Threats
 Health and Medicine Division
 The National Academies of Sciences, Engineering, and Medicine
[500 Fifth Street, NW](http://500FifthStreetNW.org)
 Phone: [202-334-3222](tel:202-334-3222)
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On Mar 20, 2020, at 15:44, Kester, Kent /US <Kent.Kester@sanofi.com> wrote:

I'm good after 1530 on the 27th.

From: Peter Daszak <daszak@ecohealthalliance.org>
Sent: Friday, March 20, 2020 2:29 PM
To: Amponsah, Edith <EAmponsah@nas.edu>; Alison Andre <andre@ecohealthalliance.org>; Rima F.

Khabbaz <rfk1@cdc.gov>; Kester, Kent /US <Kent.Kester@sanofi.com>

Cc: 'vjk1@cdc.gov' <vjk1@cdc.gov>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>

Subject: [EXTERNAL] RE: FMT Leadership Meeting - March 27th

Importance: High

EXTERNAL : Real sender is daszak@ecohealthalliance.org

Hi everyone,

Sorry to do this but can we push the meeting back a bit if possible? I've got to be on a virtual conference with USAID that I can't get out of from 1-3pm that day. They changed the date, so that's why I had said this time/date would work.

I can definitely do 3:30 onwards on the 27th, and I have plenty of other times/dates the week after.

Many apologies and much appreciated if you can change...

Cheers,

Peter

Peter Daszak

President

EcoHealth Alliance
460 West 34th Street
New York, NY 10001
USA

Tel.: +1-212-380-4474

Website: www.ecohealthalliance.org

Twitter: [@PeterDaszak](https://twitter.com/PeterDaszak)

EcoHealth Alliance develops science-based solutions to prevent pandemics and promote conservation

From: Amponsah, Edith <EAmponsah@nas.edu>

Sent: Thursday, March 19, 2020 11:17 AM

To: Alison Andre <andre@ecohealthalliance.org>; Peter Daszak <daszak@ecohealthalliance.org>; Rima F. Khabbaz <rfk1@cdc.gov>; Kent Kester <Kent.Kester@sanofi.com>
Cc: 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'vivian.louchie@sanofipasteur.com' <vivian.louchie@sanofipasteur.com>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: Re: FMT Leadership Meeting - March 27th

Thanks all - I will send a short agenda early next week.

Talk soon,
 Edith

From: Alison Andre <andre@ecohealthalliance.org>
Sent: Tuesday, March 17, 2020 4:46 PM
To: Amponsah, Edith; Peter Daszak; Rima F. Khabbaz; Kent Kester
Cc: 'vjk1@cdc.gov'; 'vivian.louchie@sanofipasteur.com'; Pavlin, Julie; Goodtree, Hannah; Buckley, Gillian
Subject: Re: FMT Leadership Meeting - March 27th

This time still works for Peter.

Best,
 Alison

From: "Amponsah, Edith" <EAmponsah@nas.edu>
Date: Tuesday, March 17, 2020 at 3:35 PM
To: Peter Daszak <daszak@ecohealthalliance.org>, "Rima F. Khabbaz" <rfk1@cdc.gov>, Kent Kester <Kent.Kester@sanofi.com>
Cc: Alison Andre <andre@ecohealthalliance.org>, "'vjk1@cdc.gov'" <vjk1@cdc.gov>, "'vivian.louchie@sanofipasteur.com'" <vivian.louchie@sanofipasteur.com>, "Pavlin, Julie" <JPavlin@nas.edu>, "Goodtree, Hannah" <HGoodtree@nas.edu>, "Buckley, Gillian" <GBuckley@nas.edu>
Subject: FMT Leadership Meeting - March 27th

Dear Peter, Rima, and Kent,

With the current COVID-19 outbreak at the center of attention currently, we understand many people's schedules and availability have changed. I am writing to confirm that we are still meeting virtually via zoom next Friday from 1-2:30pm ET for our regular leadership meetings.

Please let us know if you're still available (or not) by responding to this email.

Thank you,
Edith Amponsah, MPH, IBCLC
 Research Associate
 Forum on Microbial Threats
 Health and Medicine Division
 The National Academies of Sciences, Engineering, and Medicine
 500 Fifth Street, NW

Phone: 202-334-3222

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USUHS		
HHS/CDC/NCEZID		
Infectious Diseases Society of America		
VA		
DHS		
HHS/NIH/NIAID		
American Society of Tropical Medicine and Hygiene		
EcoHealth Alliance		
Johnson & Johnson		
HHS/FDA		
Sanofi Pasteur		

Organizations to establish contact with about possible sponsorship

(b)(4)

(b)(4)

From: Kester, Kent /US
Sent: Fri, 27 Mar 2020 19:32:28 +0000
To: Goodtree, Hannah;Louchie, Vivian /US;Amponsah, Edith;'daszak@ecohealthalliance.org';Khabbaz, Rima (CDC/DDID/NCEZID/OD);Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);'andre@ecohealthalliance.org';Pavlin, Julie;Buckley, Gillian
Subject: RE: Forum Leadership Meeting

The Zoom session seems to have ended. I'm on the phone now and there is only music.

-----Original Appointment-----

From: Goodtree, Hannah <HGoodtree@nas.edu>
Sent: Wednesday, February 19, 2020 12:21 PM
To: Goodtree, Hannah; Louchie, Vivian /US; Amponsah, Edith; 'daszak@ecohealthalliance.org'; 'rfk1@cdc.gov'; 'vjk1@cdc.gov'; 'andre@ecohealthalliance.org'; Kester, Kent /US; Pavlin, Julie; Buckley, Gillian
Subject: [EXTERNAL] Forum Leadership Meeting
When: Friday, March 27, 2020 3:30 PM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: <https://nasem.zoom.us/j/664233743>

EXTERNAL : Real sender is HGoodtree@nas.edu

Hello,

Please see below for the call-in details for the Forum on Microbial Threats Leadership Meeting on March 27th, 1-2:30 PM

Join from PC, Mac, Linux, iOS or Android:

Or Dial:

US: + or (Toll Free)

Meeting ID:

International numbers available:

NOTICE: The Zoom service allows audio and any materials exchanged or viewed during the session to be recorded and shared. Please be aware that by participating in this activity, you consent to your voice, likeness, and any materials you provide, being recorded for use and dissemination, without payment of any compensation for such use, in any language, format, or media now known or later devised, and you release the National Academies of Sciences, Engineering, and Medicine from any and all claims, liability, or damages arising from any such use. The Academies will proceed in reliance upon such consent and release. If you do not consent to the foregoing, please do not join the session.

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From: Amponsah, Edith
Sent: Fri, 27 Mar 2020 19:53:30 +0000
To: 'Kester, Kent /US'; Goodtree, Hannah; Louchie, Vivian /US; 'daszak@ecohealthalliance.org'; Khabbaz, Rima (CDC/DDID/NCEZID/OD); Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR); 'andre@ecohealthalliance.org'; Pavlin, Julie; Buckley, Gillian
Subject: RE: Forum Leadership Meeting
Attachments: DRAFT FMT Vaccines Agenda 03.26.docx

Agenda attached.

Best,
 Edith

-----Original Message-----

From: Kester, Kent /US <Kent.Kester@sanofi.com>
 Sent: Friday, March 27, 2020 3:32 PM
 To: Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Amponsah, Edith <EAmponsah@nas.edu>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
 Subject: RE: Forum Leadership Meeting

The Zoom session seems to have ended. I'm on the phone now and there is only music.

-----Original Appointment-----

From: Goodtree, Hannah <HGoodtree@nas.edu>
 Sent: Wednesday, February 19, 2020 12:21 PM
 To: Goodtree, Hannah; Louchie, Vivian /US; Amponsah, Edith; 'daszak@ecohealthalliance.org'; 'rfk1@cdc.gov'; 'vjk1@cdc.gov'; 'andre@ecohealthalliance.org'; Kester, Kent /US; Pavlin, Julie; Buckley, Gillian
 Subject: [EXTERNAL] Forum Leadership Meeting
 When: Friday, March 27, 2020 3:30 PM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
 Where: (b)(6)

EXTERNAL : Real sender is HGoodtree@nas.edu

Hello,

Please see below for the call-in details for the Forum on Microbial Threats Leadership Meeting on March 27th, 1-2:30 PM

Join from PC, Mac, Linux, iOS or Android: (b)(6)

Or Dial:

US: +1 646 558 8656 or (b)(6) (Toll Free)

Meeting ID: 664 233 743

International numbers available: (b)(6)

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**The Critical Public Health Value of Vaccines – Tackling Issues of Access
and Hesitancy**
A Workshop

DRAFT Agenda

MAY 28-29, 2020

Washington, DC

Objectives:

This is a 1.5-day public workshop designed to examine the current state of vaccine preventable diseases and the impact of vaccine access and hesitancy globally, and the multidimensional drivers and impacts of declining vaccine confidence. This workshop will explore health systems, research opportunities, communication strategies, and policies that could be considered to address access, perceptions, attitudes, and behaviors toward vaccination.

Specifically, this workshop will feature invited presentations and discussions on the following topics:

- The global impact of declining immunization rates on vaccine-preventable diseases from lack of access and confidence;
- Trends and indicators to monitor attitudes surrounding vaccine safety and efficacy, including a focus on regional and cultural differences;
- The complex determinants of vaccination that hinder or promote vaccine uptake;

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

- The role of health systems and professionals in improving access, influencing vaccine behavior, protecting at-risk communities from vaccine-preventable disease outbreaks, and preserving and building confidence in immunization strategies and practices;
- The role of media, anti-vaccine networks, and online misinformation in reinforcing anxieties about vaccine safety and drivers of vaccine hesitancy;
- Strategies to enhance community-based approaches and community engagement efforts for improving access and reducing vaccine hesitancy;
- Communication approaches that would help assuage anxieties about vaccine safety and strengthen public trust in science and health professionals;
- The ethics and effectiveness of legislation that aim to address vaccine hesitancy; and
- Potential priority actions as well as partnerships and collaborations among policy makers, health professionals, national and international health organizations, parents, and community groups to increase immunization access and vaccine confidence.

Workshop speakers and discussants will contribute perspectives from government,

DAY 1 – THURSDAY, May 28, 2020

1:00pm **Welcome Remarks**
PETER DASZAK, *Chair of the Forum on Microbial Threats*
President
EcoHealth Alliance

academia, private, and nonprofit sectors.

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

Workshop Overview and Goals

MATTHEW ZAHN, *Workshop Co-Chair*

Medical Director, Division of Epidemiology and Assessment
Orange County Health Care Agency

Keynote Addresses

**Exploring the Global Impact of Vaccination and Understanding the Immunization
Landscape Today**

KATHERINE O'BRIEN (**declined – asked to suggest alternate**)

Director, Department of Immunization, Vaccines, and Biologicals
World Health Organization

The Global State of Vaccine Confidence: How Do We Enhance the Uptake of Vaccines?

HEIDI LARSON, *Workshop Co-Chair*

Professor of Anthropology, Risk and Decision Science
Director, The Vaccine Confidence Project
London School of Hygiene & Tropical Medicine

Session I: Improving Access and Closing the Global Immunization Gap

1:45pm

Session I objectives:

- Assess the current state of vaccine-preventable diseases globally, delineating the key barriers to dissemination and uptake of vaccines.
- Examine evidence-based strategies to improve access to vaccines and increase immunization coverage, globally and locally.

Moderator TBD

Plenary Presentation

Applying an Equity Lens in Immunization to Close the Global Immunization Gap

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

ANURADHA GUPTA (invited)

Deputy Chief Executive Officer
Gavi, The Vaccine Alliance

Commented [AE1]: Alternate: Robin Nandy, Principal
Adviser and Chief of Immunization, UNICEF

Case Presentations

Door to Door Strategy for Improving Access and Utilization of Immunization Services

JEAN-MARC OLIVE (accepted – virtual presentation)

Independent Consultant

Using mHealth Interventions to Improve Vaccination Coverage

MOMIN ABDUL KAZI (accepted)

Assistant Professor

The Aga Khan University, Pakistan

The Role of Community-Based Pharmacy Interventions in Increasing Vaccine Uptake

JEFF GOAD (accepted)

Chair, Department of Pharmacy Practice

Chapman University School of Pharmacy

Reducing Barriers and Increasing Vaccine Uptake Among Adults

LITJEN (L.J.) TAN (accepted)

Chief Strategy Officer

Immunization Action Coalition

2:45pm Q&A

3:30pm Break

Session II: Assessing Global and Local Drivers of Vaccine Hesitancy

3:45pm Session II Objectives:

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

- Examine trends in hesitant attitudes toward vaccination and the impact on declining immunization rates.
- Evaluate the complex determinants and drivers of vaccine uptake, including sociocultural factors that influence perceptions, attitudes, and behaviors towards vaccination.
- Explore methods to monitor and measure vaccine hesitancy to better address concerns, and to sustain confidence in vaccination.

Moderator: TBD

A Conceptual Model of Vaccine Hesitancy: Understanding Drivers of Vaccine Uptake

JULIE BETTINGER (accepted)

Associate Professor

Vaccine Evaluation Center

Determinants of Vaccine Hesitancy Among General Practitioners in France

PIERRE VERGER (invited x2)

Epidemiologist

Inserm

Commented [EA2]: Please suggest alternate

Assessing Parental Beliefs and Attitudes Using A Caregiver Vaccination Attitudes Scale

AARON WALLACE (invited)

Epidemiologist, Global Immunization Division

US Centers for Disease Control and Prevention

Case Presentation

Vaccine-Attributable Severe Dengue in the Philippines and the Impact on National Immunization Programs

STEFAN FLASCHE (accepted – virtual presentation)

Associate Professor

London School of Hygiene and Tropical Medicine

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

- 4:30pm Q&A
- 5:00pm **Day 1 Visionary Statement on Enhancing Acceptance of Vaccines for Current and Future Generations – Lessons from the US Immunization Program**
NANCY MESSONNIER (**conditionally accepted – contingent upon COVID-19 situation**)
Director, Center for the National Center for Immunization and Respiratory Diseases
US Centers for Disease Control and Prevention
- 5:15pm **Observations from Day 1**
MATTHEW ZAHN, *Workshop Co-Chair*
Medical Director, Division of Epidemiology and Assessment
Orange County Health Care Agency
- 5:30pm **Adjourn**

DAY 2 – FRIDAY, May 29 2020

-
- 9:00am **Welcome and Recap Day 1**
HEIDI LARSON, *Workshop Co-Chair*
Professor of Anthropology, Risk and Decision Science
Director, The Vaccine Confidence Project
London School of Hygiene & Tropical Medicine
-

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

**Session III: Employing a Systems Approach to Building Confidence and Increasing
Uptake**

9:10am

Session III – Part A Objectives:

- Explore opportunities in research, communication, legislation, and technology in influencing vaccine behavior, improving access, and building confidence in immunization practices.

Moderator: TBD

Adaptation of the COM-B Model to Increase Vaccination Acceptance and Uptake

CATHERINE JACKSON (accepted)

Director

Valid Research Limited

Harnessing Cultural Insights to Increase Vaccination Uptake and Compliance

DAN CARUCCI (accepted)

Global Medical Director

McCann Health

**Legal Approaches to Promoting Parental Compliance with Childhood Immunization
Recommendations**

DORIT REISS (accepted)

Professor of Law

University of California Hastings College of the Law

The Role of Physicians in Building Vaccine Confidence and Acceptance

TODD WOLYNN (accepted)

Chief Executive Officer

Kids Plus Pediatrics

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

10:10am Q&A

10:40am Break

10:50am Session III – Part B Objectives:

- Discuss how community-based approaches and strategies can effectively and ethically be employed to reduce vaccine hesitancy and increase vaccine confidence.

Moderator TBD

Social Mobilization as a Strategy to Increase Vaccine Acceptance and Uptake

DIMITRI PRYBYLSKI (invited x2)

Associate Director for Science

U.S. Centers for Disease Control (CDC)

Commented [EA3]: Alternate: Noel Brewer
Professor
University of North Carolina Gillings School of Global
Public Health

**Engaging with Faith Communities to Increase Vaccine Acceptance and Uptake: A Charedi
Orthodox Jewish Community Example**

LOUISE LETLEY (accepted)

Nurse Manager for Research, Immunisation Operations,
Public Health England

**The Immunity Community: A Community Engagement Strategy to Boost Vaccine
Confidence**

CLARISSA HSU (accepted)

Assistant Investigator

Kaiser Permanente Washington Health Research Institute

Strengthening Community Engagement to Increase Measles Vaccine Uptake in Pakistan

DEEPA RISAL POKHAREL (invited)

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

Chief of Communication for Development
UNICEF

Commented [AE4]: Alternate:

**Strengthening Community Engagement to Increase
Measles Vaccine Uptake in Eastern Europe**
MARIO MOSQUERA
Regional Advisor, Communication for Development
UNICEF

11:30am Q&A

12:00pm Lunch (*Bad News Good News Game*)

**Community Engagement During the Ebola Vaccine Trial
in Guinea**
GODWIN ENWERE
WHO Africa

Session IV: Moving Forward: Optimizing the Utilization of Vaccines

1:00pm Session IV – Part A Objective:

- Discuss the impact of vaccines in mitigating the effects of emerging threats during an outbreak.

Moderator TBD

Plenary Presentation

New Vaccines in the Midst of an Outbreak: Reflecting on the 2019 Coronavirus Outbreak

NICOLE LURIE (accepted)

Strategic Advisor to the CEO

Coalition for Epidemic Preparedness Innovations (CEPI)

1:20pm Q&A

1:50pm Session IV – Part B Objectives:

- Discuss approaches to strengthen public trust in science and public health programs.
- Synthesize priority actions that could ensure that immunization programs reach the last mile.

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

Panel: Inoculating Against Misinformation and Rebuilding The Public's Trust in Science

DEL HARVEY (invited x2)

VP, Trust & Safety

Twitter

IMRAN KHAN (accepted)

Head of public Engagement

Wellcome Trust

KASISOMAYAJULA VISWANATH (invited – trying to rearrange his calendar)

Lee Kum Kee Professor of Health Communication

Harvard T. H. Chan School of Public Health

2:50pm

Q&A

3:20pm

Break

Moderator: TBD

3:30pm

Day 2 Visionary Statements on Priorities in Building Vaccine Acceptance and Uptake for the Next Generation

PETER HOTEZ (accepted)

Dean, National School of Tropical Medicine

Baylor College of Medicine

JULIE LEASK (virtual presentation)

Visiting Professorial Fellow

National Centre for Immunisation Research and Surveillance

Commented [EA5]: Alternate:
Brighton Collaboration; please suggest speakers

Commented [AE6]: Alternates:
Monika Bickert
Developer Policy Enforcement
Facebook

Ifeoma Ozomo
Public Policy & Social Impact Manager
Pinterest

Alternate presentation on the RAMS model

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

Sydney, Australia

NARENDRA ARORA (accepted)

Executive Director

Inclen

3:50pm **Q&A**

4:15pm **Final Synthesis and Discussion with Audience**

MATTHEW ZAHN, *Workshop Co-Chair*

Medical Director, Division of Epidemiology and Assessment

Orange County Health Care Agency

4:30pm **Closing Remarks**

KENT KESTER, *Vice-Chair of the Forum on Microbial Threats*

Vice President and Head, Translational Science and Biomarkers

Sanofi Pasteur

PETER DASZAK, *Chair of the Forum on Microbial Threats*

President

EcoHealth Alliance

4:45pm **Adjourn**

From: Amponsah, Edith
Sent: Mon, 30 Mar 2020 14:19:11 +0000
To: 'Kester, Kent /US'; Goodtree, Hannah; Louchie, Vivian /US; 'daszak@ecohealthalliance.org'; Khabbaz, Rima (CDC/DDID/NCEZID/OD); Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR); 'andre@ecohealthalliance.org'; Pavlin, Julie; Buckley, Gillian
Subject: RE: Forum Leadership Meeting
Attachments: Forum on Microbial Threats Sponsorship list -3.30.2020.docx

Dear Peter, Kent, and Rima,

Thank you for a productive call on Friday. Below are some dates in August and September with availability at the Keck center for the vaccines workshop. Please let us know if any of these dates do not work for you or if you have any preferences.

Peter and Kent - I have also attached the sponsors list and took a first try at dividing some of the potential sponsors into first vs second tier.

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 Thursday 8/20 - Friday 8/21
 Thursday 8/27 - Friday 8/28
 Monday 8/31 - Tuesday 9/1

Best,
 Edith

-----Original Message-----

From: Kester, Kent /US <Kent.Kester@sanofi.com>
Sent: Friday, March 27, 2020 3:32 PM
To: Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Amponsah, Edith <EAmponsah@nas.edu>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
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The Zoom session seems to have ended. I'm on the phone now and there is only music.

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Sent: Wednesday, February 19, 2020 12:21 PM
To: Goodtree, Hannah; Louchie, Vivian /US; Amponsah, Edith; 'daszak@ecohealthalliance.org'; 'rfk1@cdc.gov'; 'vjk1@cdc.gov'; 'andre@ecohealthalliance.org'; Kester, Kent /US; Pavlin, Julie; Buckley, Gillian
Subject: [EXTERNAL] Forum Leadership Meeting
When: Friday, March 27, 2020 3:30 PM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: (b)(6)

EXTERNAL : Real sender is HGoodtree@nas.edu

Hello,

Please see below for the call-in details for the Forum on Microbial Threats Leadership Meeting on March 27th, 1-2:30 PM

Join from PC, Mac, Linux, iOS or Android: (b)(6)

Or Dial:

US: (b)(6) or (b)(6) (Toll Free)

Meeting (b)(6)

International numbers available (b)(6)

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Forum on Microbial Threats Sponsors, as of March 30th, 2020

Current Sponsors	Date of Last Payment
USAID	(b)(4)
ASPR BARDA	
Merck & Co., Inc.	
USUHS	
HHS/CDC/NCEZID	
Infectious Diseases Society of America	
VA	
DHS	
HHS/NIH/NIAID	
American Society of Tropical Medicine and Hygiene	
EcoHealth Alliance	
Johnson & Johnson	
HHS/FDA	
Sanofi Pasteur	

Organizations to establish contact with about possible sponsorship

(b)(4)

(b)(4)

From: Kester, Kent /US
Sent: Mon, 30 Mar 2020 18:37:13 +0000
To: Amponsah, Edith;Goodtree, Hannah;Louchie, Vivian /US;'daszak@ecohealthalliance.org';Khabbaz, Rima (CDC/DDID/NCEZID/OD);Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);'andre@ecohealthalliance.org';Pavlin, Julie;Buckley, Gillian
Subject: RE: Forum Leadership Meeting

As of now, all of the proposed dates work for me.

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From: Amponsah, Edith <EAmponsah@nas.edu>
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Subject: [EXTERNAL] Forum Leadership Meeting

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Where: (b)(6)

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To: Amponsah, Edith;Goodtree, Hannah;Louchie, Vivian /US;'daszak@ecohealthalliance.org';Khabbaz, Rima (CDC/DDID/NCEZID/OD);Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);'andre@ecohealthalliance.org';Pavlin, Julie;Buckley, Gillian
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As to the tiered entities, we did approach (b)(6) about 18 months ago. While there was some initial interest, it never went anywhere. You could check with Ceci for the details.

(b)(6) is totally consumed at DTRA so I don't think that we'll make any headway there, at least at present. Keep them on the list to try later in the year.

I don't have a good contact at GSK any longer now that (b)(6)

Kent

-----Original Message-----

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Monday, March 30, 2020 10:19 AM
To: Kester, Kent /US <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: [EXTERNAL] RE: Forum Leadership Meeting

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Sent: Wednesday, February 19, 2020 12:21 PM
To: Goodtree, Hannah; Louchie, Vivian /US; Amponsah, Edith; 'daszak@ecohealthalliance.org'; 'rfk1@cdc.gov'; 'vjk1@cdc.gov'; 'andre@ecohealthalliance.org'; Kester, Kent /US; Pavlin, Julie; Buckley, Gillian
Subject: [EXTERNAL] Forum Leadership Meeting
When: Friday, March 27, 2020 3:30 PM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: (b)(6)

EXTERNAL : Real sender is HGoodtree@nas.edu

Hello,

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Meeting ID: (b)(6)

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From: Amponsah, Edith
Sent: Tue, 31 Mar 2020 12:19:41 +0000
To: 'Kester, Kent /US'; Goodtree, Hannah; Louchie, Vivian /US; 'daszak@ecohealthalliance.org'; Khabbaz, Rima (CDC/DDID/NCEZID/OD); Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR); 'andre@ecohealthalliance.org'; Pavlin, Julie; Buckley, Gillian
Subject: RE: Forum Leadership Meeting

Thanks for the note on (b)(6) We will update the information on our end.

Best,
 Edith

-----Original Message-----

From: Kester, Kent /US <Kent.Kester@sanofi.com>
 Sent: Monday, March 30, 2020 2:40 PM
 To: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
 Subject: RE: Forum Leadership Meeting

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(b)(6) is totally consumed at DTRA so I don't think that we'll make any headway there, at least at present. Keep them on the list to try later in the year.

I don't have a good contact at (b)(4) any longer now that (b)(6) has retired.

Kent

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From: Amponsah, Edith <EAmponsah@nas.edu>
 Sent: Monday, March 30, 2020 10:19 AM
 To: Kester, Kent /US <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
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Sent: Wednesday, February 19, 2020 12:21 PM
To: Goodtree, Hannah; Louchie, Vivian /US; Amponsah, Edith; 'daszak@ecohealthalliance.org'; 'rfk1@cdc.gov'; 'vjkl@cdc.gov'; 'andre@ecohealthalliance.org'; Kester, Kent /US; Pavlin, Julie; Buckley, Gillian
Subject: [EXTERNAL] Forum Leadership Meeting
When: Friday, March 27, 2020 3:30 PM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: (b)(6)

EXTERNAL : Real sender is HGoodtree@nas.edu

Hello,

Please see below for the call-in details for the Forum on Microbial Threats Leadership Meeting on March 27th, 1-2:30 PM

Join from PC, Mac, Linux, iOS or Android: (b)(6)

Or Dial:

US: + (b)(6) or (b)(6) (Toll Free)

Meeting (b)(6)

International numbers available: (b)(6)

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From: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Sent: Tue, 31 Mar 2020 18:20:31 +0000
To: Kester, Kent /US;Amponsah, Edith;Goodtree, Hannah;Louchie, Vivian /US;'daszak@ecohealthalliance.org';Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);'andre@ecohealthalliance.org';Pavlin, Julie;Buckley, Gillian
Subject: RE: Forum Leadership Meeting

-

From: Amponsah, Edith
Sent: Tue, 31 Mar 2020 18:57:02 +0000
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD);Kester, Kent /US;Goodtree, Hannah;Louchie, Vivian /US;'daszak@ecohealthalliance.org';Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);'andre@ecohealthalliance.org';Pavlin, Julie;Buckley, Gillian
Subject: RE: Forum Leadership Meeting

Thanks Rima.

Alison informed me of two possibly conflicting dates for Peter so I'll sending the remaining four availabilities in a survey gizmo to Forum members later today...hopefully we'll have a confirmed date by next week.

Best,
 Edith

-----Original Message-----

From: Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfl1@cdc.gov>
 Sent: Tuesday, March 31, 2020 2:21 PM
 To: Kester, Kent /US <Kent.Kester@sanofi.com>; Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
 Subject: RE: Forum Leadership Meeting

The dates look fine for now too.
 Thanks,
 Rima

-----Original Message-----

From: Kester, Kent /US <Kent.Kester@sanofi.com>
 Sent: Monday, March 30, 2020 2:37 PM
 To: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfl1@cdc.gov>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
 Subject: RE: Forum Leadership Meeting

As of now, all of the proposed dates work for me.

-----Original Message-----

From: Amponsah, Edith <EAmponsah@nas.edu>
 Sent: Monday, March 30, 2020 10:19 AM
 To: Kester, Kent /US <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfl1@cdc.gov' <rfl1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
 Subject: [EXTERNAL] RE: Forum Leadership Meeting

EXTERNAL : Real sender is eamponsah@nas.edu

Dear Peter, Kent, and Rima,

Thank you for a productive call on Friday. Below are some dates in August and September with availability at the Keck center for the vaccines workshop. Please let us know if any of these dates do not work for you or if you have any preferences.

Peter and Kent - I have also attached the sponsors list and took a first try at dividing some of the potential sponsors into first vs second tier.

Wednesday 8/19 - Thursday 8/20
 Tuesday 9/1 - Wednesday 9/2
 Monday 8/10 - Tuesday 8/11
 Thursday 8/20 - Friday 8/21
 Thursday 8/27 - Friday 8/28
 Monday 8/31 - Tuesday 9/1

Best,
 Edith

-----Original Message-----

From: Kester, Kent /US <Kent.Kester@sanofi.com>
 Sent: Friday, March 27, 2020 3:32 PM
 To: Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Amponsah, Edith <EAmponsah@nas.edu>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
 Subject: RE: Forum Leadership Meeting

The Zoom session seems to have ended. I'm on the phone now and there is only music.

-----Original Appointment-----

From: Goodtree, Hannah <HGoodtree@nas.edu>
 Sent: Wednesday, February 19, 2020 12:21 PM
 To: Goodtree, Hannah; Louchie, Vivian /US; Amponsah, Edith; 'daszak@ecohealthalliance.org'; 'rfk1@cdc.gov'; 'vjk1@cdc.gov'; 'andre@ecohealthalliance.org'; Kester, Kent /US; Pavlin, Julie; Buckley, Gillian
 Subject: [EXTERNAL] Forum Leadership Meeting
 When: Friday, March 27, 2020 3:30 PM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
 Where: (b)(6)

EXTERNAL : Real sender is HGoodtree@nas.edu

Hello,

Please see below for the call-in details for the Forum on Microbial Threats Leadership Meeting on March 27th, 1-2:30 PM

Join from PC, Mac, Linux, iOS or Android: (b)(6)

Or Dial:

US: (b)(6) or (b)(6) (Toll Free)
 Meeting ID: (b)(6)

International numbers available (b)(6)

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From: Amponsah, Edith
Sent: Tue, 7 Apr 2020 18:30:42 +0000
To: Alan Tennenberg;'Chandy C. John';David Nabarro;'eharris@berkeley.edu';Roselle, Gary (CDC va.gov);Cassetti, Cristina (NIH/NIAID) [E];Jonna Mazet;Kent Kester;Kumanan Rasanathan;Marcos A. Espinal;Mair, Michael (FDA/OC);Peter Daszak;Peter Sands (peter.sands@theglobalfund.org);Rafael Obregon;Bright, Rick (OS/ASPR/BARDA);'Miller, Sally';Suerie Moon;Thomas W. Scott;Timothy Burgess;'Hermsen, Elizabeth D';Khabbaz, Rima (CDC/DDID/NCEZID/OD);Matthew Zahn;Clements, Andrew (CDC usaid.gov);Kevin Anderson
Cc: Rita Mueller;'debabenn@iupui.edu';Karen Goraleski;'magali@4sd.info';'Mary Radford';'vivian.louchie@sanofipasteur.com';Tejada, Ms. Cecilia (WDC);Sadove, Elizabeth (FDA/OC);'Jacqui Moseley';'andre@ecohealthalliance.org';'Laura Olmedo (lolmedo@unicef.org)';Blatner, Gretta (OS/ASPR/BARDA);Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);Pavlin, Julie;Goodtree, Hannah;Buckley, Gillian
Subject: RE: Please respond by Friday! - FMT Workshop Updates

Dear Forum members,

Thank you for your response to the survey on such short notice. We appreciate your help in choosing a new dates. The workshop on vaccine access and hesitancy will now be held on **August 19 – 20, 2020** at the National Academies' Keck Center in Washington, D.C, barring any further interruption due to the ongoing pandemic. We will update you all with details on logistics as the date draws near.

Stay safe,
 Edith

From: Amponsah, Edith
Sent: Wednesday, April 1, 2020 3:24 PM
To: Alan Tennenberg <atennenb@ITS.JNJ.com>; 'Chandy C. John' <chjohn@iu.edu>; David Nabarro <david@4sd.info>; 'eharris@berkeley.edu' <eharris@berkeley.edu>; Gary A. Roselle <gary.roselle@va.gov>; Cristina Cassetti <ccassetti@niaid.nih.gov>; Jonna Mazet <jkmazet@ucdavis.edu>; Kent Kester <Kent.Kester@sanofi.com>; Kumanan Rasanathan <rasanathank@who.int>; Marcos A. Espinal <espinalm@paho.org>; Michael Mair <michael.mair@fda.hhs.gov>; Peter Daszak <daszak@ecohealthalliance.org>; Peter Sands (peter.sands@theglobalfund.org) <peter.sands@theglobalfund.org>; Rafael Obregon <robregon@unicef.org>; Rick Bright <Rick.Bright@hhs.gov>; 'Miller, Sally' <miller.769@osu.edu>; Suerie Moon <suerie.moon@graduateinstitute.ch>; Thomas W. Scott <twscott@ucdavis.edu>; Timothy Burgess <timothy.burgess@usuhs.edu>; 'Hermsen, Elizabeth D' <elizabeth.hermsen@merck.com>; Rima F. Khabbaz <rfk1@cdc.gov>; Matthew Zahn <mzahn@ochca.com>; 'Andrew Clements' <aclements@usaid.gov>; Kevin Anderson <kevin.anderson@dhs.gov>
Cc: Rita Mueller <rmuelle5@its.jnj.com>; 'debabenn@iupui.edu' <debabenn@iupui.edu>; Karen Goraleski <kgoraleski@astmh.org>; 'magali@4sd.info' <magali@4sd.info>; 'Mary Radford' <maradford@ucdavis.edu>; 'vivian.louchie@sanofipasteur.com' <vivian.louchie@sanofipasteur.com>; Tejada, Ms. Cecilia (WDC) <tejadace@paho.org>; 'Elizabeth.Sadove@fda.hhs.gov' <Elizabeth.Sadove@fda.hhs.gov>; 'Jacqui Moseley' <jacqui.moseley@theglobalfund.org>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; 'Laura Olmedo (lolmedo@unicef.org)' <lolmedo@unicef.org>; 'Blatner, Gretta (OS/ASPR/BARDA)' <Gretta.Blatner@hhs.gov>; 'vjk1@cdc.gov'

<vj1@cdc.gov>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>

Subject: Please respond by Friday! - FMT Workshop Updates

Dear Forum members,

I hope this email finds you all well and safe, taking care of yourselves and families. I have a few announcements for you:

- Due to the evolving situation around the current COVID-19 pandemic, the Forum's leadership and staff have decided to postpone the upcoming workshop on "The Critical Public Health Value of Vaccines - Tackling Issues of Access and Hesitancy." The workshop's planning committee and the Forum's leadership agree that holding the workshop in person is best for participating in the rich, meaningful discussions this very important topic warrants as opposed to a virtual workshop. As such, we would like your help in choosing the next dates for the workshop in late summer. We have provided some dates based on availability of conference rooms at our facility in Washington, DC. We would like to secure a room soon so please respond no later than COB this **Friday, April 3, 2020** with your selections. Link: (b)(6)
(b)(6)
- We want to continue the conversations around vaccine access and hesitancy in preparation for the main workshop by holding a "teaser" 2 - hour virtual workshop in May. We will provide more information on this as we finalize the agenda and logistics.
- To comply with our contracts, we still plan to hold two workshops this year. We will hold our second workshop of the year on "Systematizing the One Health Approach in Preparedness and Response Efforts for Infectious Disease Outbreaks on **December 7-8, 2020** in Washington, D.C.

Thank you for your continuous contributions and support of the Forum.

Edith Amponsah, MPH, IBCLC

Associate Program Officer

Forum on Microbial Threats

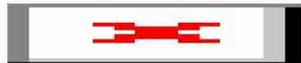
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From: Peter Daszak
Sent: Thu, 6 Feb 2020 01:59:26 +0000
To: Kester, Kent /US;Pavlin, Julie
Cc: Khabbaz, Rima (CDC/DDID/NCEZID/OD);Amponsah, Edith;Goodtree, Hannah
Subject: RE: FMT Co-chair

Great to hear this news!!

Welcome onto the leadership Rima – Kent and I are looking forward eagerly to you joining our calls and helping continue the momentum of the FMT.

Cheers,

Peter

Peter Daszak
President

EcoHealth Alliance
460 West 34th Street – 17th Floor
New York, NY 10001

Tel. +1 212-380-4474
Website: www.ecohealthalliance.org
Twitter: [@PeterDaszak](https://twitter.com/PeterDaszak)

EcoHealth Alliance leads cutting-edge research into the critical connections between human and wildlife health and delicate ecosystems. With this science we develop solutions that prevent pandemics and promote conservation.

From: Kester, Kent /US [mailto:Kent.Kester@sanofi.com]
Sent: Tuesday, February 4, 2020 4:37 PM
To: Pavlin, Julie
Cc: Khabbaz, Rima (CDC/DDID/NCEZID/OD); Peter Daszak; Amponsah, Edith; Goodtree, Hannah
Subject: FMT Co-chair

Excellent news!

On Feb 4, 2020, at 4:35 PM, Pavlin, Julie <JPavlin@nas.edu> wrote:

EXTERNAL : Real sender is JPavlin@nas.edu

Hi Peter and Kent,

I wanted to let you know that Rima has agreed to serve as co-chair of the Forum with the 2 of you. Yay! We're going to put the official nomination packet forward for our internal approvals here and as soon as that is approved, we will let the Forum members know.

Thank you again Rima!

Julie

Julie A. Pavlin, MD, PhD, MPH
Director, Board on Global Health
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From: Amponsah, Edith
Sent: Wed, 5 Feb 2020 21:35:55 +0000
To: 'atennenb@ITS.JNJ.com'; 'Chandy C. John'; 'David Nabarro'; 'Eva Harris'; 'Roselle, Gary (CDC va.gov)'; 'Jay P. Siegel'; 'Cassetti, Cristina (NIH/NIAID) [E]'; 'Clements, Andrew (CDC usaid.gov)'; 'Jonna Mazet'; 'Kent Kester'; 'Kevin Anderson'; 'Kumanan Rasanathan'; 'Marcos A. Espinal'; 'Mair, Michael (FDA/OC)'; 'Sadove, Elizabeth (FDA/OC)'; 'Matthew Zahn'; 'Peter Sands (peter.sands@theglobalfund.org)'; 'pasands@icloud.com'; 'Peter Daszak'; 'Rafael Obregon'; 'Bright, Rick (OS/ASPR/BARDA)'; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)'; 'Sally A. Miller'; 'Suerie Moon'; 'Thomas W. Scott'; 'Timothy Burgess'
Cc: 'Rita Mueller'; 'Karen Goraleski'; 'debabenn@iupui.edu'; 'magali@4sd.info'; 'Kathleen.Lee@va.gov'; 'Mary Radford'; 'vivian.louchie@sanofipasteur.com'; 'Tejada, Ms. Cecilia (WDC)'; 'dgonzalezpulido@ucdavis.edu'; 'Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR)'; 'Blatner, Gretta (OS/ASPR/BARDA)'; 'Laura Olmedo (lolmedo@unicef.org)'; 'andre@ecohealthalliance.org'; 'jacqui.moseley@theglobalfund.org'; 'Pavlin, Julie'; 'Goodtree, Hannah'
Subject: Please respond by Friday: FMT December 2020 Workshop Topics
Attachments: December 2020 survey.pdf

Dear Forum members,

This is a gentle reminder to please inform us of your preferences for the topic the Forum should cover during the December 2020 workshop if you have not done so already.

Link to survey: (b)(6)

(b)(6)

Please let me know if you have any problem accessing the survey. Alternatively, I have attached a PDF of the survey here. You may respond to me with your first, second, and third choice.

Best,
 Edith

From: Amponsah, Edith
Sent: Thursday, January 23, 2020 8:09 AM
To: atennenb@ITS.JNJ.com; Chandy C. John <chjohn@iu.edu>; David Nabarro <david@4sd.info>; Eva Harris <eharris@berkeley.edu>; Gary A. Roselle <gary.roselle@va.gov>; Jay P. Siegel <jsiegel@ucdavis.edu>; (b)(6); Cristina Cassetti <ccassetti@niaid.nih.gov>; Andrew Clements <aclements@usaid.gov>; Jonna Mazet <jkmazet@ucdavis.edu>; Kent Kester <Kent.Kester@sanofi.com>; Kevin Anderson <kevin.anderson@dhs.gov>; Kumanan Rasanathan <rasanathank@who.int>; Marcos A. Espinal <espinalm@paho.org>; Michael Mair <michael.mair@fda.hhs.gov>; 'Elizabeth.Sadove@fda.hhs.gov' <Elizabeth.Sadove@fda.hhs.gov>; Matthew Zahn <mzahn@ochca.com>; Peter Sands (peter.sands@theglobalfund.org) <peter.sands@theglobalfund.org>; 'pasands@icloud.com' <pasands@icloud.com>; Peter Daszak <daszak@ecohealthalliance.org>; Rafael Obregon <robregon@unicef.org>; Rick Bright <Rick.Bright@hhs.gov>; Rima F. Khabbaz <rfk1@cdc.gov>; Sally A. Miller <miller.769@osu.edu>; Suerie Moon <suerie.moon@graduateinstitute.ch>; Thomas W.

Scott <twscott@ucdavis.edu>; Timothy Burgess <timothy.burgess@usuhs.edu>
Cc: Rita Mueller <rmuelle5@its.jnj.com>; Karen Goraleski <kgoraleski@astmh.org>;
 'debabenn@iupui.edu' <debabenn@iupui.edu>; 'magali@4sd.info' <magali@4sd.info>;
 'Kathleen.Lee@va.gov' <Kathleen.Lee@va.gov>; Mary Radford <maradford@ucdavis.edu>;
 'vivian.louchie@sanofipasteur.com' <vivian.louchie@sanofipasteur.com>; Tejada, Ms. Cecilia (WDC)
 <tejadace@paho.org>; 'dgonzalezpulido@ucdavis.edu' <dgonzalezpulido@ucdavis.edu>; 'vjk1@cdc.gov'
 <vjk1@cdc.gov>; 'Blatner, Gretta (OS/ASPR/BARDA)' <Gretta.Blatner@hhs.gov>; Laura Olmedo
 (lolmedo@unicef.org) <lolmedo@unicef.org>; 'andre@ecohealthalliance.org'
 <andre@ecohealthalliance.org>; 'jacqui.moseley@theglobalfund.org'
 <jacqui.moseley@theglobalfund.org>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah
 <HGoodtree@nas.edu>

Subject: FMT December 2020 Workshop Topics

Importance: High

Dear Forum Members,

Please take a moment to complete the survey and enter your preferences for the topic the Forum will be addressing during the December 2020 workshop. Your feedback is very important to us so we would appreciate it if you could complete the [survey](#) as soon as possible. We will be closing it on **Friday,**

February 7th. (b)(6)

(b)(6)

Additionally, I have attached the notes from the closed session meetings held during the last workshop in December 2019.

We have also finalized the dates for the next workshop on “The Critical Public Health Value of Vaccines in the Age of Pandemics” based on the responses to the survey we sent out. The workshop will be held on **May 28-29, 2020** in Washington, DC. My colleague, Hannah Goodtree sent you all a calendar invite.

Please let me know if you have any questions or concerns or have any trouble with completing the survey.

Thank you all for your continued support of the Forum.

Best wishes,

Edith Amponsah, MPH, IBCLC

Research Associate

Forum on Microbial Threats

Health and Medicine Division

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December 2020 FMT Future Workshop Topics

Survey on Forum on Microbial Threats December 2020 Workshop Topics

Page description:

During the Forum on Microbial Threats closed meeting in December, forum members discussed several topics to be addressed during future workshops in 2020 and beyond. This is an opportunity for those members who were not able to attend the meeting to propose new topics and for all members to let us know your preferences. The topics below are not listed in any prioritized order.

We have included brief descriptions of each potential workshop topic. Please rank your choices below.

Microbial Threats and Armed and Other Conflicts

Armed and political conflicts can heighten the threat to human health posed by infectious disease, both within warzones as well as political unstable countries. When health systems break down, microbial threats that had previously been under control may re-emerge, as the reappearance of polio in Syria has demonstrated. Efforts by warring parties to control territory and populations can impede the control of outbreaks, a situation illustrated by the record-breaking cholera outbreak in Yemen, which has been exacerbated by blockages of humanitarian assistance; in peacetime cholera would have been straightforward to address. Health systems are further weakened by the unprecedented rise in targeted military attacks on medical facilities and health workers, reflecting an alarming erosion in respect for international humanitarian law. Insecurity, economic collapse, and unsanitary living conditions of populations displaced by fighting can also all contribute to deterioration in public health. New evidence has also suggested that certain drug-resistant bacteria (e.g. "Iraqibacter") may be related to high concentrations of heavy metals in the soil of countries where use of munitions has been widespread, potentially raising an entirely different set of challenges for addressing antimicrobial resistance. Finally, in conflict-affected and post-conflict contexts, trust between populations and government authorities can be fragile,

undermining public efforts to prevent, detect and respond to outbreaks of infectious disease. At the same time, it has been posited that conflict can sometimes slow down disease transmission by reducing trade, travel and economic activity.

A workshop could address this topic by considering the following questions:

- How well do we understand how armed conflict affects the dynamics of infectious disease?
- What are the implications for the health of civilian populations, military combatants, and countries not directly involved in the conflict?
- How effective are current arrangements to address these threats?
- How do approaches to disease control, often developed for stable political contexts, need to be adapted or re-envisioned for situations of armed conflict?
- What special exceptions to business as usual might be merited in armed conflicts?
- How can we effectively and transparently communicate associated health risks in armed conflicts?

This workshop would intend to bring together practitioners, researchers, and experts from the public health, military, security and humanitarian aid communities to identify the most pressing gaps in knowledge, practices and arrangements to address the threat of infectious disease relating to situations of armed conflict.

Footprint of Outbreak Response Efforts on Health Systems

The workshop could review the state of outbreak response capacity in areas with health systems with constrained resources following major outbreaks such as yellow fever, SARS, Ebola, and Zika. Once the outbreak is controlled and the perceived threat has passed, the attention generally vanishes and there is little interest in understanding how the outbreak has affected these already vulnerable systems. This workshop could explore what types of investments these epidemics trigger in health systems; the extent to which the investments may divert attention away from other health services and if they have strengthened the country's public health capacity; and how national action plans and donor priorities may evolve. Other topics to examine include how communities mobilize to rebuild their lives with existing health services, and have the ability to contribute to strengthening the local and national health systems. Finally, the workshop could discuss improvements for future outbreak response globally and within the United States, transcending the rhetoric and the usual discussions around the efficacy of the International Health Regulations.

Systematizing the One Health Approach in Preparedness and Response Efforts for Infectious Disease Outbreaks

This workshop could explore how integrating the One Health approach for outbreak preparedness and response could bolster efforts to strengthen national health systems and enhance global health security using resources more efficiently. Implementing core capacities and interventions for preparedness that are underpinned by principles of One Health is critical to be able to promptly and adequately respond to infectious disease outbreaks and to break the cycle of panic and neglect. Some topics of this workshop could include the following:

- Critical review and discussion on the implications of using the One Health approach in recent outbreaks, such as the Ebola outbreak in Democratic Republic of Congo versus the reactionary response that provides medical supplies and vaccines once the outbreak has already started;
- Feasibility of creating national One Health coordination mechanisms and integrating One Health into national action plans based on the Joint External Evaluation
- Exploration of engaging with communities and influencing behaviors that lower the risk of infectious disease infection through the One Health approach; and
- Strategies to build a strong investment case to overcome political and technical impasses to

systematize One Health in national preparedness and response efforts.

- Strategies to explore the tension between public health needs, innovations, private sector, and data sharing within the One Health context in preparedness and response efforts.

Creating a Sustainable Business Model for Global Health Innovations

The Sustainable Development Goal (Target 3.B) is to support research and development of vaccines and medicines for diseases that primarily affect developing countries and to provide access to affordable essential medicines and vaccines. Less than 10 years after global vaccine coverage had soared to 80% coverage in 1990, immunization rates in low resource settings stagnated. The translation gap in research and development between discovery and proof of concept is noted, but the second 'valley of death' in late development to get proof of efficacy and registration takes 70% of the R&D budget. For example, despite intensive R&D for a malaria vaccine, these efforts are hampered by the difficulty in getting a product licensed, manufactured and distributed without a market in high-income countries. If a disease such as malaria, which has a very high disease burden and a significant global public health impact, lacks a cogent business case, there is an exceptionally dire situation for other products to prevent or treat other neglected tropical infectious diseases. The situation for associated health commodities, such as diagnostics and vector control agents and devices, is similarly challenging. To reach SDG 3.B, we must face the challenges of product development and deployment through tough discussions on financing, access and public policy. Some topics of this workshop could include the following:

- What are the current successes and challenges in product development?
- What mechanisms are available to incentivize investment in novel manufacturing and delivery platforms?
- What are some innovative solutions for licensure, manufacturing and distribution of products without a lucrative market?
- What creative financing solutions are available and being tried?
- What are examples of successful public-private partnerships in product development and marketing?
- What are innovative approaches and tools to accelerate the pathway to licensure (e.g., CHIMS, adaptive trial designs, and bridging first and next generation candidates)?

1. Please select your **top** ranked choice.

- Microbial Threats and Armed and Other Conflicts
- Footprint of Outbreak Response Efforts on Health Systems
- Systematizing the One Health Approach in Preparedness and Response Efforts for Infectious Disease Outbreaks
- Creating a Sustainable Business Model for Global Health Innovations
- Other - Write In

2. Please select your **second** ranked choice.

- Microbial Threats and Armed and Other Conflicts
- Footprint of Outbreak Response Efforts on Health Systems
- Systematizing the One Health Approach in Preparedness and Response Efforts for Infectious Disease Outbreaks
- Creating a Sustainable Business Model for Global Health Innovations
- Other - Write In

3. Please select your **third** ranked choice.

- Microbial Threats and Armed and Other Conflicts
- Footprint of Outbreak Response Efforts on Health Systems
- Systematizing the One Health Approach in Preparedness and Response Efforts for Infectious Disease Outbreaks
- Creating a Sustainable Business Model for Global Health Innovations
- Other - Write In

4. Name:

From: Peter Daszak
Sent: Thu, 6 Feb 2020 01:59:25 +0000
To: (b)(6) atennenb@ITS.JNJ.com; Amponsah, Edith; Pavlin, Julie
Cc: Shah, Cecilia; Andrew M. Pope, Ph.D.; 'Kent.Kester@sanofi.com'
(Kent.Kester@sanofi.com); Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Subject: Thank you for your service to the Forum on Microbial Threats

Thanks for letting us know in a timely way (b)(6) much appreciated. I have to agree with you that being a member of 3 fora would be more than a burden, and we completely understand your decision.

On behalf of Kent, Rima, Julie, Ceci, the rest of the staff and all FMT members, I want to take this opportunity to thank you for your service to the Forum on Microbial Threats. Your voice of calm reason and depth of experience has been a major resource for us over the years, and your personal commitment to joining so many workshop organizing committees and conference calls is exemplary to all of us, and a reflection of your own values of public service.

You will be sorely missed, but in the meantime, if by any chance you happen to be in DC around the time of our next meeting (especially the dinner), feel free to come over and I'll make sure we personally toast you!

Cheers,

Peter

Peter Daszak

President

EcoHealth Alliance
460 West 34th Street – 17th Floor
New York, NY 10001

Tel. +1 212-380-4474

Website: www.ecohealthalliance.org

Twitter: [@PeterDaszak](https://twitter.com/PeterDaszak)

EcoHealth Alliance leads cutting-edge research into the critical connections between human and wildlife health and delicate ecosystems. With this science we develop solutions that prevent pandemics and promote conservation.

From: (b)(6)
Sent: Wednesday, February 5, 2020 7:27 PM
To: Peter Daszak; atennenb@ITS.JNJ.com; Amponsah, Edith; Pavlin, Julie
Cc: Shah, Cecilia; Andrew M. Pope, Ph.D.
Subject: Resigning from Forum on Microbial Threats

I have not responded to the various survey notices re FMT topics (b)(6) forum, effective immediately.

It has truly been an honor to serve on the Forum for several years during which:

- 1) the threats, including emerging infections, zoonoses, flu pandemic, antimicrobial resistance, and climate change impact persist, evolve, and grow.
- 2) the tools for addressing those risks are also rapidly expanding
- 3) the political and social challenges in mounting global responses are enormous but critical to address.
- 4) Ebola and Zika are but 2 of the examples of how important these issues are.

The leadership, membership and staffing of the Forum have been excellent throughout and I have learned much re process that has served well in other activities including, but not limited to,

(b)(6)

The reason I am resigning now is that I will be joining the (b)(6) which like the (b)(6) calls upon a major area of my career focus. It does not feel like it would be appropriate to be a member of 3 fora.

Again, it has been a pleasure to work with you and I wish FMT the best in the important work ahead.

Sincerely,

(b)(6)

From: Pavlin, Julie
Sent: Thu, 6 Feb 2020 17:19:11 +0000
To: 'Peter Daszak'; (b)(6) atennenb@ITS.JNJ.com; Amponsah, Edith
Cc: Shah, Cecilia; Pope, Andrew; 'Kent.Kester@sanofi.com'
(Kent.Kester@sanofi.com); Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Subject: RE: Thank you for your service to the Forum on Microbial Threats

Dear (b)(6)

Yes, thank you so much for all your assistance and service to the Forum – and to all the other National Academies programs you've worked with. Your inputs have been greatly appreciated.

And please do join us for dinner if you are in town – we'd like for everyone to have a chance to thank you.

Julie

From: Peter Daszak <daszak@ecohealthalliance.org>
Sent: Wednesday, February 5, 2020 8:59 PM
To: (b)(6) atennenb@ITS.JNJ.com; Amponsah, Edith <EAmponsah@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>
Cc: Shah, Cecilia <cshah@nas.edu>; Pope, Andrew <APope@nas.edu>; 'Kent.Kester@sanofi.com' (Kent.Kester@sanofi.com) <Kent.Kester@sanofi.com>; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rfk1@cdc.gov>
Subject: Thank you for your service to the Forum on Microbial Threats
Importance: High

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Peter

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President

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Website: www.ecohealthalliance.org
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(b)(6)

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Again, it has been a pleasure to work with you and I wish FMT the best in the important work ahead.

Sincerely,

(b)(6)

From: Redd, Stephen (CDC/DDPHSIS/OD)
Sent: Wed, 11 Mar 2020 13:48:40 +0000
To: Kamran Khan; Jacobs, Michael; Yijun LIN (MOH); Annelise Wilder-Smith; Ximena Aguilera; Constance LOW (MOH); BRIAND, Sylvie; FALL, Ibrahima Soce; David Heymann; Amadou.SALL@pasteur.sn; c.bruschke@minInv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.
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 ail.com; ephpjv@nus.edu.sg; Deborah NG (MOH); Felicia HONG (MOH); Vernon LEE (MOH); John N. Nkengasong; ID Commissioners Lancet; Wen Qing YEO (MOH); Olivia OH (MOH); Beatrice Bernard; Zalinah KADIS (MCI)
Cc: Constance LOW (MOH); Nur ASHIKIN (MOH); Vernon Lee; Vernon LEE (MOH); Muhammad AKMAL (MOH); Deborah_ng@ncid.sg; Olivia OH (MOH)
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Likewise wish I could be there. The need for the commission could not be more evident! I know that the experiences we are all living through we be an important element in the eventual report.

Stephen C. Redd, MD
 RADM, USPHS

From: Kamran Khan <Kamran@bluedot.global>
Sent: Wednesday, March 11, 2020 9:28:26 AM
To: Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>; Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn <Amadou.SALL@pasteur.sn>; c.bruschke@minInv.nl <c.bruschke@minInv.nl>; Daniel.Bausch@phe.gov.uk <Daniel.Bausch@phe.gov.uk>; deanmed@hku.hk <deanmed@hku.hk>; cfetpyhj@vip.sina.com <cfetpyhj@vip.sina.com>; [REDACTED] (b)(6) [REDACTED] (b)(6)
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 [REDACTED] (b)(6) gmleung@hku.hk <gmleung@hku.hk>; Chikwe lhekweazu <chikwe.lhekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br <eduardo.carmo@saude.gov.br>; Ziad Memish [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6)
 [REDACTED] (b)(6) [REDACTED] (b)(6) [REDACTED] (b)(6) ephpjv@nus.edu.sg <ehpjv@nus.edu.sg>; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet [REDACTED] (b)(6) Wen

Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>; gmleung@hku.hk <gmleung@hku.hk>

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Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Colleagues –

I also want to send my sincere regrets – with each passing day I am pulled deeper into hospital and public health COVID-19 emergency readiness and response activities. With very long work days and a 12 hour time difference it will be difficult for me to join the calls late night my time in Toronto. I am deeply committed to this important work but unfortunately the timing is presenting challenges. Appreciate your understanding.

Kamran

Kamran Khan MD MPH FRCPC
 Physician-Scientist
 Department of Medicine
 Division of Infectious Diseases
 Li Ka Shing Knowledge Institute
 St. Michael's Hospital

Professor
 Faculty of Medicine, Division of Infectious Diseases
 Dalla Lana School of Public Health
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Founder and CEO, BlueDot
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From: "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>

Date: Wednesday, March 11, 2020 at 6:48 AM

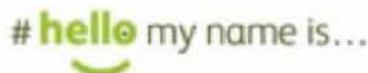
To: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera <xaguilera@udd.cl>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "briands@who.int" <briands@who.int>, "FALL, Ibrahima Soce" <socef@who.int>, David Heymann <David.Heymann@lshtm.ac.uk>, "Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, 余宏杰 <cfetpyhj@vip.sina.com>,

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 "gmleung@hku.hk" <gmleung@hku.hk>
Cc: "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "Nur ASHIKIN (MOH)"
 <Nur_ASHIKIN@moh.gov.sg>, (b)(6) (b)(6) "Vernon
 LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "Muhammad AKMAL (MOH)"
 <MUHAMMAD_Akmal@moh.gov.sg>, "Deborah_ng@ncid.sg" <Deborah_ng@ncid.sg>, Olivia
 OH <Olivia_OH@moh.gov.sg>
Subject: Re: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13
 Mar 2020)

Dear Colleagues

I am very disappointed to miss the meeting this week. To be clear, this is due to the emerging situation in the UK and the need to support the response, and is no reflection on the situation in Singapore. As a consequence, I also won't be able to dial in as offered, but I wanted to wish you all well and reiterate that I am keen to contribute off line afterwards.

Best wishes to all
 Mike

 #hello my name is...

Michael Jacobs | Consultant & Hon. Associate Professor of Infectious Diseases
 Royal Free London NHS Foundation Trust, Pond Street, London NW3 2QG, UK
 T: +44 (0)20 7794 0500 x34640
 E: michael.jacobs@ucl.ac.uk (or michael.jacobs@nhs.net for patient confidential emails)

From: "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>

Date: Tuesday, 10 March 2020 at 15:42

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>, Ximena Aguilera <xaguilera@udd.cl>, "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "BRIAND, Sylvie" <briands@who.int>, "FALL, Ibrahima Soce" <socef@who.int>, David Heymann <David.Heymann@lshtm.ac.uk>, "Amadou.SALL@pasteur.sn" <Amadou.SALL@pasteur.sn>, "c.bruschke@minlnv.nl" <c.bruschke@minlnv.nl>, "Daniel.Bausch@phe.gov.uk" <Daniel.Bausch@phe.gov.uk>, "deanmed@hku.hk" <deanmed@hku.hk>, "cfetpyhj@vip.sina.com" <cfetpyhj@vip.sina.com>, (b)(6)
 (b)(6) (b)(6) (b)(6) "Karen TAN (MCI)" <Karen_TAN@mci.gov.sg>, "dandona@uw.edu" <dandona@uw.edu>, "Jacobs, Michael" <michael.jacobs@ucl.ac.uk>, Ngozi Erundu <Ngozi.Erundu@lshtm.ac.uk>, (b)(6) (b)(6) "riha@cepi.net" <riha@cepi.net>, "Ryan.Morhard@weforum.org" <Ryan.Morhard@weforum.org>, "scr1@cdc.gov" <scr1@cdc.gov>, "Cleghorn, Sean (ELS-LOW)" <sean.cleghorn@lancet.com>, (b)(6) (b)(6) Kamran Khan <Kamran@bluedot.global>, "gmleung@hku.hk" <gmleung@hku.hk>, Chikwe Ihekweazu <chikwe.iheweazu@ncdc.gov.ng>, "eduardo.carmo@saude.gov.br" <eduardo.carmo@saude.gov.br>, Ziad Memish (b)(6)
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 (b)(6) (b)(6) (b)(6)
 (b)(6) (b)(6) "Yijun LIN (MOH)" <LIN_Yijun@MOH.gov.sg>, "ephjv@nus.edu.sg" <ephjv@nus.edu.sg>, "Deborah NG (MOH)" <Deborah_NG@moh.gov.sg>, "Felicia HONG (MOH)" <Felicia_HONG@moh.gov.sg>, "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "John N. Nkengasong" <NkengasongJ@africa-union.org>, ID Commissioners Lancet (b)(6) "Wen Qing YEO (MOH)" <YEO_Wen_Qing@moh.gov.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>, Beatrice Bernard <Beatrice@bluedot.global>, "Zalinah KADIS (MCI)" <Zalinah_KADIS@mci.gov.sg>, "gmleung@hku.hk" <gmleung@hku.hk>
Cc: "Constance LOW (MOH)" <Constance_LOW@moh.gov.sg>, "Nur ASHIKIN (MOH)" <Nur_ASHIKIN@moh.gov.sg>, Vernon Lee (b)(6) "Vernon LEE (MOH)" <Vernon_LEE@moh.gov.sg>, "Muhammad AKMAL (MOH)" <MUHAMMAD_Akmal@moh.gov.sg>, "Deborah_ng@ncid.sg" <Deborah_ng@ncid.sg>, "Olivia OH (MOH)" <Olivia_OH@moh.gov.sg>
Subject: [Update 1: For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Further to the email below, we would appreciate if you could participate in the discussion via teleconference. The working documents are attached below.

We understand that due to the time differences, you may not be able to participate fully. Therefore, we suggest the following:

1. For those dialling in from the Americas, you may wish to join in from **10AM to 12 Noon** (Singapore Time)
2. For those dialling in from Europe, Africa and Middle East, you may wish to join in from **3PM to 5PM** (Singapore Time)

We will have a short discussion on the Covid situation on Thursday morning followed by a discussion on the working documents. On the second day, we will continue discussions with the same dial in times. The teleconferencing details are as follows:

Table1. Teleconferencing details

Topic: Lancet ID Commission on Pandemic Preparedness Day 1	Topic: Lancet ID Commission on Pandemic Preparedness Day 2
Time: Mar 12, 2020 08:00 AM Singapore	Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

Join Zoom Meeting

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Meeting ID: (b)(6)

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Table 2. Working documents

No.	Section	Summary of Content	Action required
	Introduction	(i.e. ecology to changing risk)	
	<i>Introduction to the epidemic threats</i>	Describe current risks posed by emerging	Peter and Bethan to draft the introduction section in bullet points or prose where relevant;
	<i>1current risks and state of preparedness</i>	Describe the current state of preparedness, and what needs to be done for it to be relevant in the changing world	

Public Health Ecology

A new ecology and a changing imperative

Define public health ecology
Link ecology to disruptions i.e. what risks to be targeted at based on the ecology

Vernon and team to draft the section in bullet points or prose where relevant;

Also to provide the diagrams (for Lancet illustrator);

Vernon to produce draft write-up of a commentary perspective piece in lancet ID (700 words)

Looking forward - Design for the future (i.e. what to be instituted in the context of the new ecology; what are the opportunities in the new reality)

Building flexible preparedness components
Novel solutions / approach to building Sustainability, Adequate health services to manage surge, Increase Collaboration and Partnership

Lead: Daniel

Info / big data -

Risk

assessment of

diseases

Lead: Kamran Khan

Pharmaceutical and non-

pharmaceutical

interventions

Lead: Richard

Strategic

communication

issues and advocacy

Lead: Karen Tan

How do interventions need to change for the new ecology: Pharmaceutical; Non pharmaceutical e.g. - border control, IPC, failures in regulatory process
Comms as a tool to manage epidemic threats. What are the new comms activities that are needed in the new ecology

Workgroups 3-6 to expand pointers (e.g. 3-5 pages) for the section based on the following guiding questions:

What has to be true for this to work?

What would be the expected impact?

Are there any examples of successes or failures?

Chairs of each workgroup to reach out to members and designate a member to expand pointers for the section.

Next Steps

7 Next steps Recommendations, timeline and measurables

Nil; to be discussed in Singapore in March 2020
Survey on new dates

Regards,
Yijun

MOH EMS

(b)(6)

MOH EMS

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: 09 March 2020 04:15

To: Annelise Wilder-Smith <annelies.wilder-smith@lshtm.ac.uk>; Ximena Aguilera <xaguilera@udd.cl>;

Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; BRIAND, Sylvie <briands@who.int>; FALL, Ibrahima Soce <socef@who.int>; David Heymann <David.Heymann@lshtm.ac.uk>; Amadou.SALL@pasteur.sn; c.bruschke@minlnv.nl; Daniel.Bausch@phe.gov.uk; deanmed@hku.hk; cfetpyhj@vip.sina.com; (b)(6) (b)(6) Karen TAN (MCI) <Karen_TAN@mci.gov.sg>; dandona@uw.edu; Jacobs, Michael <michael.jacobs@ucl.ac.uk>; Ngozi Erondu <Ngozi.Erondu@lshtm.ac.uk>; (b)(6) riha@cepi.net; Ryan.Morhard@weforum.org; scr1@cdc.gov; Cleghorn, Sean (ELS-LOW) <sean.cleghorn@lancet.com>; (b)(6) Kamran Khan <Kamran@bluedot.global>; Chikwe Ihekweazu <chikwe.ihekweazu@ncdc.gov.ng>; eduardo.carmo@saude.gov.br; Ziad Memish (b)(6) (b)(6) (b)(6) (b)(6) Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>; ephpjv@nus.edu.sg; Deborah NG (MOH) <Deborah_NG@moh.gov.sg>; Felicia HONG (MOH) <Felicia_HONG@moh.gov.sg>; Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; John N. Nkengasong <NkengasongJ@africa-union.org>; ID Commissioners Lancet (b)(6) Wen Qing YEO (MOH) <YEO_Wen_Qing@moh.gov.sg>; Olivia OH (MOH) <Olivia_OH@moh.gov.sg>; Beatrice Bernard <Beatrice@bluedot.global>; Zalinah KADIS (MCI) <Zalinah_KADIS@mci.gov.sg>
Cc: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>; Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>
Subject: [For info pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Greetings from Singapore.

The Lancet ID commission on Pandemic Preparedness meeting will be held on 12 to 13 March 2020 in Singapore.

For those who are attending, please bring along a laptop to aid the meeting discussions. For those who are unable to join us, we hope that you may be able to participate in our discussion via teleconferencing at your convenience. Pls refer to the updated agenda [as attached] and the teleconferencing instructions below.

a. **Teleconferencing instructions**

Topic: Lancet ID Commission on Pandemic Preparedness **[Day 1]**

Time: Mar 12, 2020 08:00 AM Singapore

Join Zoom Meeting

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(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

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Topic: Lancet ID Commission on Pandemic Preparedness [Day 2]

Time: Mar 13, 2020 08:00 AM Singapore

Join Zoom Meeting

(b)(6)

Meeting ID: (b)(6)

Password: (b)(6)

One tap mobile

(b)(6) US (San Jose)
(b)(6) US (New York)

Dial by your location

(b)(6) US (San Jose)
(b)(6) US (New York)

Meeting ID: (b)(6)

Find your local number: (b)(6)

Regards,
Yijun & Constance

[MOH EMS](#)

(b)(6)

From: Constance LOW (MOH) <Constance_LOW@moh.gov.sg>

Sent: Thursday, 20 February 2020 10:09 PM

To: Amadou.SALL@pasteur.sn; annelies.wilder-smith@lshtm.ac.uk; (b)(6) -

Contact (b)(6) Bruschke, dr. C.J.M. (Christianne)

<c.j.m.bruschke@minlnv.nl>; David Heymann <david.heyman@lshtm.ac.uk>; Jacobs, Michael

<michael.jacobs@ucl.ac.uk>; Ngozi.Erond@lshtm.ac.uk; (b)(6) Cleghorn, Sean (ELS-

LOW) <sean.cleghorn@lancet.com>; Ziad Memish (b)(6) John N. Nkengasong

<NkengasongJ@africa-union.org>; Daniel Bausch <Daniel.Bausch@phe.gov.uk>; gmluong@hku.hk;

Redd, Stephen (CDC/DDPHSIS/OD) <scr1@cdc.gov>; xaguilera@udd.cl; (b)(6)

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Vernon Lee (b)(6) Vernon

LEE (MOH) <Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH)

<MUHAMMAD_Akmal@moh.gov.sg>; Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Subject: [Update] RE: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Message Classification: Restricted

Dear Commissioners,

Thank you all for your replies. We would like to inform that the Lancet meeting on 12 to 13 March 2020 in Singapore will proceed as planned.

Have a good week ahead and see you all soon.

Thanks and best regards,
Constance

[MOH EMS](#)

(b)(6)

From: Yijun LIN (MOH) <LIN_Yijun@MOH.gov.sg>

Sent: Thursday, 13 February 2020 1:59 PM

Cc: Nur ASHIKIN (MOH) <Nur_ASHIKIN@moh.gov.sg>; Constance LOW (MOH)

<Constance_LOW@moh.gov.sg>; Vernon Lee (b)(6) Vernon LEE (MOH)

<Vernon_LEE@moh.gov.sg>; Muhammad AKMAL (MOH) <MUHAMMAD_Akmal@moh.gov.sg>

Subject: [Urgent pls] Lancet ID Commission on Pandemic Preparedness (12-13 Mar 2020)

Dear Commissioners,

Thank you for agreeing to attend the meeting in Singapore from 12 – 13 Mar 2020.

As you are aware, the COVID -19 situation is evolving rapidly. Thus far, the situation in Singapore is stable and there have not been any travel restrictions. We would like to find out if you are still keen to attend the meeting as scheduled.

If you are unable to attend, would you be keen to join via teleconference?

Pls also let us know if you have booked your air tickets.

Appreciate if you could let us know your response below by 14 Feb 2020.

Thank you and we appreciate your understanding.

(Y/N)?

Still attending?

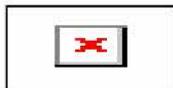
Booked air tickets?

If not attending in person, okay
for teleconference?

Regards,
Yijun

[MOH EMS](#)

(b)(6)



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From: Pavlin, Julie
Sent: Fri, 12 Jun 2020 10:55:53 +0000
To: Peter Daszak;'Kester, Kent /US';Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Amponsah, Edith;Goodtree, Hannah
Subject: FW: July 1 Standing Committee and Genomics Roundtable Joint Meeting on COVID-19
Attachments: 2020-05-28-Draft Agenda Joint Meeting of the RT and SC- Host Genomics_revised.docx, Genomics Roundtable One Pager-June 2020.pdf, [External] AMP COVID-19 Virtual Town Hall.eml

Hi Peter, Kent and Rima –

Any interest in doing something similar at our Forum meeting in August? Have a joint meeting with the standing committee?

From: Brown, Lisa <LBrown@nas.edu>
Sent: Thursday, June 11, 2020 11:24 AM
To: Alexandra Phelan (alp81@georgetown.edu) <alp81@georgetown.edu>; David A Relman (relman@stanford.edu) <relman@stanford.edu>; David Walt (dwalt@bwh.harvard.edu) <dwalt@bwh.harvard.edu>; Diane Griffin (dgriffi6@jhmi.edu) <dgriffi6@jhmi.edu>; Embrey, Ellen (eembrey@stratitia.com) <eembrey@stratitia.com>; Georges Benjamin (georges.benjamin@apha.org) <georges.benjamin@apha.org>; Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; John Hick (b)(6)>; Jonna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>; Kent Kester (Kent.Kester@sanofi.com) <Kent.Kester@sanofi.com>; Kristian G. Andersen (b)(6) Mark Smolinski (mark@endingpandemics.org) <mark@endingpandemics.org>; Mary Travis Bassett (mbassett@hsph.harvard.edu) <mbassett@hsph.harvard.edu>; Patricia King (b)(6) (b)(6); Peggy Hamburg (peggy@hbfam.net) <peggy@hbfam.net>; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Phyllis D. Meadows (PDMeadows@kresge.org) <PDMeadows@kresge.org>; Richard Besser (rbesser@rwjf.org) <rbesser@rwjf.org>; Tara O'Toole (totoole@iq.t.org) <totoole@iq.t.org>; Trevor Bedford (trevor@bedford.io) <trevor@bedford.io>; rbaric@email.unc.edu; Donald Berwick (b)(6) alta.charo@wisc.edu; Jeff.Duchin@kingcounty.gov; Baruch Fischhoff <baruch@cmu.edu>; DHanfling@iq.t.org; bgroves@georgetown.edu
Cc: Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; mnavish@iq.t.org; andre@ecohealthalliance.org; Peisch, Samuel Francis <speisch@hsph.harvard.edu>; jbaker@rwjf.org; antoinette_baric@med.unc.edu; Mary Radford <maradford@ucdavis.edu>; Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Feit, Monica <MFeit@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>; Beachy, Sarah <SBeachy@nas.edu>
Subject: July 1 Standing Committee and Genomics Roundtable Joint Meeting on COVID-19

Dear Members of the Standing Committee ,

I'm writing to invite you to attend a joint virtual meeting of the National Academies' [Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats](#) and the

[Roundtable on Genomics and Precision Health](#) on Wednesday, July 1 from 1-3pm ET. An outlook invitation will follow shortly to secure the time on your calendar.

With this meeting, we aim to discuss the state of the science with regard to what is known about human genomics and susceptibility to and severity of COVID-19, what efforts are ongoing, and where some of the research needs are. We are also interested in understanding how data collection and sharing is occurring in new and innovation ways and what some of the gaps still are.

There are two audiences for this meeting—one being our Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats, as we think about future areas that need attention through our rapid expert consultation reports and other ways of sharing information with our sponsors. The other audience is the members of the Roundtable on Genomics and Precision Health as they run, in parallel, a strategic planning process to define what areas they should prioritize in the next few years.

Please see the attached draft agenda for the meeting. We are hoping to have this meeting be under two hours, with short (10 min talks) and then plenty of time for discussion with the members.

Also, if you are interested, the Association for Molecular Pathology (AMP) is holding a virtual town hall today at 1:00 p.m. ET. AMP will present key preliminary findings from a recent COVID-19 survey of laboratories. This town hall will discuss various aspects of COVID-19 molecular diagnostic testing including:

- Current and anticipated testing capacity
- Testing turn-around times
- Supply chain issues
- Test performance and validation
- Processes for United States (US) public health reporting

Details are attached.

Please let me know if you have any questions.

Many thanks,
Lisa

Lisa Brown, MPH
Senior Program Officer
Board on Health Sciences Policy
Health and Medicine Division
The National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW, Washington, DC 20001
202-334-2487 (office)

lbrown@nas.edu

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From: Brown, Lisa

Sent: Tuesday, June 2, 2020 2:43 PM

To: Alexandra Phelan (alp81@georgetown.edu) <alp81@georgetown.edu>; David A Relman (relman@stanford.edu) <relman@stanford.edu>; David Walt (dwalt@bwh.harvard.edu) <dwalt@bwh.harvard.edu>; Diane Griffin (dgriffi6@jhmi.edu) <dgriffi6@jhmi.edu>; Embrey, Ellen (eembrey@stratitia.com) <eembrey@stratitia.com>; Georges Benjamin (georges.benjamin@apha.org) <georges.benjamin@apha.org>; Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; John Hick [REDACTED (b)(6)]; Anna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>; Kent Kester (Kent.Kester@sanofi.com) <Kent.Kester@sanofi.com>; Kristian G. Andersen [REDACTED (b)(6)]; Mark Smolinski (mark@endingpandemics.org) <mark@endingpandemics.org>; Mary Travis Bassett (mbassett@hsph.harvard.edu) <mbassett@hsph.harvard.edu>; Patricia King [REDACTED (b)(6)]; [REDACTED (b)(6)]; Peggy Hamburg (peggy@hbfam.net) <peggy@hbfam.net>; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Phyllis D. Meadows (PDMeadows@kresge.org) <PDMeadows@kresge.org>; Richard Besser (rbesser@rwjf.org) <rbesser@rwjf.org>; Tara O'Toole (totoole@iqt.org) <totoole@iqt.org>; Trevor Bedford (trevor@bedford.io) <trevor@bedford.io>; 'rbaric@email.unc.edu' <rbaric@email.unc.edu>; 'Donald Berwick' [REDACTED (b)(6)]; 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'Baruch Fischhoff' <baruch@cmu.edu>; 'DHanfling@iqt.org' <DHanfling@iqt.org>; 'bgroves@georgetown.edu' <bgroves@georgetown.edu>

Cc: Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; 'mnavish@iqt.org' <mnavish@iqt.org>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; 'Peisch, Samuel Francis' <speisch@hsph.harvard.edu>; 'jbaker@rwjf.org' <jbaker@rwjf.org>; 'antoinette_baric@med.unc.edu' <antoinette_baric@med.unc.edu>; 'Mary Radford' <maradford@ucdavis.edu>; Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Feit, Monica <MFeit@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>

Subject: Note from Harvey - Update on the Activities of the Standing Committee on Emerging Infectious Diseases

Dear Members of the Standing Committee,

It has been just over a month since we convened our second standing committee meeting, and we wanted to update you on next steps. As you know, the standing committee is pivoting towards more intermediate to long-term topics, and staff and I have had ongoing discussions with the sponsors about the questions they would be most interested in, given the continually evolving situation. We will keep you informed of these discussions and topics as they progress,

but we envision hosting some monthly mini-workshops and pursuing written products in the near future. Please stay tuned for additional details.

In addition to working with the sponsors to determine next steps, there are several different ad hoc activities connected to the standing committee currently underway.

- **Joint Meeting of the Standing Committee and the Roundtable on Genomics and Precision Health.** The standing committee is invited to participate in a joint meeting with the Roundtable on Genomics and Precision Health to discuss host genomics research and data collection efforts related to COVID-19. This meeting date is tentatively scheduled for July 1. Additional details will be forthcoming.
- **Committee on Data Needs to Monitor the Evolution of SARS-CoV-2.** On May 7th, several members of the standing committee participated in a rapid telephonic consultation on potential mutations of the virus. As a result of these discussions, an ad hoc committee is currently being appointed lay out a framework to define and describe the data needs for a system to track and correlate viral genome sequences with clinical and epidemiological data. The committee will produce a short report with recommendations to address these issues, and the report will likely be released in mid-July.
- **Committee to Provide Guidance to K-12 Education on Responding to COVID-19.** The Division of Behavioral and Social Sciences and Education (DBASSE) appointed an ad hoc committee to provide states and districts with guidance about whether and how to reopen K-12 schools in the 2020-2021 school year safely. The committee will produce a short report with recommendations to address these issues, and the report will likely be released in mid-July. Phyllis Meadows, a member of the standing committee, is a member of this ad hoc committee.
- **Societal Experts Action Network (SEAN Network).** As we have previously discussed, DBASSE, in collaboration with NSF, has convened a network of experts in the social and behavioral sciences to facilitate rapid responses to actionable questions from decision-makers. This network is coordinated with the standing committee and is guided by an executive committee co-chaired by Bob Groves and Mary Bassett, both members of the standing committee. The SEAN Network is currently undertaking its first task to produce a short document to help state and local decision-makers better understand and evaluate various data sources as they make policy decisions related to COVID-19.

We continue at this time to explore other potential topics for further work, including a roadmap for diagnostic testing (this would incorporate considerations of purpose, technologies, target populations, frequency, validation and deployment by geographic area), vaccine immunization priorities and implementation, and longer-term prediction and management of emerging infections. Please let Andy, Lisa, or me know if you have any questions. We look forward to your feedback.

Warm regards,

Harvey

Harvey V. Fineberg, MD, PhD
President
Gordon and Betty Moore Foundation

1661 Page Mill Rd
Palo Alto CA 94304

T: 650.213.3100

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Board on Health Sciences Policy

DRAFT

***Host Genomics Research and Data Collection Efforts
 Related to COVID-19***

**Joint Meeting
 of the
 Roundtable on Genomics and Precision Health
 and the
 Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats**

A VIRTUAL MEETING

July 1, 2020

1:00 PM – 2:45 PM ET

Zoom Link: Will be sent closer to the meeting date

Aims for the meeting:

- To understand the scientific challenges that the field of genomics is facing
 - What has been the effect of the pandemic on genomics research and data collection and sharing? What is the role of the genomics community during the pandemic? What research is underway? What research still needs to be done?
 - What gaps and challenges in the field is this crisis highlighting? What unique contributions of the field are not being leveraged effectively?
- To explore innovative approaches to overcoming those challenges
 - What new approaches are you using to solve a problem? Could these be applied to the field of genomics? Are there lessons from genomics that are being used in light of the pandemic? What are the opportunities for connecting efforts and data sets (e.g. across institutions, genotype and phenotype data)?
- To discuss opportunities for the Genomics Roundtable and for the Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats to facilitate progress
 - Are there opportunities for the Roundtable and Standing Committee to act that align with strategic priorities?
 - Are the Roundtable and Standing Committee uniquely positioned to address specific challenges?



AGENDA:

1:00 p.m. ET Welcoming Remarks

GEOFFREY GINSBURG, *Roundtable Co-Chair*
 Director, Duke Center for Applied Genomics & Precision Medicine
 Professor, Medicine, Pathology, and Biomedical Engineering
 Duke University Medical Center

MICHELLE PENNY, *Roundtable Co-Chair*
 Vice President and Head of Genomics
 Goldfinch Bio

HARVEY FINEBERG, *Standing Committee Chair*
 President
 Gordon and Betty Moore Foundation

1:15 p.m. **Understanding Host Genetics and Genomics Related to COVID-19 and Opportunities for Forming Data Sharing COVID-19 Communities**

MAXIMILIAN MUENKE (*confirmed*)
 CEO
 American College of Medical Genetics and Genomics (ACMG)

1:25 p.m. SHARON TERRY (*confirmed*)
 Founder and CEO
 Genetic Alliance

1:35 p.m. JOYCE TUNG (*confirmed*)
 Vice President, Research
 23andMe

1:45 p.m. GEOFFREY GINSBURG, *Roundtable Co-Chair (confirmed)*
 Director, Duke Center for Applied Genomics & Precision Medicine
 Professor, Medicine, Pathology, and Biomedical Engineering
 Duke University Medical Center

1:55 p.m. **Discussion with Roundtable and Standing Committee Members**

2:30 p.m. **Next Steps**

Questions:

- What challenges or gaps were exposed today?
- Is there an area that should be incorporated into the Roundtable's strategic planning or the Standing Committee's work?

GEOFFREY GINSBURG, *Roundtable Co-Chair*
Director, Duke Center for Applied Genomics & Precision Medicine
Professor, Medicine, Pathology, and Biomedical Engineering
Duke University Medical Center

MICHELLE PENNY, *Roundtable Co-Chair*
Vice President and Head of Genomics
Goldfinch Bio

HARVEY FINEBERG, *Standing Committee Chair*
President
Gordon and Betty Moore Foundation

2:45 p.m. Adjourn

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Roundtable on **GENOMICS** and **PRECISION HEALTH**

The sequencing of the human genome is rapidly opening new doors to research and progress in biology, medicine, and health care. At the same time, these developments have produced a diversity of new issues to be addressed.

The National Academies of Sciences, Engineering, and Medicine has convened a Roundtable on Genomics and Precision Health (previously the Roundtable on Translating Genomic-Based Research for Health) that brings together leaders from academia, industry, government, foundations and associations, and representatives of patient and consumer interests who have a mutual concern and interest in addressing the issues surrounding the translation of genome-based research for use in maintaining and improving health. The mission of the Roundtable is to advance the field of genomics and improve the translation of research findings to health care, education, and policy. The Roundtable will discuss the translation process, identify challenges at various points in the process, and discuss approaches to address those challenges.

The field of genomics and its translation involves many disciplines, and takes place within different economic, social, and cultural contexts, necessitating a need for increased communication and understanding across these fields. As a convening mechanism for interested parties from diverse perspectives to meet and discuss complex issues of mutual concern in a neutral setting, the Roundtable: fosters dialogue across sectors and institutions; illuminates issues, but does not necessarily resolve them; and fosters collaboration among stakeholders.

To achieve its objectives, the Roundtable conducts structured discussions, workshops, and symposia. Workshop summaries will be published and collaborative efforts among members are encouraged

(e.g., journal articles). Specific issues and agenda topics are determined by the Roundtable membership, and span a broad range of issues relevant to the translation process.

Issues may include the integration and coordination of genomic information into health care and public health including encompassing standards for genetic screening and testing, improving information technology for use in clinical decision making, ensuring access while protecting privacy, and using genomic information to reduce health disparities. The patient and family perspective on the use of genomic information for translation includes social and behavioral issues for target populations. There are evolving requirements for the health professional community, and the need to be able to understand and responsibly apply genomics to medicine and public health.

Of increasing importance is the need to identify the economic implications of using genome-based research for health. Such issues include incentives, cost-effectiveness, and sustainability.

Issues related to the developing science base are also important in the translation process. Such issues could include studies of gene-environment interactions, as well as the implications of genomics for complex disorders such as addiction, mental illness, and chronic diseases.

Roundtable sponsors include federal agencies, pharmaceutical companies, medical and scientific associations, foundations, and patient/public representatives. For more information about the Roundtable on Genomics and Precision Health, please visit our website at nationalacademies.org/GenomicsRT or contact Sarah Beachy at 202-334-2217, or by e-mail at sbeachy@nas.edu.

Roundtable on Genomics and Precision Health Membership

Geoffrey Ginsburg, M.D., Ph.D. (Co-Chair) Duke University
Michelle Penny, Ph.D. (Co-Chair) Goldfinch Bio

Naomi Aronson, Ph.D.

BlueCross/BlueShield Association

Aris Baras, M.D., M.B.A.

Regeneron Pharmaceuticals

Karina Bienfait, Ph.D.

Merck and Co., Inc.

Vence Bonham, Jr., J.D.

National Human Genome Research Institute

Robert B. Darnell, M.D. Ph.D.

The Rockefeller University / NY Genome Center

Stephanie Devaney, Ph.D.

All of Us Research Program, NIH

Katherine Donigan, Ph.D.

U.S. Food and Drug Administration

W. Gregory Feero, M.D., Ph.D.

Journal of the American Medical Association

Jessica M. Gill, Ph.D., R.N., FAAN

National Institute of Nursing Research

Marc Grodman, M.D.

Genosity

Richard Hodes, M.D.

National Institute on Aging

Praduman Jain, M.S.

Vibrent Health

Sally John, Ph.D.

Biogen

Sekar Kathiresan, M.D.

Massachusetts General Hospital

Muin Khoury, M.D., Ph.D.

Centers for Disease Control and Prevention

David Ledbetter, Ph.D.

Geisinger

Charles Lee, Ph.D., FACMG

The Jackson Laboratory for Genomic Medicine

Thomas Lehner, Ph.D., M.P.H.

National Institute of Mental Health

Debra Leonard, M.D., Ph.D.

College of American Pathologists

Patrick Loerch, Ph.D.

Johnson & Johnson

James Lu, M.D., Ph.D.

Helix

Sean McConnell, Ph.D.

American Medical Association

Mona Miller, M.P.P.

American Society of Human Genetics

Jennifer Moser, Ph.D.

U.S. Department of Veterans Affairs

Maximilian Muenke, M.D., FACMG

American College of Medical Genetics and Genomics

Anna Pettersson, Ph.D.

Pfizer Inc.

Victoria M. Pratt, Ph.D., FACMG

Association for Molecular Pathology

Nadeem Sarwar, Ph.D.

Eisai Inc.

Sheri Schully, Ph.D.

Formerly NIH Office of Disease Prevention, now All of Us

Joan A. Scott, M.S., C.G.C.

Health Resources and Services Administration

Nonniekaye Shelburne, C.R.N.P., M.S., A.O.C.N.

National Cancer Institute

Sam Shekar, M.D., M.P.H.

American College of Preventive Medicine

Nikoletta Sidiropoulos, M.D.

University of Vermont Health Network Medical Group

Katherine Johansen Taber, Ph.D.

Myriad Women's Health

Ryan Taft, Ph.D.

Illumina

Jacquelyn Taylor, Ph.D.

New York University

Sharon Terry, M.A.

Genetic Alliance

Joyce Tung, Ph.D.

23andMe, Inc.

Jameson Voss, M.D.

Air Force Medical Support Agency

Catherine A. Wicklund, M.S., C.G.C.

National Society of Genetic Counselors

Huntington F. Willard, Ph.D.

Genome Medical

Janet K. Williams, Ph.D., R.N., FAAN

American Academy of Nursing

Sarah Wordsworth, Ph.D.

University of Oxford

Alicia Zhou, Ph.D.

Color Genomics

Project Staff

Sarah H. Beachy, Ph.D., *Roundtable Director*

Siobhan Addie, Ph.D., *Program Officer*

Meredith Hackmann, *Associate Program Officer*

Kelly Choi, *Senior Program Assistant*

From: Kester, Kent /US
Sent: Mon, 10 Feb 2020 18:31:18 +0000
To: Peter Daszak;Pavlin, Julie;Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Amponsah, Edith;Goodtree, Hannah
Subject: RE: Forum on Microbial Threats

Agreed.

From: Peter Daszak <daszak@ecohealthalliance.org>
Sent: Wednesday, February 5, 2020 12:17 PM
To: Pavlin, Julie <JPavlin@nas.edu>; Kester, Kent /US <Kent.Kester@sanofi.com>; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rfk1@cdc.gov>
Cc: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>
Subject: [EXTERNAL] RE: Forum on Microbial Threats

EXTERNAL : Real sender is daszak@ecohealthalliance.org

Andrew's right that this would be extremely topical, but you're right that we don't have enough time to line this up, and in any case, all the key speakers are at other meetings...

We could certainly bring some discussion of the nCoV into the introduction and to a couple of the sessions. We should also address it at the closed part of our meeting, I think.

Cheers,

Peter

Peter Daszak
President

EcoHealth Alliance
460 West 34th Street – 17th Floor
New York, NY 10001

Tel. +1 212-380-4474
Website: www.ecohealthalliance.org
Twitter: [@PeterDaszak](https://twitter.com/PeterDaszak)

EcoHealth Alliance leads cutting-edge research into the critical connections between human and wildlife health and delicate ecosystems. With this science we develop solutions that prevent pandemics and promote conservation.

From: Pavlin, Julie [<mailto:JPavlin@nas.edu>]
Sent: Wednesday, February 5, 2020 7:23 AM
To: Peter Daszak; 'Kester, Kent /US'; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)'
Cc: Amponsah, Edith; Goodtree, Hannah
Subject: FW: Forum on Microbial Threats

FYI – Andrew’s idea below. With how busy everyone is on the topic, I think it might be difficult to get speakers to commit to anything right now, and of course, there are still a lot of uncertainties to determine what are the most relevant issues to discuss. We’d also have to go back to our governing board with a new topic and get approval, which takes about a month. But still, obviously of high interest right now – let me know your thoughts and whether we should bring this to the entire Forum for their input.

From: Andrew Clements <aclements@usaid.gov>
Sent: Wednesday, February 5, 2020 6:43 AM
To: Pavlin, Julie <JPavlin@nas.edu>
Subject: Re: Forum on Microbial Threats

Tomorrow or Friday works for me.

Is there any appetite to push the vaccine workshop back to December 2020 to make space for a nCoV workshop during the May 28-29, 2020 slot?

Andrew Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
E-mail: aclements@usaid.gov

For more information on USAID's Emerging Pandemic Threats program, see: <http://www.usaid.gov/ept2>

On Tue, Feb 4, 2020 at 10:33 PM Pavlin, Julie <JPavlin@nas.edu> wrote:
Hi Andrew,

Hope everything is going well – are you getting involved in the coronavirus issues? Just checking to see if there is a good time to talk about USAID’s continued support to the FMT for 2020 – let me know if I can send you any documentation or if there are others I should include in a conversation.

Thanks for all your support!

Julie

Julie A. Pavlin, MD, PhD, MPH

Director, Board on Global Health
Health and Medicine Division – Find us at nationalacademies.org/HMD
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Washington, DC 20001
Phone: 202-334-2171

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From: Kester, Kent /US
Sent: Fri, 12 Jun 2020 11:28:32 +0000
To: Pavlin, Julie;Peter Daszak;Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Amponsah, Edith;Goodtree, Hannah
Subject: RE: July 1 Standing Committee and Genomics Roundtable Joint Meeting on COVID-19

God be useful, assuming that we don't tread the same ground as other meetings.

From: Pavlin, Julie <JPavlin@nas.edu>
Sent: Friday, June 12, 2020 6:56 AM
To: Peter Daszak <daszak@ecohealthalliance.org>; Kester, Kent /US <Kent.Kester@sanofi.com>; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rfk1@cdc.gov>
Cc: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>
Subject: [EXTERNAL] FW: July 1 Standing Committee and Genomics Roundtable Joint Meeting on COVID-19

EXTERNAL : Real sender is jpavlin@nas.edu

Hi Peter, Kent and Rima –

Any interest in doing something similar at our Forum meeting in August? Have a joint meeting with the standing committee?

From: Brown, Lisa <LBrown@nas.edu>
Sent: Thursday, June 11, 2020 11:24 AM
To: Alexandra Phelan (alp81@georgetown.edu) <alp81@georgetown.edu>; David A Relman (relman@stanford.edu) <relman@stanford.edu>; David Walt (dwalt@bwh.harvard.edu) <dwalt@bwh.harvard.edu>; Diane Griffin (dgriffi6@jhmi.edu) <dgriffi6@jhmi.edu>; Embrey, Ellen (eembrey@stratitia.com) <eembrey@stratitia.com>; Georges Benjamin (georges.benjamin@apha.org) <georges.benjamin@apha.org>; Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; John Hick <(b)(6)>; Jonna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>; Kent Kester (Kent.Kester@sanofi.com) <Kent.Kester@sanofi.com>; Kristian G. Anderser <(b)(6)>; Mark Smolinski (mark@endingpandemics.org) <mark@endingpandemics.org>; Mary Travis Bassett (mbassett@hsph.harvard.edu) <mbassett@hsph.harvard.edu>; Patricia King <(b)(6)>; <(b)(6)>; Peggy Hamburg (peggy@hbfam.net) <peggy@hbfam.net>; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Phyllis D. Meadows (PDMeadows@kresge.org) <PDMeadows@kresge.org>; Richard Besser (rbesser@rwjf.org) <rbesser@rwjf.org>; Tara O'Toole (totoole@iqt.org) <totoole@iqt.org>; Trevor Bedford (trevor@bedford.io) <trevor@bedford.io>; rbaric@email.unc.edu; Donald Berwick <(b)(6)>; alta.charo@wisc.edu; Jeff.Duchin@kingcounty.gov; Baruch Fischhoff <baruch@cmu.edu>; DHanfling@iqt.org; bgroves@georgetown.edu
Cc: Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; mnavish@iqt.org;

andre@ecohealthalliance.org; Peisch, Samuel Francis <speisch@hsph.harvard.edu>; jbaker@rwjf.org; antoinette_baric@med.unc.edu; Mary Radford <maradford@ucdavis.edu>; Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Feit, Monica <MFeit@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>; Beachy, Sarah <SBeachy@nas.edu>
Subject: July 1 Standing Committee and Genomics Roundtable Joint Meeting on COVID-19

Dear Members of the Standing Committee ,

I'm writing to invite you to attend a joint virtual meeting of the National Academies' [Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats](#) and the [Roundtable on Genomics and Precision Health](#) on Wednesday, July 1 from 1-3pm ET. An outlook invitation will follow shortly to secure the time on your calendar.

With this meeting, we aim to discuss the state of the science with regard to what is known about human genomics and susceptibility to and severity of COVID-19, what efforts are ongoing, and where some of the research needs are. We are also interested in understanding how data collection and sharing is occurring in new and innovation ways and what some of the gaps still are.

There are two audiences for this meeting—one being our Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats, as we think about future areas that need attention through our rapid expert consultation reports and other ways of sharing information with our sponsors. The other audience is the members of the Roundtable on Genomics and Precision Health as they run, in parallel, a strategic planning process to define what areas they should prioritize in the next few years.

Please see the attached draft agenda for the meeting. We are hoping to have this meeting be under two hours, with short (10 min talks) and then plenty of time for discussion with the members.

Also, if you are interested, the Association for Molecular Pathology (AMP) is holding a virtual town hall today at 1:00 p.m. ET. AMP will present key preliminary findings from a recent COVID-19 survey of laboratories. This town hall will discuss various aspects of COVID-19 molecular diagnostic testing including:

- Current and anticipated testing capacity
- Testing turn-around times
- Supply chain issues
- Test performance and validation
- Processes for United States (US) public health reporting

Details are attached.

Please let me know if you have any questions.

Many thanks,
Lisa

Lisa Brown, MPH
Senior Program Officer
Board on Health Sciences Policy
Health and Medicine Division
The National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW, Washington, DC 20001
202-334-2487 (office)
lbrown@nas.edu

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From: Brown, Lisa

Sent: Tuesday, June 2, 2020 2:43 PM

To: Alexandra Phelan (alp81@georgetown.edu) <alp81@georgetown.edu>; David A Relman (relman@stanford.edu) <relman@stanford.edu>; David Walt (dwalt@bwh.harvard.edu) <dwalt@bwh.harvard.edu>; Diane Griffin (dgriffi6@jhmi.edu) <dgriffi6@jhmi.edu>; Embrey, Ellen (eembrey@stratitia.com) <eembrey@stratitia.com>; Georges Benjamin (georges.benjamin@apha.org) <georges.benjamin@apha.org>; Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; John Hick (b)(6); Jonna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>; Kent Kester (Kent.Kester@sanofi.com) <Kent.Kester@sanofi.com>; Kristian G. Andersen (b)(6); Mark Smolinski (mark@endingpandemics.org) <mark@endingpandemics.org>; Mary Travis Bassett (mbassett@hsph.harvard.edu) <mbassett@hsph.harvard.edu>; Patricia King (b)(6); (b)(6); Peggy Hamburg (peggy@hbfam.net) <peggy@hbfam.net>; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Phyllis D. Meadows (PDMeadows@kresge.org) <PDMeadows@kresge.org>; Richard Besser (rbesser@rwjf.org) <rbesser@rwjf.org>; Tara O'Toole (totoole@iqt.org) <totoole@iqt.org>; Trevor Bedford (trevor@bedford.io) <trevor@bedford.io>; 'rbaric@email.unc.edu' <rbaric@email.unc.edu>; 'Donald Berwick' (b)(6); 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'Baruch Fischhoff' <baruch@cmu.edu>; 'DHanfling@iqt.org' <DHanfling@iqt.org>; 'bgroves@georgetown.edu' <bgroves@georgetown.edu>
Cc: Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; 'mnavish@iqt.org' <mnavish@iqt.org>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; 'Peisch, Samuel Francis' <speisch@hsph.harvard.edu>; 'jbaker@rwjf.org' <jbaker@rwjf.org>; 'antoinette_baric@med.unc.edu' <antoinette_baric@med.unc.edu>; 'Mary Radford' <maradford@ucdavis.edu>; Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Feit, Monica <MFeit@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>

Subject: Note from Harvey - Update on the Activities of the Standing Committee on Emerging Infectious Diseases

Dear Members of the Standing Committee,

It has been just over a month since we convened our second standing committee meeting, and we wanted to update you on next steps. As you know, the standing committee is pivoting towards more intermediate to long-term topics, and staff and I have had ongoing discussions with the sponsors about the questions they would be most interested in, given the continually evolving situation. We will keep you informed of these discussions and topics as they progress, but we envision hosting some monthly mini-workshops and pursuing written products in the near future. Please stay tuned for additional details.

In addition to working with the sponsors to determine next steps, there are several different ad hoc activities connected to the standing committee currently underway.

- **Joint Meeting of the Standing Committee and the Roundtable on Genomics and Precision Health.** The standing committee is invited to participate in a joint meeting with the Roundtable on Genomics and Precision Health to discuss host genomics research and data collection efforts related to COVID-19. This meeting date is tentatively scheduled for July 1. Additional details will be forthcoming.
- **Committee on Data Needs to Monitor the Evolution of SARS-CoV-2.** On May 7th, several members of the standing committee participated in a rapid telephonic consultation on potential mutations of the virus. As a result of these discussions, an ad hoc committee is currently being appointed lay out a framework to define and describe the data needs for a system to track and correlate viral genome sequences with clinical and epidemiological data. The committee will produce a short report with recommendations to address these issues, and the report will likely be released in mid-July.
- **Committee to Provide Guidance to K-12 Education on Responding to COVID-19.** The Division of Behavioral and Social Sciences and Education (DBASSE) appointed an ad hoc committee to provide states and districts with guidance about whether and how to reopen K-12 schools in the 2020-2021 school year safely. The committee will produce a short report with recommendations to address these issues, and the report will likely be released in mid-July. Phyllis Meadows, a member of the standing committee, is a member of this ad hoc committee.
- **Societal Experts Action Network (SEAN Network).** As we have previously discussed, DBASSE, in collaboration with NSF, has convened a network of experts in the social and behavioral sciences to facilitate rapid responses to actionable questions from decision-makers. This network is coordinated with the standing committee and is guided by an executive committee co-chaired by Bob Groves and Mary Bassett, both members of the standing committee. The SEAN Network is currently undertaking its first task to produce a short document to help state and local decision-makers better

understand and evaluate various data sources as they make policy decisions related to COVID-19.

We continue at this time to explore other potential topics for further work, including a roadmap for diagnostic testing (this would incorporate considerations of purpose, technologies, target populations, frequency, validation and deployment by geographic area), vaccine immunization priorities and implementation, and longer-term prediction and management of emerging infections. Please let Andy, Lisa, or me know if you have any questions. We look forward to your feedback.

Warm regards,

Harvey

Harvey V. Fineberg, MD, PhD
President
Gordon and Betty Moore Foundation

1661 Page Mill Rd
Palo Alto CA 94304

T: 650.213.3100

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From: Pavlin, Julie
Sent: Fri, 12 Jun 2020 11:39:56 +0000
To: 'Kester, Kent /US'; Peter Daszak; Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Amponsah, Edith; Goodtree, Hannah
Subject: RE: July 1 Standing Committee and Genomics Roundtable Joint Meeting on COVID-19

Agree – would need to make sure we had a specific issue we'd like to address and not just a discussion about the importance of tackling COVID. I would limit it to an hour.

From: Kester, Kent /US <Kent.Kester@sanofi.com>
Sent: Friday, June 12, 2020 7:29 AM
To: Pavlin, Julie <JPavlin@nas.edu>; Peter Daszak <daszak@ecohealthalliance.org>; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rfk1@cdc.gov>
Cc: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>
Subject: RE: July 1 Standing Committee and Genomics Roundtable Joint Meeting on COVID-19

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Sent: Friday, June 12, 2020 6:56 AM
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Cc: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>
Subject: [EXTERNAL] FW: July 1 Standing Committee and Genomics Roundtable Joint Meeting on COVID-19

EXTERNAL : Real sender is jpavlin@nas.edu

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<Kent.Kester@sanofi.com>; Kristian G. Andersen (b)(6); Mark Smolinski (mark@endingpandemics.org) <mark@endingpandemics.org>; Mary Travis Bassett (mbassett@hsph.harvard.edu) <mbassett@hsph.harvard.edu>; Patricia King (b)(6)
(b)(6) Peggy Hamburg (peggy@hbfam.net) <peggy@hbfam.net>; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Phyllis D. Meadows (PDMeadows@kresge.org) <PDMeadows@kresge.org>; Richard Besser (rbesser@rwjf.org) <rbesser@rwjf.org>; Tara O'Toole (totoole@iqt.org) <totoole@iqt.org>; Trevor Bedford (trevor@bedford.io) <trevor@bedford.io>; rbaric@email.unc.edu; Donald Berwick (b)(6); alta.charo@wisc.edu; Jeff.Duchin@kingcounty.gov; Baruch Fischhoff <baruch@cmu.edu>; DHanfling@iqt.org; bgroves@georgetown.edu
Cc: Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; mnavish@iqt.org; andre@ecohealthalliance.org; Peisch, Samuel Francis <speisch@hsph.harvard.edu>; jbaker@rwjf.org; antoinette_baric@med.unc.edu; Mary Radford <maradford@ucdavis.edu>; Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Feit, Monica <MFeit@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>; Beachy, Sarah <SBeachy@nas.edu>
Subject: July 1 Standing Committee and Genomics Roundtable Joint Meeting on COVID-19

Dear Members of the Standing Committee ,

I'm writing to invite you to attend a joint virtual meeting of the National Academies' [Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats](#) and the [Roundtable on Genomics and Precision Health](#) on Wednesday, July 1 from 1-3pm ET. An outlook invitation will follow shortly to secure the time on your calendar.

With this meeting, we aim to discuss the state of the science with regard to what is known about human genomics and susceptibility to and severity of COVID-19, what efforts are ongoing, and where some of the research needs are. We are also interested in understanding how data collection and sharing is occurring in new and innovation ways and what some of the gaps still are.

There are two audiences for this meeting—one being our Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats, as we think about future areas that need attention through our rapid expert consultation reports and other ways of sharing information with our sponsors. The other audience is the members of the Roundtable on Genomics and Precision Health as they run, in parallel, a strategic planning process to define what areas they should prioritize in the next few years.

Please see the attached draft agenda for the meeting. We are hoping to have this meeting be under two hours, with short (10 min talks) and then plenty of time for discussion with the members.

Also, if you are interested, the Association for Molecular Pathology (AMP) is holding a virtual town hall today at 1:00 p.m. ET. AMP will present key preliminary findings from a recent COVID-

19 survey of laboratories. This town hall will discuss various aspects of COVID-19 molecular diagnostic testing including:

- Current and anticipated testing capacity
- Testing turn-around times
- Supply chain issues
- Test performance and validation
- Processes for United States (US) public health reporting

Details are attached.

Please let me know if you have any questions.

Many thanks,
Lisa

Lisa Brown, MPH
Senior Program Officer
Board on Health Sciences Policy
Health and Medicine Division
The National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW, Washington, DC 20001
202-334-2487 (office)
lbrown@nas.edu

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From: Brown, Lisa

Sent: Tuesday, June 2, 2020 2:43 PM

To: Alexandra Phelan (alp81@georgetown.edu) <alp81@georgetown.edu>; David A Relman (relman@stanford.edu) <relman@stanford.edu>; David Walt (dwalt@bwh.harvard.edu) <dwalt@bwh.harvard.edu>; Diane Griffin (dgriffi6@jhmi.edu) <dgriffi6@jhmi.edu>; Embrey, Ellen (eembrey@stratitia.com) <eembrey@stratitia.com>; Georges Benjamin (georges.benjamin@apha.org) <georges.benjamin@apha.org>; Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; John Hick [REDACTED] (b)(6); Jonna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>; Kent Kester (Kent.Kester@sanofi.com) <Kent.Kester@sanofi.com>; Kristian G. Andersen [REDACTED] (b)(6); Mark Smolinski (mark@endingpandemics.org) <mark@endingpandemics.org>; Mary Travis Bassett (mbassett@hsph.harvard.edu) <mbassett@hsph.harvard.edu>; Patricia King [REDACTED] (b)(6); [REDACTED] (b)(6); Peggy Hamburg (peggy@hbfam.net) <peggy@hbfam.net>; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Phyllis D. Meadows (PDMeadows@kresge.org) <PDMeadows@kresge.org>; Richard Besser (rbesser@rwjf.org) <rbesser@rwjf.org>; Tara O'Toole (totoole@iq.t.org) <totoole@iq.t.org>; Trevor Bedford

(trevor@bedford.io) <trevor@bedford.io>; 'rbaric@email.unc.edu' <rbaric@email.unc.edu>; 'Donald Berwick' <(b)(6)>; 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'Baruch Fischhoff' <baruch@cmu.edu>; 'DHanfling@iqt.org' <DHanfling@iqt.org>; 'bgroves@georgetown.edu' <bgroves@georgetown.edu>
Cc: Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; 'mnavish@iqt.org' <mnavish@iqt.org>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; 'Peisch, Samuel Francis' <speisch@hsph.harvard.edu>; 'jbaker@rwjf.org' <jbaker@rwjf.org>; 'antoinette_baric@med.unc.edu' <antoinette_baric@med.unc.edu>; 'Mary Radford' <maradford@ucdavis.edu>; Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Feit, Monica <MFeit@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>

Subject: Note from Harvey - Update on the Activities of the Standing Committee on Emerging Infectious Diseases

Dear Members of the Standing Committee,

It has been just over a month since we convened our second standing committee meeting, and we wanted to update you on next steps. As you know, the standing committee is pivoting towards more intermediate to long-term topics, and staff and I have had ongoing discussions with the sponsors about the questions they would be most interested in, given the continually evolving situation. We will keep you informed of these discussions and topics as they progress, but we envision hosting some monthly mini-workshops and pursuing written products in the near future. Please stay tuned for additional details.

In addition to working with the sponsors to determine next steps, there are several different ad hoc activities connected to the standing committee currently underway.

- **Joint Meeting of the Standing Committee and the Roundtable on Genomics and Precision Health.** The standing committee is invited to participate in a joint meeting with the Roundtable on Genomics and Precision Health to discuss host genomics research and data collection efforts related to COVID-19. This meeting date is tentatively scheduled for July 1. Additional details will be forthcoming.
- **Committee on Data Needs to Monitor the Evolution of SARS-CoV-2.** On May 7th, several members of the standing committee participated in a rapid telephonic consultation on potential mutations of the virus. As a result of these discussions, an ad hoc committee is currently being appointed lay out a framework to define and describe the data needs for a system to track and correlate viral genome sequences with clinical and epidemiological data. The committee will produce a short report with recommendations to address these issues, and the report will likely be released in mid-July.
- **Committee to Provide Guidance to K-12 Education on Responding to COVID-19.** The Division of Behavioral and Social Sciences and Education (DBASSE) appointed an ad hoc committee to provide states and districts with guidance about whether and how to reopen K-12 schools in the 2020-2021 school year safely. The committee

will produce a short report with recommendations to address these issues, and the report will likely be released in mid-July. Phyllis Meadows, a member of the standing committee, is a member of this ad hoc committee.

- **Societal Experts Action Network (SEAN Network).** As we have previously discussed, DBASSE, in collaboration with NSF, has convened a network of experts in the social and behavioral sciences to facilitate rapid responses to actionable questions from decision-makers. This network is coordinated with the standing committee and is guided by an executive committee co-chaired by Bob Groves and Mary Bassett, both members of the standing committee. The SEAN Network is currently undertaking its first task to produce a short document to help state and local decision-makers better understand and evaluate various data sources as they make policy decisions related to COVID-19.

We continue at this time to explore other potential topics for further work, including a roadmap for diagnostic testing (this would incorporate considerations of purpose, technologies, target populations, frequency, validation and deployment by geographic area), vaccine immunization priorities and implementation, and longer-term prediction and management of emerging infections. Please let Andy, Lisa, or me know if you have any questions. We look forward to your feedback.

Warm regards,

Harvey

Harvey V. Fineberg, MD, PhD
President
Gordon and Betty Moore Foundation

1661 Page Mill Rd
Palo Alto CA 94304

T: 650.213.3100

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From: Amponsah, Edith
Sent: Tue, 16 Jun 2020 15:36:22 +0000
To: 'atennenb@ITS.JNJ.com'; 'Chandy C. John'; 'Karen Goraleski'; 'David Nabarro'; 'Elizabeth Hermsen'; 'Eva Harris'; 'Roselle, Gary (CDC va.gov)'; 'Cassetti, Cristina (NIH/NIAID) [E]'; 'Clements, Andrew (CDC usaid.gov)'; 'Jonna Mazet'; 'Kent Kester'; 'Anderson, Kevin'; 'Kumanan Rasanathan'; 'Marcos A. Espinal'; 'Matthew Zahn'; 'Mair, Michael (FDA/OC)'; 'Sadove, Elizabeth (FDA/OC)'; 'pasands@icloud.com'; 'Peter Sands (peter.sands@theglobalfund.org)'; 'Peter Daszak'; 'Rafael Obregon'; 'Rick Bright'; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)'; 'Sally A. Miller'; 'Suerie Moon'; 'Thomas W. Scott'; 'Timothy Burgess'; 'david.brett-major@usuhs.edu'
Cc: 'Rita Mueller'; 'debabenn@iupui.edu'; 'magali@4sd.info'; 'Kathleen.Lee@va.gov'; 'Mary Radford'; 'Louchie, Vivian /US'; 'Tejada, Ms. Cecilia (WDC)'; 'Jacqui Moseley'; 'Alison Andre'; 'Laura Olmedo (lolmedo@unicef.org)'; 'Blatner, Gretta (OS/ASPR/BARDA)'; 'Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR)'; 'dgonzalezpulido@ucdavis.edu'; 'Pavlin, Julie'; 'Goodtree, Hannah'
Subject: RE: ACTION ITEMS - Forum on Microbial Threats Updates and Feedback Requested

Dear Forum members,

Thank you to all who have completed the survey so far with your availability for the next Forum closed session meeting. If you have not done so already, please complete the survey here:

(b)(6)

Thank you,
 Edith

From: Amponsah, Edith
Sent: Monday, June 8, 2020 6:30 PM
To: atennenb@ITS.JNJ.com; Chandy C. John <chjohn@iu.edu>; Karen Goraleski <kgoraleski@astmh.org>; David Nabarro <david@4sd.info>; Elizabeth Hermsen <elizabeth.hermsen@merck.com>; Eva Harris <eharris@berkeley.edu>; Gary A. Roselle <gary.roselle@va.gov>; Cristina Cassetti <ccassetti@niaid.nih.gov>; Andrew Clements <aclements@usaid.gov>; Jonna Mazet <jkmazet@ucdavis.edu>; Kent Kester <Kent.Kester@sanofi.com>; 'Anderson, Kevin' <Kevin.Anderson@HQ.DHS.GOV>; Kumanan Rasanathan <rasanathank@who.int>; Marcos A. Espinal <espinalm@paho.org>; Matthew Zahn <mzahn@ochca.com>; Michael Mair <michael.mair@fda.hhs.gov>; 'Elizabeth.Sadove@fda.hhs.gov' <Elizabeth.Sadove@fda.hhs.gov>; 'pasands@icloud.com' <pasands@icloud.com>; Peter Sands (peter.sands@theglobalfund.org) <peter.sands@theglobalfund.org>; Peter Daszak <daszak@ecohealthalliance.org>; Rafael Obregon <robregon@unicef.org>; Rick Bright <Rick.Bright@hhs.gov>; Rima F. Khabbaz <rfk1@cdc.gov>; Sally A. Miller <miller.769@osu.edu>; Suerie Moon <suerie.moon@graduateinstitute.ch>; Thomas W. Scott <twscott@ucdavis.edu>; Timothy Burgess <timothy.burgess@usuhs.edu>; 'david.brett-major@usuhs.edu' <david.brett-major@usuhs.edu>
Cc: Rita Mueller <rmuelle5@its.jnj.com>; 'debabenn@iupui.edu' <debabenn@iupui.edu>; 'magali@4sd.info' <magali@4sd.info>; 'Kathleen.Lee@va.gov' <Kathleen.Lee@va.gov>; Mary Radford <maradford@ucdavis.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Tejada, Ms. Cecilia

(WDC) <tejadace@paho.org>; 'Jacqui Moseley' <jacqui.moseley@theglobalfund.org>; 'Alison Andre' <andre@ecohealthalliance.org>; Laura Olmedo (lolmedo@unicef.org) <lolmedo@unicef.org>; 'Blatner, Gretta (OS/ASPR/BARDA)' <Gretta.Blatner@hhs.gov>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vj1@cdc.gov>; 'dgonzalezpulido@ucdavis.edu' <dgonzalezpulido@ucdavis.edu>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>

Subject: ACTION ITEMS - Forum on Microbial Threats Updates and Feedback Requested

Importance: High

Dear Forum members,

Thank you for your continuous support of the Forum on Microbial Threats. On May 28, 2020 we successfully held the first of the two-part workshop series on “The Critical Public Health Value of Vaccines – Tackling Issues of Access and Hesitancy.” We had over 800 participants attend and we look forward to continuing the conversation in August during the main workshop. Due to the ongoing pandemic, we will be holding this workshop virtually over 4 days, 2-3 hours each day from **Monday August 17, 2020 to Thursday August 20, 2020**. We will send details and links to the webinar as soon as they are available. We would also like to schedule a time for our next Forum closed session meeting following the workshop in August (please see survey below to provide your availability).

Next, our second workshop of the year on “Systematizing the One Health Approach in Preparedness and Response Efforts for Infectious Disease Outbreaks” will be held on **December 7-8, 2020** in Washington, D.C. I have attached a draft of the statement of task here. We would appreciate your feedback on this draft before beginning the process for institutional approval. We would also like to call for nominations and volunteers to join the planning committee of this workshop. Please respond to me if you would like to help in the planning of this workshop or have suggestions on experts we can engage with.

Action Items:

- We would appreciate your feedback on the webinar held on Thursday, May 28th. Please share your thoughts and let us know your availability for the next Forum closed session meeting by completing this [survey](#).
- Please send recommendations for planning committee members for the workshop in December.
- Please provide feedback on the statement of task for the workshop in December.

National Academies news publication from the vaccine access and hesitancy webinar:

- [Vaccine Access and Hesitancy: The Public Health Importance of Vaccines](#)

Please let me know if you have any questions or concerns.

Thank you,

Edith Amponsah, MPH, IBCLC

Associate Program Officer

Forum on Microbial Threats

Health and Medicine Division

The National Academies of Sciences, Engineering, and Medicine

500 Fifth Street, NW

Phone: 202-334-3222

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From: Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR)
Sent: Mon, 10 Feb 2020 21:25:26 +0000
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Subject: FW: Action Items - FMT Leadership Calls
Attachments: Forum on Microbial Threats Sponsorship list 02.05.2020.docx

Rima,

Did you respond? If not, I will take care of it. I assume your calendar in terms of leave is updated.

Thanks,
Celeste

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Monday, February 10, 2020 12:35 PM
To: Peter Daszak <daszak@ecohealthalliance.org>; Kent Kester <Kent.Kester@sanofi.com>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rpk1@cdc.gov>
Cc: 'Alison Andre' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; 'vivian.louchie@sanofipasteur.com' <vivian.louchie@sanofipasteur.com>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>
Subject: Action Items - FMT Leadership Calls

Dear Rima, Peter, and Kent,

Please let us know your availability for the next two FMT leadership meetings in March and May by completing this doodle [poll](#).

I have also attached the list of current sponsors and potential sponsors we discussed at the most recent leadership meeting a few weeks ago. I left space at the bottom of the document for prioritizing future sponsors to connect with.

Please let me know if you have any questions or concerns

--

Thanks,

Edith Amponsah, MPH, IBCLC

Research Associate

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Forum on Microbial Threats Sponsors, as of January 31, 2020

Current Sponsors	Date of Last Payment
USAID	(b)(4)
ASPR BARDA	
Merck & Co., Inc.	
USUHS	
HHS/CDC/NCEZID	
Infectious Diseases Society of America	
VA	
DHS	
HHS/NIH/NIAID	
American Society of Tropical Medicine and Hygiene	
EcoHealth Alliance	
Johnson & Johnson	
HHS/FDA	
Sanofi Pasteur (2020 invoice expected in March)	

Commented [AE1]: 2019 payment (b)(4)
(b)(4)

Organizations to establish contact with about possible sponsorship

(b)(4)

(b)(4)

Prioritization

First Tier	Second Tier

From: Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR)
Sent: Mon, 10 Feb 2020 21:39:29 +0000
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Subject: RE: Action Items - FMT Leadership Calls

Ok thanks.

From: Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>
Sent: Monday, February 10, 2020 4:37 PM
To: Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>
Subject: Re: Action Items - FMT Leadership Calls

Thanks Celeste. I have not responded. Great if you could for me. Believe my leaves are on the calendar. What is not is the short term corona response activities/meetings over next couple of weeks so if this is beyond, hopefully things will be lighter.

Get [Outlook for iOS](#)

From: Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>
Sent: Monday, February 10, 2020 4:25:26 PM
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>
Subject: FW: Action Items - FMT Leadership Calls

Rima,

Did you respond? If not, I will take care of it. I assume your calendar in terms of leave is updated.

Thanks,
Celeste

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Monday, February 10, 2020 12:35 PM
To: Peter Daszak <daszak@ecohealthalliance.org>; Kent Kester <Kent.Kester@sanofi.com>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>
Cc: 'Alison Andre' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; 'vivian.louchie@sanofipasteur.com' <vivian.louchie@sanofipasteur.com>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>
Subject: Action Items - FMT Leadership Calls

Dear Rima, Peter, and Kent,

Please let us know your availability for the next two FMT leadership meetings in March and May by completing this doodle [poll](#).

I have also attached the list of current sponsors and potential sponsors we discussed at the most recent leadership meeting a few weeks ago. I left space at the bottom of the document for prioritizing future sponsors to connect with.

Please let me know if you have any questions or concerns

--

Thanks,

Edith Amponsah, MPH, IBCLC

Research Associate

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From: Kester, Kent /US
Sent: Sun, 28 Jun 2020 18:28:54 +0000
To: Pavlin, Julie;Khabbaz, Rima (CDC/DDID/NCEZID/OD);Peter Daszak
Cc: Alison Andre
Subject: RE: FMT and EID Standing Committee

Certainly fine with me. There are clear relevant connectivities that can be leveraged.

Kent

From: Pavlin, Julie <JPavlin@nas.edu>
Sent: Sunday, June 28, 2020 2:27 PM
To: 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rfk1@cdc.gov>; Peter Daszak <daszak@ecohealthalliance.org>; Kester, Kent /US <Kent.Kester@sanofi.com>
Cc: Alison Andre <andre@ecohealthalliance.org>
Subject: [EXTERNAL] FMT and EID Standing Committee

EXTERNAL : Real sender is JPavlin@nas.edu

Hi Peter, Rima and Kent,

What do you think about having any interested members of the Standing Committee on EID to join our FMT meeting for perhaps an hour of it to give an update on the activities (of course Peter and Kent could do that, being a member of both), but also where the Forum could perhaps take on some of the ideas that are coming out of ASPR and OSTP (mini-workshops, etc.). I can invite Lisa Brown and Andy Pope to attend as well for them to review some of the requests that they are fielding.

Your thoughts? I know we only have 3 hours. We are going to have the One Health meeting on a different day so it isn't too much.

Julie

Julie A. Pavlin, MD, PhD, MPH
 Director, Board on Global Health
 Health and Medicine Division – Find us at nationalacademies.org/HMD
 The National Academies of Sciences, Engineering, and Medicine
 500 Fifth Street, NW
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From: Amponsah, Edith
Sent: Thu, 2 Jan 2020 13:38:12 +0000
To: Pavlin, Julie
Cc: Goodtree, Hannah
Subject: RE: FMT June 2020 Workshop (and more!) - ACTION NEEDED

Dear Forum Members,

I hope you're all having a relaxing holiday season. This is a reminder to please complete the [survey](#) if you have not done so already. Your input is greatly appreciated and will help us finalize dates for the next workshop on **"The Critical Public Health Value of Vaccines in the Age of Pandemics"** so that we can begin the planning process.

We understand your busy schedules and competing priorities, especially with the Holidays and greatly appreciate your help with this. We would like your participation in the survey by **COB January 6th**.

Please let us know if you have any questions.

Happy New Year,
 Edith

From: Amponsah, Edith
Sent: Wednesday, December 18, 2019 5:05 PM
To: atennenb@ITS.JNJ.com; Chandy C. Johnson <chjohn@iu.edu>; David Nabarro <david@4sd.info>; Elizabeth Hermsen <elizabeth.hermsen@merck.com>; Eva Harris <eharris@berkeley.edu>; Gary A. Roselle <gary.roselle@va.gov>; Jay P. Siegel [REDACTED]; Cristina Cassetti <ccassetti@niaid.nih.gov>; Andrew Clements <aclements@usaid.gov>; Jonna Mazet <jkmazet@ucdavis.edu>; Kent Kester <Kent.Kester@sanofi.com>; Kevin Anderson <kevin.anderson@dhs.gov>; Kumanan Rasanathan <rasanathan@who.int>; Marcos A. Espinal <espinalm@paho.org>; Matthew Zahn <mzahn@ochca.com>; Michael Mair <michael.mair@fda.hhs.gov>; Peter Sands (peter.sands@theglobalfund.org) <peter.sands@theglobalfund.org>; Peter Daszak <daszak@ecohealthalliance.org>; Rafael Obregon <robregon@unicef.org>; Rick Bright <Rick.Bright@hhs.gov>; Rima F. Khabbaz <rfk1@cdc.gov>; Sally A. Miller <miller.769@osu.edu>; Suerie Moon <suerie.moon@graduateinstitute.ch>; Thomas W. Scott <twscott@ucdavis.edu>; Timothy Burgess <timothy.burgess@usuhs.edu>
Cc: Rita Mueller <rmuelle5@its.jnj.com>; Karen Goraleski <kgoraleski@astmh.org>; 'magali@4sd.info' <magali@4sd.info>; 'Kathleen.Lee@va.gov' <Kathleen.Lee@va.gov>; 'Mary Radford' <maradford@ucdavis.edu>; 'vivian.louchie@sanofipasteur.com' <vivian.louchie@sanofipasteur.com>; 'Elizabeth.Sadove@fda.hhs.gov' <Elizabeth.Sadove@fda.hhs.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; 'lolmedo@unicef.org' <lolmedo@unicef.org>; 'Blatner, Gretta (OS/ASPR/BARDA)' <Gretta.Blatner@hhs.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; Grosshans, Denise <DGrossha@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>
Subject: FMT June 2020 Workshop (and more!) - ACTION NEEDED
Importance: High

Dear Forum Members,

A special thank you to all of you for your contributions and support of the Forum. The recent workshop on “Exploring the Frontiers of Innovation to Tackle Microbial Threats” this past month was a success and we appreciate all of your support in accomplishing that. We have incorporated your feedback during the closed session meeting and have begun planning for our next workshop “The Critical Public Health Value of Vaccines in the Age of Pandemics.” As many of you know, it was brought to our attention that GAVI will be hosting their replenishment pledging conference the same dates we had originally slated for our workshop (June 3-4, 2020). As such, we have decided to reschedule our next workshop. Please visit the link below to select your preferred dates from the proposed list. Please complete this by **COB December 27, 2019** so that we can go ahead and reserve the space while it is still available.

Survey:

I also wanted to share with you all this exciting TEDx Omaha talk Forum member Elizabeth Hermsen gave on November 9th. The theme of the event was “Reframe” and her talk focused on reframing the way we think about antibiotics. See Elizabeth in action here:

Please let me know if you have any questions.

Thank you and Happy Holidays to you all,
Edith

Edith Amponsah

Research Associate

Forum on Microbial Threats

Health and Medicine Division

The National Academies of Sciences, Engineering, and Medicine

500 Fifth Street, NW

Phone: 202-334-3222

www.nationalacademies.org/HMD

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From: Smith, Paul W. (CDC/DDID/NCEZID/OD)
Sent: Wed, 22 Jan 2020 22:13:12 +0000
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD);Pesik, Nicki (CDC/DDID/NCEZID/OD)
Subject: FY21 Overseas staffing plans for GHS

Dr. Khabbaz,

As requested by CDC OD in the first step of FY21 GHS budget planning, the Divisions provided their FY21 Overseas staffing plans. Only two programs proposed changes to their overseas staffing plans. Discussion about these positions is n the agenda for tomorrow morning's meeting.

AMR in Sierra Leone

(b)(5)

DHCPP proposed two Direct Hires for VHF work overseas. The justification and cost estimates are below.

(b)(5)

(b)(5)

Paul W. Smith

Lieutenant Commander, U.S. Public Health Service
U.S. Centers for Disease Control and Prevention
National Center for Emerging and Zoonotic Infectious Diseases
Office: 404-639-0681

Mobile:

Deputy Team Leader
USPHS NIST E

From: Amponsah, Edith
Sent: Tue, 12 May 2020 21:45:02 +0000
To: 'Kester, Kent /US'; Goodtree, Hannah; 'Louchie, Vivian /US'; 'daszak@ecohealthalliance.org'; Khabbaz, Rima (CDC/DDID/NCEZID/OD); Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR); 'andre@ecohealthalliance.org'; Pavlin, Julie; Buckley, Gillian
Subject: RE: Forum Leadership Meeting

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Best,
 Edith

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Sent: Friday, March 27, 2020 3:54 PM
To: 'Kester, Kent /US' <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: Forum Leadership Meeting

Agenda attached.

Best,
 Edith

-----Original Message-----

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Sent: Friday, March 27, 2020 3:32 PM
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Subject: RE: Forum Leadership Meeting

The Zoom session seems to have ended. I'm on the phone now and there is only music.

-----Original Appointment-----

From: Goodtree, Hannah <HGoodtree@nas.edu>
Sent: Wednesday, February 19, 2020 12:21 PM
To: Goodtree, Hannah; Louchie, Vivian /US; Amponsah, Edith; 'daszak@ecohealthalliance.org'; 'rfk1@cdc.gov'; 'vjk1@cdc.gov'; 'andre@ecohealthalliance.org'; Kester, Kent /US; Pavlin, Julie; Buckley, Gillian
Subject: [EXTERNAL] Forum Leadership Meeting
When: Friday, March 27, 2020 3:30 PM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: (b)(6)

EXTERNAL : Real sender is HGoodtree@nas.edu

Hello,

Please see below for the call-in details for the Forum on Microbial Threats Leadership Meeting on March 27th, 1-2:30 PM

Join from PC, Mac, Linux, iOS or Android:

Or Dial:

US: or (Toll Free)

Meeting ID

International numbers available:

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From: Kester, Kent /US
Sent: Tue, 12 May 2020 21:48:55 +0000
To: Amponsah, Edith;Goodtree, Hannah;Louchie, Vivian /US;'daszak@ecohealthalliance.org';Khabbaz, Rima (CDC/DDID/NCEZID/OD);Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);'andre@ecohealthalliance.org';Pavlin, Julie;Buckley, Gillian
Subject: RE: Forum Leadership Meeting

Works for me.

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 Sent: Tuesday, May 12, 2020 5:45 PM
 To: Kester, Kent /US <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
 Subject: [EXTERNAL] RE: Forum Leadership Meeting

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Agenda attached.

Best,
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Where: (b)(6)

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Hello,

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Join from PC, Mac, Linux, iOS or Android: (b)(6)

Or Dial:

US: (b)(6) or (b)(6) (Toll Free)
Meeting ID: (b)(6)
International numbers available: (b)(6)

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From: Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Sent: Wed, 13 May 2020 00:05:01 +0000
To: Kester, Kent /US;Amponsah, Edith;Goodtree, Hannah;Louchie, Vivian /US;'daszak@ecohealthalliance.org';Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);'andre@ecohealthalliance.org';Pavlin, Julie;Buckley, Gillian
Subject: Re: Forum Leadership Meeting

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From: Alison Andre
Sent: Wed, 13 May 2020 14:21:20 +0000
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD);Kester, Kent /US;Amponsah, Edith;Goodtree, Hannah;Louchie, Vivian /US;Peter Daszak;Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);Pavlin, Julie;Buckley, Gillian
Subject: Re: Forum Leadership Meeting

This time still works for Peter, too.

Best,
 Alison

From: "Khabbaz, Rima (CDC/DDID/NCEZID/OD)" <rfk1@cdc.gov>
Date: Tuesday, May 12, 2020 at 8:05 PM
To: "Kester, Kent /US" <Kent.Kester@sanofi.com>, "Amponsah, Edith" <EAmponsah@nas.edu>, "Goodtree, Hannah" <HGoodtree@nas.edu>, "Louchie, Vivian /US" <Vivian.Louchie@sanofi.com>, Peter Daszak <daszak@ecohealthalliance.org>, "Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR)" <vjk1@cdc.gov>, Alison Andre <andre@ecohealthalliance.org>, "Pavlin, Julie" <JPavlin@nas.edu>, "Buckley, Gillian" <GBuckley@nas.edu>
Subject: Re: Forum Leadership Meeting

Nothing conflicting for now, so hopefully should work for me too.
 Rima

Get [Outlook for iOS](#)

From: Kester, Kent /US <Kent.Kester@sanofi.com>
Sent: Tuesday, May 12, 2020 5:48:55 PM
To: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: Forum Leadership Meeting

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To: Kester, Kent /US <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>

Subject: [EXTERNAL] RE: Forum Leadership Meeting

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<daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>;

'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>;

Buckley, Gillian <GBuckley@nas.edu>

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Agenda attached.

Best,
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Gillian

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Subject: RE: Forum Leadership Meeting

Great. I will get started on an agenda for the meeting.

Best,
 Edith

From: Alison Andre <andre@ecohealthalliance.org>
Sent: Wednesday, May 13, 2020 10:21 AM
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>; Kester, Kent /US <Kent.Kester@sanofi.com>; Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Peter Daszak <daszak@ecohealthalliance.org>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: Re: Forum Leadership Meeting

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Date: Tuesday, May 12, 2020 at 8:05 PM
To: "Kester, Kent /US" <Kent.Kester@sanofi.com>, "Amponsah, Edith" <EAmponsah@nas.edu>, "Goodtree, Hannah" <HGoodtree@nas.edu>, "Louchie, Vivian /US" <Vivian.Louchie@sanofi.com>, Peter Daszak <daszak@ecohealthalliance.org>, "Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR)" <vjk1@cdc.gov>, Alison Andre <andre@ecohealthalliance.org>, "Pavlin, Julie" <JPavlin@nas.edu>, "Buckley, Gillian" <GBuckley@nas.edu>
Subject: Re: Forum Leadership Meeting

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 Subject: [EXTERNAL] RE: Forum Leadership Meeting

EXTERNAL : Real sender is EAmponsah@nas.edu

Hello everyone,

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Best,
 Edith

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 To: 'Kester, Kent /US' <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
 Subject: RE: Forum Leadership Meeting

Agenda attached.

Best,
 Edith

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From: Kester, Kent /US <Kent.Kester@sanofi.com>
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 To: Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>;

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Subject: RE: Forum Leadership Meeting

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Sent: Wednesday, February 19, 2020 12:21 PM
To: Goodtree, Hannah; Louchie, Vivian /US; Amponsah, Edith; 'daszak@ecohealthalliance.org'; 'rfk1@cdc.gov'; 'vjk1@cdc.gov'; 'andre@ecohealthalliance.org'; Kester, Kent /US; Pavlin, Julie; Buckley, Gillian
Subject: [EXTERNAL] Forum Leadership Meeting
When: Friday, March 27, 2020 3:30 PM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: (b)(6)

EXTERNAL : Real sender is HGoodtree@nas.edu

Hello,

Please see below for the call-in details for the Forum on Microbial Threats Leadership Meeting on March 27th, 1-2:30 PM

Join from PC, Mac, Linux, iOS or Android: (b)(6)

Or Dial:

US: (b)(6) or (b)(6) (Toll Free)

Meeting ID: (b)(6)

International numbers available: (b)(6)

NOTICE: The Zoom service allows audio and any materials exchanged or viewed during the session to be recorded and shared. Please be aware that by participating in this activity, you consent to your voice, likeness, and any materials you provide, being recorded for use and dissemination, without payment of any compensation for such use, in any language, format, or media now known or later devised, and you release the National Academies of Sciences, Engineering, and Medicine from any and all claims, liability, or damages arising from any such use. The Academies will proceed in reliance upon such consent and release. If you do not consent to the foregoing, please do not join the session.

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From: Amponsah, Edith
Sent: Mon, 18 May 2020 17:24:11 +0000
To: 'Alison Andre';Khabbaz, Rima (CDC/DDID/NCEZID/OD);'Kester, Kent /US';Goodtree, Hannah;'Louchie, Vivian /US';'Peter Daszak';Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);Pavlin, Julie;Buckley, Gillian
Subject: RE: Forum Leadership Meeting
Attachments: FMT Leadership Call Agenda_May21.pdf, May 28 Draft Agenda_FINAL.pdf

Hello everyone,

Please find the agenda for the call attached here along with the finalized agenda for the May 28th virtual meeting.

Looking forward to our call.

Best,
Edith

From: Amponsah, Edith
Sent: Wednesday, May 13, 2020 10:47 AM
To: 'Alison Andre' <andre@ecohealthalliance.org>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>; Kester, Kent /US <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Peter Daszak <daszak@ecohealthalliance.org>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: Forum Leadership Meeting

Great. I will get started on an agenda for the meeting.

Best,
Edith

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SCIENCES • ENGINEERING • MEDICINE

FORUM ON MICROBIAL THREATS - LEADERSHIP CALL

Thursday, May 21, 2020

1:00 – 2:30 pm (ET)

PARTICIPANTS

MEMBERS: Peter Daszak, Kent Kester, Rima Khabbaz

STAFF: Julie Pavlin, Gillian Buckley, Edith Amponsah, and Hannah Goodtree

MEETING MATERIALS

- May virtual meeting agenda

AGENDA ITEMS

1. Forum Workshop Updates
 - Innovations Workshop
 - Proceedings received sign-off. Steps underway for production.
 - May virtual meeting
 - Finalized agenda
 - Communications plan to have Peter provide a quote for a feature article
 - Communications plan: sponsor toolkit, NAM perspectives
 - August vaccines workshop
 - Plan for possibility of it being virtual
 - December 2020 workshop: systematizing the one health approach in preparedness and response efforts for infectious disease outbreaks
 - Plan for possibility of it being virtual
2. Forum Sponsorship Updates
 - Upcoming sponsor renewals
 - CDC (July)
3. OHAC
 - 2 deliverables in progress-priority actions during COVID-19 pandemic
 - Chair – Jonna’s term ends this summer
4. Other Activities
 - NASEM activities regarding COVID-19
 - Cancer Treatment and Clinical Trials in the Context of COVID-19: A Workshop
5. Next steps and action items
 - Schedule for next call

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

The Critical Public Health Value of Vaccines – Tackling Issues of Access and Hesitancy

Agenda
MAY 28, 2020
VIRTUAL MEETING

Objectives:

This virtual meeting is the first of a series of two workshops on the critical public health value of vaccines. The workshop series will feature invited presentations and discussions on the following topics. Specifically, this workshop will feature invited presentation on questions of improving access to vaccines, creating demand for vaccines, and understanding vaccine hesitancy. Speakers will give particular attention to the role of social determinants of vaccine use and equitable distribution of vaccines.

**WORKSHOP SERIES ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES
OF ACCESS AND HESITANCY**

10:00am **Welcome Remarks**

PETER DASZAK, *Chair of the Forum on Microbial Threats*
President
EcoHealth Alliance

Workshop Overview and Goals

MATTHEW ZAHN, *Workshop Co-Chair*
Medical Director, Division of Epidemiology and Assessment
Orange County Health Care Agency

Vaccine Access and Creating Demand

10:05 ROBIN NANDY
Principal Advisor & Chief of Immunizations
UNICEF

Understanding Vaccine Hesitancy

10:35 EVE DUBÉ
Senior Researcher, National Institute of Public Health of Quebec
Invited Professor, Laval University, Department of Anthropology

Improving Access to Vaccines: Lessons from the US Immunization Program

11:05 NANCY MESSONNIER
Director, National Center for Immunization and Respiratory Diseases
Centers for Disease Control and Prevention

Panel Discussion with Speakers

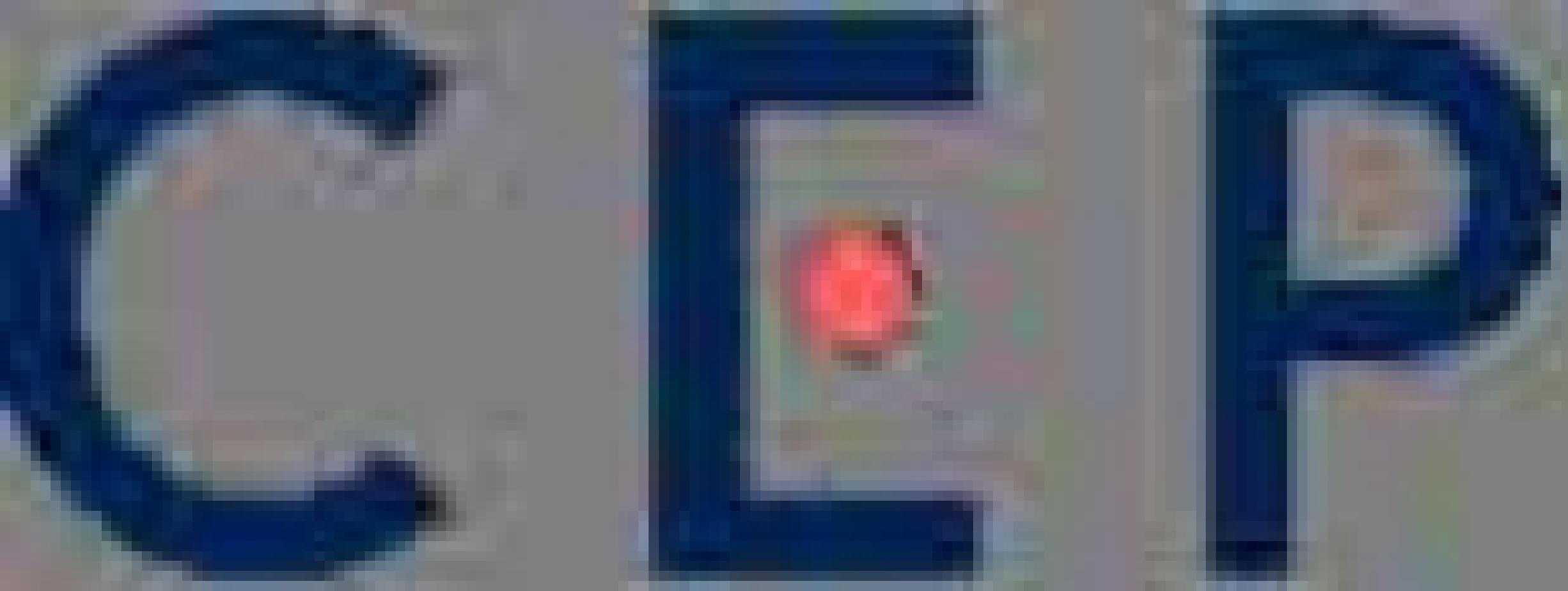
11:35 HEIDI LARSON, *Workshop Co-chair, Moderator*
Professor of Anthropology, Risk and Decision Science
London School of Hygiene & Tropical Medicine
Director, The Vaccine Confidence Project

12:00pm Adjourn

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Mon, 20 Jul 2020 19:02:42 +0000
To: Melissa Malhame
Subject: Re: CEPI - Request for critical feedback: CEPIs response to SARS-CoV-2
Attachments: image001.png, image002.png, image003.png, Outlook-ydqq33mb.png

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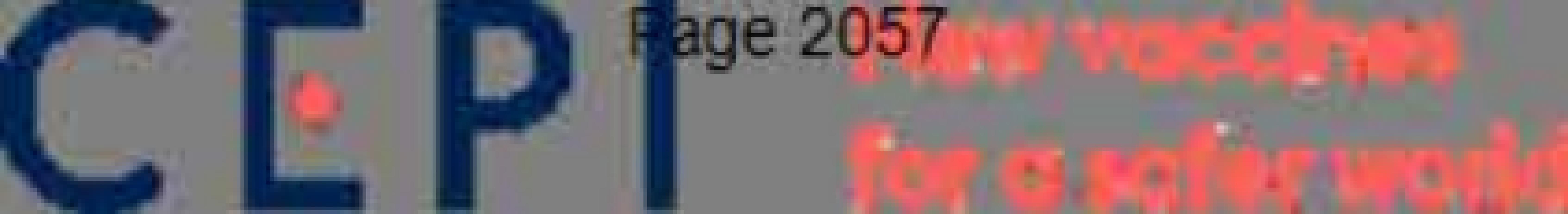
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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 22 Jul 2020 10:43:11 +0000
To: Melanie Saville;Malik, Sabahat Z. (CDC/DDID/NCEZID/DHCPP)
Cc: Paul Kristiansen;Solomon Abebe Yimer;Raul Gomez Roman;Tung Thanh Le;Stig Tollefsen;Rihana Diabo
Subject: Re: Your contribution to the development of CEPI's strategy in the next business cycle
Attachments: image004.png

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 29 Jul 2020 09:38:46 +0000
To: Solomon Abebe Yimer
Subject: Re: Kickoff meeting
Attachments: image005.png, image007.png, image009.png, image011.png, image013.png, image015.png, image017.png, image018.png, image019.png, image020.png

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CEPI New vaccines
for a safer world



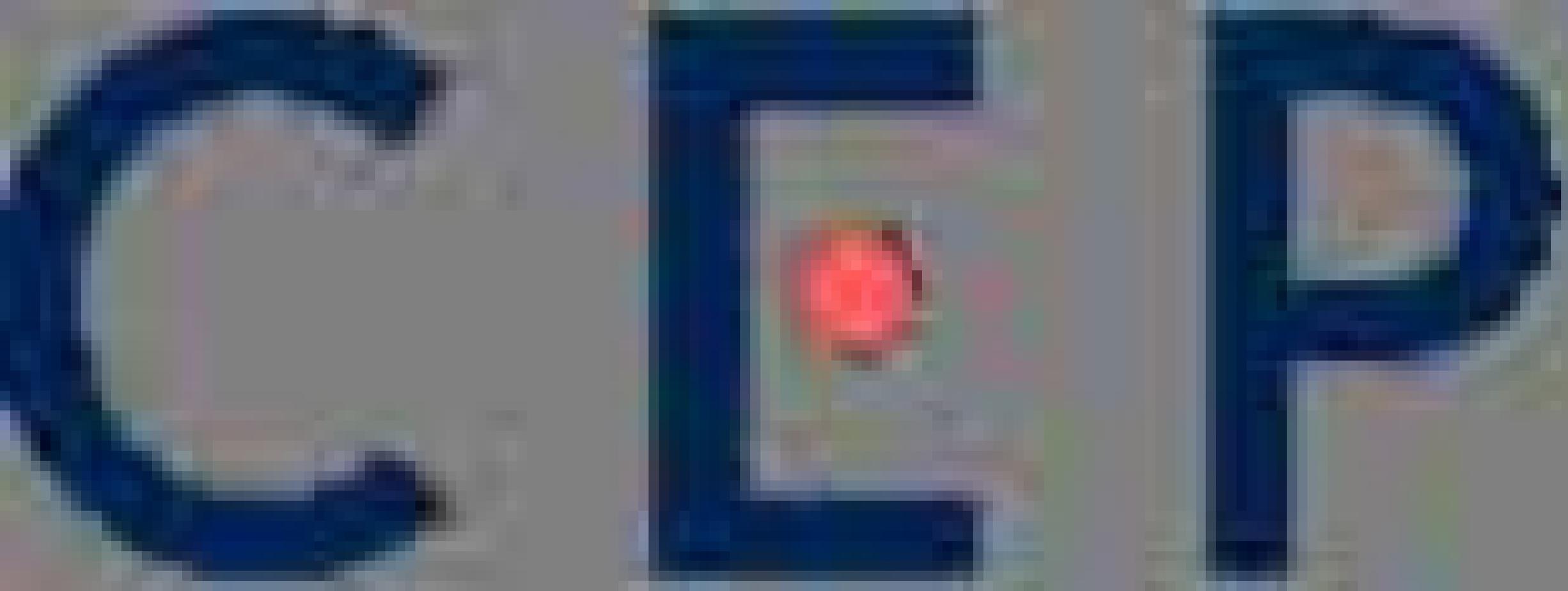
CEPI New vaccines
for a safer world



CEPI New vaccines
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CEPI New vaccines
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Page 2076

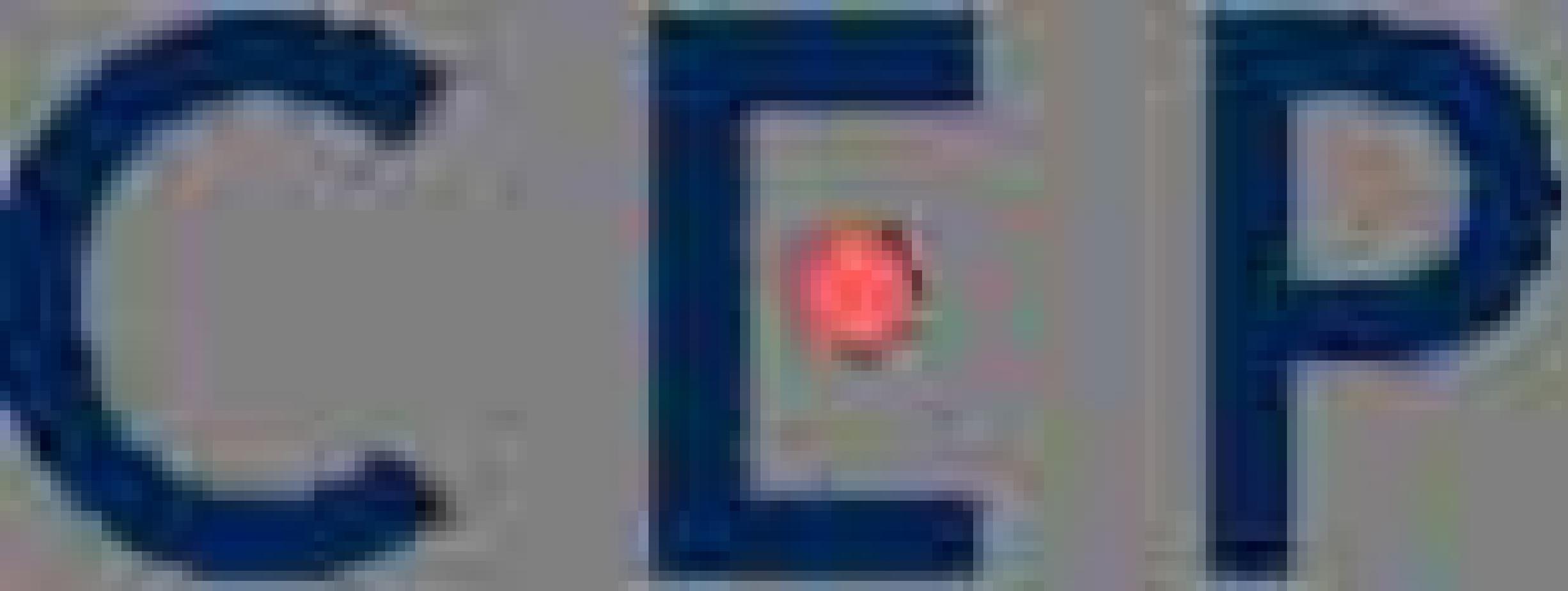


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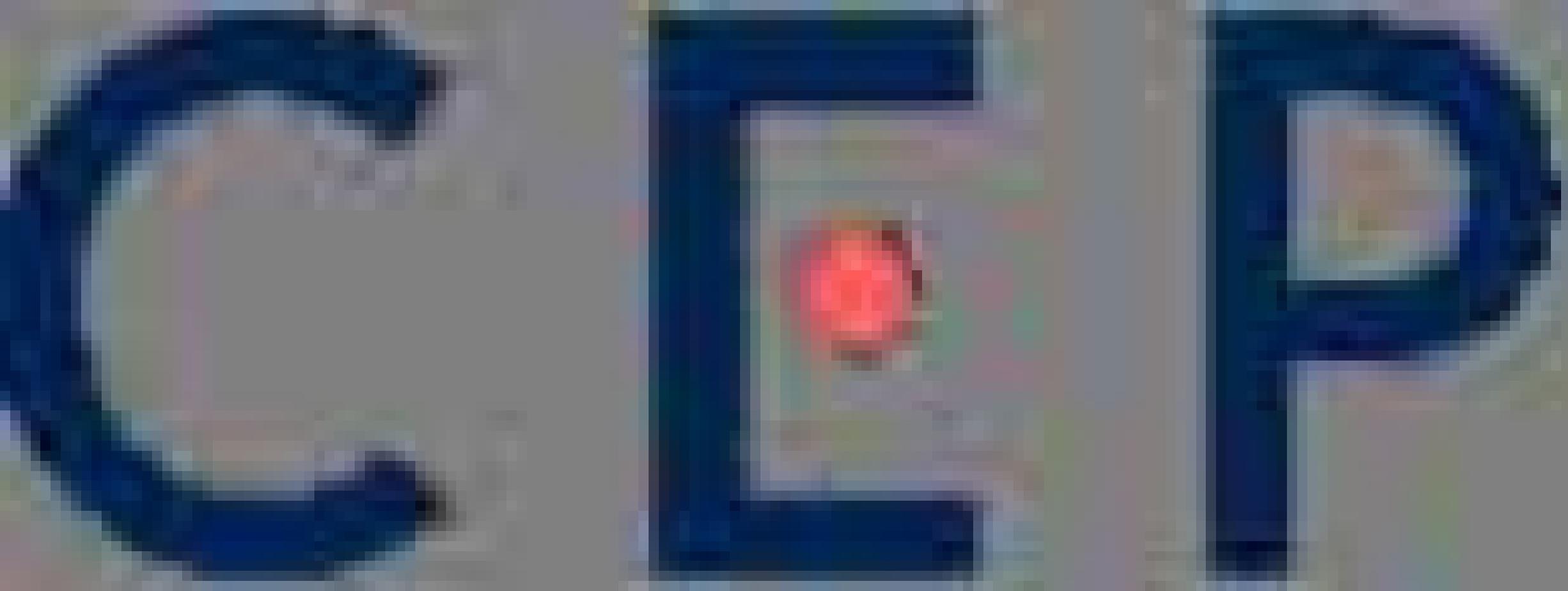


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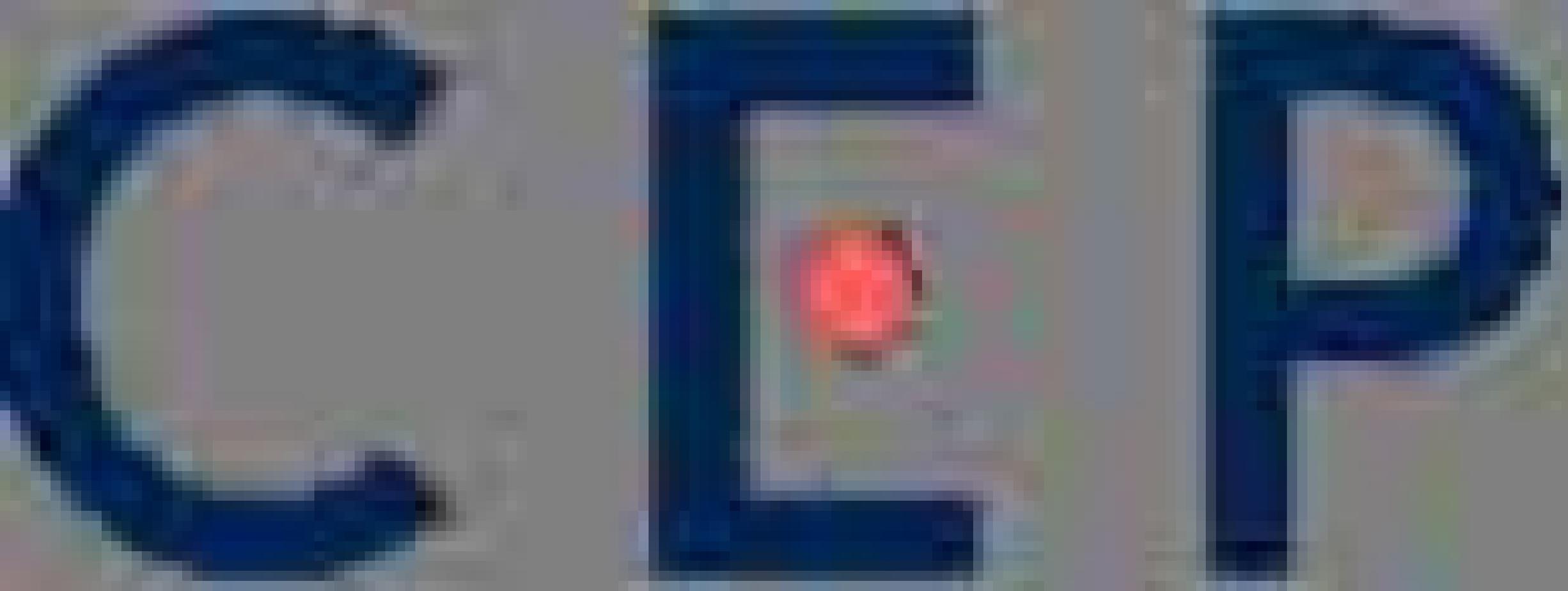


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Page 2085



From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 28 Jul 2020 21:45:34 +0000
To: Solomon Abebe Yimer
Cc: Raul Gomez Roman;Rihana Diabo
Subject: Re: Kickoff meeting
Attachments: image005.png, image007.png, image009.png, image011.png, image013.png, image015.png

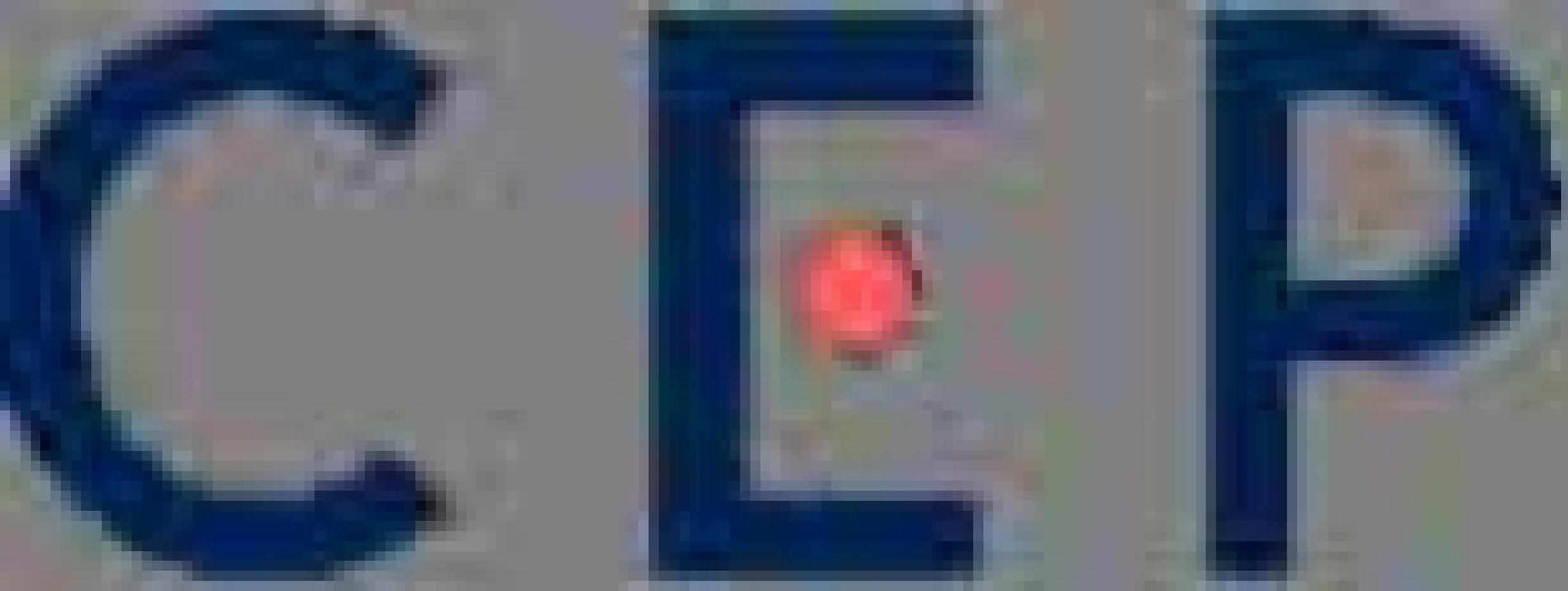
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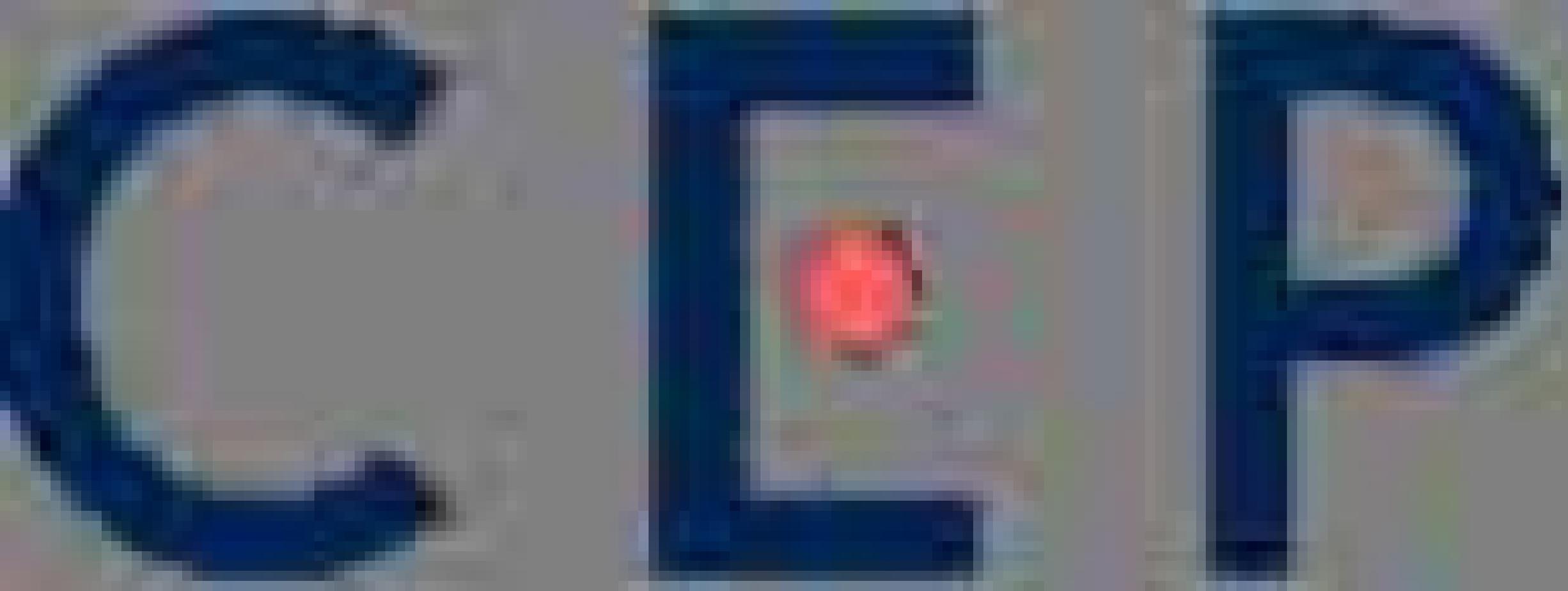


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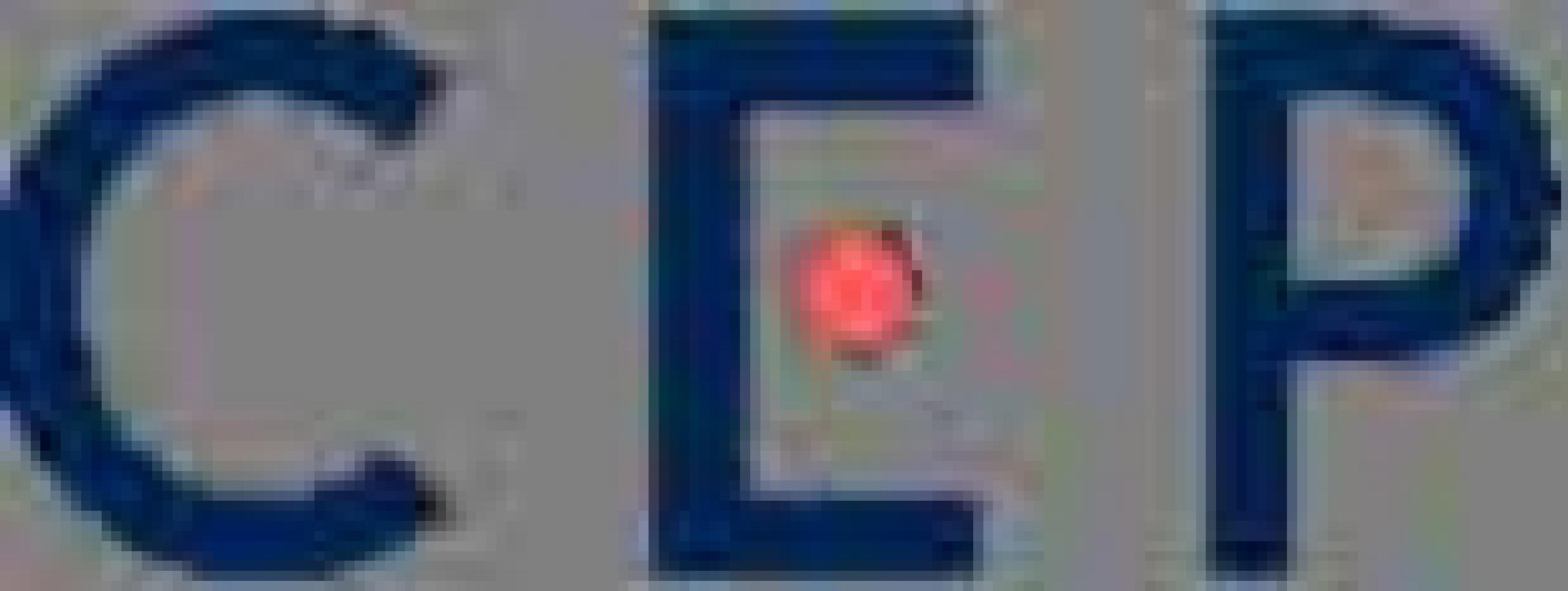
Page

2000

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 28 Jul 2020 19:42:48 +0000
To: Solomon Abebe Yimer
Cc: Raul Gomez Roman;Rihana Diabo
Subject: Re: Kickoff meeting
Attachments: image001.png, image002.png, image003.png

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From: Redd, Stephen (CDC/DDPHSIS/OD)
Sent: Wed, 8 Jan 2020 18:28:26 +0000
To: Gershman, Lynn E. (CDC/DDPHSIS/OD)
Subject: FW: LAncet WG 5 call notes and next steps
Attachments: Lancet WG 5 Call Summary_221119.docx, Lancet Commission Brainstorming Session v3.docx, image001.png

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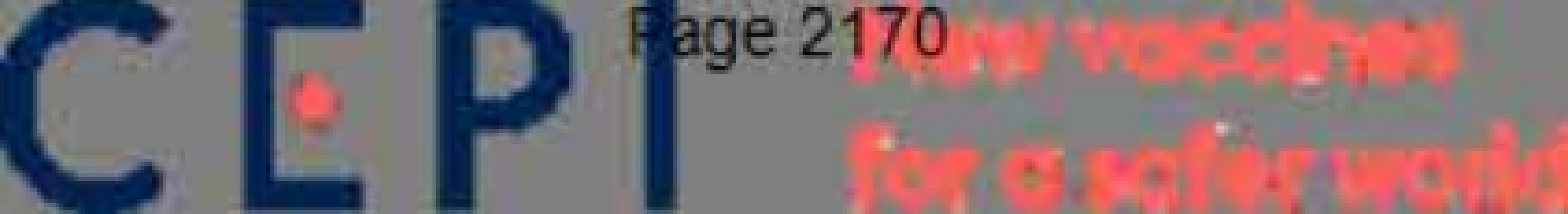
From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Fri, 8 May 2020 17:36:32 +0000
To: Inger Damon
Subject: Fw: CEPI SAC meeting May 13.
Attachments: image010.png, image001.png, image003.png, image005.png

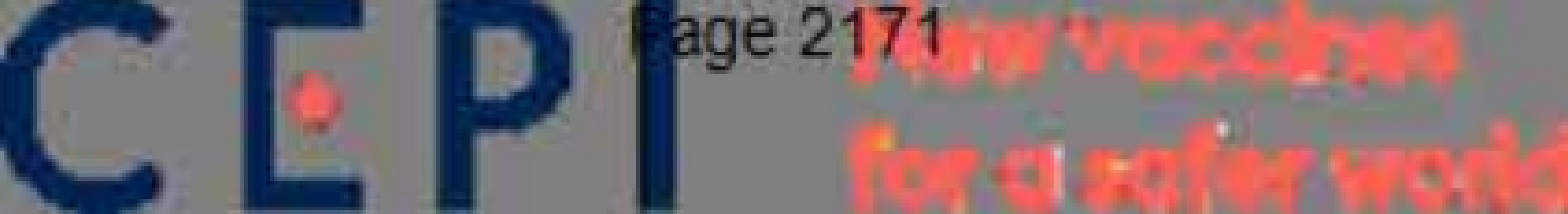
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2173

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 13 May 2020 15:50:05 +0000
To: Helfand, Rita (CDC/DDID/NCEZID/OD)
Subject: Re: CEPI and WHO per COVID 19

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From: Amponsah, Edith
Sent: Thu, 19 Mar 2020 15:17:15 +0000
To: Alison Andre; Peter Daszak; Khabbaz, Rima (CDC/DDID/NCEZID/OD); Kent Kester
Cc: Grant, Celeste (CDC/DDID/NCEZID/OD)
(CTR); 'vivian.louchie@sanofipasteur.com'; Pavlin, Julie; Goodtree, Hannah; Buckley, Gillian
Subject: Re: FMT Leadership Meeting - March 27th

Thanks all - I will send a short agenda early next week.
Talk soon,
Edith

From: Alison Andre <andre@ecohealthalliance.org>
Sent: Tuesday, March 17, 2020 4:46 PM
To: Amponsah, Edith; Peter Daszak; Rima F. Khabbaz; Kent Kester
Cc: 'vjk1@cdc.gov'; 'vivian.louchie@sanofipasteur.com'; Pavlin, Julie; Goodtree, Hannah; Buckley, Gillian
Subject: Re: FMT Leadership Meeting - March 27th

This time still works for Peter.

Best,
Alison

From: "Amponsah, Edith" <EAmponsah@nas.edu>
Date: Tuesday, March 17, 2020 at 3:35 PM
To: Peter Daszak <daszak@ecohealthalliance.org>, "Rima F. Khabbaz" <rfk1@cdc.gov>, Kent Kester <Kent.Kester@sanofi.com>
Cc: Alison Andre <andre@ecohealthalliance.org>, "'vjk1@cdc.gov'" <vjk1@cdc.gov>, "'vivian.louchie@sanofipasteur.com'" <vivian.louchie@sanofipasteur.com>, "Pavlin, Julie" <JPavlin@nas.edu>, "Goodtree, Hannah" <HGoodtree@nas.edu>, "Buckley, Gillian" <GBuckley@nas.edu>
Subject: FMT Leadership Meeting - March 27th

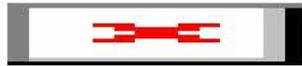
Dear Peter, Rima, and Kent,

With the current COVID-19 outbreak at the center of attention currently, we understand many people's schedules and availability have changed. I am writing to confirm that we are still meeting virtually via zoom next Friday from 1-2:30pm ET for our regular leadership meetings.

Please let us know if you're still available (or not) by responding to this email.

Thank you,
Edith Amponsah, MPH, IBCLC
Research Associate
Forum on Microbial Threats
Health and Medicine Division
The National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW
Phone: 202-334-3222

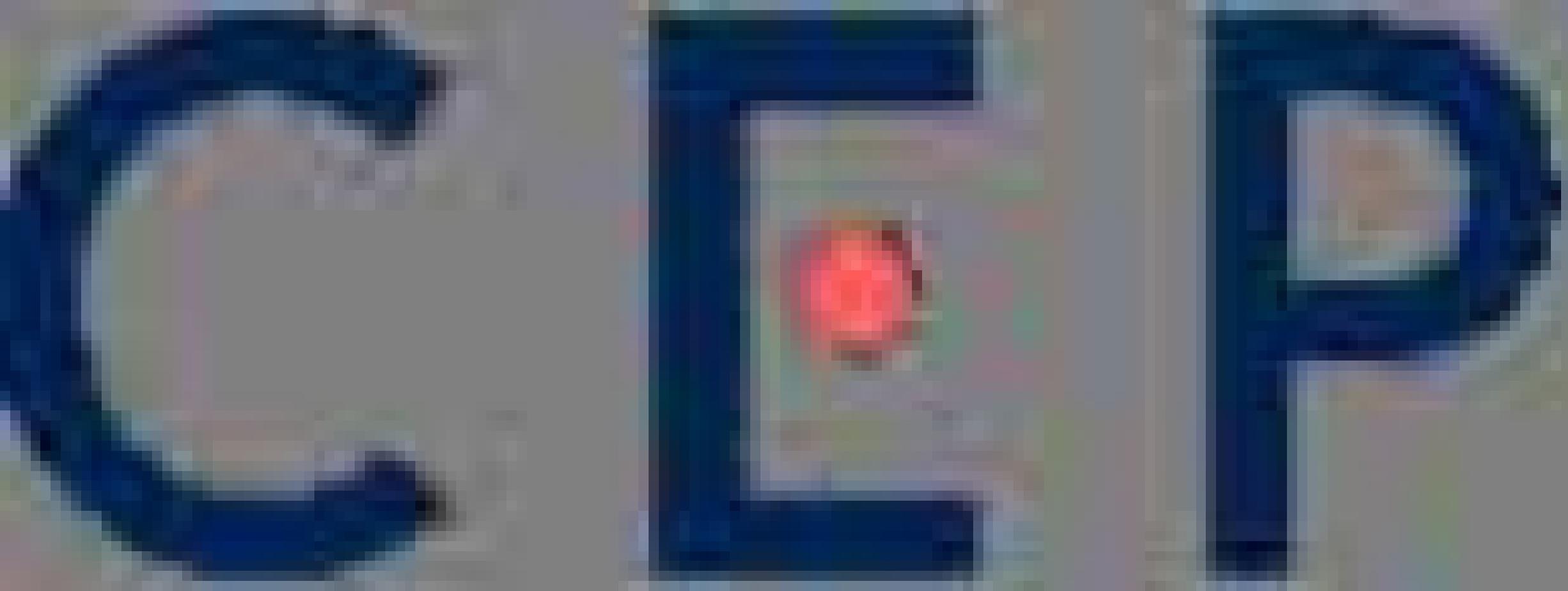
[www.nationalacademies.org/HMD]www.nationalacademies.org/HMD



From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 1 Apr 2020 12:19:12 +0000
To: Owen, Sherry M. (Michele) (CDC/DDID/NCHHSTP/OD)
Subject: Fw: Agenda for Today's call -- WHO Consultation on SARS-CoV -2 Reagents, Cross reactivity and immune Assays - Wed 3 PM CET -
Attachments: image007.png, image008.png, image009.png

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 1 Apr 2020 15:24:10 +0000
To: Lydia Ogden
Subject: Re: CEPI: Request
Attachments: PastedGraphic-1.png

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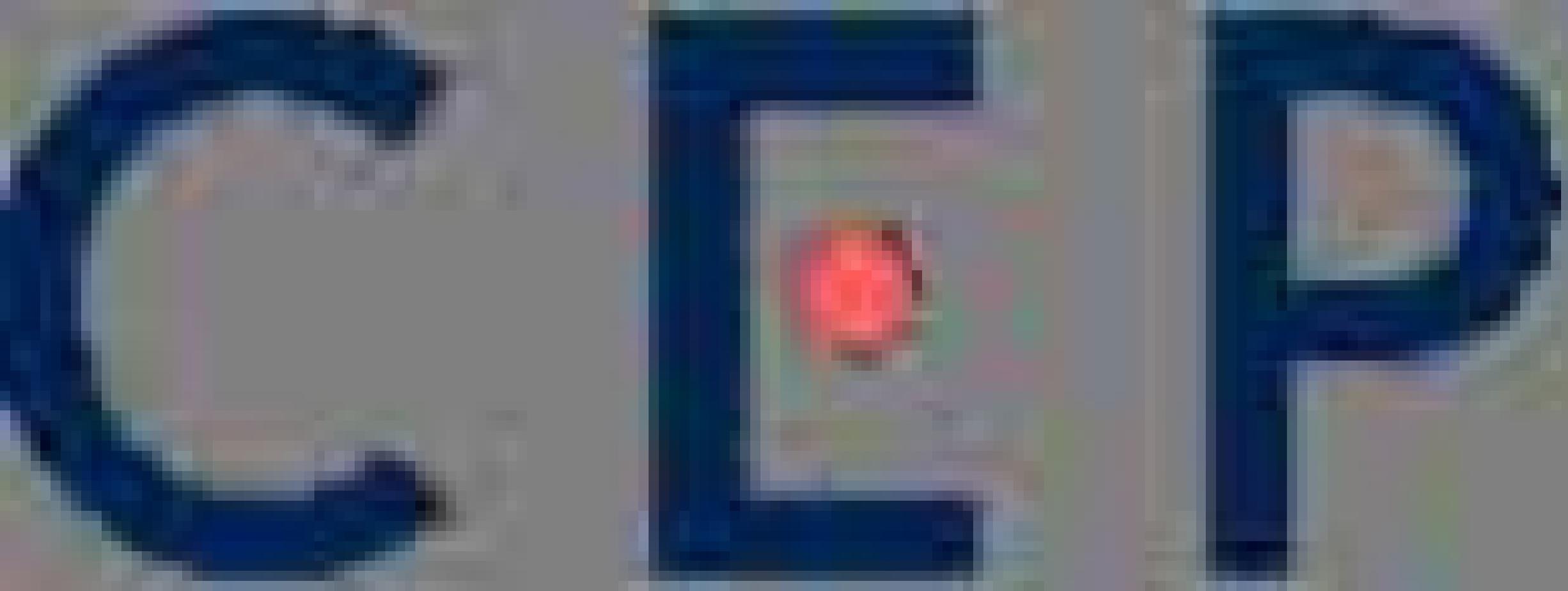


From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 2 Apr 2020 12:53:15 +0000
To: Panayampalli, Subbian Satheshkumar (CDC/DDID/NCEZID/DHCPP)
Subject: Fw: Agenda for Today's call -- WHO Consultation on SARS-CoV -2 Reagents, Cross reactivity and immune Assays - Wed 3 PM CET -
Attachments: image007.png, image008.png, image009.png

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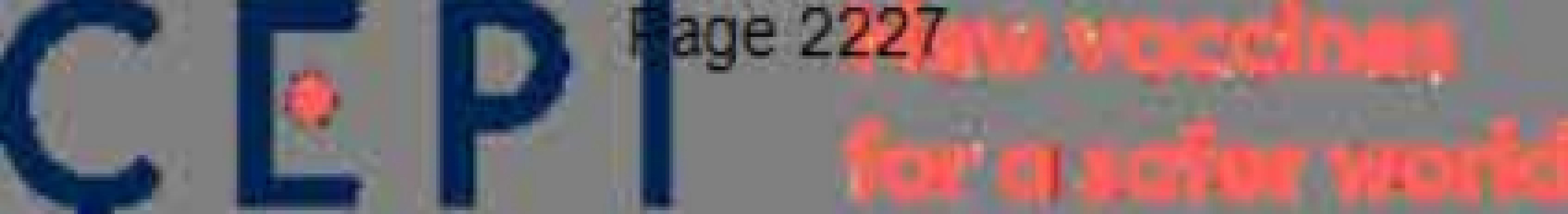
Page

2225

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 2 Apr 2020 13:27:30 +0000
To: Panayampalli, Subbian Satheshkumar (CDC/DDID/NCEZID/DHCPP)
Subject: Re: Agenda for Today's call -- WHO Consultation on SARS-CoV -2 Reagents, Cross reactivity and immune Assays - Wed 3 PM CET -
Attachments: image004.png, image006.png, image008.png

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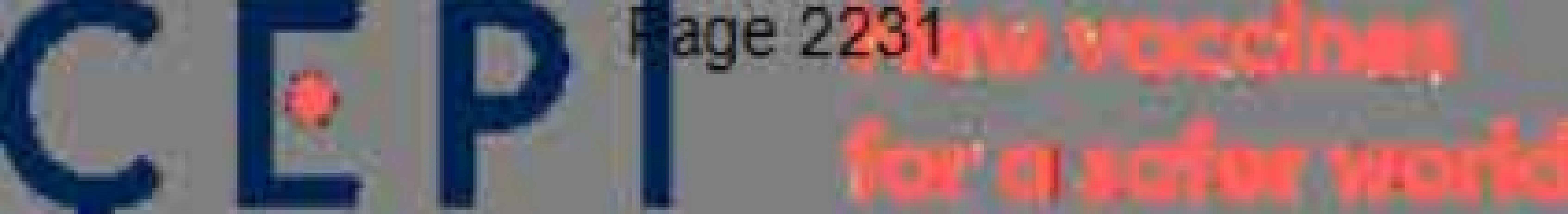
2220

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 2 Apr 2020 13:08:35 +0000
To: Panayampalli, Subbian Satheshkumar (CDC/DDID/NCEZID/DHCPP)
Subject: Re: Agenda for Today's call -- WHO Consultation on SARS-CoV -2 Reagents, Cross reactivity and immune Assays - Wed 3 PM CET -
Attachments: image001.png, image002.png, image003.png

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 7 Apr 2020 15:59:34 +0000
To: Cabigon, Abner C. (CDC/OCOO/OCIO) (CTR)
Subject: Re: IT Incident Ticket: IM5195320 -- Joining to a meeting
Attachments: image001.png, image002.jpg, image005.jpg, image006.jpg

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How would you like to join?

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Welcome to the meeting!
Waiting for other people to connect...



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cepivmr@sac.no

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Tell us your name and change any options you would like before joining

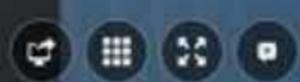
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Welcome to the meeting!

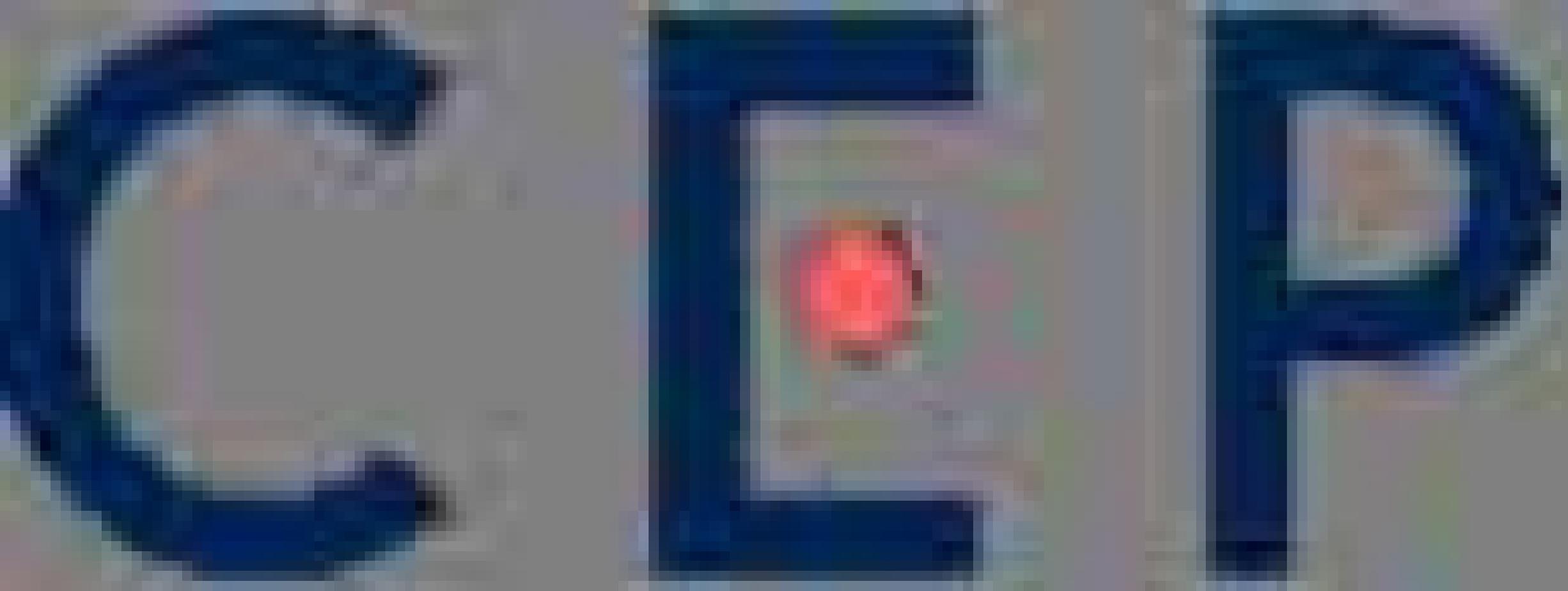
Waiting for other people to connect...



From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 29 Jan 2020 10:25:32 +0000
To: Jernigan, Daniel B. (CDC/DDID/NCIRD/ID)
Сс: Weldon, William C. (CDC/DDID/NCIRD/DVD);Carroll, Darin (CDC/DDID/NCEZID/OD);Karem, Kevin (CDC/DDPHSIS/CGH/OD)
Subject: Fwd: WHO Consultation regarding nCoV Reagents and Cross -Reactivity
Attachments: image007.png, image008.png, image009.png

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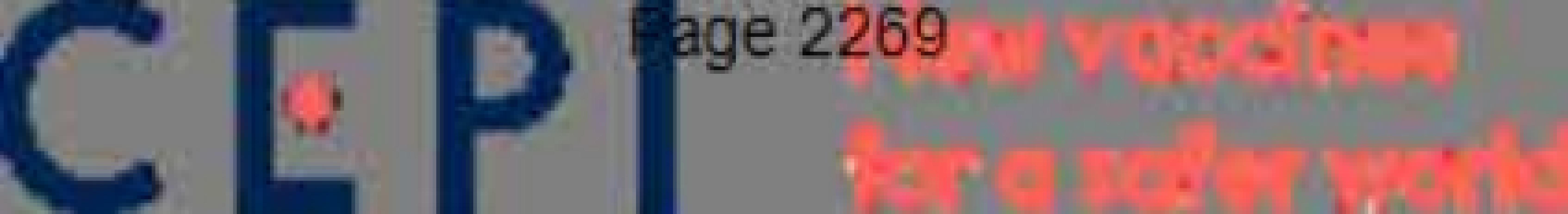
Page

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 30 Jan 2020 13:16:36 +0000
To: Kuhnert-Tallman, Wendi (CDC/DDID/OD);Karem, Kevin (CDC/DDPHSIS/CGH/OD)
Subject: Re: WHO Consultation regarding nCoV Reagents and Cross -Reactivity
Attachments: image001.png, image002.png, image003.png

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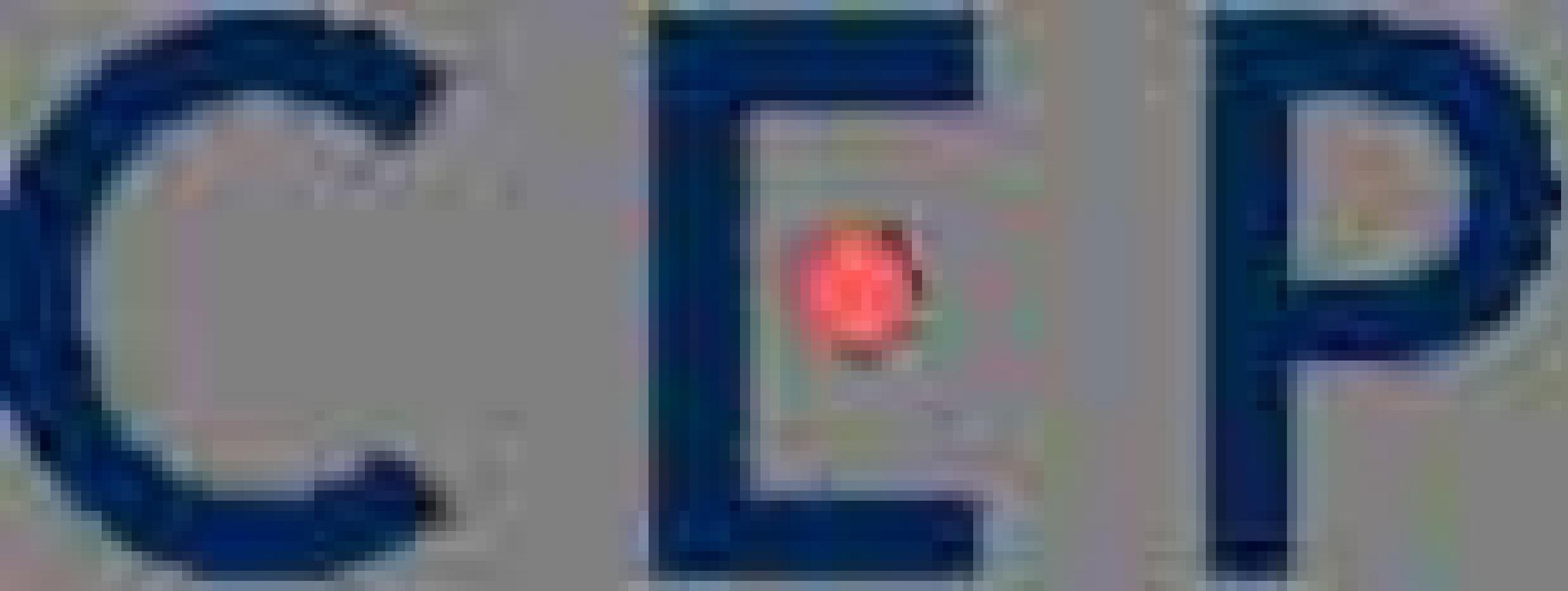
2271

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 30 Jan 2020 13:13:45 +0000
To: Karem, Kevin (CDC/DDPHSIS/CGH/OD);Kuhnert-Tallman, Wendi (CDC/DDID/OD)
Subject: Fwd: WHO Consultation regarding nCoV Reagents and Cross -Reactivity
Attachments: image004.png, image006.png, image008.png, nCoV Viruses and Reagents.xlsx

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Contact	Barbara Schierle	Giada Mattiuzzo	Shi Zhengli	Miles Carroll
Institution	Paul Ehrlich Institute	NIBSC, UK	Wuhan Institute of Virology, Chinese Academy of Sciences	PHE Porton Down
nCoV and SARS Viruses and other reagents currently available			nCoV, ACE2 mice (from Ralph Baric), human convalescent of nCoV	(b)(4) (b)(4) We have extensive experience in culturing quality controlled stocks of these viruses.

Generation of viruses and other reagents planned/ in progress Pseudotyped lentiviral vectors planned

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Reagent sharing

Cross reactivity assessments planned/in progress planned

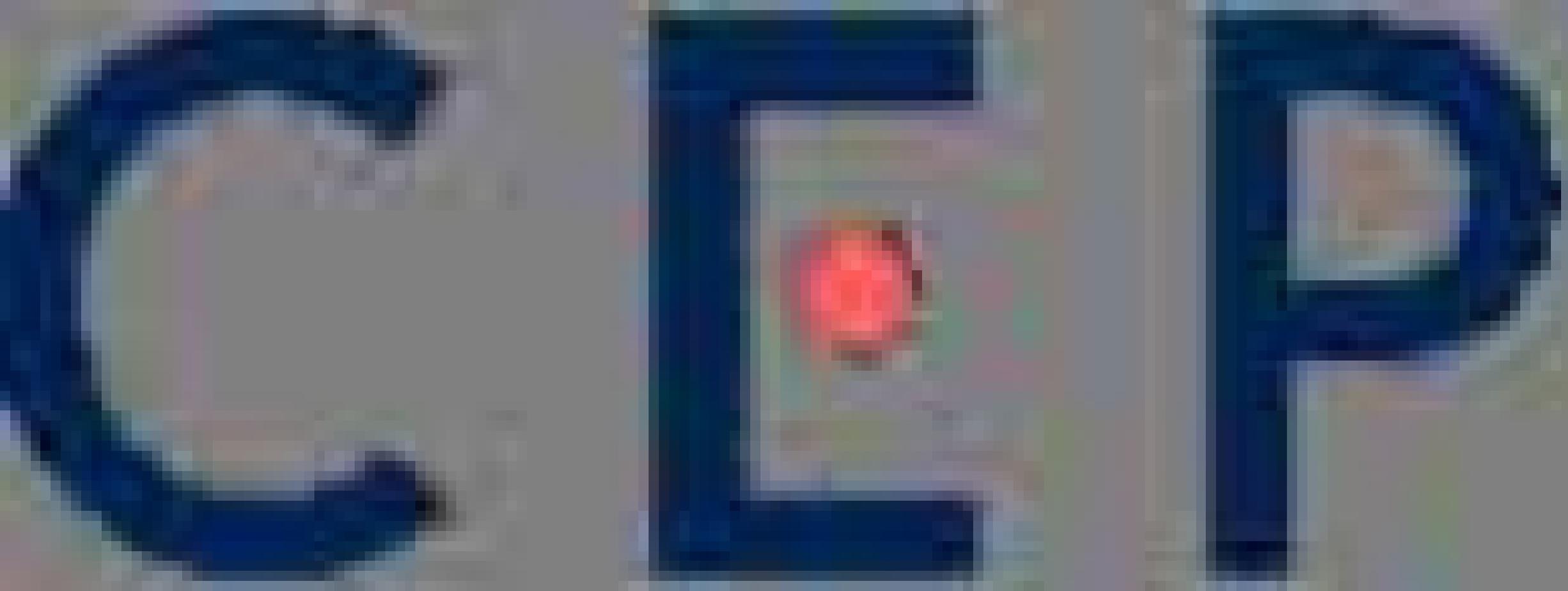
From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Mon, 1 Jun 2020 20:46:45 +0000
To: William Dowling
Cc: Hyde, Terri (CDC/DDPHSIS/CGH/GID);GSELL, Pierre
Subject: Re: vaccine development

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 9 Jun 2020 22:48:58 +0000
To: Helfand, Rita (CDC/DDID/NCEZID/OD)
Subject: Fwd: Agenda for WHO working group on viruses, reagents and immune assays
Attachments: image007.png, image008.png, image009.png

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 30 Jan 2020 13:18:55 +0000
To: Karem, Kevin (CDC/DDPHSIS/CGH/OD);Kuhnert-Tallman, Wendi (CDC/DDID/OD)
Subject: Re: WHO Consultation regarding nCoV Reagents and Cross -Reactivity
Attachments: image001.png, image002.png, image003.png

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Fri, 31 Jan 2020 13:02:25 +0000
To: Gerber, Susan I. (CDC/DDID/NCIRD/DVD)
Subject: RE: cepi

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Fri, 31 Jan 2020 13:01:15 +0000
To: Gerber, Susan I. (CDC/DDID/NCIRD/DVD)
Subject: RE: cepi

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 9 Jun 2020 19:05:45 +0000
To: Gabriel, Nathalie
Subject: RE: Category V and Z

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Fri, 31 Jan 2020 10:23:32 +0000
To: McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP); Malik, Sabahat Z. (CDC/DDID/NCEZID/DHCPP); Hammitt, Teresa (CDC/DDID/NCEZID/DHCPP)
Cc: Hummel, Kim (CDC/DDID/NCEZID/DHCPP)
Subject: Re: Division Directors Bullets

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 9 Jun 2020 18:56:01 +0000
To: Gabriel, Nathalie
Subject: RE: Category V and Z

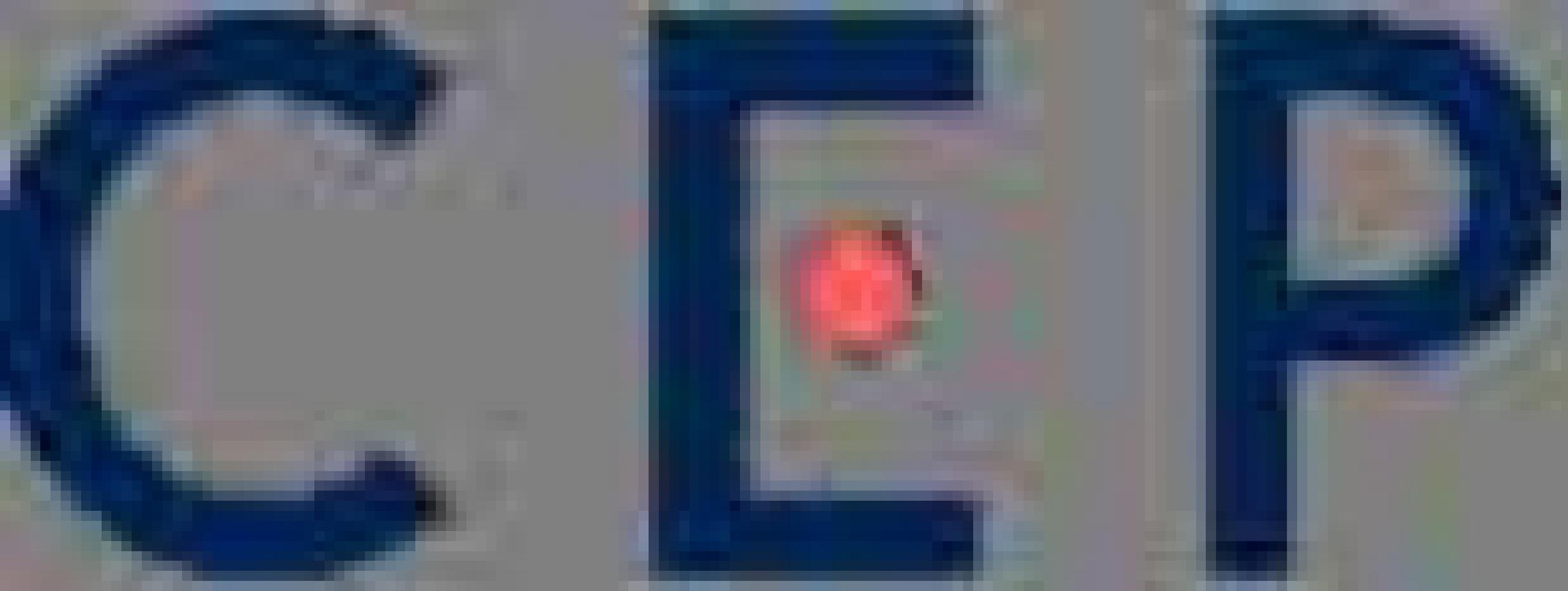
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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 10 Jun 2020 11:36:10 +0000
To: Helfand, Rita (CDC/DDID/NCEZID/OD)
Subject: Re: Agenda for WHO working group on viruses, reagents and immune assays
Attachments: image007.png, image008.png, image009.png

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2900

From: Amponsah, Edith
Sent: Wed, 20 May 2020 23:20:39 +0000
To: 'Alison Andre';Khabbaz, Rima (CDC/DDID/NCEZID/OD);'Kester, Kent /US';Goodtree, Hannah;'Louchie, Vivian /US';'Peter Daszak';Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR);Pavlin, Julie;Buckley, Gillian
Subject: RE: Forum Leadership Meeting
Attachments: Background on new FDA study.docx, May 28 Draft Agenda_FINAL.pdf, FMT Leadership Call Agenda_May21.pdf

Hello,

I've attached here additional material for our call tomorrow regarding a proposed new FDA study with potential of collaborating with the Forum depending on level of interest.

Looking forward to our call tomorrow,
Edith

From: Amponsah, Edith
Sent: Monday, May 18, 2020 1:24 PM
To: 'Alison Andre' <andre@ecohealthalliance.org>; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)' <rfk1@cdc.gov>; 'Kester, Kent /US' <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; 'Louchie, Vivian /US' <Vivian.Louchie@sanofi.com>; 'Peter Daszak' <daszak@ecohealthalliance.org>; 'Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR)' <vjk1@cdc.gov>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: Forum Leadership Meeting

Hello everyone,

Please find the agenda for the call attached here along with the finalized agenda for the May 28th virtual meeting.

Looking forward to our call.
Best,
Edith

From: Amponsah, Edith
Sent: Wednesday, May 13, 2020 10:47 AM
To: 'Alison Andre' <andre@ecohealthalliance.org>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>; Kester, Kent /US <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Peter Daszak <daszak@ecohealthalliance.org>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: Forum Leadership Meeting

Great. I will get started on an agenda for the meeting.

Best,
Edith

From: Alison Andre <andre@ecohealthalliance.org>
Sent: Wednesday, May 13, 2020 10:21 AM
To: Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>; Kester, Kent /US <Kent.Kester@sanofi.com>; Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Peter Daszak <daszak@ecohealthalliance.org>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: Re: Forum Leadership Meeting

This time still works for Peter, too.

Best,
Alison

From: "Khabbaz, Rima (CDC/DDID/NCEZID/OD)" <rfk1@cdc.gov>
Date: Tuesday, May 12, 2020 at 8:05 PM
To: "Kester, Kent /US" <Kent.Kester@sanofi.com>, "Amponsah, Edith" <EAmponsah@nas.edu>, "Goodtree, Hannah" <HGoodtree@nas.edu>, "Louchie, Vivian /US" <Vivian.Louchie@sanofi.com>, Peter Daszak <daszak@ecohealthalliance.org>, "Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR)" <vjk1@cdc.gov>, Alison Andre <andre@ecohealthalliance.org>, "Pavlin, Julie" <JPavlin@nas.edu>, "Buckley, Gillian" <GBuckley@nas.edu>
Subject: Re: Forum Leadership Meeting

Nothing conflicting for now, so hopefully should work for me too.
Rima

Get [Outlook for iOS](#)

From: Kester, Kent /US <Kent.Kester@sanofi.com>
Sent: Tuesday, May 12, 2020 5:48:55 PM
To: Amponsah, Edith <EAmponsah@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; Khabbaz, Rima (CDC/DDID/NCEZID/OD) <rfk1@cdc.gov>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: Forum Leadership Meeting

Works for me.

-----Original Message-----

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Tuesday, May 12, 2020 5:45 PM

To: Kester, Kent /US <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: [EXTERNAL] RE: Forum Leadership Meeting

EXTERNAL : Real sender is EAmponsah@nas.edu

Hello everyone,

We have a leadership meeting scheduled for May 21st 1-2pm. We understand schedules are busier than ever right now so I wanted to confirm with everyone if this day and time is still good.

Best,
Edith

-----Original Message-----

From: Amponsah, Edith
Sent: Friday, March 27, 2020 3:54 PM
To: 'Kester, Kent /US' <Kent.Kester@sanofi.com>; Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: Forum Leadership Meeting

Agenda attached.

Best,
Edith

-----Original Message-----

From: Kester, Kent /US <Kent.Kester@sanofi.com>
Sent: Friday, March 27, 2020 3:32 PM
To: Goodtree, Hannah <HGoodtree@nas.edu>; Louchie, Vivian /US <Vivian.Louchie@sanofi.com>; Amponsah, Edith <EAmponsah@nas.edu>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'rfk1@cdc.gov' <rfk1@cdc.gov>; 'vjk1@cdc.gov' <vjk1@cdc.gov>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; Pavlin, Julie <JPavlin@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: Forum Leadership Meeting

The Zoom session seems to have ended. I'm on the phone now and there is only music.

-----Original Appointment-----

From: Goodtree, Hannah <HGoodtree@nas.edu>

Sent: Wednesday, February 19, 2020 12:21 PM
To: Goodtree, Hannah; Louchie, Vivian /US; Amponsah, Edith; 'daszak@ecohealthalliance.org'; 'rfk1@cdc.gov'; 'vjk1@cdc.gov'; 'andre@ecohealthalliance.org'; Kester, Kent /US; Pavlin, Julie; Buckley, Gillian
Subject: [EXTERNAL] Forum Leadership Meeting
When: Friday, March 27, 2020 3:30 PM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: (b)(6)

EXTERNAL : Real sender is HGoodtree@nas.edu

Hello,

Please see below for the call-in details for the Forum on Microbial Threats Leadership Meeting on March 27th, 1-2:30 PM

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US: (b)(6) or (b)(6) (Toll Free)

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Background on new FDA study

Cancer Treatment and Clinical Trials in the Context of COVID-19: A Workshop

An ad hoc planning committee will plan and host a 1.5-day public workshop that will examine approaches to oncology clinical trial design, enrollment, and data analysis plans, given the potential for patients to be exposed to COVID-19 prior to trial enrollment or during the study. The workshop will feature invited presentations and panel discussions on topics such as:

- Characterizing COVID-19 infection status and morbidity in patients, including disease severity, duration, and time since exposure and recovery, as well as the effects of the disease on organ systems (e.g., renal, cardiac, pulmonary, hematologic).
- Response of the immune system to COVID-19 and how that intersects with cancer pathophysiology and treatment.
- Strategies for screening and monitoring patients for COVID-19 infection and morbidity in cancer clinical trials.
- Considerations of COVID-19 morbidities and drug mechanisms of action in defining trial eligibility criteria and treatment plans.
- Opportunities to collect common data elements to characterize patients with COVID-19 infection in cancer clinical trials.
- Data analysis plans for assessing patient outcomes among COVID-19-positive subpopulations, including attribution of adverse events (due to the cancer drugs under study, COVID-19 infection, or a combination of multiple exposures).
- Data collection strategies to understand the safety and effectiveness of approved cancer therapies in patients with COVID-19 infection and morbidity.

The planning committee will develop the agenda for the workshop sessions, select and invite speakers and discussants, and moderate the discussions. A proceedings of the presentations and discussions at the workshop will be prepared by a designated rapporteur in accordance with institutional guidelines.

*Depending on the level of interest, they would potentially make this a collaboration with the Forum on Microbial Threats and Drug Forum.

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The Critical Public Health Value of Vaccines – Tackling Issues of Access and Hesitancy

Agenda
MAY 28, 2020
VIRTUAL MEETING

Objectives:

This virtual meeting is the first of a series of two workshops on the critical public health value of vaccines. The workshop series will feature invited presentations and discussions on the following topics. Specifically, this workshop will feature invited presentation on questions of improving access to vaccines, creating demand for vaccines, and understanding vaccine hesitancy. Speakers will give particular attention to the role of social determinants of vaccine use and equitable distribution of vaccines.

**WORKSHOP SERIES ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES
OF ACCESS AND HESITANCY**

- 10:00am **Welcome Remarks**
 PETER DASZAK, *Chair of the Forum on Microbial Threats*
 President
 EcoHealth Alliance
- Workshop Overview and Goals**
 MATTHEW ZAHN, *Workshop Co-Chair*
 Medical Director, Division of Epidemiology and Assessment
 Orange County Health Care Agency
- Vaccine Access and Creating Demand**
 ROBIN NANDY
 10:05 Principal Advisor & Chief of Immunizations
 UNICEF
- Understanding Vaccine Hesitancy**
 EVE DUBÉ
 10:35 Senior Researcher, National Institute of Public Health of Quebec
 Invited Professor, Laval University, Department of Anthropology
- Improving Access to Vaccines: Lessons from the US Immunization Program**
 NANCY MESSONNIER
 11:05 Director, National Center for Immunization and Respiratory Diseases
 Centers for Disease Control and Prevention
- Panel Discussion with Speakers**
 HEIDI LARSON, *Workshop Co-chair, Moderator*
 11:35 Professor of Anthropology, Risk and Decision Science
 London School of Hygiene & Tropical Medicine
 Director, The Vaccine Confidence Project
- 12:00pm Adjourn

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FORUM ON MICROBIAL THREATS - LEADERSHIP CALL

Thursday, May 21, 2020

1:00 – 2:30 pm (ET)

PARTICIPANTS

MEMBERS: Peter Daszak, Kent Kester, Rima Khabbaz

STAFF: Julie Pavlin, Gillian Buckley, Edith Amponsah, and Hannah Goodtree

MEETING MATERIALS

- May virtual meeting agenda

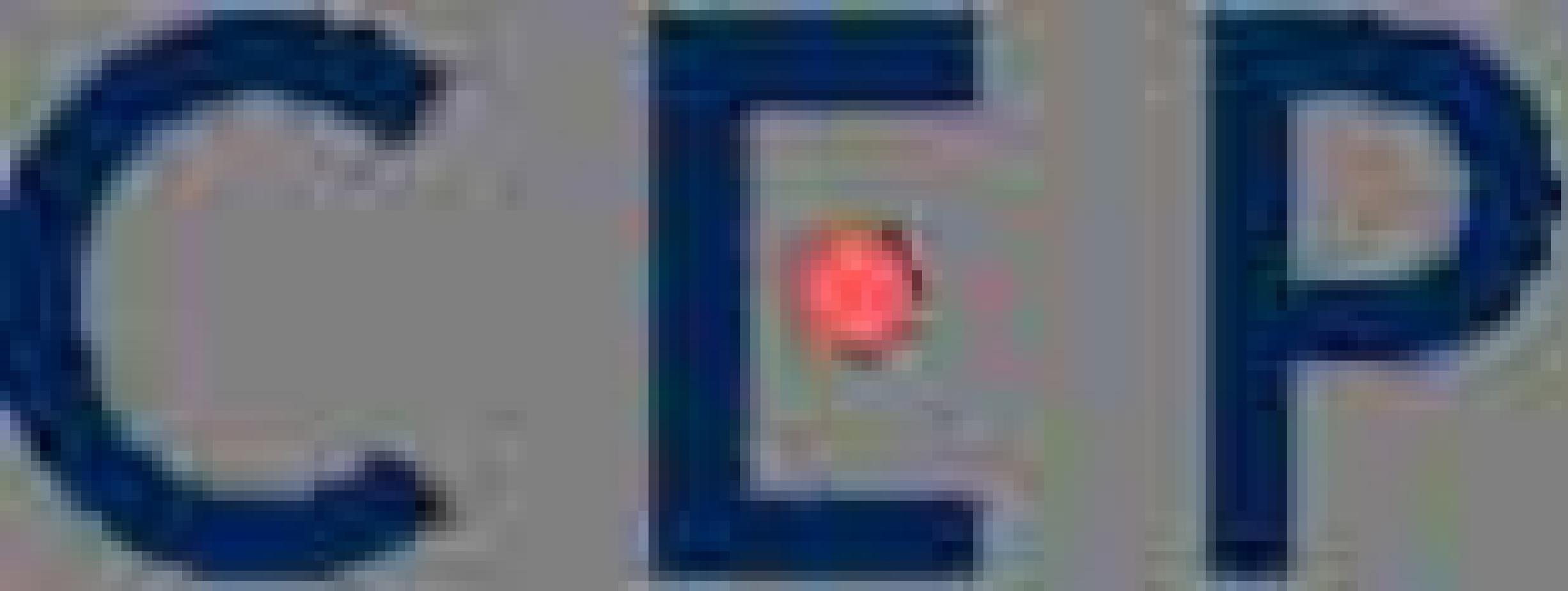
AGENDA ITEMS

1. Forum Workshop Updates
 - Innovations Workshop
 - Proceedings received sign-off. Steps underway for production.
 - May virtual meeting
 - Finalized agenda
 - Communications plan to have Peter provide a quote for a feature article
 - Communications plan: sponsor toolkit, NAM perspectives
 - August vaccines workshop
 - Plan for possibility of it being virtual
 - December 2020 workshop: systematizing the one health approach in preparedness and response efforts for infectious disease outbreaks
 - Plan for possibility of it being virtual
2. Forum Sponsorship Updates
 - Upcoming sponsor renewals
 - CDC (July)
3. OHAC
 - 2 deliverables in progress-priority actions during COVID-19 pandemic
 - Chair – Jonna’s term ends this summer
4. Other Activities
 - NASEM activities regarding COVID-19
 - Cancer Treatment and Clinical Trials in the Context of COVID-19: A Workshop
 - AMR study (Gillian)
5. Next steps and action items
 - Schedule for next call

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 29 Jul 2020 11:04:37 +0000
To: Solomon Abebe Yimer
Cc: Rihana Diabo;Raul Gomez Roman
Subject: Re: Slides
Attachments: image001.png, image002.png, image003.png

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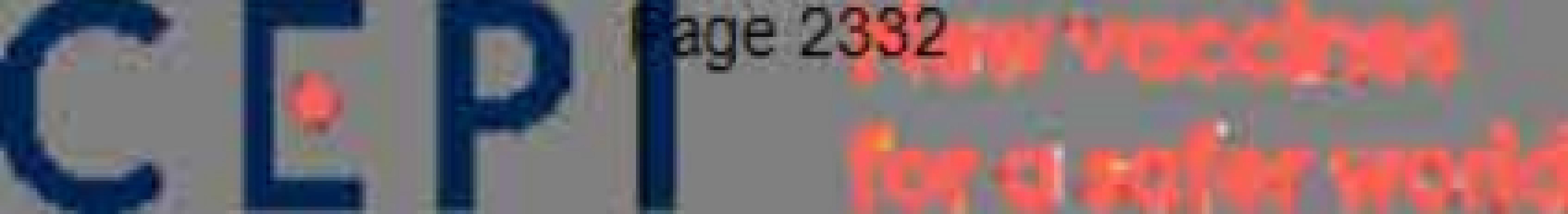
Page

2915

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 17 Jun 2020 10:34:36 +0000
To: Alison Bettis;Spiropoulou, Christina (CDC/DDID/NCEZID/DHCPP);Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP);Gabrielle Breugelmans
Cc: McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP);Hummel, Kim (CDC/DDID/NCEZID/DHCPP);Towner, Jonathan (Jon) (CDC/DDID/NCEZID/DHCPP);Monroe, Steve (CDC/DDPHSS/OLSS/OD)
Subject: Re: Introductions: U.S. CDC and CEPI
Attachments: image010.png, image011.png, image012.png, image001.png, image002.png, image003.png

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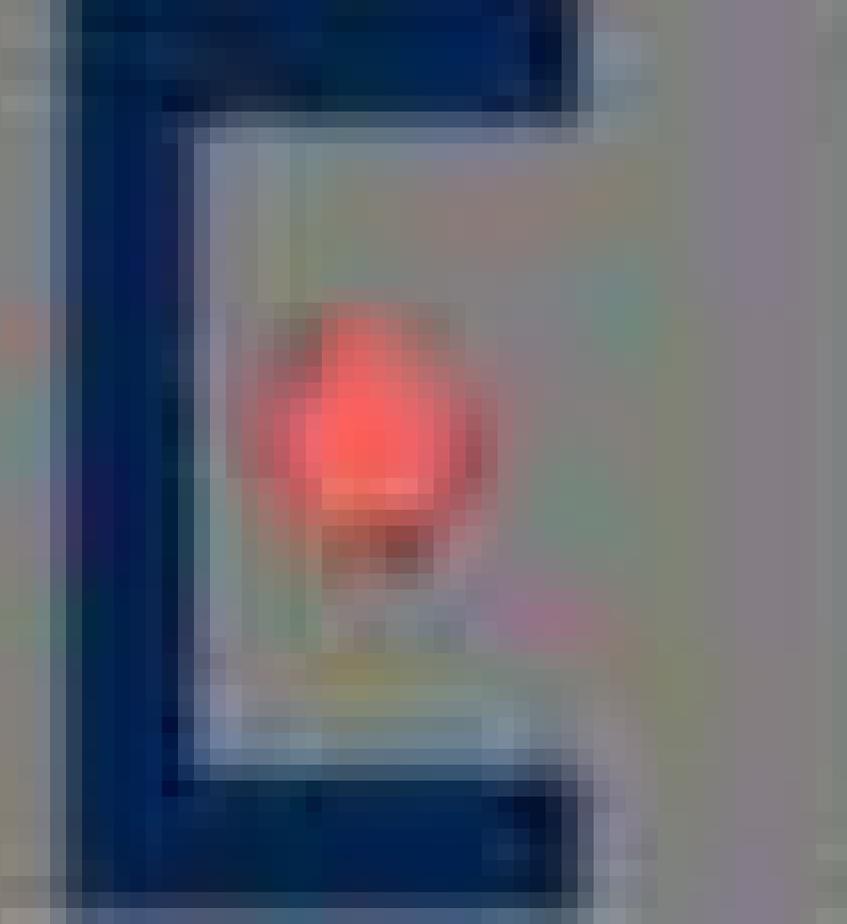
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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 11 Jun 2020 19:32:22 +0000
To: McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP)
Cc: Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP)
Subject: RE: Introductions: U.S. CDC and CEPI

-

From: Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 18 Jun 2020 18:00:06 +0000
To: Fitter, David L. (CDC/DDPHSIS/CGH/GID); Meaney Delman, Dana M. (CDC/DDNID/NCBDDD/DBDID); Butler, Jay C. (CDC/DDID/OD)
Subject: FW: Solidarity II Collaborators Meeting: AGENDA, 19 June 2020
Attachments: 20200612 Solidarity II draft notes.docx

Just FYSA

From: MORGAN, Oliver <omorgan@who.int>
Sent: Thursday, June 18, 2020 12:38 PM
To: ZHU, Jin <Jin.Zhu@health.gov.au>; scordo <scordo@qb.fcen.uba.ar>; Polack, Fernando P <fernando.p.polack@vanderbilt.edu>; BAMFORD, Pearl <Pearl.Bamford@health.gov.au>; Kristine Macartney <kristine.macartney@health.nsw.gov.au>; Celeste.Marsh <Celeste.Marsh@health.gov.au>; Kristine Macartney <kristine.macartney@health.nsw.gov.au>; Vasana, Vasana (H&B, Geelong ACDP) <Vasana.Vasana@csiro.au>; Kim Mulholland <kim.Mulholland@lshtm.ac.uk>; achidi.eric <(b)(6)>; Volker.gerds@usask.ca; Jason Kindrachuk <Jason.Kindrachuk@umanitoba.ca>; Gary Kobinger <Gary.Kobinger@crchudequebec.ulaval.ca>; macalvo <macalvo@uach.cl>; qinchuan <qinchuan@pumc.edu.cn>; rodewaldl@chinacdc.cn; zlishi@wh.iov.cn; AFO <AFO@ssi.dk>; HUTIN, Yvan J.-f. <hutiny@who.int>; Eeva Broberg <Eeva.Broberg@ecdc.europa.eu>; sylvain.baize <sylvain.baize@pasteur.fr>; christian.brechot@pasteur.fr; Mariangela Cavarelli <mariangela.cavarelli@cea.fr>; Christiane Gerke <christiane.gerke@pasteur.fr>; Roger Le Grand <roger.le-grand@cea.fr>; ayola-akim.adegnika <ayola-akim.adegnika@medizin.uni-tuebingen.de>; may <may@bnitm.de>; Cesar Munoz-Fontela <munoz-fontela@bnitm.de>; estefania.rodriquez <estefania.rodriquez@bnitm.de>; Barbara.Schnierle <Barbara.Schnierle@pei.de>; Carolyn Clark <carolyn.clark@cepi.net>; jakob.cramer <jakob.cramer@cepi.net>; William Dowling <william.dowling@cepi.net>; HENAO RESTREPO, Ana Maria <henaorestrepa@who.int>; Harish Iyer <Harish.Iyer@gatesfoundation.org>; Gagandeep Kang <gkang@cmcvellere.ac.in>; Kayla.Laserson <Kayla.Laserson@gatesfoundation.org>; Daniel Cohen <dancohen@tauex.tau.ac.il>; Tadaki <tkusuzuki@nih.go.jp>; Anthony Scott <Anthony.Scott@lshtm.ac.uk>; AZIM, Tasnim <azimt@who.int>; CAWTHORNE, Amy Louise <cawthornea@who.int>; ffntoumi <(b)(6)>; i.v.krasilnikov <i.v.krasilnikov@spbniivs.ru>; Idenisy <(b)(6)> Васильев Юрий Михайлович <y.m.vasiliev@spbniivs.ru>; ephcim <ephcim@nus.edu.sg>; Vernon_LEE <Vernon_LEE@moh.gov.sg>; cherylc <cherylc@nicd.ac.za>; (SPmig) Shabir Madhi <madhis@rmpru.co.za>; sekim <sekim@krikt.re.kr>; mdohmd <mdohmd@snu.ac.kr>; Seungtaek Kim <seungtaek.kim@ip-korea.org>; Manki Song <mksong@ivi.int>; josser.arribas@salud.madrid.org; Delgado Vazquez.Rafael <rafael.delgado@salud.madrid.org>; marta.diaz <marta.diaz@salud.madrid.org>; (SPmig) Katrin Leitmeyer <katrin.leitmeyer@ecdc.europa.eu>; BERGERI, Isabel <bergerii@who.int>; FEIKIN, Daniel <feikind@who.int>; GRANT, Rebecca <grantr@who.int>; HARBARTH Stephan <stephan.harbarth@hcuge.ch>; Paul.Lambert <Paul.Lambert@unige.ch>; PERKINS, Mark <perkism@who.int>; Dr VAN KERKHOVE, Maria <vankerkhovem@who.int>; kum.ungchusak <(b)(6)> B.L. Haagmans <b.haagmans@erasmusmc.nl>; albert.jan.van.hoek <albert.jan.van.hoek@rivm.nl>; M.P.G. Koopmans <m.koopmans@erasmusmc.nl>; Chantal Reusken <chantal.reusken@rivm.nl>; Marc-Alain Widdowson <mawiddowson@itg.be>; Gayatri.Amirthalingam <Gayatri.Amirthalingam@phe.gov.uk>; (SPmig) Nick Andrews <nick.andrews@hpa.org.uk>; Miles.Carroll

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Cc: solidarity2 <solidarity2@who.int>

Subject: Solidarity II Collaborators Meeting: AGENDA, 19 June 2020

Dear Colleagues,

I hope that you will be able to join us for the Solidarity II call tomorrow.

1. Introductions (Oliver Morgan)
2. Updates on panels (Mark Page)
3. Updates from the Vaccine Group (Bill Dowling)
4. Study update from CDC (Nathalie Thornburg)
5. Study update from South Africa (Anne Von Gottberg)
6. Study update from Oxford University (Alain Townsend)
7. Conclusions (Oliver Morgan)

Please find the notes from the last meeting attached and the Zoom details at the bottom of the email.

I look forward to connecting tomorrow.

Kind regards

Oliver

 Dr. Oliver Morgan PhD MSc FFPH
 Director Health Emergency Information & Risk Assessment
 Health Emergencies Programme
 World Health Organization

Join Zoom Meeting

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Join by Skype for Business

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WHO Solidarity II meeting

12 June 2020 – DRAFT Notes

(b)(5)

(b)(4)

(b)(4)

(b)(4)

7.Oliver Morgan

- May look at extending meeting time.

From: Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 25 Jun 2020 15:13:19 +0000
To: Butler, Jay C. (CDC/DDID/OD); Fitter, David L. (CDC/DDPHSIS/CGH/GID); Meaney Delman, Dana M. (CDC/DDNID/NCBDDD/DBDID); Eisenberg, Emily (CDC/DDID/NCIRD/ID); Bresee, Joseph (CDC/DDID/NCIRD/ID)
Subject: FW: AGENDA: Solidarity II Collaborators' Call, 26 June 2020, 1pm Geneva

We should probably be more plugged into these discussions as well.

From: MORGAN, Oliver <omorgan@who.int>
Sent: Thursday, June 25, 2020 11:06 AM
To: ZHU, Jin <Jin.Zhu@health.gov.au>; scordo <scordo@qb.fcen.uba.ar>; Polack, Fernando P <fernando.p.polack@vanderbilt.edu>; BAMFORD, Pearl <Pearl.Bamford@health.gov.au>; Kristine Macartney <kristine.macartney@health.nsw.gov.au>; Celeste.Marsh <Celeste.Marsh@health.gov.au>; Kristine Macartney <kristine.macartney@health.nsw.gov.au>; Vasan, Vasan (H&B, Geelong ACDP) <Vasan.Vasan@csiro.au>; Kim Mulholland <kim.Mulholland@lshtm.ac.uk>; achidi.eric <(b)(6)>; Volker.gerds@usask.ca; Jason Kindrachuk <Jason.Kindrachuk@umanitoba.ca>; Gary Kobinger <Gary.Kobinger@crchudequebec.ulaval.ca>; macalvo <macalvo@uach.cl>; qinchuan <qinchuan@pumc.edu.cn>; rodewaldl@chinacdc.cn; zlishi@wh.iov.cn; AFO <AFO@ssi.dk>; HUTIN, Yvan J.-f. <hutiny@who.int>; Eeva Broberg <Eeva.Broberg@ecdc.europa.eu>; sylvain.baize <sylvain.baize@pasteur.fr>; christian.brechot@pasteur.fr; Mariangela Cavarelli <mariangela.cavarelli@cea.fr>; Christiane Gerke <christiane.gerke@pasteur.fr>; Roger Le Grand <roger.le-grand@cea.fr>; ayola-akim.adegnika <ayola-akim.adegnika@medizin.uni-tuebingen.de>; may <may@bnitm.de>; Cesar Munoz-Fontela <munoz-fontela@bnitm.de>; estefania.rodriguez <estefania.rodriguez@bnitm.de>; Barbara.Schnierle <Barbara.Schnierle@pei.de>; Carolyn Clark <carolyn.clark@cepi.net>; jakob.cramer <jakob.cramer@cepi.net>; William Dowling <william.dowling@cepi.net>; HENAO RESTREPO, Ana Maria <henaorestrepa@who.int>; Harish Iyer <Harish.Iyer@gatesfoundation.org>; Gagandeep Kang <gkang@cmcvellere.ac.in>; Kayla.Laserson <Kayla.Laserson@gatesfoundation.org>; Daniel Cohen <dancohen@tauex.tau.ac.il>; Tadaki <tkusuzuki@nih.go.jp>; Anthony Scott <Anthony.Scott@lshtm.ac.uk>; AZIM, Tasnim <azimt@who.int>; CAWTHORNE, Amy Louise <cawthornea@who.int>; ffntoumi <(b)(6)>; i.v.krasilnikov <i.v.krasilnikov@spbniivs.ru>; Idenis <(b)(6)>; Васильев Юрий Михайлович <y.m.vasiliev@spbniivs.ru>; ephcim <ephcim@nus.edu.sg>; Vernon_LEE <Vernon_LEE@moh.gov.sg>; cherylc <cherylc@nicd.ac.za>; (SPmig) Shabir Madhi <madhis@rmpru.co.za>; sekim <sekim@kricr.re.kr>; mdohmd <mdohmd@snu.ac.kr>; Seungtaek Kim <seungtaek.kim@ip-korea.org>; Manki Song <mksong@ivi.int>; josser.arribas@salud.madrid.org; Delgado Vazquez.Rafael <rafael.delgado@salud.madrid.org>; marta.diaz <marta.diaz@salud.madrid.org>; (SPmig) Katrin Leitmeyer <katrin.leitmeyer@ecdc.europa.eu>; BERGERI, Isabel <bergerii@who.int>; FEIKIN, Daniel <feikind@who.int>; GRANT, Rebecca <grantr@who.int>; HARBARTH Stephan <stephan.harbarth@hcuge.ch>; Paul.Lambert <Paul.Lambert@unige.ch>; PERKINS, Mark <perkism@who.int>; Dr VAN KERKHOVE, Maria <vankerkhovem@who.int>; kum.ungchusak <(b)(6)>; B.L. Haagmans <b.haagmans@erasmusmc.nl>; albert.jan.van.hoek <albert.jan.van.hoek@rivm.nl>; M.P.G. Koopmans <m.koopmans@erasmusmc.nl>; Chantal Reusken <chantal.reusken@rivm.nl>; Marc-Alain Widdowson <mawiddowson@itg.be>; Gayatri.Amirthalingam <Gayatri.Amirthalingam@phe.gov.uk>; (SPmig) Nick Andrews <nick.andrews@hpa.org.uk>; Miles.Carroll

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Cc: solidarity2 <solidarity2@who.int>

Subject: AGENDA: Solidarity II Collaborators' Call, 26 June 2020, 1pm Geneva

Dear Colleagues,

I am pleased to share the agenda for our meeting tomorrow:

1. Introductions (Oliver Morgan)
2. Updates from NIBSC (Mark Page)
3. Updates from the Vaccine Group (Bill Dowling)
4. A haemagglutination test for antibodies to SARS-2 based on a finger-prick blood sample that is read by eye (Alain Townsend)
5. Evaluation of antigens and assay optimization (Mary Matheson)
6. Antenatal samples from pregnant women in Poland (Aleksandra Wesolowska)
7. Conclusions (Oliver Morgan)

Please find the Zoom details for the call at the bottom of the email.

Kind regards

Oliver

 Dr. Oliver Morgan PhD MSc FFPH
 Director Health Emergency Information & Risk Assessment
 Health Emergencies Programme

World Health Organization

Topic: Solidarity II Collaborator's Meeting

Time: Jun 26, 2020 01:00 PM Paris

Join Zoom Meeting

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From: Messonnier, Nancy (CDC/DDID/NCIRD/OD)
Sent: Sat, 11 Jan 2020 01:45:29 +0000
To: Schuchat, Anne MD (CDC/OD);McGowan, Robert (Kyle) (CDC/OD/OCS);Berger, Sherri (CDC/OCOO/OD)
Cc: Butler, Jay C. (CDC/DDID/OD);Dreyzehner, John (CDC/DDPHSIS/CPR/OD);Redd, Stephen (CDC/DDPHSIS/OD);Patel, Anita (CDC/DDID/NCIRD/OD)
Subject: Fwd: Sequence release notification

Fysa

From: Patel, Anita (CDC/DDID/NCIRD/OD) <bop1@cdc.gov>
Sent: Friday, January 10, 2020 8:37:57 PM
To: Messonnier, Nancy (CDC/DDID/NCIRD/OD) <nar5@cdc.gov>
Cc: Greene, Carolyn M. (CDC/DDID/NCIRD/ID) <cqg4@cdc.gov>; Cohn, Amanda (CDC/DDID/NCIRD/OD) <anc0@cdc.gov>; Pallansch, Mark A. (CDC/DDID/NCIRD/DVD) <map1@cdc.gov>; Lindstrom, Stephen (CDC/DDID/NCIRD/DVD) <sql5@cdc.gov>; Gerber, Susan I. (CDC/DDID/NCIRD/DVD) <bhx1@cdc.gov>
Subject: Sequence release notification

FYSA:

The Shanghai Public Health Clinical Center & School of Public Health, in collaboration with the Central Hospital of Wuhan, Huazhong University of Science and Technology, the Wuhan Center for Disease Control and Prevention, the National Institute for Communicable Disease Control and Prevention, Chinese Center for Disease Control, and the University of Sydney, Sydney, Australia is releasing a coronavirus genome from a case of a respiratory disease from the Wuhan outbreak. The sequence has also been deposited on GenBank (accession MN908947) and will be released as soon as possible.

<http://virological.org/t/initial-genome-release-of-novel-coronavirus/319>

From: Aiga Berke
Sent: Fri, 27 Mar 2020 11:06:24 +0000
To: Butler, Jay C. (CDC/DDID/OD)
Subject: RE: INVITATION: videoconference of the Network of major CDCs on COVID-19

Dear Jay,

Just to add that from China there will be high level representation (please see the latest list of participants below) and US CDC's participation would be of very high added value for everyone.

Thank you!

Kind regards,

Aiga

Organisation	Name	Role and affiliation
Africa Centres for Disease Control and Prevention	Benjamin Djoudalbaye	Head of Policy and Health Diplomacy
Canada, Public Health Agency	Mélanie-Anne Way	Director of Bilateral Engagement, Summits and Trade Division
	Allison DesRosiers-Rodriguez	Manager, Bilateral Engagement, Summits and Trade Division, Office of International Affairs for the Health Portfolio
	Rachel Kirkland	Policy Analyst, Bilateral Engagement, Summits and Trade Division, Office of International Affairs for the Health Portfolio
Caribbean Public Health Agency	Lisa Indar	Assistant Director, Surveillance, Disease Prevention and Control Division
Chinese Center for Disease Control and Prevention	Prof. Zunyou Wu	Chief epidemiologist
	Dr. Lei Zhou	Chief, Branch for Emerging Infectious Disease, Public Health Emergency Center
	Xiaoqi (Doris) Wang	Director of the Office of International Cooperation
	Yunduo Zou	Senior Program Officer, Office of International Cooperation
European Centre for Disease Prevention and Control	Piotr Kramarz	Deputy Head of Unit Disease Programmes/ Deputy Chief Scientist
	Andrew Amato	Head of Section Air-Borne, Blood-Borne

Organisation	Name	Role and affiliation
		and Sexually Transmitted Infections
	Helena de Carvalho Gomes	Head of Section Scientific Process and Methods
	Bruno Ciancio	Head of Section Surveillance
	Antonis Lanaras	Head of European and International Cooperation Section
	Aiga Berke	International Relations Officer
	Helen Johnson	Expert Mathematical Modelling
European Commission, Directorate-General for Health and Food Safety	Ingrid Keller	Policy Coordinator, Crisis Management and Preparedness in Health Unit, Public Health Directorate
European Commission Joint Research Centre	Tom De Groeve	Deputy Head of Disaster Risk Management Unit
Singapore Ministry of Health	Lyn James	Director - Epidemiology and Disease Control

From: Aiga Berke <Aiga.Berke@ecdc.europa.eu>

Sent: 27 March 2020 11:02

To: 'Butler, Jay C. (CDC/DDID/OD)' <jcb3@cdc.gov>

Subject: RE: INVITATION: videoconference of the Network of major CDCs on COVID-19

Dear Jay,

I just received a decline of the network meeting from you. This is very unfortunate news. Can someone else from US CDC participate please?

Kind regards,

Aiga



Aiga Berke

International Relations Officer

European and International Cooperation, DIR

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Follow ECDC on:





-----Original Appointment-----

From: Butler, Jay C. (CDC/DDID/OD) <jcb3@cdc.gov>

Sent: 27 March 2020 11:01

To: Aiga Berke

Subject: Declined: INVITATION: videoconference of the Network of major CDCs on COVID-19

When: 27 March 2020 14:00-15:30 (UTC+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague.

Where:

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From: Besser, Richard
Sent: Sat, 28 Mar 2020 19:44:49 +0000
To: Butler, Jay C. (CDC/DDID/OD)
Subject: Fwd: Response to Task 5 - update on virus survival on surfaces; incubation
Attachments: Rapid Expert Consultation on SARS-CoV-2 Survival and Incubation for the COVID-19 Pandemic.pdf

Jay-
 Nice talking with you. Here's that memo I mentioned.

Best,

Rich

Richard Besser, MD

President and CEO

Robert Wood Johnson Foundation

From: Pope, Andrew <APope@nas.edu>

Sent: Friday, March 27, 2020 7:38:01 AM

To: 'harvey.fineberg@moore.org' <harvey.fineberg@moore.org>; 'Kristian G. Andersen'

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Subject: Response to Task 5 - update on virus survival on surfaces; incubation

Dear Committee members

As some of you already know, we received a task/question on Monday from OSTP regarding an update and elaboration of the issues related to virus survival on surfaces and in the air, and virus/disease incubation period. David Relman worked with staff and Harvey to develop the response.

In the interest of keeping everyone informed, we wanted to share the attached response that was delivered to the sponsors this morning. The response will also be posted on the committee's webpage under "Publications:" <https://www.nationalacademies.org/our-work/standing-committee-on-emerging-infectious-diseases-and-21st-century-health-threats#sectionPublications>

Please let us know if you have any questions.

Be careful out there,

Andy

Andrew M. Pope, Ph.D.

Director

Board on Health Sciences Policy

Health and Medicine Division

The National Academies of Sciences,

Engineering, and Medicine

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March 27, 2020

Kelvin Droegemeier, Ph.D.
Office of Science and Technology Policy
Executive Office of the President
Eisenhower Executive Office Building
1650 Pennsylvania Avenue
Washington, DC 20504

Dear Dr. Droegemeier:

You requested an update and elaboration on our previous Rapid Expert Consultation (REC), dated March 15, concerning issues of virus survival on surfaces and in the air, and virus/disease incubation period. Here, we provide an update and elaboration on these issues, as well as some caveats about the work performed so far and as yet unmet needs. As with other questions and issues related to SARS-CoV-2 and COVID-19, work on these two topics is proceeding at a rapid pace at many locations across the globe. Consequently, aspects of this update report may rapidly be superseded by new data.

This REC is organized by question and summarizes published and unpublished studies that were deemed most useful, as well as personal communications with experts (cited below). We have selected studies that are most relevant and critical, rather than attempting to be comprehensive. For each of the questions, data are presented for experimental studies and natural history studies, followed by comments on caveats and unmet needs.

This document was prepared by me with support from staff of the National Academies of Sciences, Engineering, and Medicine. Harvey Fineberg approved this document, as chair of the Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats. The following individuals served as reviewers: Kathryn Edwards, Vanderbilt University Medical Center, James LeDuc, University of Texas Medical Branch, and Lindsey Marr, Virginia Tech. Ellen Clayton, Vanderbilt University, and Susan Curry, University of Iowa, served as arbiters of this review on behalf of the NASEM Report Review Committee and its Health and Medicine Division.

Question 1: Environmental Survival

In general, there are two basic approaches to study this issue: A) experimental studies, typically involving deliberate dissemination of laboratory-propagated virus under

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controlled environmental conditions and subsequent sampling; and B) natural history studies, typically involving characterization of environments naturally contaminated by virus, such as hospital rooms recently occupied by patients. Each approach has strengths and weaknesses: with experimental studies there is control over important parameters, but almost always the conditions fail to adequately mimic those of the natural setting; with natural history studies, the conditions are relevant and reflect the real-world, but there is typically little control of environmental conditions and potentially confounding factors. Since March 15, there have been advances with studies of each type.

A. Experimental studies

In a recent study from Hong Kong, Chin et al. examined the stability (using viral culture) of SARS-CoV-2 as a function of temperature, type of surface, and following the use of disinfectants¹. With respect to temperature, using a starting suspension of 6.7 log TCID₅₀/ml in virus transport medium,² at 4°C there was only a 0.6-log unit reduction at the end of 14 days of incubation in this medium; at 22°C, a 3-log unit reduction after 7 days, and no detection at 14 days; and at 37°C, a 3-log unit reduction after 1 day and no virus detected afterwards. No virus was detected after 30 minutes at 56°C or after 5 minutes at 70°C. With respect to survival on surfaces using a 5 µL droplet of virus culture at 7.8 log TCID₅₀/ml, no infectious virus was recovered from printing and tissue paper after 3 hours; no infectious virus was detected on cloth after 2 days or on stainless steel after 7 days. However, on the outside of a surgical mask, 0.1% of the original inoculum was detected on day 7. The persistence of infectious virus on PPE is concerning and warrants additional study to inform guidance for healthcare workers. Such studies should also examine the effects of various treatments that might be used to disinfect PPE when they cannot be discarded after single use.

Chad Roy, from the Tulane University National Primate Research Center, shared via telephone some preliminary results of dynamic aerosol stability experiments with SARS-CoV-2 conducted over the past several weeks at the Infectious Diseases Aerobiology program at Tulane.³ His group generated an aerosol with a fairly uniform distribution of 2 micron particles, using virus grown in DMEM tissue culture (TC) medium and suspended in a rotating drum at an ambient temperature of ~23°C and ~50% humidity. The aerosol was sampled longitudinally for up to 16 hours, and virus was assessed for viability by growth (enumeration of plaque forming units [PFUs]) and morphology (electron microscopy). He reports surprisingly that SARS-CoV-2 has a longer half-life under these conditions than influenza virus, SARS-CoV-1, monkeypox virus, and *Mycobacterium tuberculosis*. He is still waiting for some growth results, but expects to

¹ Chin, A. et al. 2020. Stability of SARS-CoV-2 in different environmental conditions.

<https://www.medrxiv.org/content/10.1101/2020.03.15.20036673v1.full.pdf>. Accessed 3/24/2020

² TCID₅₀ is the Median Tissue Culture Infectious Dose

³ Personal communication, Chad Roy, Tulane National Primate Research Center, 3/24/2020

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post a manuscript describing these findings to BioRxiv on March 27. This result is also concerning, but is quite preliminary; importantly, the details have not yet been shared.

George Korch and Mike Hevey from the National Biodefense Analysis and Countermeasures Center (NBACC), which was created by the U.S. Department of Homeland Security, shared their plans for an extensive series of experiments on SARS-CoV-2 environmental survival.⁴ Because they have shared these plans with the Inter-Agency Task Force, only a few observations are provided here. NBACC is well-suited for the kinds of studies they have planned, and the scope and relevance is noteworthy. In particular, they plan to create simulated infected body fluids, including saliva and lower respiratory secretions. They plan to test simulated solar radiation on virus survival, which is important. They also have already examined a wider range of relative humidity and temperature than have some other groups, which is again, important. And they will compare RNA semi-quantitative measurements with viral growth (PFUs) on samples from all conditions, which is critical.

At Rocky Mountain Laboratories (RML), part of the National Institutes of Health, current studies include the effect of temperature and humidity on virus stability, virus stability in human body fluids, including urine and feces, and the effectiveness of decontamination procedures for personal protective equipment (PPE), including N95 respirators.⁵

As follow-up, the study by van Doremalen et al. mentioned in our letter of March 15, which was at that time an unpublished preprint, has since been published by the New England Journal of Medicine⁶.

B. Natural history studies

In a recent published study from Singapore, Ong et al. sampled environmental surfaces at 26 sites in each of 3 SARS-CoV-2 patient isolation rooms, as well as PPE worn by physicians exiting patient rooms and air in the patient rooms and anterooms.⁷ All samples were tested using reverse transcriptase-polymerase chain reaction (RT-PCR). There were no efforts to assess virus viability. Patient A's room was sampled on days 4 and 10 of illness while the patient was still symptomatic, after routine cleaning. All samples were negative. Patient B was symptomatic on day 8 and asymptomatic on day 11 of illness; samples taken on these 2 days after routine cleaning were negative.

⁴ Personal communication, George Korch and Mike Hevey, National Biodefense Analysis and Countermeasures Center, 3/24/2020

⁵ Personal communication, Vincent Munster, Rocky Mountain Laboratories, 3/24/2020

⁶ van Doremalen et al., Aerosol and surface stability of SARS-CoV-2 as compared with SARS-CoV-1. *N Engl J Med* 2020 Mar 17; doi: 10.1056/NEJMc2004973

⁷ Wei Xiang Ong, S., et al. 2020. Air, Surface Environmental, and Personal Protective Equipment Contaminated by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) From a Symptomatic Patient. *JAMA*. <https://jamanetwork.com/journals/jama/fullarticle/2762692>. Accessed 3/24/2020.

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Samples collected from Patient C's room before routine cleaning had positive results at 13 (87%) of 15 room sites (including air outlet fans) and 3 (60%) of 5 toilet sites (toilet bowl, sink, and door handle). Anteroom and corridor samples were negative. Patient C had upper respiratory tract involvement with no pneumonia and had 2 positive stool samples for SARS-CoV-2 on RT-PCR, despite not having diarrhea. Only 1 PPE swab, from the surface of a shoe front, was positive. All other PPE swabs were negative. All air samples were negative. However, the lack of detection of virus in air samples does not necessarily contradict the finding of virus on the air outlet fan in Patient C's room, which presumably deposited from air onto the surface of the fan. There are at least three explanations for the negative findings in air: 1) a high ventilation rate of the room would dilute concentrations to a level that would be difficult to detect except with a large volume of air; 2) the sample volume was only a fraction of the total room volume; and 3) the air outlets were located above the head of the bed, and it is likely that any virus released into air would be transported directly upward to the outlet, so an air sampler would need to intersect this pathway to optimize chances of detection. Again, it is important to underscore that samples from the two surface-negative rooms were collected after the rooms had been cleaned.

In a recent unpublished study from Changchun, China, Jiang et al. collected 158 environmental surface and air samples from inside and near isolation wards where persons under investigation (PUIs) and known infected patients were housed.⁸ Samples were collected just before daily cleaning procedures. Only 2 of the 158 samples were RT-PCR-positive: one from surfaces at a nursing station, and the other from an air sample from the room of an intensive care patient.

The Centers for Disease Control and Prevention (CDC) Cruise Ship Environmental Investigation Team mentioned in the CDC's Morbidity and Mortality Weekly Report (MMWR) on 23 March 2020, the results of environmental sample analysis from the Diamond Princess cruise ship.⁹ In total, 601 samples were collected and tested, of which 58 were positive (9.7%) by RT-PCR. According to the Discussion, "SARS-CoV-2 RNA was identified on a variety of surfaces in cabins of both symptomatic and asymptomatic infected passengers up to 17 days after cabins were vacated on the Diamond Princess but before disinfection procedures had been conducted (Takuya Yamagishi, National Institute of Infectious Diseases, personal communication, 2020). Although these data cannot be used to determine whether transmission occurred from contaminated surfaces, further study of fomite transmission of SARS-CoV-2 aboard cruise ships is warranted."

⁸ Jiang, *et al.* 2020. Clinical Data on Hospital Environmental Hygiene Monitoring and Medical Staffs Protection during the Coronavirus Disease 2019 Outbreak. <https://www.medrxiv.org/content/10.1101/2020.02.25.20028043v2.full.pdf>. Accessed 3/25/2020.

⁹ Yamagishi et al. Environmental sampling for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) during a coronavirus disease (COVID-19) outbreak aboard a commercial cruise ship: Preliminary Report. Cited in MMWR Morb Mortal Wkly Rep. ePub: 23 March 2020.

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Santarpia et al. recently completed a study (as yet unpublished and not yet posted on a preprint server) of air and surface samples from 11 isolation rooms at University of Nebraska Medical Center that were used to care for SARS-CoV-2 patients.¹⁰ Samples were collected from common room surfaces, personal items and toilets, as well as high volume air samples and low volume personal air samples. Many commonly used items, toilet facilities, and air samples had evidence of viral contamination. 76.5% of all personal items and 80.4% of all room surfaces were positive for SARS-CoV-2 by RT-PCR (0.22-0.82 gene copies/microliter of swab re-suspension); 63% of room air samples were positive (mean 2.86 copies/L of air). 81% of toilet samples were positive. The percentage of positive samples from each room ranged from 50% to 100%. There was no clear correlation between severity of illness, cough or fever, and the prevalence of viral RNA. Of note, air collectors positioned more than 6 feet from each of two patients yielded positive samples, as did air samplers placed outside patient rooms in the hallways. Although the results are preliminary, it appears that some samples are positive for infectious virus, including an air sample collected well more than 6 feet from a patient (personal communication from J. Santarpia). These results require urgent confirmation under a variety of conditions as they have significant implications for current public health messaging regarding necessary distancing between nearby individuals to prevent virus transmission. In addition, and in this case anecdotal, the highest airborne RNA concentrations were recorded by personal samplers while a patient was receiving oxygen through a nasal cannula (19.17 and 48.21 copies/L). The possibility of aerosol generation by oxygen delivery via nasal cannula, and other mechanisms is currently being explored. Overall, these data support the possibilities of both direct (droplet and person-to-person) and indirect (contaminated objects, airborne) forms of transmission.

A recent study by Liu et al. provides additional information regarding aerodynamics, concentrations, and distribution of aerosols containing SARS-CoV-2.¹¹ A total of 35 aerosol samples (30 samples with total suspended particles, 3 samples with size-segregated particles, and 2 aerosol deposition samples) were collected in two hospitals and public areas in Wuhan, including patient areas, ICUs, medical staff areas, and toilet areas. In regards to patient areas, the highest concentrations of airborne SARS-CoV-2 were observed inside the patient mobile toilet room (19 copies m⁻³), suggesting the importance of frequent disinfection of patient toilets. In regards to medical staff areas, the protective apparel removal rooms had the highest airborne virus concentrations (18 to 42 copies m⁻³). In regards to public areas, airborne concentrations were generally below 3 copies m⁻³, except for a crowded site near the entrance to a department store and a busy site next to a hospital. The peak concentrations of SARS-CoV-2 aerosols appears to exist in two distinct size ranges: 0.25 to 1.0 µm and those larger than 2.5

¹⁰ Santarpia et al., Transmission potential of SARS-CoV-2 in viral shedding observed at the University of Nebraska Medical Center. In preparation; soon at medRxiv.

¹¹ Liu et al. 2020. Aerodynamic Characteristics and RNA Concentration of SARS-CoV-2 Aerosol in Wuhan Hospitals during COVID-19 Outbreak.

<https://www.biorxiv.org/content/10.1101/2020.03.08.982637v1>, accessed 26 March 2020.

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μm . Aerosols smaller than 2.5 μm can remain suspended in air for many hours. The study observed that the negative pressure ventilation and high air exchange rate inside some locations were effective in minimizing airborne SARS-CoV-2. Additional findings suggest that virus-laden aerosol deposition may play a role in surface contamination and thus subsequent human infection. The authors believe that a direct source of SARS-CoV-2 may be due to a resuspension of virus-laden aerosol from the surface of medical staff protective apparel during removal, which may come from direct deposition of respiratory droplets while medical staff are working. Floor dust aerosol containing the virus is also subject to resuspension—meaning that virus-laden aerosols could first deposit on the surface of protective gear and then fall to the floor to be resuspended by medical staff movement. Outside of the hospital, only 2 crowd gathering sites (of 11 sites sampled) had detectable concentrations of SARS-CoV-2 aerosol, which may contribute to sources of virus-laden aerosol during sampling. It is important to note that the sample size for the aerosol samples, and notably the size-segregated samples (3) and aerosol deposition samples (2), were small—a limitation of this study. Furthermore, TRIzol LS Reagent (Invitrogen) was added to inactivate SARS-CoV-2 to extract the RNA, which should be noted as a limitation to the study because the authors measured viral RNA, not infectious virus.

There are a number of published studies that examine the relationship between the geographic incidence of COVID-19 cases and ambient temperature and humidity. Some suggest possible but modest correlations between geographies with higher temperature or humidity, and lower rates of disease; however, there are a number of confounding factors, including disease reporting practices, and quality of and access to health care. We did not scrutinize these studies carefully nor perform an extensive search for related studies.

C. Caveats, Needs

A notable limitation of most of the natural history studies described above is a reliance on RT-PCR to assess the presence of SARS-CoV-2 on surfaces and air. Although viral RNA was detected in many environmental samples across the various studies, infectivity is not known. It is important to note that there are no available data to our knowledge that speak to the possible linkage between the presence of environmental viral RNA or even infectious virus and the risk of transmission from these environmental sites to humans. This is a key issue, and relates in part to another major issue and unanswered question: What is the infectious dose of SARS-CoV-2 for humans? Studies to address this question are planned, and in fact may be underway with non-human primates at several laboratories, but these studies will be limited by the relevance of non-human primate susceptibility to human susceptibility. The use of other laboratory animals will provide even less relevant information on incubation time.

Questions have been (appropriately) raised about whether there are relatively easy-to-perform, quick and safe measurements one might undertake on environmental samples for predicting the presence of viable virus, rather than reliance on cultivation (PFU)

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assays. One idea recently discussed by Wölfel et al.¹² is to look for subgenomic mRNAs made by the virus during its life cycle in a human cell but not packaged into mature virions. These subgenomic mRNAs, if detected directly in a clinical sample, signify that the virus has been actively replicating in host cells in the sample at the time the sample was expelled from the body. This approach was used by Wölfel et al. to argue for active SARS-CoV-2 replication in the throat of COVID-19 patients during the first 5 days after symptoms onset. This approach could conceivably be used to assess the possibility of recent active viral replication in environmental swab samples.

An important caveat regarding the results from experimental studies relates to their relevance to real world conditions. For example, many of the experimental environmental survival studies have used virus grown in TC media. It is quite possible that virus from naturally infected humans when directly disseminated to the nearby environment has different survival properties than virus grown in TC media, even when the latter is purified and spiked into a relevant human body fluid such as saliva. However, environmental dissemination of clinically relevant human fluids spiked with TC-grown virus, will be more predictive of real-world environmental survival than environmental dissemination of TC-grown virus in TC media. Important human clinical matrices into which virus should be spiked include saliva, respiratory (including nasal) mucus and lower respiratory tract airway secretions, urine, blood, and stool. In addition, nebulized saline should be spiked and studied. Another issue related to experimental conditions is the effect of humidity on viral stability. Aerosol studies to date have tended to use humidity levels for culture media that are more favorable for viral decay (e.g., 50-65% relative humidity). Real respiratory fluid is likely to be more protective of infectivity, and indoor relative humidity in wintertime in temperate regions is usually 20-40%, a range that is more favorable for virus survival. Consequently, the half-lives reported to date may represent the lower end of the range. Differences in experimental conditions across studies (e.g., viral growth media, viral titer determination methods, infectivity of the inoculum) would be expected to contribute to variation in study results.

Before too many public health decisions are made on the basis of experimental or natural history studies using just one virus strain, some attention should be paid to the possibility of variation among different SARS-CoV-2 strains in their environmental survival properties. Different isolates from early and late in the pandemic, and from different geographic regions, should be studied and compared.

Registries of patient data and patient samples (e.g., nasopharyngeal, sera, urine, stool) are being created and can be used in future studies examining environmental persistence of the virus. For example, such samples could be used as clinical matrices to look at SARS-CoV-2 persistence on surfaces.

¹² Wölfel et al., Virological assessment of hospitalized cases of coronavirus disease 2019 <https://www.medrxiv.org/content/10.1101/2020.03.05.20030502v1.full.pdf>, accessed 25 March 2020.

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Question 2: Incubation Period

We approach this question in a similar way, examining first experimental studies and then natural history studies: A) experimental studies, typically involving inoculation of animals in the laboratory using laboratory-propagated virus under controlled conditions and subsequent monitoring for onset of viral shedding, signs of disease, or other physiological responses; and B) natural history studies, typically involving longitudinal or cross-sectional studies of naturally exposed humans and collection of data on time of exposure and time of onset of signs, symptoms, virological and molecular features of infection and disease. Each approach has strengths and weaknesses: with experimental studies there is control over time of exposure and various features of the inoculum, but non-human animals to varying degrees fail to reflect the natural history of infection in humans; with natural history studies, the host is relevant, but the time and nature of the exposure is less well understood and sample availability is uncertain.

A. Experimental studies

As mentioned above, experimental infections in non-human primates are planned or are underway at several sites in the United States, including Tulane University's National Primate Center and RML,¹³ and presumably in other countries. While animal models are very important for understanding pathogenesis and responses to therapeutic and vaccine candidates, they are not as helpful with the incubation period studies given physiological differences across species.

B. Natural history studies

In a recent preprint from Shaanxi, China and New York, Men et al. examined confirmed cases of COVID-19 from 10 regions in China, other than Hubei province, for whom there were data on time of exposure and time of disease onset.¹⁴ A Monte Carlo simulation was employed to estimate incubation period, along with additional statistical analysis to assess relationships between different age/gender groups. In this study, the mean and median incubation periods were estimated to be 5.84 and 5.0 days, respectively. Patients 40 years of age or older had a longer incubation period and larger variance than did patients younger than 40 years. There was no statistically significant difference in incubation period based on gender. These findings suggest that different periods of quarantine may be advisable based on age. However, these results need to be confirmed through additional studies and with further stratification of incubation period results by age group.

¹³ Personal communication, Chad Roy, Tulane National Primate Research Center, 24 March 2020

¹⁴ Men et al. 2020. Estimate the incubation period of coronavirus 2019 (COVID-19). <https://www.medrxiv.org/content/10.1101/2020.02.24.20027474v1.full.pdf>, accessed 25 March 2020.

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In a recent preprint from the National Institute of Allergy and Infectious Diseases, Peking University, and Chinese CDC, Qin et al. identified asymptomatic individuals at their time of departure from Wuhan and followed them until symptoms arose.¹⁵ This method was reported to offer enhanced accuracy by reducing recall bias and by utilizing forward time data. More than 1000 cases were collected from publicly available data. They found that the estimated median incubation period was 8.13 days, the mean was 8.62 days, the 90th percentile was 14.65 days and the 99th percentile 20.59 days. Compared to other studies, this incubation period is longer. They conclude that ~10% of patients with COVID-19 do not develop symptoms until 14 days after infection.

In a recent preprint from Guangzhou and Hong Kong, He et al. report on temporal patterns of viral shedding in 94 laboratory-confirmed COVID-19 patients and modelled COVID-19 infectiousness from a separate sample of 77 infector-infectee transmission pairs.¹⁶ They observed the highest viral load in throat swabs at the time of symptom onset, and inferred that infectiousness peaked on or before symptom onset. They estimated that 44% of transmission may occur before the first symptoms of the index case.

C. Caveats, Needs

Robust estimates of the distribution of the incubation period and the period of infectiousness for SARS-CoV-2 are critically important to inform public health messaging. Differences in incubation period findings among existing studies may relate to methodological differences, limited sample sizes, recall bias, or inadequate follow up (potentially missing people who have longer incubation periods). Given the small number of human studies evaluating these disease characteristics for COVID-19, additional studies to confirm incubation period estimates and infectiousness prior to symptom onset are urgently needed. For public health management, it makes a great deal of difference whether 1 percent of patients will develop disease after 14 days (if the mean incubation is approximately five days) or whether the fraction is 10 percent of patients (if the mean incubation period is approximately 8 days). Additional studies should examine variables that may have an impact on incubation period, which, besides age (see Men et al. above), may include inoculum size, immune competency of host, co-infecting agents, as well as underlying morbid conditions. Prospective longitudinal studies are most effective for addressing this issue. An obvious challenge is precise identification and timing of natural exposures. Additionally, as mentioned above, it is conceivable that the evolution of new SARS-CoV-2 strain variants will be accompanied

¹⁵ Qin et al. 2020. Estimation of incubation period distribution of COVID-19 using disease onset forward time: a novel cross-sectional and forward follow-up study. <https://www.medrxiv.org/content/10.1101/2020.03.06.20032417v1.full.pdf>, accessed 25 March 2020.

¹⁶ He et al. 2020. Temporal dynamics in viral shedding and transmissibility of COVID-19, <https://www.medrxiv.org/content/10.1101/2020.03.15.20036707v2.full.pdf>, accessed 25 March 2020.

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by different properties, including incubation period. Prior to changing current public health guidance, it may be prudent to compare observed incubation periods among different SARS-CoV-2 strains. Future studies related to incubation period and viral loads in asymptomatic patients may help to inform pressing questions related to, for example, the role of super spreaders and children in transmission.

Respectfully,

David A. Relman, M.D.

Member

Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats

From: Besser, Richard
Sent: Sun, 29 Mar 2020 14:56:38 +0000
To: Butler, Jay C. (CDC/DDID/OD)
Subject: Fwd: Response to Task 6- Crisis Standards of Care
Attachments: Rapid Expert Consultation on Guiding Principles, Key Elements, and Core Messages for Crisis Standards of Care_March 28.pdf

The latest from expert consultation.
 Richard E. Besser, M.D.
 President and CEO
 Robert Wood Johnson Foundation

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Please note: In light of the request made for increased social distancing we have made the decision to close all three RWJF campuses in New Jersey, New York, and Washington, until further notice. All RWJF employees will now work remotely, and all in-person meetings are either cancelled or will be conducted virtually. For accurate information on what to do to prepare and respond to COVID-19, visit CDC.gov (<https://www.cdc.gov/coronavirus/2019-nCoV/index.html>) and your state health department website.

From: Pope, Andrew <APope@nas.edu>

Sent: Saturday, March 28, 2020 10:22:46 PM

To: 'harvey.fineberg@moore.org' <harvey.fineberg@moore.org>; 'Kristian G. Andersen'

'(b)(6)' <(b)(6)>; 'Diane Griffin' <dgriffi6@jhmi.edu>; 'O'Toole, Tara' <totoole@iqt.org>; 'Jonna Mazet' <jkmazet@ucdavis.edu>; 'Phyllis D. Meadows' <PDMeadows@kresge.org>; 'peggy@hbfam.net' <peggy@hbfam.net>; 'David A Relman' <relman@stanford.edu>; 'Mark Smolinski' <mark@endingpandemics.org>; 'Bassett, Mary Travis' <mbassett@hsph.harvard.edu>; 'Trevor Bedford' <trevor@bedford.io>; 'Georges Benjamin' <georges.benjamin@apha.org>; Besser, Richard <rbesser@rwjf.org>; 'John Hick' <(b)(6)>; 'alp81@georgetown.edu' <alp81@georgetown.edu>; 'Embrey, Ellen' <eembrey@stratitia.com>; 'Walt, David' <dwalt@bwh.harvard.edu>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'Kester, Kent /US' <Kent.Kester@sanofi.com>; 'Patricia king' <(b)(6)>; 'Donald Berwick' <(b)(6)>; 'Alta CHARO' <alta.charo@wisc.edu>

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Subject: Response to Task 6- Crisis Standards of Care

Dear Committee members

As some of you already know, we received a task/question on Wednesday, March 25 from the ASH and ASPR regarding a rationale for the implementation of crisis standards of care (CSC) in response to the COVID-19 pandemic. .

In the interest of keeping everyone informed, we wanted to share the attached response that was delivered to the sponsors today. The response will also be posted early next week on the committee's

webpage under “Publications:” <https://www.nationalacademies.org/our-work/standing-committee-on-emerging-infectious-diseases-and-21st-century-health-threats#sectionPublications>

Please let us know if you have any questions.

Be careful out there,

Andy

Andrew M. Pope, Ph.D.

Director

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March 28, 2020

ADM Brett Giroir, M.D.
Assistant Secretary for Health
200 Independence Ave., SW
Washington, DC 20201

Robert Kadlec, M.D.
Assistant Secretary for Preparedness and Response
200 Independence Ave., SW
Washington, DC 20201

Dear ADM Giroir and Dr. Kadlec:

Attached please find a rapid expert consultation that was prepared by the co-conveners of the Crisis Standards of Care working group, John Hick and Dan Hanfling, with input from others listed in the attachment, and conducted under the auspices of the National Academies' Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats.

Building on the previous decade of National Academies reports, the aim of this rapid expert consultation is to articulate the guiding principles, key elements, and core messages that undergird Crisis Standards of Care decision-making at all levels. It does not, and in our opinion should not, attempt to dictate exactly what choice should be made under exactly what circumstance, as that depends on the specific circumstances of the case at hand, and these must be left to the judgment of the professional, institutional, community and civic leaders who are best situated to understand the local reality.

In my opinion, one of the most important components of the rapid expert consultation is the core principle derived from earlier reports, namely, that Crisis Standards of Care compel thinking in terms of what is best for an entire group of patients, on the principle of saving the most lives (or achieving the best outcome for the group of patients) rather than focusing only on an individual patient under your care. When equipment, staffing, and material are sufficient, focusing only on what is best for each individual patient is tantamount to the best outcome for the collection of patients because the group outcome is simply the sum of the individual outcomes. Under conditions that compel Crisis Standards of Care, this identity of outcomes for the individual and group breaks down, and the decision makers cannot avoid the hard choices before them. We hope these principles, elements and messages can assist in discussing and making these difficult, heart-rending decisions.

Respectfully,

Harvey V. Fineberg, M.D., Ph.D.
Chair
Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats

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March 28, 2020

This rapid expert consultation responds to your March 25 request to provide a rationale for the implementation of crisis standards of care (CSC) in response to the COVID-19 outbreak. Also discussed are the broad principles and core elements of CSC planning and implementation. This discussion builds on a 10-year foundation of three seminal reports on CSC issued in 2009, 2012, and 2013 by the Institute of Medicine, which are described in Appendix A at the end of this document.

This document is meant to provide principles and guidance. It is neither appropriate nor feasible for us to detail actual choices and preferences that apply to specific situations, each of which depends on the exigencies of the epidemic relative to locally available facilities, equipment, personnel and other needed resources. Rather, this document describes the basis upon which to carry out such decision-making whenever it has to happen.

Catastrophic emergencies are by their very nature disruptive and life altering. They can have far-reaching societal impacts, even challenging fundamental assumptions about how we live and what we take for granted. Nowhere is this more evident than when medical facilities cannot deliver the usual level of care to all those who need medical attention. This is the current and likely future reality for many institutions caring for the growing numbers of patients with SARS-CoV-2 infection.

Crisis Standards of Care Definition, Guiding Principles, and Key Elements of Planning

Crisis standards of care are applied when a pervasive or catastrophic disaster make it impossible to meet usual healthcare standards.

GUIDING PRINCIPLES

- Healthcare planning must do everything possible never to need CSC.
- CSC have the joint goals of extending the availability of key resources and minimizing the impact of shortages on clinical care.
- CSC strive to save the most lives possible, recognizing that some individual patients will die, who would survive under usual care.
- Implementation of CSC will require facility-specific decisions regarding the allocation of limited resources, including how patients will be triaged to receive life-saving care.

KEY ELEMENTS OF CSC PLANNING

Ethical Grounding

- During a catastrophic crisis, it is vitally important to uphold the core ethical principles of fairness, duty to care, duty to steward resources, transparency in decision making, consistency, proportionality, and accountability.

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- When resource scarcity reaches catastrophic levels, clinicians are ethically justified—and, indeed, are ethically obligated—to use the available resources to sustain life and wellbeing to the greatest extent possible.

Engagement, Education, and Communication

- CSC planning must involve both providers and the public in order to ensure the legitimacy of the process and the standards.
- These CSC planning processes must be proactive, honest, transparent, and accountable regarding the state of the U.S. healthcare system as COVID-19 cases increase, in order to warrant the public’s trust.
- Senior leadership must prepare healthcare workers for the possible need for CSC and support them as they face the decisions that violate usual care standards.

Legal Considerations

- Healthcare workers who must make difficult decisions implementing CSC must have adequate guidance and legal protections.
- Under disaster conditions, adherence to core constitutional principles remains a constant, but other statutory or regulatory provisions can be altered as necessary in real time.

Indicators, Triggers, and Responsibility (*Examples of hospital indicators, triggers, and tactics for transitions along the continuum of care are outlined in a Table in Appendix A.*)

- Institutions must be alert to indicators that signal a shift to CSC levels of care.
- Observation of those indicators should trigger plans for initiating the contingency or crisis care standards.

Evidence-Based Clinical Operations

- Decisions made at the bedside should be evidence-based.
- Current predictive scoring systems of patient outcomes have unclear value in the COVID-19 context.
- Evidence-based care guidelines may emerge over the course of the pandemic, and with them, CSC guidelines should also evolve, if feasible

Shifting to crisis standards of care is the only ethically tenable approach to shortages of health care resources. Ultimately, this shift represents not a rejection of ethical principles but their embodiment.

THE CONTINUUM OF CARE

Standards of care fall along a continuum of three levels, reflecting the incremental surge in demand relative to available healthcare resources:

- *Conventional care* is everyday healthcare services.
- *Contingency care* arises when demand for medical staff, equipment, or pharmaceuticals begins to exceed supply. Contingency care seeks functionally equivalent care, recognizing that some adjustments to usual care are necessary.

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- *Crisis care* occurs when resources are so depleted that functionally equivalent care is no longer possible.

Appendix A provides examples of the kinds of shortages that can trigger CSC.

THE GOAL OF CSC PLANNING

The transition from conventional to contingency to crisis care comes with a concomitant increase in morbidity and mortality. Thus, it is crucial that planning ensure that CSC is never needed, proactively moving resources ahead of when they are needed. When the system is at risk of becoming overwhelmed, the goal then becomes to conserve, substitute, adapt, and reuse, so that, only in the most extreme of circumstances, are CSC needed.

THE KEY ELEMENTS OF CSC PLANNING

Here, we elaborate briefly on the five key elements of CSC planning:

- A strong ethical grounding;
- Integrated, continuing community and provider engagement, education, and communication;
- Assurances regarding legal authority and environment;
- Clear indicators, triggers, and lines of responsibility; and
- Evidence-based clinical processes and operations.

Ethical Grounding. During a crisis, it is vitally important to adhere to core ethical principles: fairness, the duty to care, the duty to steward resources, transparency in decision-making, consistency, proportionality, and accountability. Medical decisions informed by these ethical principles may allow for actions that would be unacceptable under ordinary circumstances, such as not providing some patients with resources when other patients would derive greater benefit from them. When resource scarcity reaches catastrophic levels, clinicians are ethically justified—and indeed are ethically obligated—to use the available resources to sustain life and well-being to the greatest extent possible.

Engagement, Education, and Communication. Both providers and the public must be engaged in CSC planning both to ensure the legitimacy of the process and the resulting standards and to achieve the best possible result. Both the public and healthcare providers must understand these difficult choices and be engaged in developing the criteria for making them. Those criteria must then be clear enough that practitioners can apply them when making decisions at the bedside, especially when the stewarding of scarce resources means withholding or withdrawing critical care services. Those criteria must reflect the values, wishes, and interests of all patients, especially the most vulnerable.

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In the current pandemic, public trust is essential. To this end, healthcare leaders must be proactive, honest, transparent, and accountable when communicating the state of their institutions and the system as a whole. Given the resources available at the start of the crisis and expected during the immediate period, demand for healthcare services, especially in critical care, will soon outstrip healthcare providers' ability to deliver usual care in many communities, as has already occurred in several metropolitan areas. Reports on extreme conditions elsewhere may not prepare the public for the shift to CSC in their own hometowns. Healthcare and political leaders have a duty to forewarn the public about what is coming, and the implications of CSC.

Senior leaders must also provide material and moral support to healthcare workers, who will bear the physical, health, and psychological burdens of working under CSC conditions. Providing that support will require careful, consistent messaging; ongoing two-way communication; and attention to the needs created by grueling, stressful work.

Legal Considerations. The law must inform CSC and create incentives for protecting the public's health and respecting individual rights. Extreme scarcity can necessitate difficult life-and-death decisions. Healthcare workers who will have to make them must have adequate guidance and legal protections. They must be able to follow the rule of law, even under disaster conditions.

At the same time, healthcare workers must be continually and clearly informed about all relevant changes in statutory or regulatory provisions. These legal issues may affect (1) the organization of key personnel, (2) fair access to treatment, (3) coordination of services within and across health systems, (4) assurance of patients' interests, (5) allocation of scarce resources, (6) protection of healthcare workers and volunteers from unwarranted liability claims, (7) reimbursement of costs incurred when protecting the public's health, and (8) interjurisdictional cooperation and coordination.

Indicators, Triggers, and Responsibility. Communities must be alert to indicators that signal a shift in the level of care that can be delivered. Under pandemic conditions, changes can occur rapidly. Being as prepared as possible requires situational awareness, open lines of practical and risk communication, and clear lines of authority and responsibility. Appendix A provides examples of such signals.

Evidence-Based Clinical Operations (Making Clinical Decisions under Crisis Conditions).

Beside decisions should be evidence-based, drawing on clinical research and experience as consistently and transparently as possible. These should evolve as evidence accrues. For the current situation, existing prospective tools are insufficient for decision-making. For example, Sequential Organ Failure Assessment (SOFA) scores have proven to be poor predictors of individual patients' survival, particularly for those with primary respiratory failure. Hence, at their current state of development, these scores are not suitable for excluding patients with respiratory failure from SARS-CoV-2 from receiving critical care. Similar reservations apply to

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other currently available decision support tools, although their value may improve as experience accumulates with patients having SARS-CoV-2 infection. Even in the face of imperfect data, decision-making will be needed at multiple levels. Governments and institutions should consider these criteria proactively, and disseminate them publicly and transparently. This will permit public input and enable better response to evolving science and local circumstances. A useful summary of ethical guidelines and list of resources has been compiled by the Hastings Center.¹

It is important to separate triage at each level of care from care provided at the bedside. This enables caregivers to better fulfill their ethical obligations to individual patients, while other decision-making processes ensure care provides the greatest good for the greatest number. Governments at all levels, institutions and frontline caregivers should recognize that these decisions are difficult and inherently involve ethical concerns. Ongoing peer- and psychological support for those involved will be essential for them to continue their work.

THE BOTTOM LINE

Despite efforts to forestall the spread of SARS-CoV-2 to date, it appears that the COVID-19 outbreak will continue expanding across the United States. We can, therefore, anticipate that a growing number of hospitals will face medical needs that outpace the existing supply of ventilators, protective equipment and other essentials, as well as the rate that enhanced supply can be produced, acquired, and put into place. These circumstances will require a shift to CSC.

Preparing for CSC means taking all feasible measures—including reuse, substitution, conservation, and administrative controls—to prevent or delay the need for CSC as long as possible. These measures must be taken at all levels of government, the healthcare system, and society. There is also an imminent need to prepare for difficult decisions about allocating limited resources, triaging patients to receive life-saving care, and minimizing the negative impacts of delivering care under crisis conditions. These preparations and the decisions that arise from them should be transparent and shared with the public. We hope the principles and elements of CSC planning outlined here will help decision makers at all levels.

Preparations for CSC include trustworthy communication with all stakeholders. Both the content and the process of those communications must convey the messages in the box below, which summarize the principles in the three seminal IOM reports on CSC. Failure to communicate regarding the shift to CSC will diminish public trust in healthcare providers and systems, as well as in government leadership. Without clear, consistent, candid communication, lost faith in institutions could become one more victim of COVID-19.

¹ Ethical Framework for Health Care Institutions and Guidelines for Institutional Ethics Services Responding to the Coronavirus Pandemic. <https://www.thehastingscenter.org/ethicalframeworkcovid19/>

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Key Messages and Principles

The following key messages and principles drawn from the three seminal Institute of Medicine (IOM) reports, described in Appendix A, can serve as a starting point for introducing the commitments of those responsible for the shift to CSC in response to the COVID-19:

- **We, the healthcare community, are doing everything possible to prevent and avoid crisis conditions and maintain conventional standards of care.** We are partners with the rest of society in slowing the spread of disease to decrease the number of people who may need critical care at the same time.
- **We recognize that the principal goal of implementing CSC is to maximize benefits to society, which includes saving as many lives—patients, healthcare workers, and front-line first responders—as possible.** CSC decisions allocate scarce treatment resources to those patients who are most likely to benefit, consistent with community values as articulated by bodies convened for this purpose (see Appendix A). Applying this overarching principle requires wise stewardship of medical resources, so that healthcare workers can help as many patients as possible. They need government, business, and healthcare systems to increase the supply and timely delivery of needed resources.
- **We are committed to creating CSC strategies that are fair, equitable, and responsive in order to maximize the safety of providers and patients.** Fairness is of paramount importance in the allocation of scarce life-saving medical resources.
- **We will communicate CSC in clear, consistent terms, through channels relevant to diverse stakeholder audiences.** We will speak with one voice to convey governmental commitment to a deliberate, thoughtful process on making these decisions of grave importance. We will draw on relevant research and community experience.
- **We anticipate that conditions will change as the pandemic spreads nationally, leading to dynamic shifts in standards of care, across communities and facilities.** We will apply the best available science to forecast those needs, address them equitably, and communicate the rationale for our actions.
- **We will consider patient and family preferences insofar as possible, within the constraint of allocating resources with the goal of saving the most patient and provider lives.** We will respect patients' dignity and preserve their comfort in all instances.
- **We will prepare adequately for the emotional impacts of CSC on healthcare workers, patients, their loved ones, and the public as a whole.** We will address the behavioral health needs of healthcare workers, patients, and their families, knowing the distress that CSC decisions will bring. We will explain these decision and demonstrate empathy with the distress and losses.

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Respectfully,

John Hick, M.D.

Member

Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats

Dan Hanfling, M.D.

Co-Chair

2009, 2012, and 2013 Institute of Medicine Crisis Standards of Care committees

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APPENDIX A

Foundational Work of the Institute of Medicine

A decade ago, during the period between the first and second waves of the H1N1 pandemic, the Institute of Medicine (IOM) convened a committee to address the following fundamental questions related to CSC:

- Who should receive care when not all who need it can be attended to?
- How should decisions be made about who gets access to care?
- Should the standard of care change to reflect the care that can be delivered under such circumstances?

The answers to these core questions formed the basis for the recommendations in the IOM’s 2009 Letter Report.² One of those recommendations was to “enable specific legal/regulatory powers and protections for healthcare providers in the necessary tasks of allocating and using scarce medical resources and implementing alternate care facilities” in the response to such events. The Letter Report also emphasized that CSC should be “formally declared by a state government” in recognition that crisis care operations “will be in place for a sustained period of time.”

Building on this work, the IOM in 2012 issued a report³ articulating a systems framework for catastrophic disaster planning and response, highlighting specific steps that key stakeholders—hospitals and health systems, public health and public safety agencies, emergency medical services, and providers of outpatient medical services—would need to take to prepare for healthcare delivery under crisis conditions. The third report, published in 2013,⁴ focused on the development of a toolkit identifying the indicators, triggers, and tactics needed to transition from conventional to crisis standards of care.

These reports are as timely and relevant today as they were the day they were released. The conditions under which CSC must be considered as a possibility clearly exist today, given the rapid spread of COVID-19 in communities across the United States and the resulting declarations of a public health emergency by U.S. Department of Health and Human Services

² Institute of Medicine. 2009. *Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations: A Letter Report*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/12749>.

³ Institute of Medicine. 2012. *Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response: Volume 1: Introduction and CSC Framework*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/13351>.

⁴ Institute of Medicine. 2013. *Crisis Standards of Care: A Toolkit for Indicators and Triggers*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/18338>.

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Secretary Azar; a national emergency by President Trump; and emergency declarations by every U.S. state and territory, as well as hundreds of municipalities.⁵

All decision makers engaged in the response to the COVID-19 outbreak will be challenged to answer crucial, complex questions reflecting the ethical, legal, clinical, political, and societal dimensions of this crisis. They will need to make difficult decisions about the allocation of resources, decisions with life-and-death consequences. The CSC framework, expressed in the recommendations and guidance of the IOM reports constitute the foundation for this rapid expert consultation and can guide our nation's response.

⁵ Descriptions of the emergency, disaster, and public health emergency categories can be found at <https://www.networkforphl.org/resources/emergency-legal-preparedness-covid19/>.

TABLE 8-1

Example Hospital Indicators, Triggers, and Tactics for Transitions Along the Continuum of Care

Indicator Category	Contingency	Crisis	Return Toward Conventional
Community and communications infrastructure	<p>Indicators:</p> <ul style="list-style-type: none"> Impact on community, including transportation and communications infrastructure <p>Triggers:</p> <ul style="list-style-type: none"> Loss of paging and/or cellular service in area Loss of phone service to hospital Loss of electrical service to hospital Closure of transit system <p>Tactics:</p> <ul style="list-style-type: none"> Use alternate communications strategies such as mass media and text messages, 700 or 800 MHz radio, satellite phones, HAM radios Provide employee alternate transportation options and on-site temporary housing Provide information to staff, visitors, and family members about impacts and response actions/options 	<p>Indicators:</p> <ul style="list-style-type: none"> Community-wide and likely prolonged impact on infrastructure affecting employee homes, transportation, and communication <p>Crisis Triggers:</p> <ul style="list-style-type: none"> Loss of electrical power or generator failure <p>Tactics:</p> <ul style="list-style-type: none"> Hospital evacuation/diversion if possible Consider whether shelter-in-place is an option Provide bag-valve ventilation for ventilator-dependent patients or place on battery-operated transport ventilators Anticipate need to switch to gravity drip IV medications with monitoring of drip rates as pump batteries fail 	<p>Indicators:</p> <ul style="list-style-type: none"> Restoration of services and transportation access <p>Triggers:</p> <ul style="list-style-type: none"> Restored electrical service <p>Tactics:</p> <ul style="list-style-type: none"> Scale back tactics or revert to conventional operations
Surveillance data	<p>Indicators:</p> <ul style="list-style-type: none"> Pandemic or epidemic (e.g., SARS) virus detected Health alert or other notification received Natural disaster occurs or mass casualty incident (MCI) declaration in community Epidemiologic forecasts (Centers for Disease Control and Prevention [CDC], etc.) Local surveillance/epidemiology data Standard metrics such as NEDOCS (National Emergency Department Overcrowding Score) Regional/community emergency department (ED) volume, ED wait times/boarding times Regional/community hospital capacity or subset data, such as available intensive care unit (ICU) beds 	<p>Indicators:</p> <ul style="list-style-type: none"> Epidemiologic projections will exceed resources available <p>Crisis Triggers:</p> <ul style="list-style-type: none"> Epidemiology projections exceed surge capacity of facility for space or specific capability (e.g., critical care)—see below space and supply considerations, as triggers should be based on depletion of available resources 	<p>Indicators:</p> <ul style="list-style-type: none"> Surveillance streams show decline in activity Improvement in regional/community ED volumes/wait times/boarding times <p>Triggers:</p> <ul style="list-style-type: none"> Not specified for predictive data, will adjust based on specific actionable data <p>Tactics:</p> <ul style="list-style-type: none"> Stand down incident management (scaled) Lengthen duration of planning cycles Reduce/deactivate regional information exchange Facility practices revert toward conventional Revert to normal system monitoring (defer this until incident clearly concludes)

continued

TABLE 8-1
Continued

Indicator Category	Contingency	Crisis	Return Toward Conventional
Surveillance data (continued)	<p>Triggers:</p> <ul style="list-style-type: none"> • Receipt of health alert triggers group notification by receiving infection prevention personnel • Disaster plan activated when >X seriously injured victims expected at facility—Hospital Command Center opens • “Full capacity” plan initiated when ED wait times exceed X hours <p>Tactics:</p> <ul style="list-style-type: none"> • Change or increase monitoring parameters, additional situational awareness activities • Partial or full activation of incident command system/hospital command center • Communication/coordination with stakeholders/coalition partners • Change hours, staffing, internal processes in accord with facility plans • Assess predicted impact on institution 		
<p>Staff</p> <p><i>[Refer also to the worker functional capacity table in Toolkit Part 1 (Table 3-1)]</i></p>	<p>Indicators:</p> <ul style="list-style-type: none"> • Increasing staff absenteeism • Specialized staff needed (pediatrics, burn, geriatrics) for incident patients • School closures • Staff work action anticipated (e.g., strike) • High patient census • Staffing hours adjustment required to maintain coverage • Staffing supervision model changes required to maintain coverage <p>Triggers:</p> <ul style="list-style-type: none"> • X% staff ill call rate prompts notification of emergency management group • School closures across area trigger opening of staff day care • Normal staff to patient ratios exceeded • Specific staff expertise demands exceeded (e.g., mass burn event—depletion of burn nurses) 	<p>Indicators:</p> <ul style="list-style-type: none"> • Increasing staff requirements in face of increasing demand • Contingency spaces maximized • Contingency staffing maximized <p>Crisis Triggers:</p> <ul style="list-style-type: none"> • Unable to safely increase staff to patient ratios or broaden supervisory responsibilities • Lack of qualified staff for specific cares—especially those with high life-safety impact <p>Tactics:</p> <ul style="list-style-type: none"> • Tailor responsibilities to expertise, diverting nontechnical or non-essential care to others • Recruit and credential staff from volunteer (Medical Reserve Corps [MRC], Emergency System for Advance Registration of Volunteer Health Professionals [ESAR-VHP]) or federal sources (Disaster Medical Assistance Team [DMAT], other National Disaster Medical System [NDMS] source, etc.) 	<p>Indicators:</p> <ul style="list-style-type: none"> • Staff impact is reduced, schools back in session, damage to community mitigated • Staff absenteeism reduced • Specialty staff obtained or demand decreased <p>Trigger:</p> <ul style="list-style-type: none"> • Staff to patient ratios of 1:X achieved on medical floor <p>Tactics:</p> <ul style="list-style-type: none"> • Shorten shift lengths • Adjust staff to patient ratios toward normal • Transition toward usual staff—releasing less qualified staff first • Resume care routines • Resume administrative duties

Tactics:

- Assess likely impact on facility
- Hold staff
- Change hours, staffing patterns
- Change staff to patient ratios
- Specialty staff provide only specialty/technical care, while other staff provide more general care
- Callback, obtain equivalent staff from coalition, hiring, administrative staff
- Change charting responsibilities
- Curtail nonessential staffing (cancel elective cases, specialty clinic visits, etc.)
- Provide support for staff (and their families as required) to help them continue to work and provide quality care (e.g., stress “immunization,” rest periods, housing support)

- Establish remote consultation of specialized services such as telemedicine, phone triage, etc., if possible
- Evacuate patients to other facilities with appropriate staff available

**Space/
infrastructure****Indicators:**

- Increased ED volumes
- Increased clinic/outpatient volumes
- Increased inpatient census
- Increased pending admits/ED boarding

Triggers:

- Inpatient census exceeds conventional beds
- Damage to infrastructure
- Clinics unable to accommodate demand for acute care
- >X hours ED boarding time
- Electronic health record downtime
- Telephone or Internet systems failures

Tactics:

- Expand hours of outpatient care
- Open additional outpatient care space by adjusting specialty clinic space/times
- Provide “inpatient” care on preinduction, postanesthesia care, other equivalent areas
- Divert patients to clinics/other facilities
- Transfer patients to other facilities
- “Reverse triage” appropriate patients home (with appropriate home care)
- Implement downtime procedures for IT systems

Indicators:

- Inpatient/outpatient contingency spaces maximized or near-maximized
- Escalating or sustained demand on ED/outpatient despite implementing contingency strategies
- Damage to infrastructure affecting critical systems

Crisis Triggers:

- Contingency inpatient beds maximized (may include subset of ICU, burn, pediatrics, etc.)
- Contingency outpatient adaptations inadequate to meet demand using equivalent spaces or strategies
- Damage to infrastructure affecting critical systems *and* presenting a safety issue to staff/patients

Tactics:

- Establish nontraditional alternate care locations (e.g., auditorium, tents, conference rooms), recognizing governmental role in authorizing waivers
- “Reverse triage” stable patients to these areas, move stable ICU patients to monitored bed areas (i.e., step-down units deliver ICU-level care)

Indicators:

- Favorable epidemiologic curves
- Restoration of critical system function
- ED/outpatient volumes decreasing

Trigger:

- Patients able to be matched to appropriate areas for care

Tactics:

- Transitional movement of sickest patients back into ICU environment
- Broaden admission criteria
- Reduce/eliminate care in nontraditional spaces (stop providing assessment/care in non-patient care areas/cot-based)
- Shift toward normal hours

continued

TABLE 8-1
Continued

Indicator Category	Contingency	Crisis	Return Toward Conventional
Space/ infrastructure (continued)		<ul style="list-style-type: none"> • Consider other methods of outpatient care, including telephone treatment and prescribing • Change admission criteria—manage as outpatients with support/early follow-up • Evacuate patients to other facilities in the region/state/nation that have appropriate capabilities and capacity 	
Supplies	<p>Indicators:</p> <ul style="list-style-type: none"> • Vendor supply or delivery disruption • Supply consumption/use rates • Epidemiology of event predicts supply impact <p>Triggers:</p> <ul style="list-style-type: none"> • Event epidemiology predicts ventilator or other specific resource shortages (e.g., pediatric equipment) • Medication/vaccine supply limited • Consumption rates of personal protective equipment (PPE) unsustainable • Vendor shortages impact ability to provide normal resources <p>Tactics:</p> <ul style="list-style-type: none"> • Use nontraditional vendors • Obtain from coalition facilities/stockpiles (including potential state/federal sources) • Conserve, substitute, or adapt functionally equivalent resources; reuse if appropriate 	<p>Indicators:</p> <ul style="list-style-type: none"> • Coalition lack of available ventilators • Anesthesia machines and other adaptive ventilation strategies in use • Coalition/vendor lack of available critical supplies/medications <p>Crisis Triggers:</p> <ul style="list-style-type: none"> • Inadequate ventilators (or other life-sustaining technology) for all patients that require them • Inadequate supplies of medications or supplies that cannot be effectively conserved or substituted for without risk of disability or death without treatment <p>Tactics:</p> <ul style="list-style-type: none"> • Implement triage team/clinical care committee process • Determine bridging therapies (bag-valve ventilation, etc.) • Coordinate care/triage policies with coalition facilities (in no-notice event, this may not be possible) • Triage access to live-saving resources (ventilators, blood products, specific medications) and reallocate as required to meet demand according to state/regional consensus recommendations • Restrict medications to select indications • Restrict PPE to high-risk exposures (and/or permit PPE reuse) • Reuse or reallocate resources when possible (benefit should outweigh risks of reuse; reallocate only when no alternatives—see criteria in IOM, 2012) 	<p>Indicators:</p> <ul style="list-style-type: none"> • Reduced use of PPE or other supplies • Reduced caseload or demand for care and services • Improved delivery of supplies • Reduced need for ventilator or other triage <p>Triggers:</p> <ul style="list-style-type: none"> • Able to provide contingency ventilation and critical care strategies to all that require them <p>Tactics:</p> <ul style="list-style-type: none"> • Retriage patients as resources become available • Broaden indications for interventions as conditions improve • Transition back from reallocation and reuse to safer adaptive and conservation strategies • Loosen restrictions on use of supplies

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APPENDIX B

Authors and Reviewers of this Rapid Expert Consultation

This rapid expert consultation was prepared by Dan Hanfling, In-Q-Tel, and John Hick, Hennepin County Medical Center, as the co-conveners of the CSC working group under the auspices of the National Academies' Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats. The working group for this document included the following individuals: Donald Berwick, Institute for Healthcare Improvement; Richard Besser, Robert Wood Johnson Foundation; Carlos del Rio, Emory Vaccine Center; James Hodge, Arizona State University; Kent Kester, Sanofi Pasteur; Tara O'Toole, In-Q-Tel; Jennifer Nuzzo, Johns Hopkins Bloomberg School of Public Health; Richard Serino, Harvard School of Public Health; Beth Weaver, RESOLVE; and Matthew Wynia, University of Colorado, Center for Bioethics and Humanities.

Harvey Fineberg, chair of the Standing Committee, approved this document. The following individuals served as reviewers: Baruch Fischhoff, Carnegie Mellon University; Nicole Lurie, Coalition for Epidemic Preparedness Innovations and Harvard University; Bernard Lo, The Greenwall Foundation; and Monica Schoch-Spana, Johns Hopkins Bloomberg School of Public Health. Ellen Wright Clayton, Vanderbilt University Medical University, and Susan Curry, University of Iowa, served as arbiters of this review on behalf of the National Academies' Report Review Committee and its Health and Medicine Division.

From: Besser, Richard
Sent: Sun, 29 Mar 2020 20:38:37 +0000
To: Butler, Jay C. (CDC/DDID/OD)
Subject: RE: Response to Task 6- Crisis Standards of Care
Attachments: AEI National-Coronavirus-Response-a-Road-Map-to-Recovering.pdf

Will do. If you haven't read the AEI paper, it's worth it.

Richard E. Besser, MD, President and CEO
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 Connect with me on [Twitter](#) | [LinkedIn](#) | [Facebook](#)

Robert Wood Johnson Foundation
Building a Culture of Health in America. Learn more at rwjf.org.
 Follow the Foundation [Twitter](#) | [Facebook](#) | [YouTube](#)

.....
***Please note:** In light of the requests made for increased social distancing related to the coronavirus (COVID-19), we have closed all three RWJF campuses in Princeton, New York City, and Washington until further notice. All RWJF employees are now working remotely, and all in-person meetings are either cancelled or will be conducted virtually. For the most up-to-date information regarding COVID-19 please see resources on [CDC](#), [NIH](#) as well as your state health department websites.*

From: Butler, Jay C. (CDC/DDID/OD) <jcb3@cdc.gov>
Sent: Sunday, March 29, 2020 4:10 PM
To: Besser, Richard <rbesser@rwjf.org>
Subject: Re: Response to Task 6- Crisis Standards of Care

Thank you, Rich—this are quite useful. If you can continue to share, that would be fabulous!

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From: Besser, Richard <rbesser@rwjf.org>
Sent: Sunday, March 29, 2020 10:56:38 AM
To: Butler, Jay C. (CDC/DDID/OD) <jcb3@cdc.gov>
Subject: Fwd: Response to Task 6- Crisis Standards of Care

The latest from expert consultation.

Richard E. Besser, M.D.
 President and CEO
 Robert Wood Johnson Foundation

.....

Please note: In light of the request made for increased social distancing we have made the decision to close all three RWJF campuses in New Jersey, New York, and Washington, until further notice. All RWJF employees will now work remotely, and all in-person meetings are either cancelled or will be conducted virtually. For accurate information on what to do to prepare and respond to COVID-19, visit [CDC.gov \(https://www.cdc.gov/coronavirus/2019-nCoV/index.html\)](https://www.cdc.gov/coronavirus/2019-nCoV/index.html) and your state health department website.

From: Pope, Andrew <APope@nas.edu>

Sent: Saturday, March 28, 2020 10:22:46 PM

To: 'harvey.fineberg@moore.org' <harvey.fineberg@moore.org>; 'Kristian G. Andersen' <(b)(6)>; 'Diane Griffin' <dgriffi6@jhmi.edu>; 'O'Toole, Tara' <totoole@igt.org>; 'Jonna Mazet' <jkmazet@ucdavis.edu>; 'Phyllis D. Meadows' <PDMeadows@kresge.org>; 'peggy@hbfam.net' <peggy@hbfam.net>; 'David A Relman' <relman@stanford.edu>; 'Mark Smolinski' <mark@endingpandemics.org>; 'Bassett, Mary Travis' <mbassett@hsph.harvard.edu>; 'Trevor Bedford' <trevor@bedford.io>; 'Georges Benjamin' <georges.benjamin@apha.org>; 'Besser, Richard' <rbesser@rwjf.org>; 'John Hick' <(b)(6)> 'alp81@georgetown.edu' <alp81@georgetown.edu>; 'Embrey, Ellen' <eembrey@stratitia.com>; 'Walt, David' <dwalt@bwh.harvard.edu>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'Kester, Kent /US' <Kent.Kester@sanofi.com>; 'Patricia king' <(b)(6)>; 'Donald Berwick' <(b)(6)> 'Alta CHARO' <alta.charo@wisc.edu>

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Subject: Response to Task 6- Crisis Standards of Care

Dear Committee members

As some of you already know, we received a task/question on Wednesday, March 25 from the ASH and ASPR regarding a rationale for the implementation of crisis standards of care (CSC) in response to the COVID-19 pandemic. .

In the interest of keeping everyone informed, we wanted to share the attached response that was delivered to the sponsors today. The response will also be posted early next week on the committee's webpage under "Publications:" <https://www.nationalacademies.org/our-work/standing-committee-on-emerging-infectious-diseases-and-21st-century-health-threats#sectionPublications>

Please let us know if you have any questions.

Be careful out there,

Andy

Andrew M. Pope, Ph.D.

Director
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National Coronavirus Response

A ROAD MAP TO REOPENING

Scott Gottlieb, MD

Caitlin Rivers, PhD, MPH

Mark B. McClellan, MD, PhD

Lauren Silvis, JD

Crystal Watson, DrPh, MPH

MARCH 28, 2020

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MARCH 28, 2020

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Executive Summary

This report provides a road map for navigating through the current COVID-19 pandemic in the United States. It outlines specific directions for adapting our public-health strategy as we limit the epidemic spread of COVID-19 and are able to transition to new tools and approaches to prevent further spread of the disease. We outline the steps that can be taken as epidemic transmission is brought under control in different regions. These steps can transition to tools and approaches that target those with infection rather than mitigation tactics that target entire populations in regions where transmission is widespread and not controlled. We suggest measurable milestones for identifying when we can make these transitions and start reopening America for businesses and families.

In each phase, we outline the steps that the federal government, working with the states and public-health and health care partners, should take to inform the response. This will take time, but planning for each phase should begin now so the infrastructure is in place when it is time to transition.

The specific milestones and markers included in the report for transitioning our responses are judgments based on our current understanding, with the goal of facilitating an effective path forward. The epidemic is evolving rapidly, and our understanding of best responses will evolve as well. The broad set of tasks described here requires and will receive high-level, ongoing attention, and it should be updated and refined as additional evidence, context, and insights about the epidemic become available.

To gradually move away from a reliance on physical distancing as our primary tool for controlling future spread, we need:

- 1) Better data to identify areas of spread and the rate of exposure and immunity in the population;
- 2) Improvements in state and local health care system capabilities, public-health infrastructure for early outbreak identification, case containment, and adequate medical supplies; and
- 3) Therapeutic, prophylactic, and preventive treatments and better-informed medical interventions that give us the tools to protect the most vulnerable people and help rescue those who may become very sick.

Our stepwise approach depends on our ability to aggregate and analyze data in real time. To strengthen our public-health surveillance system to account for the unprecedented spread of COVID-19, we need to harness the power of technology and drive additional resources to our state and local public-health departments, which are on the front lines of case identification and contact tracing. Finally, we must expand our investments in pharmaceutical research and development into COVID-19 and promote the rapid deployment of effective diagnostics, therapies, and eventually a vaccine.

Slow the Spread in Phase I. This is the current phase of response. The COVID-19 epidemic in the United States is currently growing, with community transmission occurring in every state. To slow the spread in this period,¹ schools are closed across the country, workers are being asked to do their jobs from home when possible, community gathering spaces such as malls and gyms are closed, and restaurants are being asked to limit their services. These measures will need to be in place in each state until transmission has measurably slowed down and health infrastructure can be scaled up to safely manage the outbreak and care for the sick.

State-by-State Reopening in Phase II. Individual states can move to Phase II when they are able to safely diagnose, treat, and isolate COVID-19 cases and their contacts. During this phase, schools and businesses can reopen, and much of normal life can begin to resume in a phased approach. However, some physical distancing measures and limitations on gatherings will still need to be in place to prevent transmission from accelerating again. For older adults (those over age 60), those with underlying health conditions, and other populations at heightened risk from COVID-19, continuing to limit time in the community will be important.

Public hygiene will be sharply improved, and deep cleanings on shared spaces should become more routine. Shared surfaces will be more frequently sanitized, among other measures. In addition to case-based interventions that more actively identify and isolate people with the disease and their contacts, the public will initially be asked to limit gatherings, and people will initially be asked to wear fabric nonmedical face masks while in the community to reduce their risk of asymptomatic spread. Those who are sick will be asked to stay home and seek testing for COVID-19. Testing should become more widespread and routine as point-of-care diagnostics are fully deployed in doctors' offices.

While we focus on state-by-state reopening of activities in a responsible manner and based on surveillance data, we note that states may move forward at a county or regional level if these conditions vary within the state and that coordination on reopening among states that share metropolitan regions will be necessary.

Establish Immune Protection and Lift Physical Distancing During Phase III. Physical distancing restrictions and other Phase II measures can be lifted when safe and effective tools for mitigating the risk of COVID-19 are available, including broad surveillance, therapeutics that can rescue patients with significant disease or prevent serious illness in those most at risk, or a safe and effective vaccine.

Rebuild Our Readiness for the Next Pandemic in Phase IV. After we successfully defeat COVID-19, we must ensure that America is never again unprepared to face a new infectious disease threat. This will require investment into research and development initiatives, expansion of public-health and health care infrastructure and workforce, and clear governance structures to execute strong preparedness plans. Properly implemented, the steps described here also provide the foundation for containing the damage that future pathogens may cause.

Phase I: Slow the Spread

Goals

The goal of Phase I is to save lives by:

- 1) Slowing the transmission of SARS-CoV-2 across the United States by reducing the effective reproduction number of infections,
- 2) Increasing testing capacity to accommodate the ability to test everyone with symptoms and their close contacts, and
- 3) Ensuring the health care system has the capacity to safely treat both COVID-19 patients and others requiring care.

A successful Phase I will allow for a significant relaxation of physical distancing measures and a progression to Phase II, when more targeted, case-based interventions are possible.

Thresholds for Action

Trigger to Begin to “Slow the Spread.” The trigger to implement nationwide “slow the spread” measures² in Phase I is the existence in multiple geographic locations around the country of confirmed cases that cannot be traced back to other known cases (“community spread”).³ This trigger has already been reached in the United States.

Trigger to Move to Phase II. To guard against the risk that large outbreaks or epidemic spread could reignite once we lift our initial efforts to “slow the spread,” the trigger for a move to Phase II should be when a state reports a sustained reduction in cases for at least 14 days (i.e., one incubation period); *and*

Stay-at-Home Advisories

The trigger for issuing a stay-at-home advisory⁶ in a US state is when case counts are doubling every three to five days⁷ (based on the current New York experience) or when state and local officials recommend it based on the local context (for example, growth on track to overwhelm the health system’s capacity).

The trigger for issuing a recommendation to step down from a stay-at-home-advisory back to “slow the spread” is when the number of new cases reported in a state has declined steadily for 14 days (i.e., one incubation period) and the jurisdiction is able to test everyone seeking care for COVID-19 symptoms.

local hospitals are safely able to treat all patients requiring hospitalization without resorting to crisis standards of care⁴; *and* the capacity exists in the state to test all people with COVID-19 symptoms, along with state capacity to conduct active monitoring of all confirmed cases and their contacts.⁵

Steps Required in Phase I

Maintain Physical Distancing. Each state must maintain community-level physical distancing measures⁸ until the threshold for moving to Phase II is met. These Phase I measures include:

- Closing community gathering spaces such as schools, shopping centers, dining areas,

- museums, and gyms statewide (places where people congregate indoors);
- Promoting telework for nonessential employees statewide;
 - Urging the public to limit unnecessary domestic or international travel;
 - Canceling or postponing meetings and mass gatherings;
 - Shutting dining areas but encouraging restaurants to provide takeout and delivery services if possible;
 - Issuing stay-at-home advisories in hot spots where transmission is particularly intense (i.e., when case counts are doubling in a city or locality every three to five days); and
 - Monitoring community adherence to physical distancing and stay-at-home advisories, adjusting risk messaging as appropriate, and identifying alternative incentives for compliance if needed.

Increase Diagnostic Testing Capacity and Build Data Infrastructure for Rapid Sharing of Results.

Same-day, point-of-care diagnostic testing (widely available in outpatient settings) is crucial for identifying cases, including those with asymptomatic and mild infections. To move from community-wide interventions that focus on large populations to case-based interventions that target and isolate individual people who are infected, capacity should be sufficient to test:

- 1) Hospitalized patients (rapid diagnostics are needed for this population);
- 2) Health care workers and workers in essential roles (those in community-facing roles in health and public safety);

- 3) Close contacts of confirmed cases; and
- 4) Outpatients with symptoms. (This is best accomplished with point-of-care diagnostics in doctors' offices with guidelines that encourage widespread screening and mandated coverage for testing.)

We estimate that a national capacity of at least 750,000 tests per week would be sufficient to move to case-based interventions when paired with sufficient capacity in supportive public-health infrastructure (e.g., contact tracing).⁹ In conjunction with more widespread testing, we need to invest in new tools to make it efficient for providers to communicate the test results and make the data easily accessible to public-health officials working to contain future outbreaks.

Ensure Functioning of the Health Care System.

Ensure sufficient critical-care capacity¹⁰ in hospitals to be able to immediately expand capacity from 2.8 critical-care beds per 10,000 adults to 5–7 beds per 10,000 adults in the setting of an epidemic or other emergency, allowing for regional variation.¹¹ This target is a minimum, must be adequate for the current and forecasted level of demand, and must be accompanied by adequate staffing. Regional variation in capacity reflecting local needs is acceptable.

Expand access to ventilators in hospitals from 3 per 10,000 adults to a goal of 5–7 ventilators per 10,000 adults.¹² This target does not include transport or anesthesia machines. This target is a minimum, must be adequate for the current and forecasted level of demand, and must be accompanied by adequate staffing. Regional variation in capacity reflecting local needs is acceptable.

Maintain access to acute-care hospital beds of at least 30 per 10,000 adults.¹³ Facilities should have a plan, in the case of a surge in hospital demand, for how the beds would be rapidly flexed from more discretionary uses (e.g., elective procedures) and adequately staffed, with access to adequate supplies of oxygen and other medical supplies.

This health care functioning target would also be met if critical-care and ventilator capacity does not expand to that level but COVID-19 incidence is maintained or falls meaningfully below the state's capacity to meet critical-care demand. These capacity targets can also be partially met through the availability of ample mobile health care infrastructures (supported and perhaps maintained by federal or state governments) that can be distributed and set up on short notice to hot areas with surge capacity needs.

Increase Supply of Personal Protective Equipment. The Centers for Disease Control and Prevention (CDC) recommends, at a minimum, N95 respirators for hospital staff expected to have direct contact with COVID-19 patients, plus disposable procedural or surgical masks for all other clinical personnel in any health care setting.¹⁴ The supply chain should be able to reliably distribute sufficient N95 masks, gloves, and other personal protective equipment to protect health care workers from infection.

Implement Comprehensive COVID-19 Surveillance Systems. The move toward less restrictive physical distancing could precipitate another period of acceleration in case counts. Careful surveillance will be needed to monitor trends in incidence. A high-performing disease surveillance system should be established that leverages:

- 1) Widespread and rapid testing at the point of care using cheaper, accessible, and sensitive point-of-care diagnostic tools that are authorized by the Food and Drug Administration (FDA);
- 2) Serological testing to gauge background rates of exposure and immunity to inform public-health decision-making about the level of population-based mitigation that is required to prevent continued spread in the setting of an outbreak; and
- 3) A comprehensive national sentinel surveillance system, supported by and coordinated with local public-health systems and health care providers,

to track the background rate of infection across states and identify community spread while an outbreak is still small and at a stage in which case-based interventions can prevent a larger outbreak.

ILINet, the surveillance system for influenza-like illness in the United States, is a potential model for SARS-CoV-2 surveillance. To enable rapid and more effective detection and case management, SARS-CoV-2 surveillance will also benefit from data sharing and coordination with health care providers and payers. The CDC should convene an intergovernmental task force, with outside experts as needed and input from states and the health care community, to develop and support a new national surveillance system and data infrastructure for tracking and analyzing COVID-19.

Massively Scale Contact Tracing and Isolation and Quarantine. When a new case of COVID-19 is diagnosed, the patient should be isolated either at home or in a hospital, depending on the level of care he or she requires. Current CDC guidelines recommend seven days of isolation.¹⁵ Home isolation can be enforced using technology such as GPS tracking on cell phone apps. Also, the close contacts of confirmed cases (as defined by the CDC¹⁶) should be quarantined and monitored daily for 14 days. Monitoring of international travelers is also recommended.¹⁷

To scale these interventions to accommodate thousands of daily cases and tens of thousands of daily contacts, public-health infrastructure will need to be dramatically scaled up throughout the country, in coordination with the improving capacity of health care providers to prevent, diagnose, and treat COVID-19 cases.

The task force should also be charged with developing and overseeing an initiative to:

- 1) Surge the existing public-health workforce to conduct case finding and contact tracing;
- 2) Enable rapid reporting to state, local, and federal health authorities, through the public-health

workforce and electronic data sharing from health care providers and labs; and

- 3) Develop and field a technological approach to enable rapid data entry, reporting, and support for isolation, quarantine, and safe community-based treatment of affected individuals.

Offer Voluntary Local Isolation and Quarantine. Comfortable, free facilities should be provided for cases and their contacts who prefer local isolation, quarantine, and treatment away from home. For example, a member of a large household may wish to recover in a hotel room that has been repurposed rather than risk infecting family members. Isolation and quarantine away from home should not be mandatory or compelled by force.

The Federal Emergency Management Agency is the lead agency tasked with coordinating with state and local jurisdictions to stand up appropriate isolation and quarantine facilities. Field hospitals, dormitories, hotels, and military barracks may be appropriated for this purpose.

Encourage the Public to Wear Masks. There is emerging evidence that asymptomatic and presymptomatic transmission of COVID-19 is possible,¹⁸ which complicates efforts to pursue case-based interventions. To reduce this risk during Phase I, everyone, including people without symptoms, should be encouraged to wear nonmedical fabric face masks while in public.¹⁹

Face masks will be most effective at slowing the spread of SARS-CoV-2 if they are widely used, because they may help prevent people who are asymptotically infected from transmitting the disease

unknowingly. Face masks are used widely by members of the public in some countries that have successfully managed their outbreaks, including South Korea and Hong Kong.²⁰ The World Health Organization (WHO) recommended the use of face masks by members of the public in the event of a severe influenza pandemic.²¹

However, personal protective equipment should continue to be reserved for health care workers until supplies are sufficient for them and abundant. For this reason, right now members of the general public should opt to wear nonmedical fabric face masks when going out in public. The CDC should issue guidelines on the proper design of such nonmedical fabric face masks. Consumers may be able to fashion these masks themselves using available washable materials, or they may become available in the consumer marketplace.

Trigger for Moving to Phase II

A state can safely proceed to Phase II when it has achieved all the following:

- A sustained reduction in cases for at least 14 days;
- Hospitals in the state are safely able to treat all patients requiring hospitalization without resorting to crisis standards of care²²;
- The state is able to test all people with COVID-19 symptoms; *and*
- The state is able to conduct active monitoring of confirmed cases and their contacts.²³

Phase II: Reopen, State by State

In Phase II, the majority of schools, universities, and businesses can reopen. Teleworking should continue where convenient; social gatherings should continue to be limited to fewer than 50 people wherever possible. Other local restrictions should be considered, such as those that limit people from congregating in close proximity.

High-contact settings such as schools should continue to review and implement physical distancing measures with guidance from the CDC and input from local officials. Health officials should recommend increased social hygiene measures and cleaning of shared surfaces.

For older adults (those over 60 years old), those with underlying health conditions, and other populations at heightened risk from COVID-19, it should still be recommended that they limit time in the community during Phase II. This recommendation may change if an effective therapeutic becomes available.

We need to consider these activities on a coordinated, regional basis through multistate cooperation. While state and local governments maintain sovereignty over issues related to their public-health response, coordination based on regions that cross state boundaries will be crucial. Large states with multiple urban areas and rural regions may implement reopening at a regional level. States that share major metropolitan areas (for example, New York, New Jersey, and Connecticut) should assure that the conditions for reopening these areas are met across the relevant state boundaries.

Goals

The goals of Phase II are to:

- 1) Lift strict physical distancing measures in a concerted and careful fashion,

- 2) Allow the vast majority of businesses and schools to open, and

- 3) Continue to control SARS-CoV-2 transmission so we do not revert back to Phase I.

The adoption of these Phase II measures will require a careful balance. We will need to constantly reevaluate the implementation of these measures based on available surveillance data, and we will need to be ready to adjust our approach over time according to the epidemiology of local, national, and global spread. This is especially true as we transition from one phase to the next.

Thresholds for Action

Trigger to Lift Physical Distancing Measures.

Once the criteria for the transition from Phase I to Phase II have been met and we begin to move away from the “slow the spread” period, leaders at the state level should begin an incremental easing of physical distancing measures. This should be done gradually and should be paired with increased surveillance for new cases. State officials should make decisions about the selection and timing of restrictions to lift based on their local contexts. Restrictions should be eased gradually, with sufficient time between each adjustment to carefully monitor for resurgence of transmission.

Trigger for Returning to Phase I, “Slow the Spread.” As physical distancing is gradually eased, surveillance will be essential for quickly identifying an increase in cases in the state. A state should revert to Phase I and continue “slow the spread” if a substantial number of cases cannot be traced back to known cases, if there is a sustained rise in new cases for five

days, or if hospitals in the state are no longer able to safely treat all patients requiring hospitalization.

Trigger for Moving to Phase III. Once a vaccine has been developed, has been tested for safety and efficacy, and receives FDA emergency use authorization,²⁴ or there are other therapeutic options that can be used for preventive or treatment indications and that have a measurable impact on disease activity and can help rescue very sick patients, states can move to Phase III.

Steps Required in Phase II

Implement Case-Based Interventions. Using the public-health capacities developed in Phase I, every confirmed case should be isolated either at home, in a hospital, or (voluntarily) in a local isolation facility for at least seven days, or according to the latest CDC guidance. People awaiting test results should be advised to quarantine until their results are returned.

The close contacts of confirmed cases should be traced and placed under home or central quarantine, with active daily monitoring for at least 14 days, or according to the latest CDC guidance. Diagnostic tests should be immediately administered to any close contacts who develop symptoms.

Begin to Relax Physical Distancing Measures. General physical distancing precautions should still be the norm during Phase II, including teleworking (as much as possible), maintaining hand hygiene and respiratory etiquette, wearing a mask in public, regularly disinfecting high-touch surfaces, and initially limiting social gatherings to fewer than 50 people. These recommendations should be augmented through technological solutions to understand physical distancing behaviors and adjust risk messaging as needed. This should be accomplished through partnerships with the private sector, with careful attention paid to preserving privacy and avoiding coercive means to encourage compliance.

As children return to school and daycare (i.e., high-contact settings) and people return to high-density workplaces, leaders of these organizations should continue to review and implement physical distancing measures based on guidance from the CDC for schools and businesses.²⁵

Special Care for Vulnerable Populations. While easing of physical distancing is taking place, highly vulnerable populations,²⁶ such as individuals older than 60 and those with compromised immune systems or compromised lung and heart function, should continue to engage in physical distancing as much as possible until a vaccine is available, an effective treatment is available, or there is no longer community transmission. Special attention should be paid to long-term-care facilities and nursing homes.²⁷ These facilities will need to maintain high levels of infection prevention and control efforts and limit visitors to prevent outbreaks.

If a treatment or prophylactic, such as a monoclonal antibody,²⁸ becomes available, high-risk and vulnerable populations should be prioritized to receive it, to both protect those individuals and reduce the likelihood of an increase in severe illnesses and additional patient surge in hospital intensive care units (ICUs).

Accelerate the Development of Therapeutics. Therapeutics play an important role in caring for those who are sick. Accelerating the research, development, production, and distribution of safe and effective therapeutics is a top priority. With effective development strategies and early investments in commercial-scale manufacturing, a successful therapeutic could receive emergency use authorization or approval as early as the summer or fall, if trials demonstrate that it meets either standard.

Therapeutics can serve a number of roles. First, they can serve as a prophylaxis to help prevent infection in those at greatest risk of infection, such as front-line health care workers, or those at risk of bad outcomes, such as individuals with preexisting health conditions and those who are immunocompromised. Such a treatment could include a recombinant

antibody that can target the virus surface antigens. As an example, researchers successfully developed such a therapeutic against Ebola. These antibody drugs can also be used to treat early infection or as a postexposure prophylaxis.

Other therapeutics might include antiviral drugs that target features of how the virus replicates. These drugs can be used to treat people who are critically ill or earlier in the course of disease for those at risk of developing a complication. Antiviral drugs can also be used as postexposure prophylaxis, depending on their safety profile. Postexposure prophylaxis and products that shorten the duration and intensity of viral shedding may affect the effective reproduction number only modestly. In addition, immune-modulating treatments may prove to be helpful in mitigating severe lung complications in some patients. A number of promising drugs are in early and mid-stage development.

At a minimum, the optimal profile for a therapeutic that will affect the risk from future spread is one that meaningfully reduces the risk of death or severe disease and perhaps prevents the onset of symptoms or progression to severe disease in those exposed. Oral administration at the outpatient level would be ideal, but alternative administration requirements (e.g., infusion and jet injections) could also be scaled, with sufficient planning.

While private industry has already organized a large task force to share information and capabilities to rapidly advance promising therapies, we need a commensurate focus by federal agencies to make sure the best possible resources are brought to this mission. Federal agencies should join organized efforts already underway in the private sector.

Identify Those Who Are Immune. Serology is a method used to identify evidence of immunity in someone who has recovered from infection. With accurate and widely available serological testing, we

can identify people who are immune and therefore no longer vulnerable to infection. While we need to better understand the strength of the immune response in mild cases and how long people remain immune from reinfection, we know there is a period where most people will have sufficient antibodies to offer protection. People who are immune could:

- 1) Return to work,
- 2) Serve in high-risk roles like those at the front lines of the health care system, and
- 3) Serve in roles that support community functioning for people who are still physically distancing (e.g., the elderly who continue to quarantine at home).

To use serology in this way, serological assays are needed and should be widely available, accurate, rapid, and low cost. Such assays have already been developed by researchers, but they have not yet been fully validated and are not available at scale.

A task force comprised of senior leaders from the CDC, the Biomedical Advanced Research and Development Authority, the National Institute of Allergy and Infectious Diseases, the Department of Defense (DOD), the FDA, academia, and key private-sector groups (e.g., serological manufacturing companies) should be tasked to oversee the development, production, distribution, data collection, serological survey designs, and analytics for use of serology at scale.²⁹

Trigger for Moving to Phase III

Once a vaccine has been developed, has been tested for safety and efficacy, and receives FDA emergency use authorization,³⁰ states can move to Phase III.

Phase III: Establish Protection Then Lift All Restrictions

Once a robust surveillance sentinel system is in place, coupled with widespread point-of-care testing and a robust ability to implement tracing, isolation, and quarantines—and this is supported by the availability of therapeutics that can help mitigate the risk of spread or reduce serious outcomes in those with infections—or alternatively a vaccine has been developed and tested for safety and efficacy, we can enter Phase III. The availability of these technologies (and eventually a safe and effective vaccine) will have economic and social benefits, in addition to health benefits.

Goals

The goals of safe and effective technologies for controlling transmission are to:

- 1) Prevent infection;
- 2) Treat those with early disease to prevent bad outcomes;
- 3) Provide a prophylaxis for those exposed to infection to prevent them from developing disease or reduce its severity;
- 4) In the case of a vaccine, build population-level immunity to the virus in order to reduce illness and death and stop or greatly slow spread; and
- 5) Enable the lifting of all physical distancing measures.

Thresholds for Action

Trigger to Begin Manufacturing Scale-Up and Vaccine or Therapeutic Prioritization Planning.

As soon as a vaccine or therapeutic looks promising in pivotal clinical trials (i.e., it has been shown to be safe and looks like it will also be effective),³¹ the US government should work with industry to begin planning for mass manufacturing, distribution, and administration. New provisions enacted under the recently passed CARES Act allow for large-scale manufacturing of promising therapies, in advance of approval, to help make sure there will be adequate supply available for mass distribution, should a product demonstrate that it is safe and effective and win regulatory approval.

Trigger for Switch Toward Mass Vaccination.

Once availability of vaccine or therapeutic is able to meet demand, vaccination can expand beyond priority groups. The CDC, state public-health agencies, and vaccine developers should work together to plan for and execute mass vaccination of large populations in the US. This planning can begin before Phase III because preparation can be made regardless of vaccine availability.

Steps to Take in Phase III

Vaccine or Therapeutic Production. Once a safe and effective vaccine or therapeutic has been licensed, it will need to be quickly manufactured at scale. The Public Health Emergency Medical Countermeasures enterprise,³² in coordination with pharmaceutical

companies and other private-sector stakeholders, should continue to plan for and implement mass production capable of quickly meeting US demand.

Vaccine or Therapeutic Prioritization—When Supply Is Still Limited. The CDC, the National Institutes of Health, the Office of the Assistant Secretary for Preparedness and Response, the DOD, and other stakeholders should revise prior influenza vaccine prioritization guidance to apply specifically to COVID-19.³³ The new prioritization guidance for the COVID-19 vaccine should identify priority groups for targeted distribution when a safe and effective vaccine starts to become available. The guidance should be transparent and explain the reasoning for priorities, including the populations in which the vaccine was studied, and should be a phased approach that expands to additional priority groups as vaccine availability expands. The guidance should be reflected in COVID-19 payment policies implemented by the Centers for Medicare & Medicaid Services (CMS) and private insurers, with treatment available at no cost to individuals who meet the priority guidance and a mechanism for reimbursement for individuals who are uninsured.

Mass Vaccination or Therapeutic Distribution—When Supply Is Abundant. The CDC should work with state and local health officials, health care providers, CMS and health insurers, and other public-health stakeholders to create a national plan for how mass vaccination will be carried out across the country. This plan should identify who

will administer vaccinations, where vaccines will be offered, and how data will be collected on vaccination rates, as well as possible adverse events from the vaccine. Indemnification of vaccine developers and manufacturers should also be considered. Congress could enact legislation to support a process for compensation of any individual who has an adverse event from the vaccine, which requires medical care.

Global Vaccine Scale-Up and Vaccination. The CDC, the US Agency for International Development, the State Department, and other US stakeholders should continue to work with WHO and other international organizations and national leaders to plan for how the US will assist other countries (particularly low- and middle-income countries) with obtaining vaccine and implementing mass vaccination. Support from the United States and higher-income nations will be critical for controlling the virus globally and saving lives around the world, as well as reducing the impact that future waves of the pandemic may have on the US population.

Serological Surveys to Determine Population Immunity. One key input for understanding the population at risk is the fraction of the population who have recovered and are protected against reinfection. If a sufficiently high fraction of the population has become immune either through natural recovery or vaccination, remaining restrictions can be lifted. The CDC should be the lead agency for coordinating ongoing serological surveys.

Phase IV: Rebuild Our Readiness for the Next Pandemic

The COVID-19 pandemic has exposed serious gaps in our nation's pandemic preparedness. COVID-19 will not be the last public-health emergency to threaten American society. We must invest in the scientific, public-health, and medical infrastructure needed to prevent, detect, and respond to the next infectious disease threat.

Develop Vaccines for Novel Viruses in Months, Not Years. In response to COVID-19 and in preparation for the next previously unidentified health threat (“Disease X”³⁴), the United States should lead the way by setting an ambitious goal of rapidly developing medical countermeasures for novel or unknown threats in months, not years. A dedicated strategy, program, and funding will be needed to create the ability at existing agencies within the US Department of Health and Human Services and DOD to quickly develop flexible platforms and countermeasures for any type of novel pathogen.³⁵ This strategy should include supporting flexible manufacturing capacity to scale up production to a global level in an emergency.

Modernize and Fortify the Health Care System. We must improve our hospital-bed and ICU capacity to accommodate large surges of patients through public-private partnerships, for example, by enhancing the Hospital Preparedness Program³⁶ and the Public Health Emergency Preparedness Cooperative Agreement³⁷ and emphasizing preparedness in federal health care programs (e.g., the CMS³⁸ and the Department of Veterans Affairs³⁹). We must also expand the supply chain of personal protective equipment and further the development of crisis standards of care. To reduce future burdens on our critical-care systems, we must also support our primary and community care capabilities to identify populations at elevated risk, detect cases early, and manage them at home or in the community more effectively. Health care payers

have been implementing payment reforms to support better screening and population health management. Emergency supplemental payments to health care providers in the current pandemic and future health care payments should be linked to establishing better surge capacity for severe cases, as well as stronger capabilities to partner with public-health authorities to contain outbreaks and reduce the burden on hospitals.

Establish a National Infectious Disease Forecasting Center. Given the important role of infectious disease modeling in supporting public-health decision-making, we should increase our nation's capacity to use infectious disease modeling⁴⁰ to support public-health decision-making by establishing a national infectious disease forecasting center. This permanent federal institution would function similarly to the National Weather Service, providing a centralized capability for both producing models and undertaking investigations to improve methods used to advance basic science and data-science and visualization capabilities. It would also provide decision support to public-health agencies based on modeling and analytic results.

Governance. We need to move away from a decentralized system that promotes unequal implementation of preparedness measures across the nation and toward more coordinated execution of response. We should develop clear and effective plans for the implementation of public-health measures such as quarantine and the unification of actions made by state and local health departments. Outbreaks are matters of regional—and more typically national—concern. Preparedness for public-health emergencies should be elevated as a function in the White House, with a coordinating function analogous to the director of national intelligence.

Acknowledgments

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 28 Jul 2020 22:24:10 +0000
To: Solomon Abebe Yimer
Subject: Re: Kickoff meeting
Attachments: image005.png, image007.png, image009.png, image011.png, image013.png, image015.png, image025.png, image026.png, image027.png

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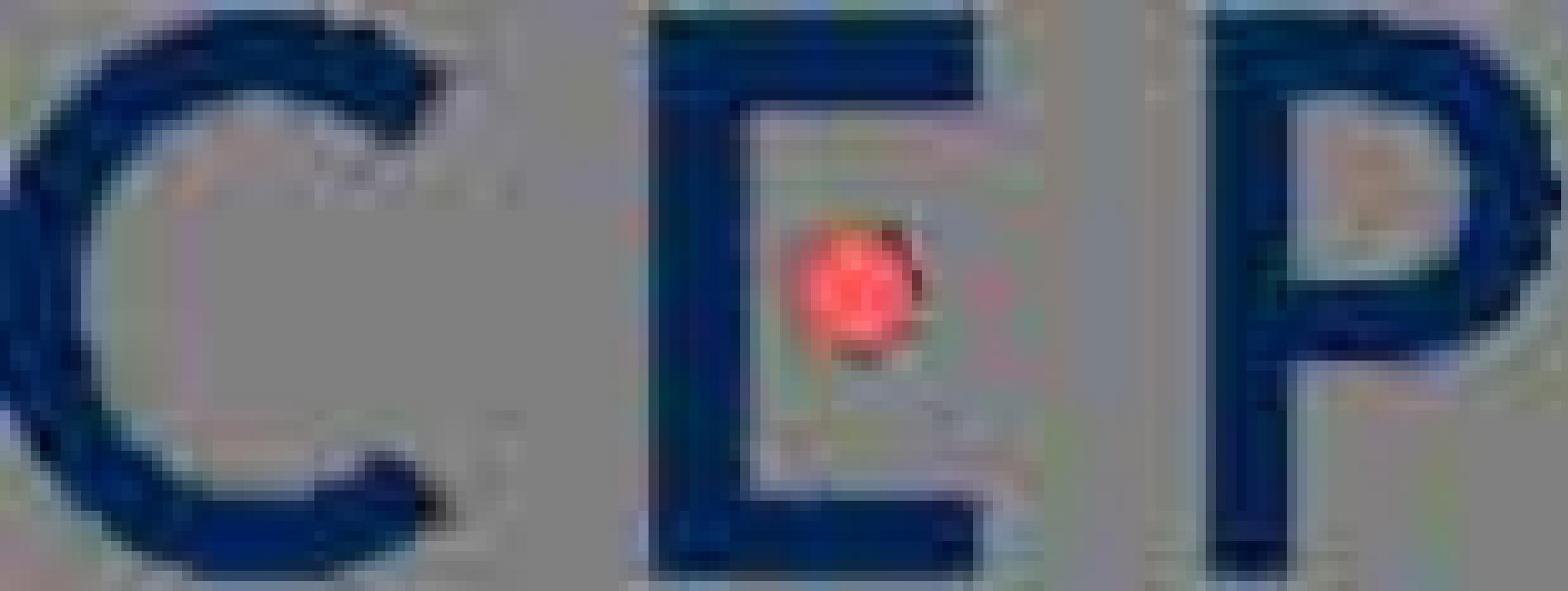


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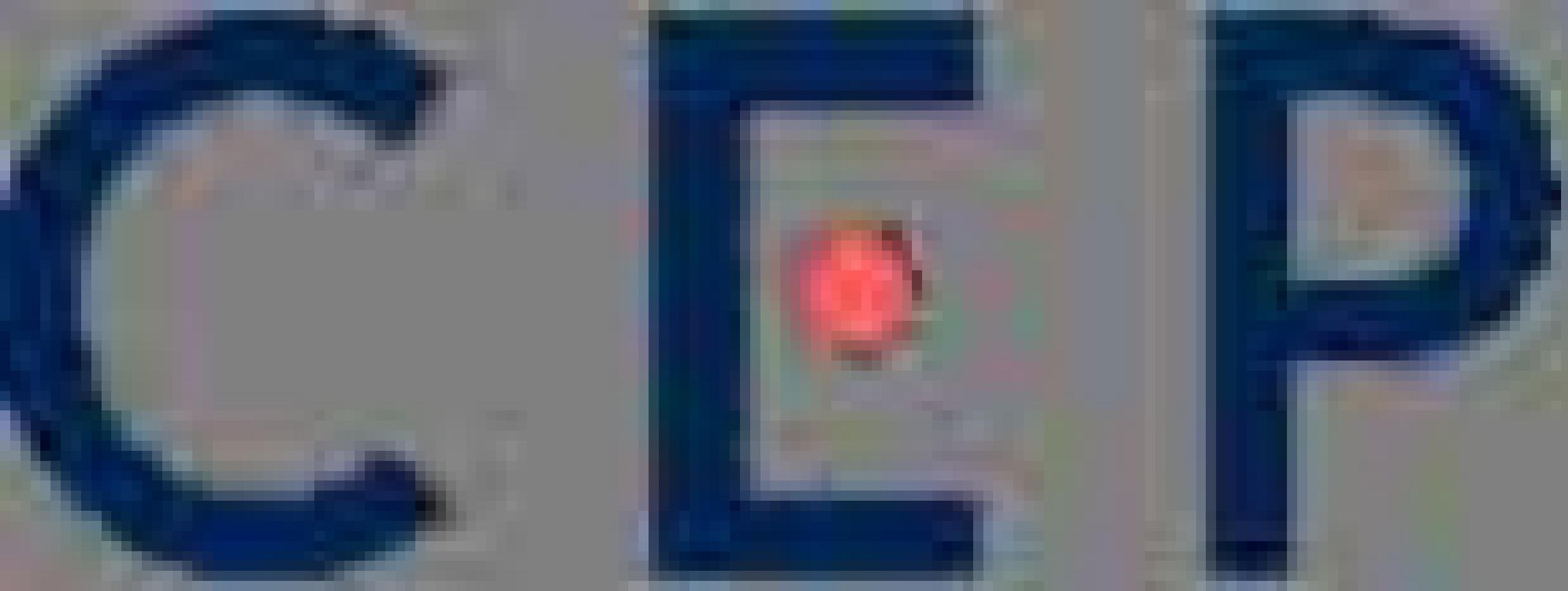


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From: Butler, Jay C. (CDC/DDID/OD)
Sent: Tue, 31 Mar 2020 10:23:25 +0000
To: Messonnier, Nancy (CDC/DDID/NCIRD/OD)
Subject: NEJM article from Coalition for Epidemic Preparedness Innovation
Attachments: nejmp2005630 2.pdf

Note last paragraph— [redacted] (b)(5)
[redacted] (b)(5) Thanks.



The NEW ENGLAND JOURNAL of MEDICINE

Perspective

Developing Covid-19 Vaccines at Pandemic Speed

Nicole Lurie, M.D., M.S.P.H., Melanie Saville, M.D., Richard Hatchett, M.D., and Jane Halton, A.O., P.S.M.

The need to rapidly develop a vaccine against SARS-CoV-2 comes at a time of explosion in basic scientific understanding, including in areas such as genomics and structural biology,

that is supporting a new era in vaccine development. Over the past decade, the scientific community and the vaccine industry have been asked to respond urgently to epidemics of H1N1 influenza, Ebola, Zika, and now SARS-CoV-2. An H1N1 influenza vaccine was developed relatively rapidly, largely because influenza-vaccine technology was well developed and key regulators had previously decided that vaccines made using egg- and cell-based platforms could be licensed under the rules used for a strain change. Although a monovalent H1N1 vaccine was not available before the pandemic peaked in the Northern Hemisphere, it was available soon afterward as a stand-alone vaccine and was ultimately incorporated into commercially available seasonal influenza vaccines.

Vaccines for the severe acute respiratory syndrome (SARS), Ebola, and Zika did not follow a similar path. The SARS and Zika epidemics ended before vaccine development was complete, and federal funding agencies reallocated funds that had been committed to vaccine development, leaving manufacturers with financial losses and setting back other vaccine-development programs.

Development of an Ebola vaccine by the Public Health Agency of Canada had been on hold when the 2013–2016 Ebola outbreak began. The U.S. government provided funding to accelerate the vaccine's development, which was ultimately transferred to Merck. The company continued development even when the outbreak ended, and stockpiles of investigational product were available for use

in the recent outbreaks in the Democratic Republic of Congo. The vaccine received conditional marketing authorization from the European Medicines Authority and approval from the U.S. Food and Drug Administration at the end of 2019 and in several African countries thereafter. Some companies working on Ebola vaccines have received external support and invested their own funds to continue development. Even with successful development and licensure, however, the prospect that commercial markets will sustain multiple vaccines for which relatively few doses may need to be manufactured seems dim.

Reviews of the experience with H1N1 vaccine have stressed the need for novel development-and-manufacturing platforms that can be readily adapted to new pathogens. Vaccine and biotech companies have been investing heavily in such approaches, with support from the U.S. government and other funders. The National Institute of Allergy and Infectious

Diseases has led an initiative to support early development of platforms and test them against “prototype pathogens” from various viral families.¹

Our organization, the Coalition for Epidemic Preparedness Innovation (CEPI), an international non-governmental organization funded by the Wellcome Trust, the Bill and Melinda Gates Foundation, the European Commission, and eight countries (Australia, Belgium, Canada, Ethiopia, Germany, Japan, Norway, and the United Kingdom), is supporting development of vaccines against five epidemic pathogens on the World Health Organization (WHO) priority list. We aim to develop reserves of investigational vaccines for each pathogen after such vaccines have completed phase 2a trials, expecting that they will undergo clinical trials during future outbreaks. CEPI also supports development of platform technologies to prepare for “Disease X” — a newly emerging epidemic disease, such as Covid-19. An ideal platform would support development from viral sequencing to clinical trials in less than 16 weeks, demonstrate elicitation of consistent immune responses across pathogens, and be suitable for large-scale manufacturing using a pathogen-agnostic platform.

Multiple platforms are under development. Among those with the greatest potential for speed are DNA- and RNA-based platforms, followed by those for developing recombinant-subunit vaccines. RNA and DNA vaccines can be made quickly because they require no culture or fermentation, instead using synthetic processes. Developers’ and regulators’ experience with these platforms for personal oncology vaccines

can facilitate rapid testing and release. There are no approved RNA vaccines to date, but RNA vaccines have entered clinical trials, and regulators have experience in reviewing clinical trial applications and with associated manufacturing of the vaccines.

Use of next-generation sequencing and reverse genetics may also cut development time of more conventional vaccines during epidemics. The table lists major platform types and examples of SARS-CoV-2 vaccine types being developed on each. A more complete and continually updated list is available from the WHO.²

Even with novel platforms, SARS-CoV-2 vaccine development poses challenges. First, although the virus’s spike protein is a promising immunogen for protection, optimizing antigen design is critical to ensure optimal immune response. Debate continues over the best approach — for example, targeting the full-length protein or only the receptor-binding domain.

Second, preclinical experience with vaccine candidates for SARS and the Middle East respiratory syndrome (MERS) have raised concerns about exacerbating lung disease, either directly or as a result of antibody-dependent enhancement. Such an adverse effect may be associated with a type 2 helper T-cell (Th2) response. Hence, testing in a suitable animal model and rigorous safety monitoring in clinical trials will be critical. (It is still too early to define good animal models; rhesus macaques appear quite promising, as do hamsters and ferrets [unpublished data].) If adjuvants are required to generate a sufficient immune response or for dose sparing, those triggering a Th1 response and demonstrating

a high neutralizing-antibody response are theoretically more likely to be protective and avoid the risk of immunopathology. However, data and careful regulatory review will be needed.

Third, although correlates of protection may be inferred from experience with SARS and MERS vaccines, they are not yet established. As with naturally acquired infection, the potential duration of immunity is unknown; similarly, whether single-dose vaccines will confer immunity is uncertain.

Vaccine development is a lengthy, expensive process. Attrition is high, and it typically takes multiple candidates and many years to produce a licensed vaccine.³ Because of the cost and high failure rates, developers typically follow a linear sequence of steps, with multiple pauses for data analysis or manufacturing-process checks. Developing a vaccine quickly requires a new pandemic paradigm (see diagram), with a fast start and many steps executed in parallel before confirming a successful outcome of another step, hence resulting in elevated financial risk. For example, for platforms with experience in humans, phase 1 clinical trials may be able to proceed in parallel with testing in animal models.

As soon as China announced that a novel coronavirus had been identified as the cause of the Wuhan outbreak, CEPI contacted its partners that were developing MERS vaccines or working on novel platforms. With the potential for further financial support, they and others began vaccine development as soon as the first gene sequence was posted, and development is proceeding quickly. Moderna’s mRNA-based SARS-

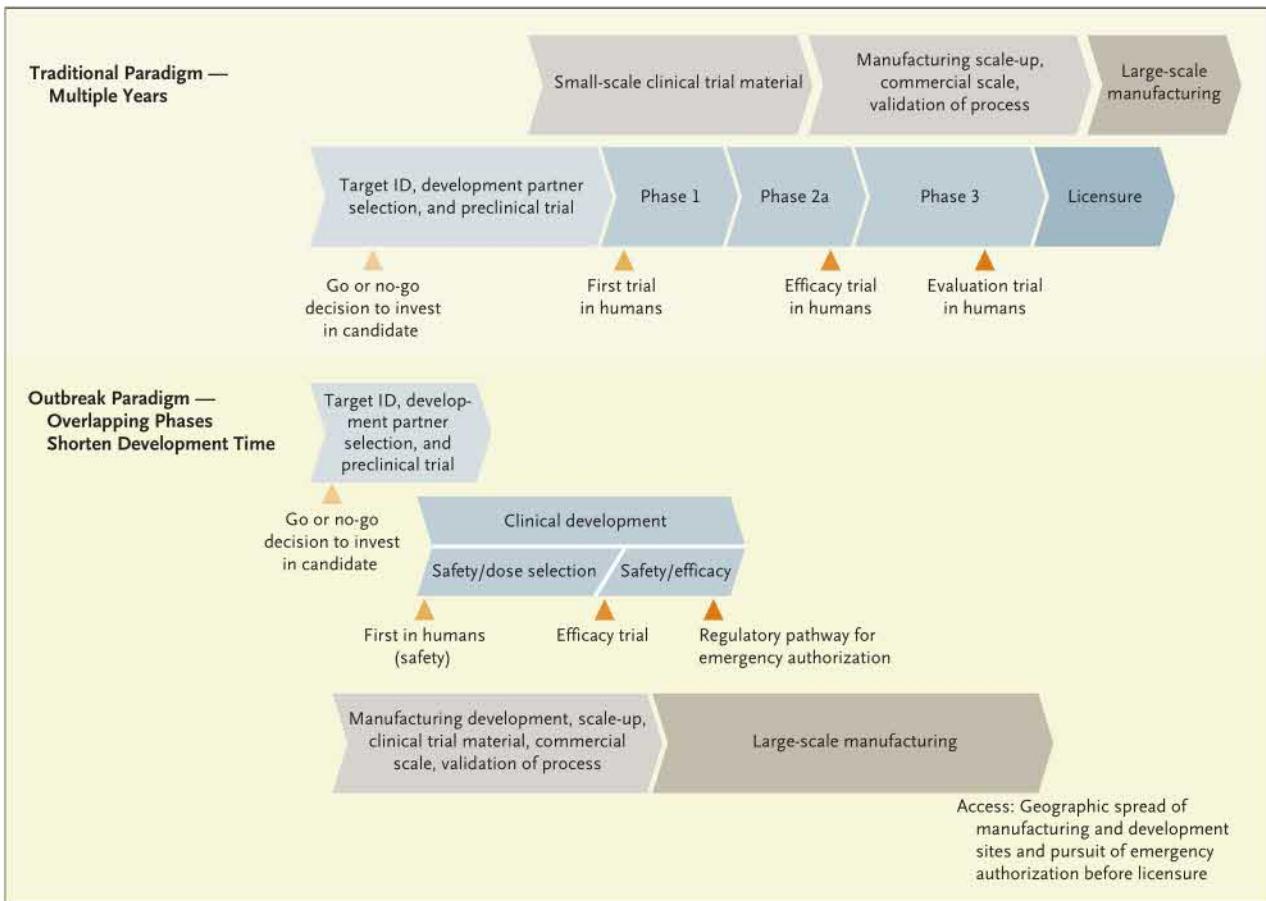
Vaccine Platforms, Their Attributes, and the Status of Vaccine Candidates.*						
Technology	Attributes				Candidates in Preclinical Development	Candidates in Phase I
	Single Dose	Licensed Platform	Speed	Current Scale		
DNA	No	No	Fast	Medium	Inovio Pharmaceuticals Takis/Applied DNA Sciences/Evvivax Zydus Cadila	
Inactivated	No	Yes	Medium	Medium to high	Sinovac	
Live attenuated	Yes	Yes	Slow	High	Codagenix/Serum Institute of India	
Nonreplicating vector	Yes	No	Medium	High	GeoVax/BravoVax Janssen Pharmaceutical Companies University of Oxford Altimune Greffex Vaxart ExpresS2ion	CanSino Biologics (ChiCTR2000030906)
Protein subunit	No	Yes	Medium to fast	High	WRAIR/U.S. Army Medical Research Institute of Infectious Diseases Clover Biopharmaceuticals Inc/GSK Vaxil Bio AJ Vaccines Genrex/EpiVax/University of Georgia Sanofi Pasteur Novavax Heat Biologics/University of Miami University of Queensland/GSK/ Baylor College of Medicine iBio/CC-Pharming	
Replicating viral vector	Yes	Yes	Medium	High	Zydus Cadila Institut Pasteur/Themis Tonix Pharma/Southern Research	
RNA	No	No	Fast	Low to medium	Fudan University/Shanghai JiaoTong University/RNACure Biopharma China CDC/Tongji University/Stermina Arcturus/Duke-NUS Imperial College London Curevac BioNTech/Pfizer	Moderna/NIAID (NCT04283461)
Uncertain					University of Pittsburgh University of Saskatchewan ImmunoPrecise MIGAL Galilee Research Institute Doherty Institute Tulane University	

* Attributes refer to general attributes of the platform, and assessments are not intended as inferences about a particular candidate. NIAID denotes National Institute of Allergy and Infectious Diseases, and WRAIR Walter Reed Army Institute of Research.

CoV-2 candidate entered a phase 1 clinical trial on March 16, less than 10 weeks after the first genetic sequences were released; the first phase 1 trial with a non-replicating vector-based vaccine has regulatory clearance to start phase 1 studies in China. Other phase 1 trials of nucleic acid vaccines are expected to start in April.

For some candidates, additional clinical trial material for phase 2 studies is being manufactured now; proceeding rapidly beyond phase 2 trials means manufacturing will need to be scaled up to commercial levels before substantial safety and immunogenicity data are available. Building manufacturing capacity can cost

hundreds of millions of dollars. Furthermore, for novel platform technologies, most of which are unlicensed, large-scale manufacturing has never been done, so facilities capable of producing large quantities of product must be identified, technologies transferred, and manufacturing processes adapted, all without know-



Difference between Traditional Vaccine Development and Development Using a Pandemic Paradigm.

The pandemic paradigm requires multiple activities to be conducted at financial risk to developers and manufacturers and without knowing whether the vaccine candidate will be safe and effective, including very early manufacturing scale-up to commercial scale before establishment of clinical proof of concept. ID denotes identification.

ing if the vaccine candidate is viable.

It's far from certain that these new platforms will be scalable or that existing capacity can produce sufficient quantities of vaccine fast enough. It's therefore critical that vaccines also be developed using tried-and-true methods, even if they may take longer to enter clinical trials or to result in large numbers of doses.

Conducting clinical trials during a pandemic poses additional challenges. It's difficult to predict where and when outbreaks will occur and to prepare trial sites to coincide with vaccine readiness for testing. In addition,

if multiple vaccines are ready for testing in the second half of 2020, it will be important not to crowd sites or burden countries and their ethics and regulatory authorities with multiple trials, as happened with Ebola therapeutics during the 2013–2016 outbreak.

Moreover, in a high-mortality situation, populations may not accept randomized, controlled trials with placebo groups; although other approaches that address such concerns may be scientifically feasible, they're typically not as fast, and the results can be harder to interpret.⁴ This problem can sometimes be over-

come by comparing outcomes with early vaccination versus delayed vaccination, as in the “Ebola ça suffit!” trial. One possible way forward would be to test several vaccines simultaneously in an adaptive trial design using a single, shared control group, so that more participants would receive an active vaccine.⁵ This approach has advantages but can be logistically and statistically complex, and developers often avoid trials that may generate head-to-head comparative data.

CEPI, as a relatively new organization, had not established financial mechanisms and instruments to support development of

pandemic vaccines and will need to raise additional funds to see SARS-CoV-2 vaccines through the development and scale-up manufacturing processes. Although as many as several million vaccine doses may become available as a by-product of development, in a pandemic situation, once vaccine candidates are proved safe and effective, doses must be manufactured in large quantities. Though some high-income countries may pay for development and manufacture with their own populations in mind, there's no global entity responsible for financing or ordering vaccine manufacture. Discussions with global stakeholders about organizing and financing large-scale vaccine manufacturing, procurement, and delivery are under way.

Finally, pandemics will generate simultaneous demand for vaccines around the world. Clinical and serologic studies will be

needed to confirm which populations remain at highest risk once vaccines are available and could form the basis for establishing a globally fair vaccine-allocation system. Some Group of Seven countries have already called for such a global system, whose planning must start while vaccine development proceeds.

Though it's unlikely, if the pandemic appears to abruptly end before vaccines are ready, we should continue developing the most promising candidates to a point at which they can be stockpiled and ready for trials and emergency authorization should an outbreak recur. A global financing system that supports end-to-end development and large-scale manufacturing and deployment, ensures fair allocation, and protects private-sector partners from significant financial losses will be a critical component of future pandemic preparedness.

Disclosure forms provided by the authors are available at NEJM.org.

From the Coalition for Epidemic Preparedness Innovations, Oslo.

This article was published on March 30, 2020, at NEJM.org.

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From: Messonnier, Nancy (CDC/DDID/NCIRD/OD)
Sent: Tue, 31 Mar 2020 15:00:22 +0000
To: Butler, Jay C. (CDC/DDID/OD)
Subject: RE: NEJM article from Coalition for Epidemic Preparedness Innovation

Richard Hatchett was at BARDA before taking the CEPI position and, of course with Nicole Lurie and also several others working there, and the subject matter, there is a lot of connection with BARDA. The USG declined to invest in CEPI while multiple European countries and Gates have which has been a bit of an issue. That said, Richard Hatchett was here within the past year for a few days meeting with SMEs. He met with Sue gerber and the MERS team and we had engaged scientifically.

From: Butler, Jay C. (CDC/DDID/OD) <jcb3@cdc.gov>
Sent: Tuesday, March 31, 2020 6:23 AM
To: Messonnier, Nancy (CDC/DDID/NCIRD/OD) <nar5@cdc.gov>
Subject: NEJM article from Coalition for Epidemic Preparedness Innovation

Note last paragraph— (b)(5)
(b)(5) Thanks.

From: Messonnier, Nancy (CDC/DDID/NCIRD/OD)
Sent: Thu, 4 Jun 2020 16:18:06 +0000
To: Butler, Jay C. (CDC/DDID/OD)
Subject: RE: The Road to Immunity During COVID-19: Developing and Distributing a Vaccine - Free NAM-APHA Webinar

Yes its interesting that John Mascola who is part of OWS is speaking in this.

From: Butler, Jay C. (CDC/DDID/OD) <jcb3@cdc.gov>
Sent: Thursday, June 4, 2020 12:17 PM
To: Messonnier, Nancy (CDC/DDID/NCIRD/OD) <nar5@cdc.gov>
Subject: FW: The Road to Immunity During COVID-19: Developing and Distributing a Vaccine - Free NAM-APHA Webinar

Probably already on your radar...

From: APHA <apha@apha.org>
Sent: Thursday, June 4, 2020 11:08 AM
To: Butler, Jay C. (CDC/DDID/OD) <jcb3@cdc.gov>
Subject: The Road to Immunity During COVID-19: Developing and Distributing a Vaccine - Free NAM-APHA Webinar



COVID-19 Conversations Webinar Series

[The Road to Immunity During COVID-19: Developing and](#)

Distributing a Vaccine

June 10, 2020 | 5 – 6:30 p.m. ET

The ninth COVID-19 Conversations webinar will discuss the road to immunity during COVID-19, including the basics of vaccine development, how developing a vaccine for COVID-19 differs from "traditional" vaccine development, and what actions can be taken now and in the coming months to ensure that our supply chain is ready to manufacture millions of doses of a vaccine.

The webinar will begin with an introduction from the session's moderator, **Paul A. Offit**, Director, Vaccine Education Center, Children's Hospital of Philadelphia, and then feature a panel discussion among expert speakers, including:

- **John R. Mascola** - Director, Dale and Betty Bumpers Vaccine Research Center, National Institute of Allergy and Infectious Diseases
- **Kathleen M. Neuzil** - Myron M. Levine MD Professor in Vaccinology and Director, Center for Vaccine Development and Global Health, University of Maryland School of Medicine
- **Richard J. Hatchett** - Chief Executive Officer, Coalition for Epidemic Preparedness Innovations (CEPI)
- **Seth Berkley** - Chief Executive Officer, Gavi, The Vaccine Alliance

The panel discussion will be followed by a Q&A session with the webinar audience.

This webinar has also been approved for **1.5 continuing education credits for CPH, CME, CNE or CHES**. Several days after attending the webinar, those who watched the entire activity will receive an email with info on how to complete the online evaluation and then claim their credits.

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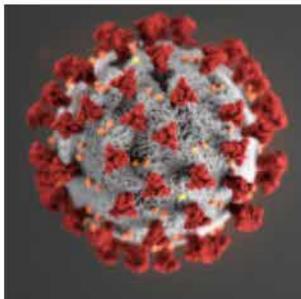
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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Fri, 10 Jan 2020 16:19:19 +0000
To: Helfand, Rita (CDC/DDID/NCEZID/OD)
Subject: Re: CEPI call

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Fri, 10 Jan 2020 14:15:16 +0000
To: Helfand, Rita (CDC/DDID/NCEZID/OD)
Subject: GCM

Rita

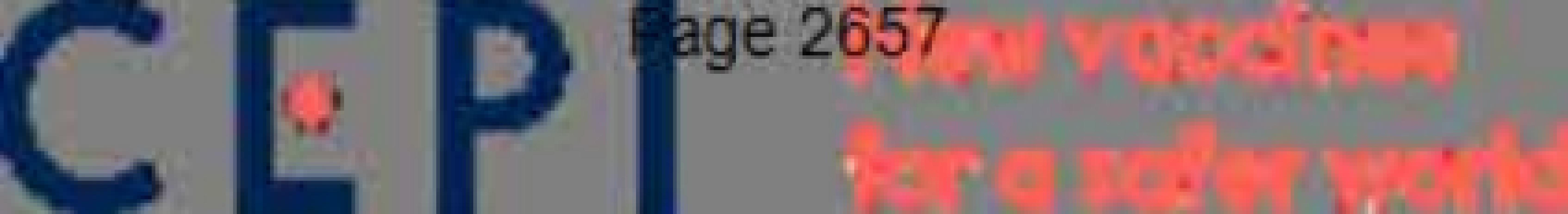
Any updates from GCM meeting on new coronavirus? I am supposed to be on CEPI call in 20 minutes

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
NCEZID
CDC

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 23 Jan 2020 21:58:41 +0000
To: William Dowling
Subject: RE: WHO Consultation regarding the Wuhan coronavirus
Attachments: image001.png, image002.png, image003.png

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Thu, 23 Jan 2020 21:57:50 +0000
To: Jernigan, Daniel B. (CDC/DDID/NCIRD/ID);Gerber, Susan I. (CDC/DDID/NCIRD/DVD)
Subject: FW: WHO Consultation regarding the Wuhan coronavirus
Attachments: Letko_2020_receptor usage of 2019 nCoV.pdf, Zhao et al 2020 supp data.pdf, Zhou et al 2020.pdf, image001.png, image002.png, image003.png

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Functional assessment of cell entry and receptor usage for lineage B β -coronaviruses, including 2019-nCoV

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Abstract

Over the past 20 years, several coronaviruses have crossed the species barrier into humans, causing outbreaks of severe, and often fatal, respiratory illness. Since SARS-CoV was first identified in animal markets, global viromics projects have discovered thousands of coronavirus sequences in diverse animals and geographic regions. Unfortunately, there are few tools available to functionally test these novel viruses for their ability to infect humans, which has severely hampered efforts to predict the next zoonotic viral outbreak. Here we developed an approach to rapidly screen lineage B betacoronaviruses, such as SARS-CoV and the recent 2019-nCoV, for receptor usage and their ability to infect cell types from different species. We show that host protease processing during viral entry is a significant barrier for several lineage B viruses and that bypassing this barrier allows several lineage B viruses to enter human cells through an unknown receptor. We also demonstrate how different lineage B viruses can recombine to gain entry into human cells and confirm that human ACE2 is the receptor for the recently emerging 2019-nCoV.

Introduction

Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV) first emerged in humans in 2003 after transmitting from animals in open air markets in China^{1,2}. Shortly thereafter, several genetically related viruses were identified in Chinese Horseshoes bats (*Rhinolophus sinicus*)³⁻⁷. At the same time, improvements in next generation sequencing technology lead to a boom of virus discovery, uncovering thousands of novel virus sequences in wild animal populations around the world. While most of these viruses have never been found in humans, many are genetically similar to known human viruses within the betacoronaviruses (β -CoV) genus. The β -CoVs are further divided into four lineages: lineage B, which includes SARS-CoV and the newly emerging 2019-nCoV, has approximately 200 published virus sequences whereas lineage C, which includes MERS-CoV, has over 500 viral sequences.

Every year, additional novel CoV sequences are discovered. However, there is a massive knowledge gap in the field as very little work is performed after the viral sequences are published. Therefore, it is unknown whether these novel viruses have the potential to emerge in human populations.

Current methods for studying novel β -CoVs are technically demanding. Viral isolation from field samples is rarely successful and reverse genetics recovery of recombinant virus is labor-intensive, and expensive as synthesis of a single genome can cost upwards of \$15,000. These limitations are prohibitive to studying novel CoVs at the scale in which they are discovered.

Cell entry is an essential component of cross-species transmission, especially for the β -CoVs. All CoVs encode a surface glycoprotein, spike, which binds to the host-cell

receptor and mediates viral entry⁸. For β -CoVs, a single region of the spike protein called the receptor binding domain (RBD) mediates the interaction with the host cell receptor. After binding the receptor, a nearby host protease cleaves the spike, which releases the spike fusion peptide, facilitating virus entry⁹⁻¹². Known host receptors for β -CoVs include angiotensin converting enzyme 2 (ACE2) for SARS-CoV and dipeptidyl peptidase 4 (DPP4) for MERS-CoV^{13,14}.

Structural studies of coronaviruses have shown that the spike RBD is capable of folding independently from the rest of the spike protein and contains all of the structural information for host receptor binding¹⁵. Additionally, a previous study showed that replacing the RBD of the lineage B bat virus, Rp3, allowed the virus to enter cells expressing human ACE2 (hACE2)¹⁶. We therefore developed a method to functionally test the RBDs from novel lineage B β -CoVs in place of the SARS-CoV spike RBD (figure 1). Synthesizing just the RBD of spike is much faster and cost-effective than conventional pseudotyping methods that rely on synthesis of the full ~4kb spike sequence for novel CoVs: a process that can take weeks and is cost-prohibitive for large panels of spike sequences. The short turnaround time for our approach allowed us to test the receptor usage of all published, unique RBD sequences in lineage B, and also rapidly confirm the ACE2 receptor usage of the 2019-nCoV spike, which emerged in China in January 2020 as our study was ongoing.

We show that lineage B RBDs divide into functionally distinct clades and that several previously-unappreciated viruses exhibit compatibility with an unknown receptor on human cells. We also show that these clades are capable of recombining to impart human host-cell entry phenotypes, and that, beyond the RBD-receptor interaction, host

protease processing is another species barrier encountered by lineage B β -CoVs during cell entry.

Methods

Cells

293T, A549, BHK, Caco-2, Huh-7.5, PK-15, and Vero cells were maintained in DMEM (Sigma) supplemented with 10% FBS, penicillin/streptomycin, and L-glutamine. RhiNi/40.1, AJ-primary, AJi, HypNi, RaKSM-2.5i, RhiLu, and RhiNi cells were maintained in DMEM/F12 (Gibco) supplemented with 12% FBS, penicillin/streptomycin, non-essential amino acids, sodium pyruvate and L-glutamine. AJ-primary cells were immortalized with a lentiviral vector expressing SV40 T-antigen following the manufacturer's instructions to generate AJi cells (abm; #G203). RaKSM-2.5 primary cells have been previously described and were immortalized in this study similar to AJi cells¹⁷.

Plasmids

The spike coding sequences for SARS-CoV Urbani, As6526, and BM48-31 were codon optimized for human cells, appended with a 5' kozak expression sequence (GCCACC) and 3' tetra-glycine linker followed by nucleotides encoding a FLAG tag sequence (DYKDDDDK). For SARS-CoV spike, silent mutations were introduced around codons 308 and 519 to form KpnI and XhoI digest sites. For As6526 spike, silent mutations were introduced around codons 290 and 501 to form AflIII and HindIII digest sites. For BM48-31 spike, silent mutations were introduced around codons 295 and 501 to form AflIII and HindIII digest sites. These engineered spike sequences were synthesized and cloned into pcDNA3.1+ (GenScript).

Spike RBDs were first codon-optimized for human cells, appended with regions of the target spike backbone to facilitate Infusion cloning and synthesized as double

stranded DNA fragments (IDT DNA). SARS-CoV, As6526 or BM48-31 engineered spike plasmids were digested with their corresponding restriction enzymes and gel purified. RBD inserts were resuspended in water and Infusion cloned into gel purified, digested spike backbone vectors (Takara).

Human ACE2 (Q9BYF1.2), DPP4 (XM_005246371.3), or APN (NP_001141.2) were synthesized and cloned into pcDNA3.1+ (GenScript). All DNA constructs were verified by Sanger sequencing (ACGT Inc.).

Receptor transfection

BHK cells were seeded in black 96-well plates and transfected the next day with 100ng plasmid DNA encoding human ACE2, DPP4, APN or empty vector, using polyethyleneimine (Polysciences). All downstream experiments were performed 24 hours post-transfection.

Pseudotype production

Pseudotypes were produced as previously described¹⁸. 293T cells were seeded onto 6-well plates pre-coated with poly-L-lysine (Sigma) and transfected the next day with 1200ng empty plasmid and 400ng of plasmid encoding coronavirus spike or GFP as a no pseudotype control. Twenty-four hours later, transfected cells were infected with VSVΔG particles pseudotyped with VSV-g as previously described¹⁹. After one hour of incubating at 37°C, cells were washed three times and incubated in 2mL DMEM supplemented with 2% FBS, penicillin/streptomycin, and L-glutamine for 48 hours. Supernatants were collected, centrifuged at 500xG for 5 minutes, aliquoted and stored at -80.

Luciferase-based cell entry assay

Target cells were seeded in black 96-well plates and inoculated, in triplicate, with equivalent volumes of pseudotype stocks. For trypsin experiments, pseudotype stocks were diluted 1:1 in DMEM without FBS, trypsin was added to a final concentration of 2500µg/mL and samples were incubated at 37°C for 15 minutes. Samples were then diluted again 1:1 in cold DMEM supplemented with 2% FBS and added to cells. Inoculated plates were centrifuged at 1200xG, 4°C, for 1 hour and incubated over night at 37°C. Approximately 18-20 hours post-infection, Bright-Glo luciferase reagent (Promega) was added to each well, 1:1, without removing culture media and luciferase was measured. Relative entry was calculated by normalizing the relative light unit (RLU) for spike pseudotypes to the plate RLU average for the “no pseudotype control.”

Western blot

Producer cells (spike-transfected 293T) were lysed in 1%SDS, 150mM NaCl, 50mM Tris-HCl, 5mM EDTA and clarified by centrifugation at 14000xG for 20 minutes. Pseudotyped particles were concentrated from producer cell lysates that were overlaid a 10% OptiPrep cushion in PBS (Sigma) and centrifuged at 20,000× g for 2 hours at 4 °C. Lysates and concentrated particles were analyzed for FLAG, GAPDH and/or VSV-m expression on 10% Bis-Tris PAGE gel (ThermoFisher).

Accession numbers

Accession numbers for all spike sequences used here can be found in figure s1b.

Results

ACE2 entry is lineage B clade 1-specific

The receptor binding domain (RBD) of lineage B β -CoVs is a single, continuous domain that contains all structural information necessary to interact with the host receptor (figure 1a, b). We introduced silent mutations in the codon optimized coding sequence for SARS-CoV to facilitate replacing the SARS RBD with the RBD from other lineage B viruses (figure 1b). All lineage B sequences were downloaded from online repositories and parsed to 29 unique RBD sequences, representing all published variations of the lineage B RBD (supp. fig 1a, b). The panel of 29 RBDs phylogenetically cluster into 3 clades, as previously described⁵, but these RBD clades were not apparent in phylogenetic analysis of other viral sequences, such as the RNA-dependent RNA polymerase (supp. fig 1c). All 29 RBDs were codon optimized, synthesized and cloned in place of the SARS RBD, effectively generating chimeric spike expression constructs. We then generated VSV-luciferase reporter particles pseudotyped with the chimeric spikes (figure 1c). We chose VSV over lentiviruses as our pseudotype platform because a lentiviral pseudotypes have failed to accurately reflect viral entry with novel bat coronavirus spike protein⁷. All constructs exhibited similar levels of expression in producer cells and incorporation into VSV pseudotypes, except the chimera with BM48-31 which displayed somewhat reduced expression compared to WT SARS spike (figure 1d). We then infected BHK cells expressing the receptor for SARS-CoV or empty vector (figure 1e) and observed only clade 1, which includes SARS-CoV, WIV1 and SHC014, could enter cells transfected with human ACE2 (figure 1e).

Protease enhances clade 2 entry

After binding the host receptor, host-cell protease cleaves spike, releasing the fusion peptide and allowing for host cell entry²⁰. Previous studies have shown that absence of the host protease or incompatibility between the host protease and viral spike can block viral entry²¹⁻²⁴. To circumvent host-cell protease incompatibility or absence, we treated our lineage B pseudotype panel and infected a wide variety of cell types from different host species (figure 2, supp. fig. 2). In the absence of exogenous protease, only clade 1 infected cells from African green monkey kidney, human gastrointestinal tract, human liver, and porcine kidney, in agreement with previous studies (figure 2; supp. fig. 2a, b). Surprisingly, exogenous protease enhanced entry of a subset of clade 2 spike chimeras in nonhuman primate, bat and human cells (figure 2). Importantly, VSV-g pseudotyped particles were able to produce luciferase signal in all cell lines tested in this study (supp. fig. 2c).

Clade 2 entry is receptor-dependent

We next tested human variants of known β -CoV receptors for their ability to mediate cell entry of clade 2 and 3 spike chimeras. We also tested human aminopeptidase N (APN), a receptor for alphacoronaviruses, which have been shown to utilize either human ACE2 or human APN for cell entry (figure 3a). Protease treatment only enhanced entry of clade 1 RBDs on cells expressing human ACE2, but not human DPP4 or APN. No entry was observed with clade 2 or 3 spikes, regardless of receptor or protease addition. Human dipeptidyl peptidase IV (DPP4), the receptor for the lineage C β -CoVs, MERS-CoV, only mediated entry of MERS-CoV (figure 2b, middle panels).

Importantly, in the absence of receptor, no entry was observed for any of the pseudotypes, suggesting that protease-mediated entry is receptor-dependent (figure 2b, right panels).

Receptor usage of 2019-nCoV

While our study was ongoing, a novel lineage B virus tentatively named 2019-nCoV was identified as the cause of a pneumonia outbreak in Hubei, China. Once the sequence was publicly available, we synthesized, cloned and tested the RBD from 2019-nCoV in our assay with human variants of known coronavirus receptors. The chimeric SARS-2019-nCoV spike protein expressed and was incorporated into particles similarly to other clade 1 chimeric spikes (figure 3c). The 2019-nCoV RBD was capable of entering cells expressing human ACE2, but not any of the other receptors tested (figure 3d; s3).

Clade determinants for ACE2 usage

Consensus sequences of the three lineage B clades showed several key differences between these groups. Only clade 1 RBDs contain all 14 residues that have been shown through crystallography, to interact with human ACE2 (figure 4a; s4). The majority of these residues are absent from clades 2 and 3, which contain additional deletions in surface exposed loops that cluster at the interface with ACE2 (figure 4 a, b). We generated a series of clade consensus RBD variants to determine the minimum number of mutations needed to impart ACE2 function on clade 2 and 3 RBDs (figure 4c). Introducing the two loop deletions from clade 1 in clade 2 results in a reduced spike expression, impaired pseudotype incorporation and loss of cell entry (figure 4c, d).

Restoring these loops in clade 2 and 3 from the loops found in clade 1 did not enhance entry with ACE2 (figure 4c; 2→1 and 3→1 version 1). Introducing all 14 ACE2 contact points in clade 2 or 3 also failed to restore ACE2 entry (figure 4c; 2→1 and 3→1 version 2). Only replacing all 14 contact points and the surrounding amino acids (also known as the receptor binding motif, RBM) lead to increased ACE2 entry with clade 2 and 3 RBDs (figure 4c; 2→1 version 3 = clade 2 residues 322-400 + clade 1 residues 400-501; 3→1 version 3 = clade 3 residues 322-385 + clade 1 residues 386-501). Taken together, these results show that the entire RBM from clade 1 is needed for ACE2 entry.

Full-spike and RBD chimeras are comparable

We next synthesized full-length clade 2 and 3 spikes to compare to our RBD chimeras. We selected the clade 2 spike, As6526, because it consistently gave strong entry signal in human cells following protease-treatment (figure 2b) as well as BM48-31, the only clade 3 spike in our panel. As we did for SARS-CoV spike, clade 2 and 3 spikes were codon optimized, FLAG-tagged and silent mutations were introduced to facilitate replacing their RBD with the consensus RBD from clade 1 (figure 5a). All chimeric constructs expressed similarly, with the exception for the SARS-BM48-31 RBD chimera, which exhibited reduced expression and incorporation (figure 5b). Protease treatment enhanced entry of both the As6526 clade 2 RBD chimera and full-length spike entry into Huh cells (figure 5c). Protease treatment had no effect on either the BM48-31 clade 3 chimera or full-length spike (figure 5c). Taken together, these findings show that SARS-lineage B RBD chimeras reflect the entry phenotype of full-length lineage B spikes.

Finally, we tested if receptor-binding and protease processing are coupled. We replaced the RBD of full-length clade 2 and 3 spike with the consensus RBD from clade 1 and tested pseudotypes on cells expressing the clade 1 receptor. The clade 1 consensus RBD efficiently facilitated entry of both As6526 and BM48-31 spike only following protease treatment. These findings show that even though BHK-hACE2 cells support full-length clade 1 spike entry, just having the RBD from a clade 1 virus is insufficient to mediate entry. As seen in our previous experiments, protease treatment did not enhance pseudotype entry in the absence of host receptor (figure 5).

Discussion

Despite significant advances in next generation sequencing technologies, which have facilitated the discovery of thousands of novel animal-derived viruses, tools for downstream functional assessment of these novel sequences are lacking. To gain traction on this ever-growing problem, we took a reductionist approach to coronavirus entry and developed a scalable, BSL2-compatible method for testing only the minimal region of the virus essential for interacting with the host receptor (figure 1, figure s1a). Because most of these viruses have never been isolated, we resorted to synthetic biology and molecular engineering to reduce the burden of gene synthesis to just a small fragment. Thus, the cost and synthesis production time for testing several spikes for entry in our system is dramatically reduced (figure s1d). In theory, this approach to functional viromics should be applicable to a wide variety of virus-host proteins and interactions.

Coronavirus entry is a multi-step process involving multiple, distinct domains in spike that mediate virus attachment to the cell surface, receptor engagement, protease processing and membrane fusion⁸. While the RBD:receptor interaction is most studied in this process, recent studies have highlighted the major role host protease processing plays as a species barrier^{22,25-27}. Lineage C coronaviruses include MERS-CoV as well as distantly related viruses such as HKU4, HKU5 and PDF-2180^{28,29}. Studies have shown that HKU4 can bind human DPP4 but requires addition of exogenous trypsin to facilitate cell entry and that HKU5 and PDF-2180 spikes can enter human cells through an unidentified receptor with protease treatment^{22,26}. Analogous to these earlier studies of lineage C CoVs, we observed protease-enhanced entry of lineage B CoVs (figure 2, 3, 5). While it has been shown that host proteases cleave spike, allowing for downstream

membrane fusion, other evidence suggests that protease may act on the receptor as well to activate it³⁰. Addition of protease during the course of SARS-CoV infection facilitated entry in cells with low-expression of ACE2 that is normally insufficient to support virus entry³⁰. Indeed, we saw evidence of residual trypsin activity on the cells after infection in our studies as the cell monolayer was loose compared to the untreated condition. Similarly, Menachery et al. also observed cell rounding during their trypsin infections²⁶. Therefore, further studies are needed to assess where trypsin is enhancing entry of coronaviruses: at the level of spike, the receptor, or both.

In the absence of exogenous protease, only clade 1 RBDs entered nonhuman primate, human and porcine cell lines (figure 2a, b, s2a, b). These findings are in strong agreement with previous studies that have either isolated virus (WIV1) or rescued recombinant chimeric viruses (SHC014, Rs4231, Rs7237)^{5,7,31}. However, with trypsin, a subset of genetically-similar clade 2 RBDs gained entry in these cells, suggesting their barrier is at the level of protease processing (figure 2a, b). The other spike from clade 2 and 3 did not enter the cells we tested, regardless of protease addition, suggesting an absent or incompatible receptor. Surprisingly, the protease-dependent entry phenotype was consistent in the reverse spike chimeras in which we replaced the RBD in clade 2 or 3 spike with a clade 1 RBD (figure 5d), suggesting that either the protease site between S1/S2 is not compatible with the chimeric spike backbone or the protease is not expressed in these cells (figure s5). Because clade 1 spikes enter cells expressing human ACE2 without addition of protease but clade2-clade1 chimeras require protease, our data suggests the spike protease cleavage site is adapted to the protease environment of the receptor-bound RBD (figure s5).

None of the spike pseudotypes efficiently entered *Rhinolophus* cells, which has been observed in previous studies using these cells^{32,33} (figure 2c). Surprisingly, AJi cells were selectively permissive for only clade 2 entry following protease treatment, which suggests that clade 2 RBDs interact with a receptor that is distinct from clade 1 (figure 2c).

Our results show that, despite all being classified as the same virus species, most lineage B β -CoVs do not use currently known coronavirus receptors (figure 1e, 3a, b). Critically, we did not observe any pseudotype entry in the presence of protease and absence of receptor, suggesting that lineage B cell entry is still receptor-dependent following protease treatment (figure 3b). While our study was ongoing, a novel lineage B β -CoV was identified as the etiological agent behind an outbreak of pneumonia in Wuhan, Hubei, China (2019-nCoV). The RBD for 2019-nCoV has residues and motifs found in all 3 clades but forms a distinct clade, so we tested it for receptor usage and observed entry only with human ACE2 but not other known coronavirus receptors (figure 3d). Interestingly, within the backbone of SARS-CoV spike, cell entry of 2019-nCoV was similar to the other clade 1 spikes tested, including SARS-CoV. These finding suggests 2019-nCoV is capable of using human ACE2 as efficiently as SARS-CoV, which may help explain the human-to-human transmissibility of this virus. More studies are needed with the full spike sequence and, ideally, a viral isolate.

The receptor binding motif (RBM) is a small region in the C-terminal half of the RBD and contains all the residues that interface with the host receptor (figure 3a)¹⁵. The 14 contact points in the co-structure of the SARS-RBD bound to human ACE2 are largely absent from clade 2 and 3 RBDs, which also contain deletions compared to clade 1 RBMs (figure 4a, b, s4a). Simply mutating clade 2 and 3 to have the 14 contact points was

insufficient to impart human ACE2 usage (figure 4c). This is likely because the non-contact residues in the RBM play a supportive and structural role for these contact points, and indeed, these non-contact residues are different between the clades (figure s4).

In contrast to changing individual amino acids, our chimeric RBD constructs show that clade 2 and 3 RBD containing the clade 1 RBM are compatible with human ACE2. Coronaviruses frequently undergo recombination, gaining large swaths of genetic material at once^{34,35}. Taken together with our data, it is possible that recombination with a clade 1 virus will impart compatibility with human ACE2. Interestingly, the 2019-nCoV RBD forms a clade that is distinct from the other 3 clades (figure s1c). However, the 2019-nCoV RBD contains most of the contact points with human ACE2 that are found in clade 1 as well as some amino acid variations that are unique to clade 2 and 3 (figure s4b). Taken together with our receptor assay results, it may be possible that 2019-nCoV arose from recombination between clade 1 and the other clades.

As we saw with the SARS-As6526 RBD (clade 2) spike chimera, full length As6526 spike entered cells following protease treatment, but BM48-31 (clade 3) spike did not (figure 2, 5c). These data show that the chimeric spikes generally reproduce the entry phenotypes of full-length spikes. Notably, the full length As6526 spike did not enter cells as efficiently as the SARS-As6526 chimera, suggesting that other human-cell adaptations are likely needed in As6526 spike.

The capacity to predict the zoonotic potential of newly detected viruses has been severely hindered by a lack of functional data for these novel animal virus sequences. Here, we have developed a rapid and cost-effective platform to functionally test large groups of related viruses for zoonotic potential. We found that several other lineage B

coronaviruses are capable of entering human cells through an unknown receptor and that lineage B spike proteins can recombine to gain entry with a known host-receptor. Taken together with the latest outbreak of 2019-nCoV in humans, these findings underscore the importance of continued surveillance of coronaviruses at the sequence and functional levels in order to better prepare for the next emerging virus.

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Declarations of Interests

The authors declare no competing interests.

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Figures

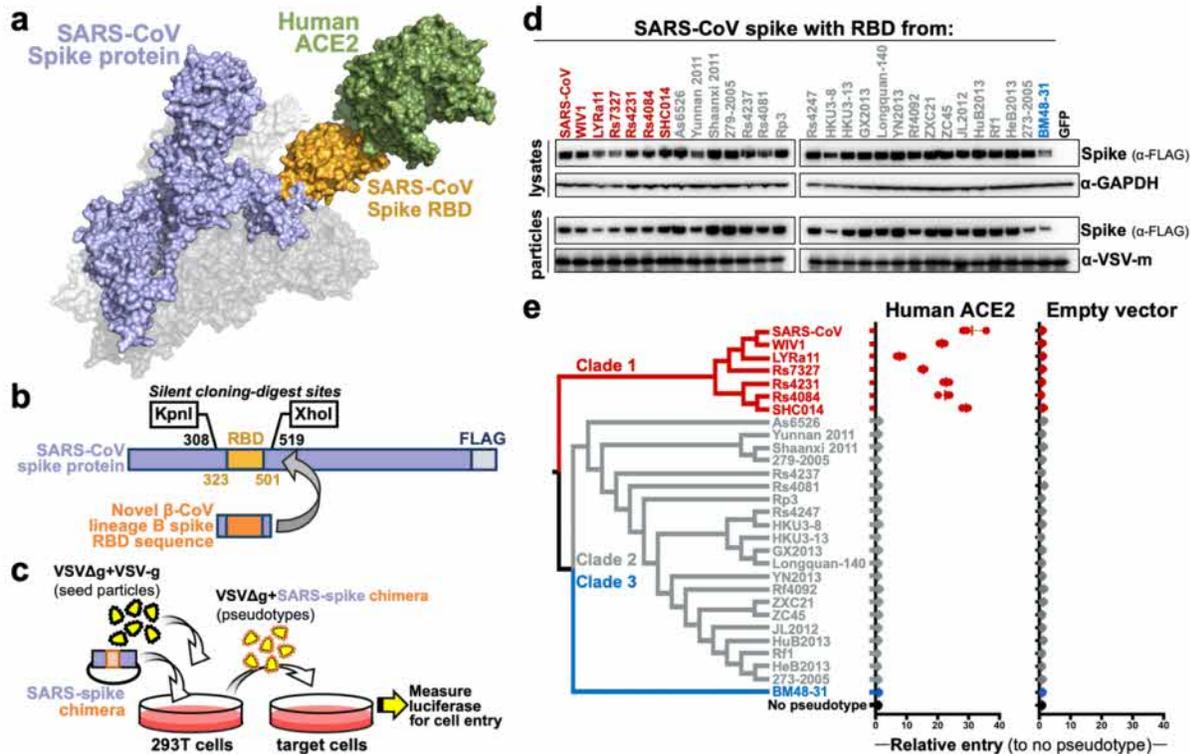


Figure 1: β -Coronavirus lineage B entry with human ACE2 is clade-specific

a, β -Coronaviruses, including SARS-CoV, interact with the host cell receptor via the Receptor Binding Domain (RBD) in spike (PDB: 5X5B, 2AJF). **b**, SARS-CoV spike was engineered with silent mutations to facilitate cloning novel RBD sequences in place of the SARS spike RBD. SARS spike amino acid numbers are indicated for silent cloning sites and the RBD in grey and orange, respectively. **c**, outline of experimental workflow. **d**, Western blot of producer cell lysates and concentrated reporter particles. **e**, BHK cells were transfected with either human ACE2 or empty vector, subsequently infected with VSV-reporter particles pseudotyped with chimeric spikes, luciferase was measured and normalized to no pseudotype as a readout for cell entry. Shown are the data for 3 replicates.

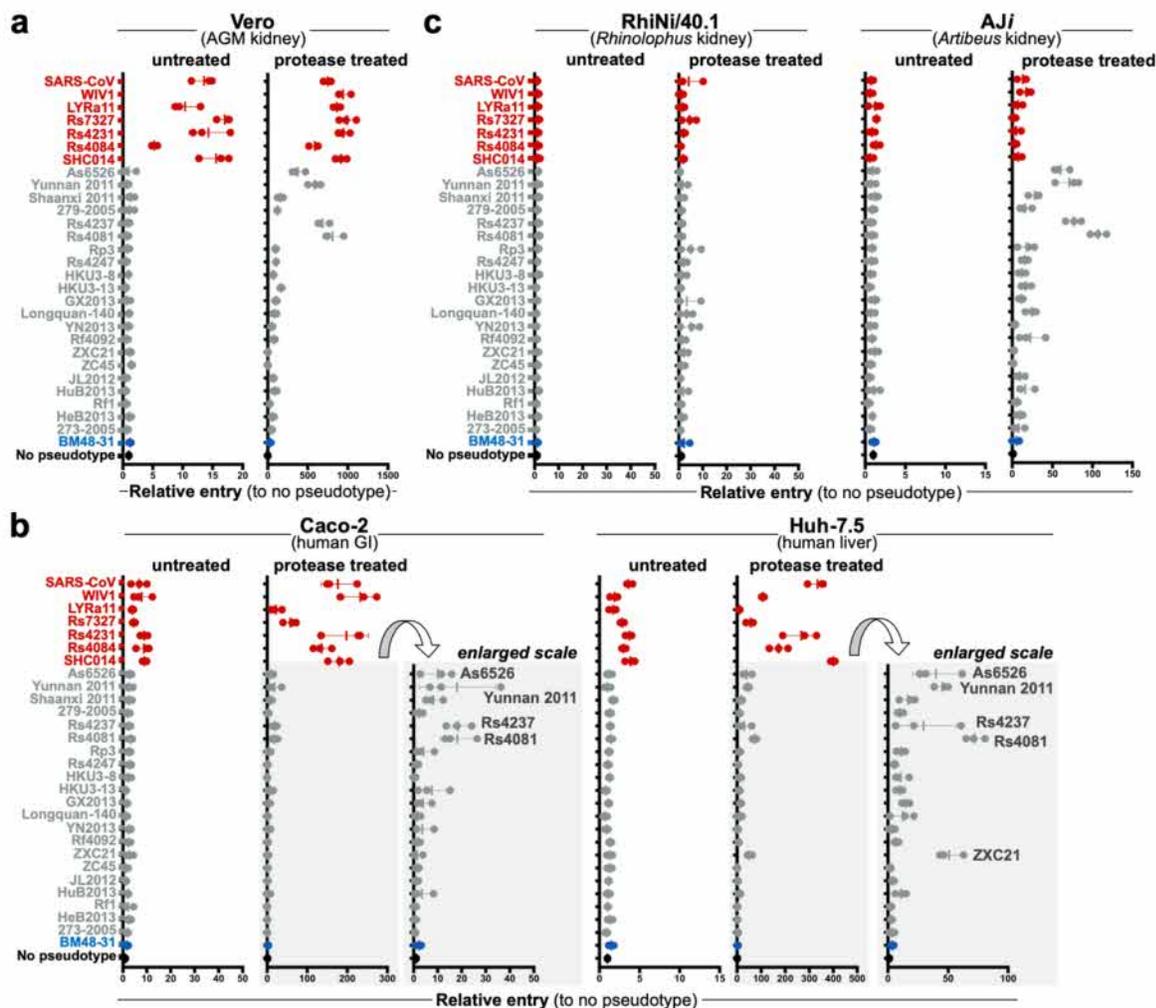


Figure 2: Trypsin enhances lineage B entry in various cell lines

a, Primate cells, **b**, human cells or **c**, bat cells were infected with VSV-particles pseudotyped with the lineage B chimeric spike panel. Pseudotypes were either left untreated or incubated with trypsin before addition to the cells. Luciferase was measured and normalized to particles produced without pseudotype. Shown are the data for 3 replicates.

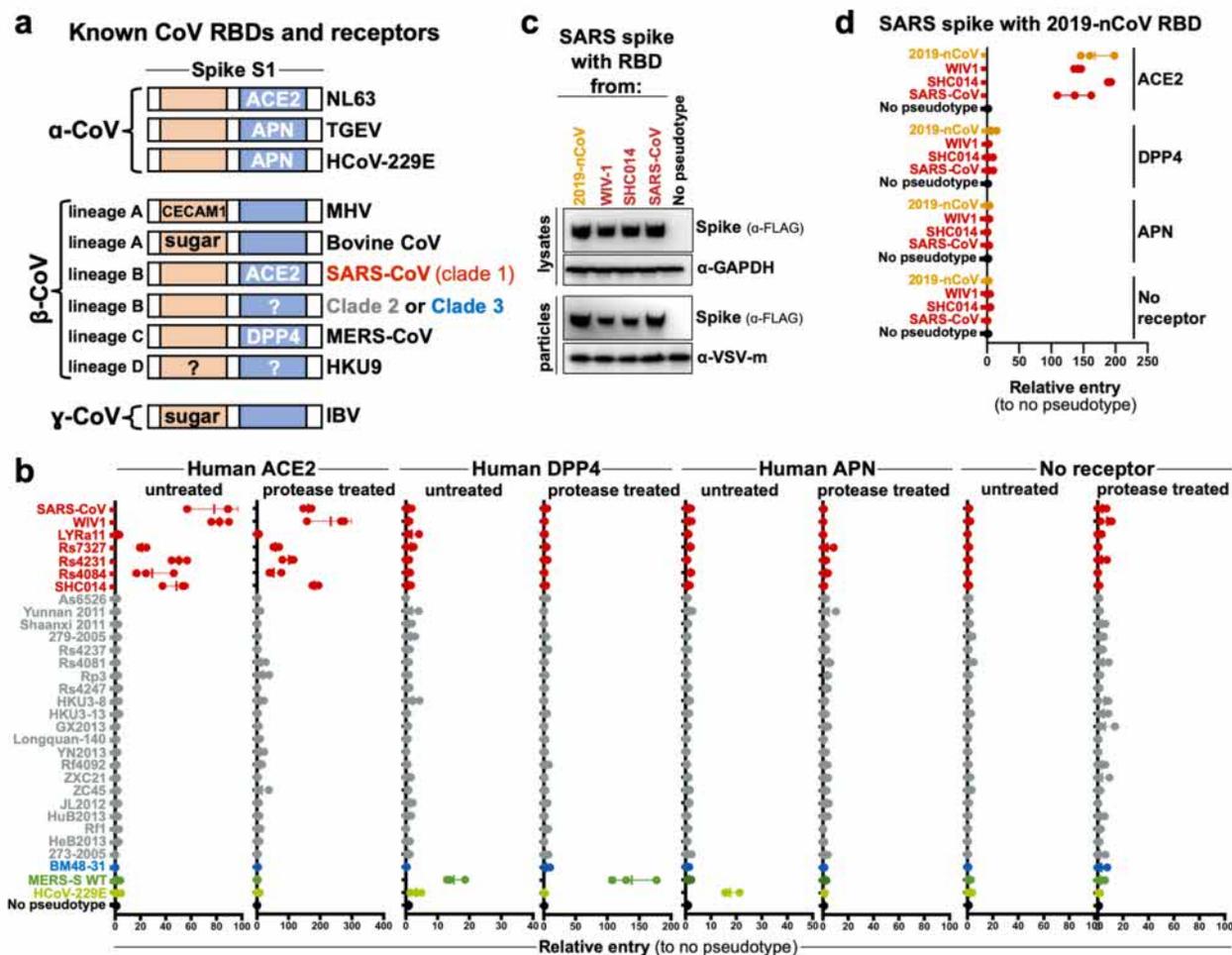


Figure 3: Lineage B entry into cells with known CoV receptors

a, Schematic of known coronavirus RBDs and their receptors. **b**, Pseudotyped particles were either left untreated and treated with trypsin and subsequently used to infect BHK cells transfected with the coronavirus receptor indicated. Shown are data from 3 replicates. **c**, Expression and pseudotype incorporation of SARS-S-2019-nCoV RBD chimeras. **d**, Pseudotypes were used to infect cells expressing hACE2, hDPP4, hAPN, or empty vector, without protease treatment.

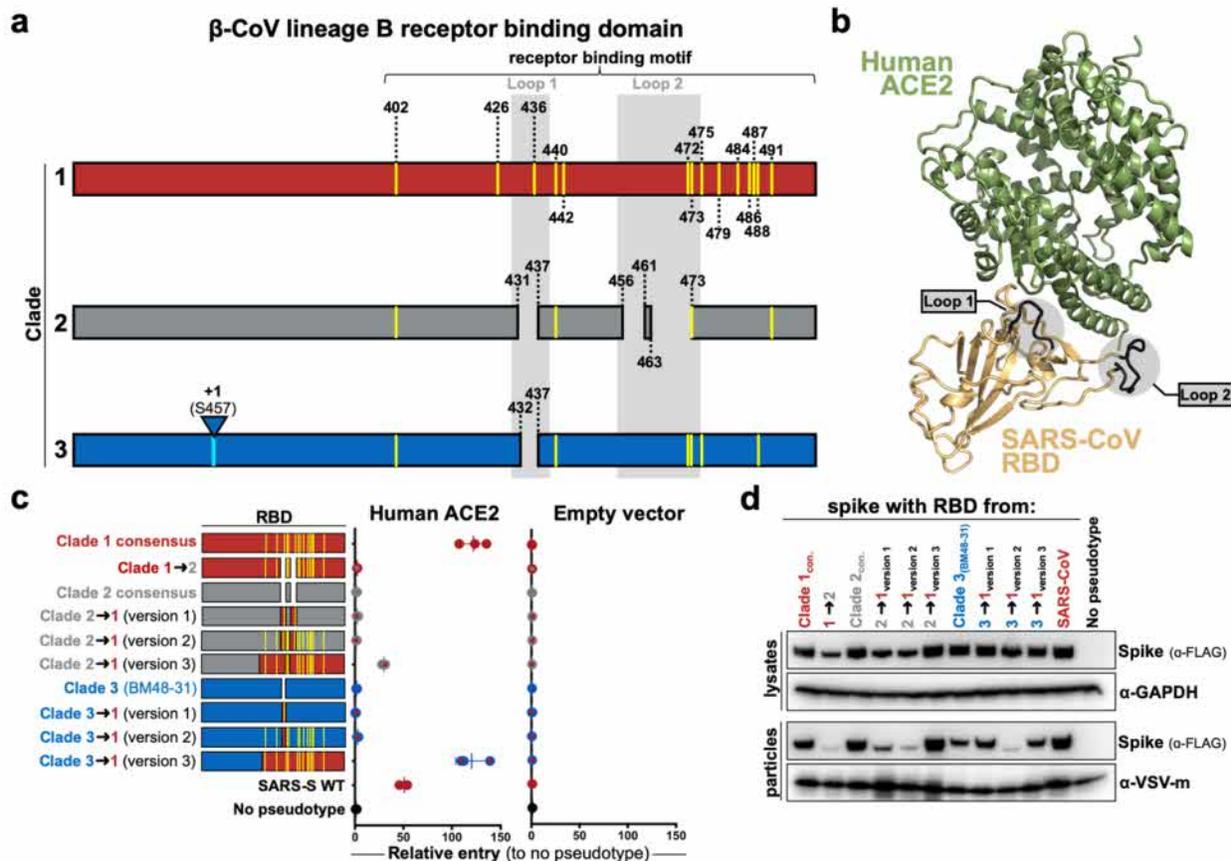


Figure 4: Lineage B clade-specific determinants for human ACE2 usage

a, Schematic overview of clade 1, 2 and 3. Highlighted in yellow are the 14 residues that contact human ACE2. Deletions in loops 1 and 2 are indicated for clades 2 and 3. **b**, Structure of human ACE2 and the SARS-S RBD (PDB: 2AJF), with loops highlighted in gray. **c**, VSV pseudotypes were generated with the indicated RBD and used to infect BHKs transfected with either human ACE2 or empty vector. Shown are data for 3 replicates. **d**, Westernblot of producer cell lysates and concentrated pseudotyped particles.

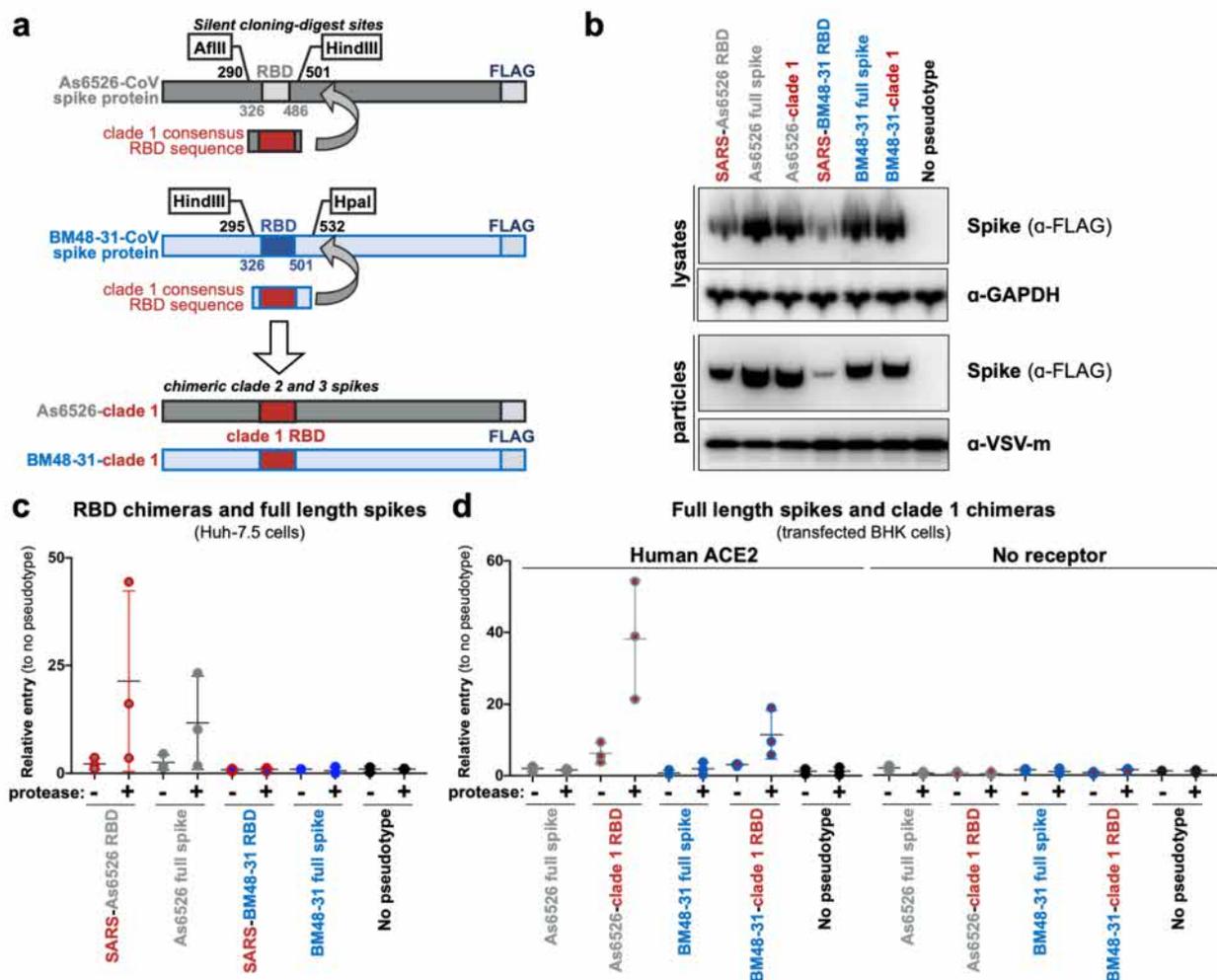


Figure 5: Comparison of chimeric and full-length clade 2 and 3 spikes

a, Full length spike sequences from As6526 (clade 2) and BM48-31 (clade 3) were codon optimized, FLAG tagged and synthesized. Silent mutations flanking the RBD facilitated replacing the native RBD with the clade 1 consensus RBD. **b**, Westernblot of producer cell lysates and concentrated pseudotypes particles. **c**, Pseudotypes with indicated spike constructs were left untreated or treated with trypsin and subsequently used to infect Huh-7.5 cells. Shown are data for 3 replicates. **d**, Pseudotypes with indicated spike constructs were left untreated or treated with trypsin and subsequently used to infect BHK cells transfected with human ACE2. Shown are data for 3 replicates.

Supplementary materials

Discovery of a novel coronavirus associated with the recent pneumonia outbreak in humans and its potential bat origin

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1

2 Discovery of a novel coronavirus associated with the recent pneumonia outbreak in
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4

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22

23 **Since the SARS outbreak 18 years ago, a large number of severe acute**
24 **respiratory syndrome related coronaviruses (SARSr-CoV) have been discovered**
25 **in their natural reservoir host, bats¹⁻⁴. Previous studies indicated that some of**
26 **those bat SARSr-CoVs have the potential to infect humans⁵⁻⁷. Here we report the**
27 **identification and characterization of a novel coronavirus (nCoV-2019) which**
28 **caused an epidemic of acute respiratory syndrome in humans, in Wuhan, China.**
29 **The epidemic, started from December 12th, 2019, has caused 198 laboratory**
30 **confirmed infections with three fatal cases by January 20th, 2020. Full-length**
31 **genome sequences were obtained from five patients at the early stage of the**
32 **outbreak. They are almost identical to each other and share 79.5% sequence**
33 **identify to SARS-CoV. Furthermore, it was found that nCoV-2019 is 96%**
34 **identical at the whole genome level to a bat coronavirus. The pairwise protein**
35 **sequence analysis of seven conserved non-structural proteins show that this virus**
36 **belongs to the species of SARSr-CoV. The nCoV-2019 virus was then isolated**
37 **from the bronchoalveolar lavage fluid of a critically ill patient, which can be**
38 **neutralized by sera from several patients. Importantly, we have confirmed that**
39 **this novel CoV uses the same cell entry receptor, ACE2, as SARS-CoV.**

40

41 Coronavirus has caused two large-scale pandemic in the last two decades, SARS and
42 MERS (Middle East respiratory syndrome)^{8,9}. It was generally believed that SARSr-
43 CoV, mainly found in bats, might cause future disease outbreak^{10,11}. Here we report
44 on a series of unidentified pneumonia disease outbreaks in Wuhan, Hubei province,
45 central China (Extended Data Figure 1). Started from a local fresh seafood market, the
46 epidemic has resulted in 198 laboratory confirmed cases with three death according to
47 authorities so far¹². Typical clinical symptoms of these patients are fever, dry cough,

48 dyspnea, headache, and pneumonia. Disease onset may result in progressive
49 respiratory failure due to alveolar damage and even death. The disease was
50 determined as viral induced pneumonia by clinicians according to clinical symptoms
51 and other criteria including body temperature rising, lymphocytes and white blood
52 cells decreasing (sometimes normal for the later), new pulmonary infiltrates on chest
53 radiography, and no obvious improvement upon three days antibiotics treatment. It
54 appears most of the early cases had contact history with the original seafood market,
55 and no large scale of human-to-human transmission was observed so far.
56
57 Samples from seven patients with severe pneumonia (six are seafood market peddlers
58 or delivers), who were enrolled in intensive unit cares at the beginning of the outbreak,
59 were sent to WIV laboratory for pathogen diagnosis (Extended Data Table 1). As a
60 CoV lab, we first used pan-CoV PCR primers to test these samples¹³, considering the
61 outbreak happened in winter and in a market, same environment as SARS. We found
62 five PCR positive. A sample (WIV04) collected from bronchoalveolar lavage fluid
63 (BALF) was analysed by metagenomics analysis using next-generation sequencing
64 (NGS) to identify potential etiological agents. Of the 1582 total reads obtained after
65 human genome filtering, 1378 (87.1%) matched sequences of SARSr-CoV (Fig. 1a).
66 By *de novo* assembly and targeted PCR, we obtained a 29,891-bp CoV genome that
67 shared 79.5% sequence identity to SARS-CoV BJ01 (GenBank accession number
68 AY278488.2). This sequence has been submitted to GISAID (accession no.
69 EPI_ISL_402124). Following the name by WHO, we tentatively call it novel
70 coronavirus 2019 (nCoV-2019). Four more full-length genome sequences of nCoV-
71 2019 (WIV02, WIV05, WIV06, and WIV07) (GISAID accession nos.

72 EPI_ISL_402127-402130) that were above 99.9% identical to each other were
73 subsequently obtained from other four patients (Extended Data Table 2).

74

75 The virus genome consists of six major open reading frames (ORFs) common to
76 coronaviruses and a number of other accessory genes (Fig. 1b). Further analysis
77 indicates that some of the nCoV-2019 genes shared less than 80% nt sequence
78 identity to SARS-CoV. However, the seven conserved replicase domains in ORF1ab
79 that were used for CoV species classification, are 94.6% aa sequence identical
80 between nCoV-2019 and SARS-CoV, implying the two belong to same species
81 (Extended Data Table 3).

82

83 We then found a short RdRp region from a bat coronavirus termed BatCoV RaTG13
84 which we previously detected in *Rhinolophus affinis* from Yunnan Province showed
85 high sequence identity to nCoV-2019. We did full-length sequencing to this RNA
86 sample. Simplot analysis showed that nCoV-2019 was highly similar throughout the
87 genome to RaTG13 (Fig. 1c), with 96.2% overall genome sequence identity. The
88 phylogenetic analysis also showed that RaTG13 is the closest relative of the nCoV-
89 2019 and form a distinct lineage from other SARSr-CoVs (Fig. 1d). The receptor
90 binding protein spike (S) gene was highly divergent to other CoVs (Extended Data
91 Figure 2), with less than 75% nt sequence identity to all previously described SARSr-
92 CoVs except a 93.1% nt identity to RaTG13 (Extended Data Table 3). The S genes of
93 nCoV-2019 and RaTG13 S gene are longer than other SARSr-CoVs. The major
94 differences in nCoV-2019 are the three short insertions in the N-terminal domain, and
95 four out of five key residues changes in the receptor-binding motif, in comparison

96 with SARS-CoV (Extended Data Figure 3). The close phylogenetic relationship to
97 RaTG13 provides evidence for a bat origin of nCoV-2019.

98

99 We rapidly developed a qPCR detection based on the receptor-binding domain of
100 spike gene, the most variable region among genome (Fig. 1c). Our data show the
101 primers could differentiate nCoV-2019 with all other human coronaviruses including
102 bat SARSr-CoV WIV1, which is 95% identity to SARS-CoV (Extended Data Figure
103 4a and 4b). From the seven patients, we found nCoV-2019 positive in six BALF and
104 five oral swab samples during the first sampling by qPCR and conventional PCR
105 (Extended Data Figure 4c). However, we can no longer find viral positive in oral
106 swabs, anal swabs, and blood from these patients during the second sampling (Fig.
107 2a). Based on these findings, we conclude that the disease should be transmitted
108 through airway, yet we can't rule out other possibilities if the investigation extended
109 to include more patients.

110

111 For serological detection of nCoV-2019, we used previously developed bat SARSr-
112 CoV Rp3 nucleocapsid protein (NP) as antigen in IgG and IgM ELISA test, which
113 showed no cross-reactivity against other human coronaviruses except SARSr-CoV⁷.
114 As a research lab, we were only able to get five serum samples from the seven viral
115 infected patients. We monitored viral antibody levels in one patient (ICU-06) at seven,
116 eight, nine, and eighteen days after disease onset (Extended Data Table 2). A clear
117 trend of IgG and IgM titre (decreased at the last day) increase was observed (Fig. 2b).
118 For a second investigation, we tested viral antibody for five of the seven viral positive
119 patients around twenty days after disease onset (Extended Data Table 1 and 2). All

120 patient samples, but not samples from healthy people, showed strong viral IgG
121 positive (Fig. 2b). We also found three IgM positive, indicating acute infection.
122
123 We then successfully isolated the virus (named nCoV-2019
124 BetaCoV/Wuhan/WIV04/2019), in Vero and Huh7 cells using BALF sample from
125 ICU-06 patient. Clear cytopathogenic effects were observed in cells after three days
126 incubation (Extended Data Figure 5a and 5b). The identity of the strain WIV04 was
127 verified in Vero E6 cells by immunofluorescence microscopy using cross-reactive
128 viral NP antibody (Extended Data Figure 5c and 5d), and by metagenomic sequencing,
129 from which most of the reads mapped to nCoV-2019 (Extended Data Figure 5e and
130 5f). Viral partials in ultrathin sections of infected cells displayed typical coronavirus
131 morphology under electron microscopy (Fig. 3). To further confirm the neutralization
132 activity of the viral IgG positive samples, we conducted serum-neutralization assays
133 in Vero E6 cells using the five IgG positive patient sera. We demonstrate that all
134 samples were able to neutralize 120 TCID₅₀ nCoV-2019 at a dilution of 1:40-1:80.
135 We also show that this virus could be cross-neutralized by horse anti-SARS-CoV
136 serum at dilutions 1:80, further confirming the relationship of the two viruses
137 (Extended Data Table 4).
138
139 Angiotensin converting enzyme II (ACE2) was known as cell receptor for SARS-
140 CoV¹⁴. To determine whether nCoV-2019 also use ACE2 as a cellular entry receptor,
141 we conducted virus infectivity studies using HeLa cells expressing or not expressing
142 ACE2 proteins from humans, Chinese horseshoe bats, civet, pig, and mouse. We
143 show that nCoV-2019 is able to use all but mouse ACE2 as an entry receptor in the
144 ACE2-expressing cells, but not cells without ACE2, indicating which is likely the cell

145 receptor of nCoV-2019 (Fig. 4). We also proved that nCoV-2019 does not use other
146 coronavirus receptors, aminopeptidase N and dipeptidyl peptidase 4 (Extended Data
147 Figure 6).

148

149 The study provides the first detailed report on nCoV-2019, the likely etiology agent
150 responsible for ongoing acute respiratory syndrome epidemic in Wuhan, central China.

151 Viral specific nucleotide positive and viral protein seroconversion observed in all
152 patients tested provides evidence of an association between the disease and the

153 presence of this virus. However, there are still many urgent questions to be answered.

154 We need more clinical data and samples to confirm if this virus is indeed the etiology
155 agent for this epidemic. In addition, we still don't know if this virus continue evolving

156 and become more transmissible between human-to-human. Moreover, we don't know

157 the transmission routine of this virus among hosts yet. We showed viral positive in

158 oral swabs, implying nCoV-2019 may be transmitted through airway. However, this

159 needs to be confirmed by extending detection range. Finally, based on our results, it

160 should be expected and worth to test if ACE2 targeting or SARS-CoV targeting drugs

161 can be used for nCoV-2019 patients. At this stage, we know very little about the virus,

162 including basic biology, animal source or any specific treatment. The almost identical

163 sequences of this virus in different patients imply a probably recent introduction in

164 humans, thus future surveillance on viral mutation and transmission ability and

165 further global research attention are urgently needed.

166

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176

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178 study. G.S.W., C.L.H., H.D.C., F.D., Q.J.C., F.X.Z., and LLL., collected patient
179 samples. X.L.Y., B.Y., W.Z., B.L., J.C., X.S.Z., Y.L., H.G., R.D.J., M.Q.L., Y. Chen,
180 X.W., X.R.S., and K.Z. performed qPCR, serology, and virus culturing. L.Z., Y.Z.,
181 H.R.S., and B.H. performed genome sequencing and annotations. The authors declare
182 no competing financial interests. Correspondence and requests for materials should be
183 addressed to ZLS (zlshi@wh.iov.cn).

184

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215 the Sars Coronavirus. *Nature* **426**, 450-454, (2003).
216

217 **Supplementary Information is available in the online version of the paper.**

218 **Main Figure Legend**

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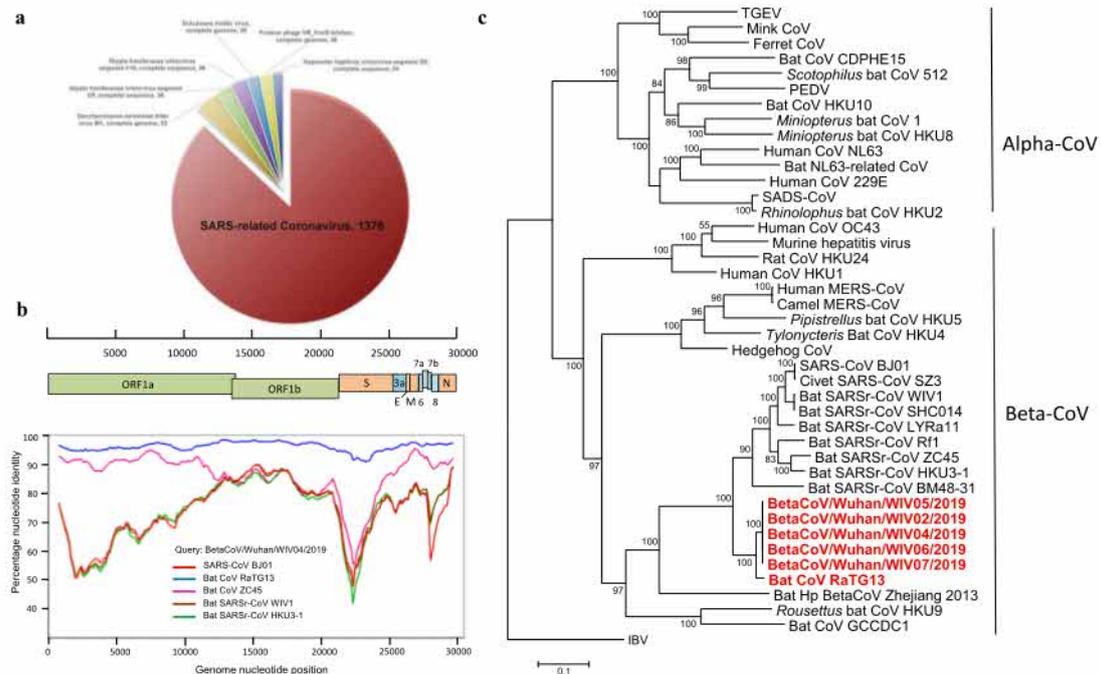
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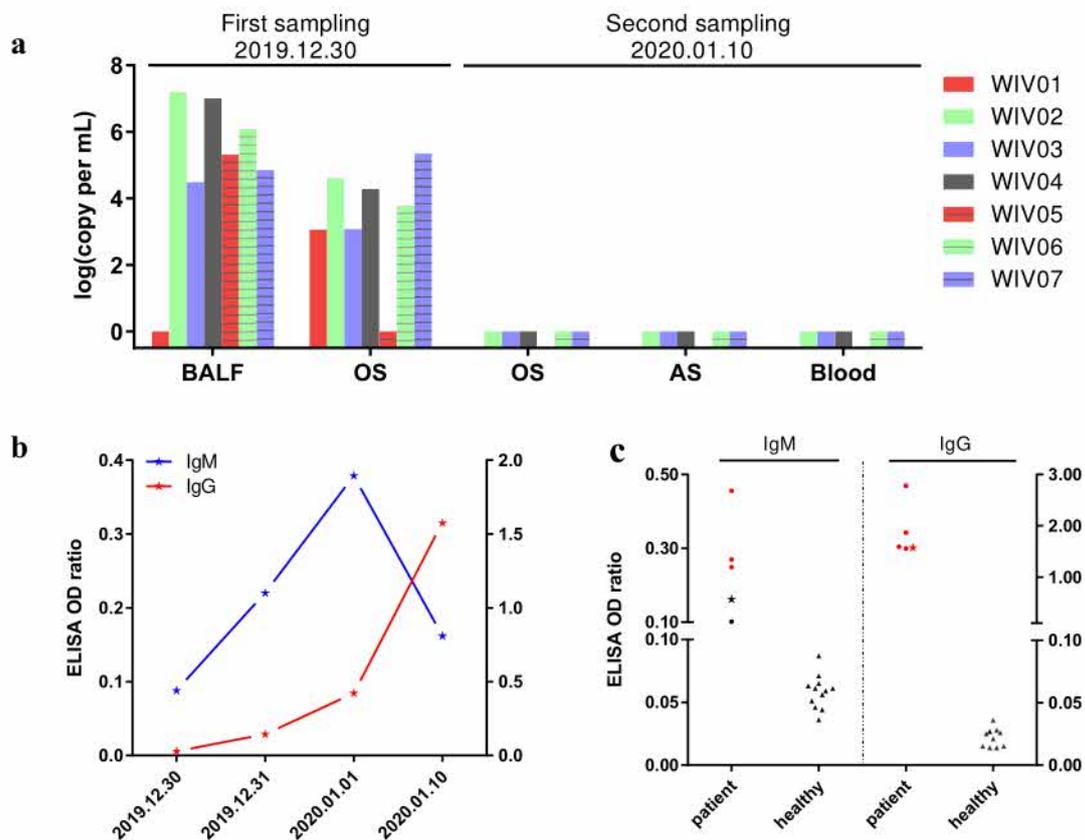
233

234 **Fig. 1 | Genome characterization of nCoV-2019. a,** pie chart showing
 235 metagenomics analysis of next-generation sequencing of bronchoalveolar lavage fluid
 236 from patient ICU06. **b,** Genomic organization of nCoV-2019 WIV04. **c,** Similarity
 237 plot based on the full-length genome sequence of nCoV-2019 WIV04. Full-length
 238 genome sequences of SARS-CoV BJ01, bat SARSr-CoV WIV1, bat coronavirus
 239 RaTG13 and ZC45 were used as reference sequences. **d,** Phylogenetic tree based on
 240 nucleotide sequences of complete ORF1b of coronaviruses. Software used and
 241 settings can be found in material and method section.
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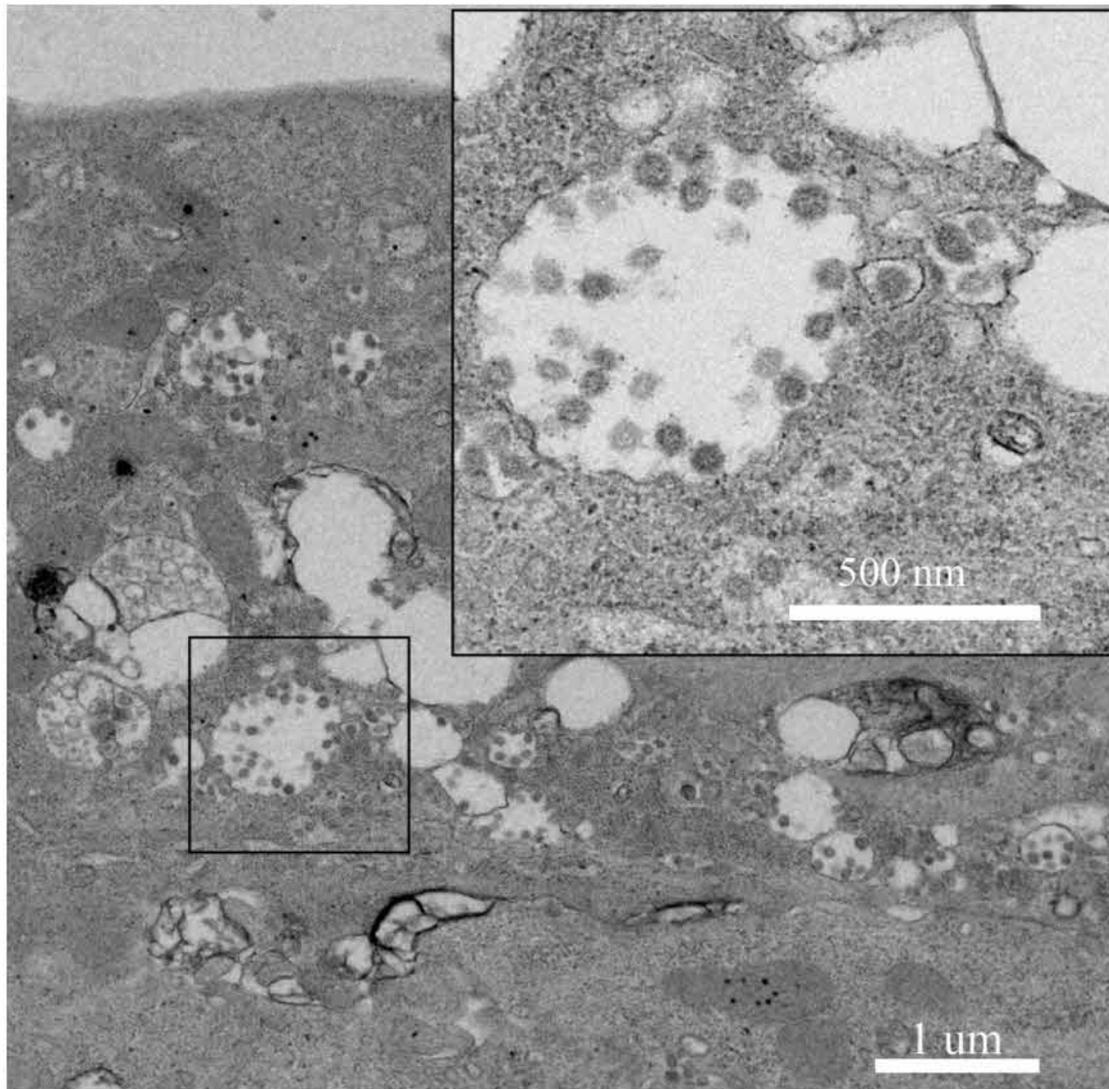
250 **Fig. 2 | Molecular and serological investigation of patient samples. a**, molecular
 251 detection of nCoV-2019 in seven patients during two times of sampling. Patient
 252 information can be found in Extended Data Table 1 and 2. Details on detection
 253 method can be found in material and methods. BALF, bronchoalveolar lavage fluid;
 254 OS, oral swab; AS, anal swab. **b**, dynamics of nCoV-2019 antibodies in one patient
 255 who showed sign of disease on 2019.12.23 (ICU-06). **c**, serological test of nCoV-
 256 2019 antibodies in five patients (more information can be found in Extended Data
 257 Table 2). Star indicates data collected from patient ICU-06 on 2020.01.10. For b and c,
 258 cut-off was set up as 0.2 for IgM test and 0.3 for IgG test, according to healthy
 259 controls.



261

262

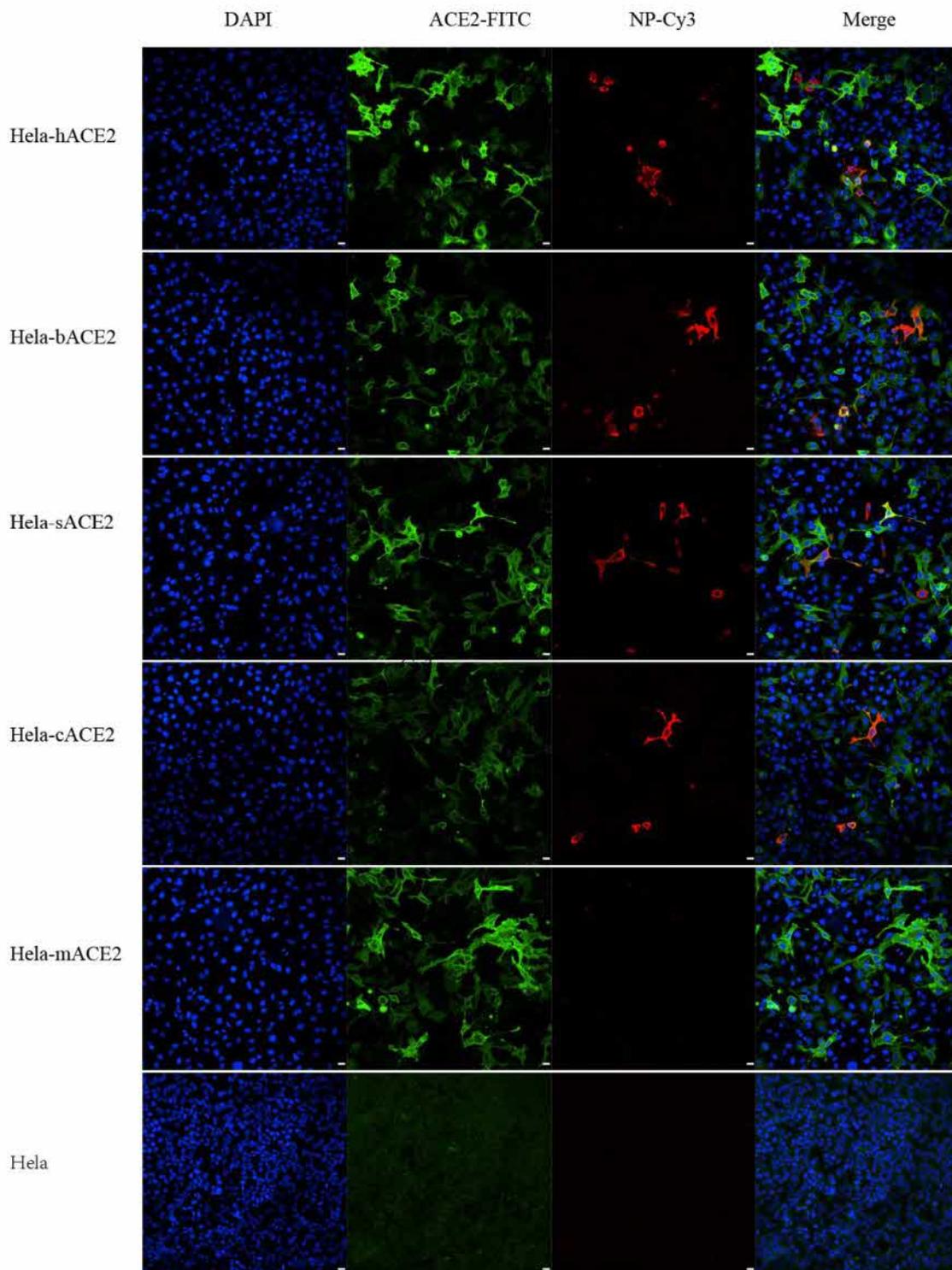
263 **Fig. 3 | Virions. a**, viral particles in the ultrathin sections under electron microscope
264 at 200 kV, sample from viral infected Vero E6 cells



265

266

267 **Fig. 4 | Analysis of nCoV-2019 receptor usage.** Determination of virus infectivity in
268 HeLa cells with or without the expression of ACE2. h, human; b, *Rhinolophus sinicus*
269 bat; c, civet; s, swine (pig); m, mouse. ACE2 protein (green), viral protein (red) and
270 nuclei (blue) was shown. Scale bar=10 um.



271

272

273 **METHODS**

274 **Sample collection.** Human samples, including oral swabs, anal swabs, blood, and
275 BALF samples were collected by Jinyintan hospital (Wuhan) with the consent from
276 all patients. Patients were sampled without gender or age preference unless where
277 indicated. For swabs, 1.5 ml DMEM+2% FBS medium was added each tube.
278 Supernatant was collected after 2500 rpm, 60 s vortex and 15-30 min standing.
279 Supernatant from swabs or BALF (no pretreatment) was added to either lysis buffer
280 for RNA extraction or to viral transport medium (VTM) for virus isolation. VTM
281 composed of Hank's balanced salt solution at pH7.4 containing BSA (1%),
282 amphotericin (15 µg/ml), penicillin G (100 units/ml), and streptomycin (50 µg/ml).
283 Serum was separated by centrifugation at 3,000 g for 15 min within 24 h of collection,
284 followed by 56 °C 30 min inactivation, and then stored at 4 °C until use.

285

286 **Virus isolation, cell infection, electron microscope and neutralization assay.** The
287 following cells were used for virus isolation in this study: Vero, Vero E6, and Huh7
288 that were cultured in DMEM +10% FBS. A list of cells were used for susceptibility
289 test (Extended Data Fig. 6). All cell lines were tested free of mycoplasma
290 contamination, applied to species identification and authenticated by microscopic
291 morphologic evaluation. None of cell lines was on the list of commonly misidentified
292 cell lines (by ICLAC).

293

294 Cultured cell monolayers were maintained in their respective medium. PCR-positive
295 BALF sample from ICU-06 patient was spin at 8,000 g for 15 min, filtered and
296 diluted 1:2 with DMEM supplied with 16 µg/ml trypsin before adding to cells. After
297 incubation at 37 °C for 1 h, the inoculum was removed and replaced with fresh culture

298 medium containing antibiotics (below) and 16 µg/ml trypsin. The cells were incubated
299 at 37 °C and observed daily for cytopathic effect (CPE). The culture supernatant was
300 examined for presence of virus by qRT-PCR developed in this study, and cells were
301 examined by immunofluorescent using SARSr-CoV Rp3 NP antibody made in house
302 (1:100). Penicillin (100 units/ml) and streptomycin (15 µg/ml) were included in all
303 tissue culture media.

304

305 The Vero E6 cells were infected with new virus at MOI of 0.5 and harvested 48 hpi.
306 Cells were fixed with 2.5% (wt/vol) glutaraldehyde and 1% osmium tetroxide, and
307 then dehydrated through a graded series of ethanol concentrations (from 30 to 100%),
308 and embedded with epoxy resin. Ultrathin sections (80 nm) of embedded cells were
309 prepared, deposited onto Formvar-coated copper grids (200 mesh), stained with
310 uranyl acetate and lead citrate, then observed under 200 kV Tecnai G2 electron
311 microscope.

312

313 The virus neutralization test was carried out in a 48-well plate. The patient serum
314 samples were heat-inactivated by incubation at 56 °C for 30 min before use. The
315 serum samples (5 µL) were diluted to 1:10, 1:20, 1:40 or 1:80, and then an equal
316 volume of virus stock was added and incubated at 37 °C for 60 min in a 5% CO₂
317 incubator. Diluted horse anti SARS-CoV serum or serum samples from healthy
318 people were used as control. After incubation, 100 µL mixtures were inoculated onto
319 monolayer Vero E6 cells in a 48-well plate for 1 hour. Each serum were repeated
320 triplicate. After removing the supernatant, the plate was washed twice with DMEM
321 medium. Cells were incubated with DMEM supplemented with 2% FBS for 24 hours.
322 Then the cells were fixed with 4% formaldehyde. And the virus were detected using

323 SL-CoV Rp3 NP antibody followed by Cy3-conjugated mouse anti-rabbit IgG. Nuclei
324 were stained with DAPI. Infected cell number was counted by high-content
325 cytometers.

326

327 **RNA extraction and PCR.** Whenever commercial kits were used, manufacturer's
328 instructions were followed without modification. RNA was extracted from 200 μ l of
329 samples with the High Pure Viral RNA Kit (Roche). RNA was eluted in 50 μ l of
330 elution buffer and used as the template for RT-PCR.

331

332 For qPCR analysis, primers based on nCoV-2019 S gene was designed: RBD-qF1: 5'-
333 CAATGGTTTAAACAGGCACAGG-3'; RBD-qR1: 5'-

334 CTCAAGTGTCTGTGGATCACG-3'. RNA extracted from above used in qPCR by
335 HiScript[®] II One Step qRT-PCR SYBR[®] Green Kit (Vazyme Biotech Co.,Ltd).

336 Conventional PCR test was also performed using the following primer pairs: ND-
337 CoVs-951F TGTKAGRTTYCCTAAYATTAC; ND-CoVs-1805R

338 ACATCYTGATANARAACAGC¹³. The 20 μ l qPCR reaction mix contained 10 μ l 2 \times
339 One Step SYBR Green Mix, 1 μ l One Step SYBR Green Enzyme Mix, 0.4 μ l 50 \times
340 ROX Reference Dye 1, 0.4 μ l of each primer (10 μ M) and 2 μ l template RNA.

341 Amplification was performed as follows: 50 $^{\circ}$ C for 3 min, 95 $^{\circ}$ C for 30 s followed by
342 40 cycles consisting of 95 $^{\circ}$ C for 10 s, 60 $^{\circ}$ C for 30 s, and a default melting curve step
343 in an ABI 7700 machine.

344

345 **Serological test.** In-house anti-SARSr-CoV IgG and IgM ELISA kits were developed
346 using SARSr-CoV Rp3 NP as antigen, which shared above 90% amino acid identity
347 to all SARSr-CoVs². For IgG test, MaxiSorp Nunc-immuno 96 well ELISA plates

348 were coated (100 ng/well) overnight with recombinant NP. Human sera were used at
349 1:20 dilution for 1 h at 37 °C. An anti-Human IgG-HRP conjugated monoclonal
350 antibody (Kyab Biotech Co., Ltd, Wuhan, China) was used at a dilution of 1:40000.
351 The OD value (450–630) was calculated. For IgM test, MaxiSorp Nunc-immuno 96
352 wellELISA plates were coated (500 ng/well) overnight with anti-human IgM (μ
353 chain). Human sera were used at 1:100 dilution for 40 min at 37 °C, followed by anti-
354 Rp3 NP-HRP conjugated (Kyab Biotech Co., Ltd, Wuhan, China) at a dilution of
355 1:4000. The OD value (450–630) was calculated.

356

357 **Examination of ACE2 receptor for nCoV-2019 infection.** HeLa cells transiently
358 expressing ACE2 were prepared by a lipofectamine 3000 system (Thermo Fisher
359 Scientific) in 96-well plate, with mock-transfected cells as controls. nCoV-2019
360 grown from Vero E6 cells was used for infection at multiplicity of infection 0.05.
361 Same for testing of APN and DPP4. The inoculum was removed after 1 h absorption
362 and washed twice with PBS and supplemented with medium. At 24 hpi, cells were
363 washed with PBS and fixed with 4% formaldehyde in PBS (pH 7.4) for 20 min at
364 room temperature. ACE2 expression was detected using mouse anti-S tag monoclonal
365 antibody followed by FITC-labelled goat anti-mouse IgG H&L (Abcam, ab96879).
366 Viral replication was detected using rabbit antibody against the Rp3 NP protein (made
367 in house, 1:100) followed by cyanin 3-conjugated goat anti-rabbit IgG (1:50, Abcam,
368 ab6939). Nucleus was stained with DAPI (Beyotime). Staining patterns were
369 examined using the FV1200 confocal microscopy (Olympus).

370

371 **High throughput sequencing, pathogen screening and genome assembly.** Samples
372 from patient BALF or from virus culture supernatant were used for RNA extraction

373 and next-generation sequencing using Illumina MiSeq 3000 sequencer. Metagenomic
374 analysis was carried out mainly base on the bioinformatics platform MGmapper
375 (PE_2.24 and SE_2.24). The raw NGS reads were firstly processed by Cutadapt
376 (v1.18) with minimum read length of 30bp. BWA (v0.7.12-r1039) was utilized to
377 align reads to local database with a filter hits parameter at 0.8 FMM value and
378 minimum alignment score at 30. Parameters for post-processing of assigned reads was
379 set with minimum size normalized abundance at 0.01, minimum read count at 20 and
380 other default parameters. A local nucleic acid database for human and mammals was
381 employed to filter reads of host genomes before mapping reads to virus database. The
382 results of metagenomic analysis were displayed through pie charts using WPS Office
383 2010. NGS reads were assembled into genomes using Geneious (v11.0.3) and
384 MEGAHIT (v1.2.9). PCR and Sanger sequencing was performed to fill gaps in the
385 genome. 5'-RACE was performed to determine the 5'-end of the genomes using
386 SMARTer RACE 5'/3' Kit (Takara). Genomes were annotated using Clone Manager
387 Professional Suite 8 (Sci-Ed Software).

388

389 **Phylogenetic analysis.** Routine sequence management and analysis was carried out
390 using DNASTar. Sequence alignment and editing were conducted using ClustalW and
391 GeneDoc. Maximum Likelihood phylogenetic trees based on nucleotide sequences of
392 full-length ORF1b and S genes were constructed using the Jukes-Cantor model with
393 bootstrap values determined by 1000 replicates in the MEGA6 software package.

394

395 **Data Availability statement.** Sequence data that support the findings of this study
396 have been deposited in GISAID with the accession no. EPI_ISL_402124 and
397 EPI_ISL_402127-402130.

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Fri, 24 Jan 2020 01:02:09 +0000
To: Gerber, Susan I. (CDC/DDID/NCIRD/DVD)
Сс: Jernigan, Daniel B. (CDC/DDID/NCIRD/ID);Pallansch, Mark A. (CDC/DDID/NCIRD/DVD)
Subject: Re: WHO Consultation regarding the Wuhan coronavirus
Attachments: image001.png, image002.png, image003.png

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Fri, 24 Jan 2020 19:43:27 +0000
To: Gerber, Susan I. (CDC/DDID/NCIRD/DVD)
Subject: FW: WHO Consultation regarding the Wuhan coronavirus
Attachments: image004.png, image005.png, image006.png

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Fri, 31 Jan 2020 14:44:20 +0000
To: Stig Tollefsen
Subject: FW: NEJM article

Just following up after the call.

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Friday, January 31, 2020 9:03 AM
To: CEPI Secretariat <secretariat@cepi.net>
Subject: NEJM article

What is concerning to me, which in my mind supports the vaccine need, is the fact that in the NEJM Qun Li et/al article, table 1 – suggests that in the cases described as identified between January 1-11 and January 12-22, the majority of cases (where information was available) did not have epi risk factors identified....~72% did not have known market exposure nor exposure to person with respiratory symptoms. I am not sure I heard Ana Maria correctly, but she seemed to say that epi risk factors had been identified? This would be important to clarify, and goes to Stanley's question of pauci-symptomatic cases – esp with the apparent absence of children <15 dx with disease....

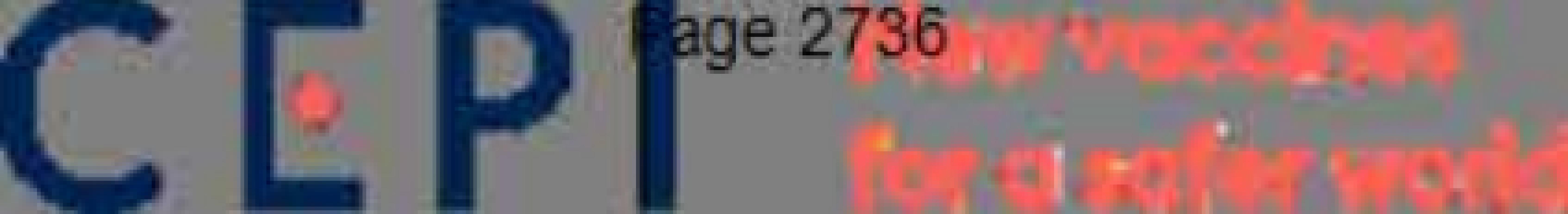
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Inger Damon M.D., Ph.D.
Director, Division of High Consequence Pathogens and Pathology
NCEZID
phone 404-639-4931
email idamon@cdc.gov
Mailstop A30
Centers for Disease Control and Prevention
1600 Clifton Rd NE
Atlanta, GA 30333

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 5 Feb 2020 16:50:02 +0000
To: Stig Tollefsen
Subject: RE: Sac meeting minutes January 31
Attachments: image001.png, image002.png, image003.png

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 28 Jan 2020 17:33:50 +0000
To: Gerber, Susan I. (CDC/DDID/NCIRD/DVD);Jernigan, Daniel B.
(CDC/DDID/NCIRD/ID)
Subject: CEPI

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 28 Jan 2020 20:52:37 +0000
To: William Dowling
Subject: Re: WHO Consultation regarding the Wuhan coronavirus
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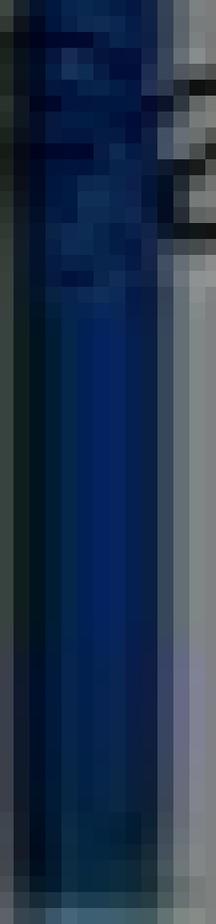
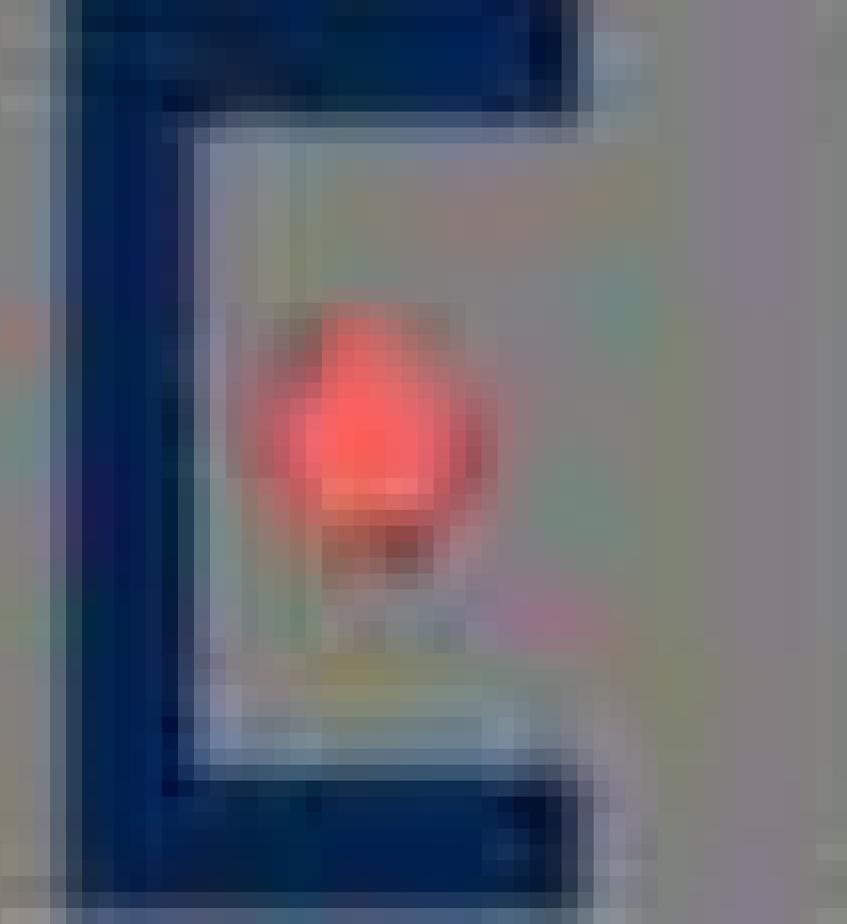
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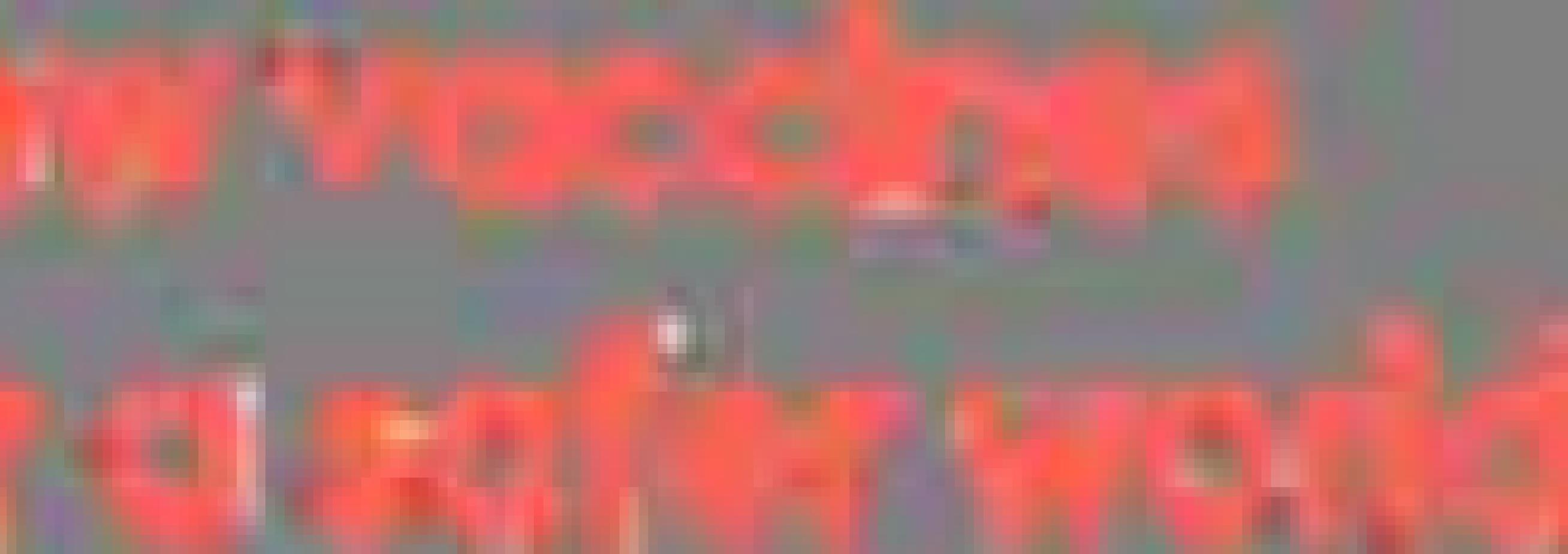
From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Sun, 16 Feb 2020 23:17:53 +0000
To: Stig Tollefsen
Cc: Raimonda Viburiene;Melanie Saville;Nick Jackson
Subject: Re: Proposal review COVID-2019
Attachments: image001.png, image002.png, image003.png

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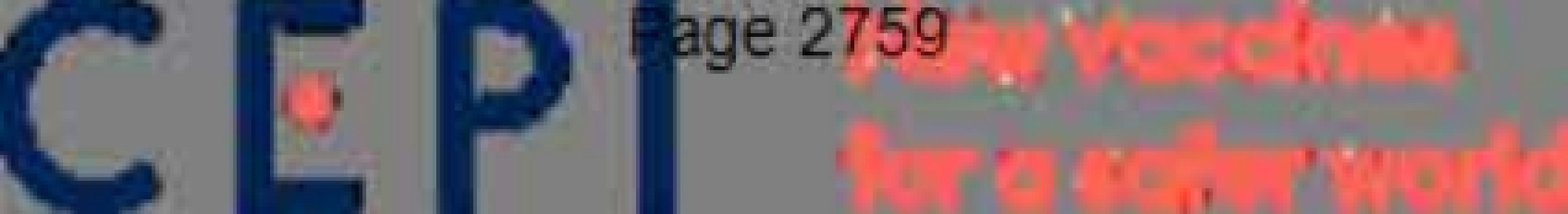
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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Mon, 17 Feb 2020 23:27:19 +0000
To: Gerber, Susan I. (CDC/DDID/NCIRD/DVD)
Subject: Re: URGENT: Diamond Princess epidemiology
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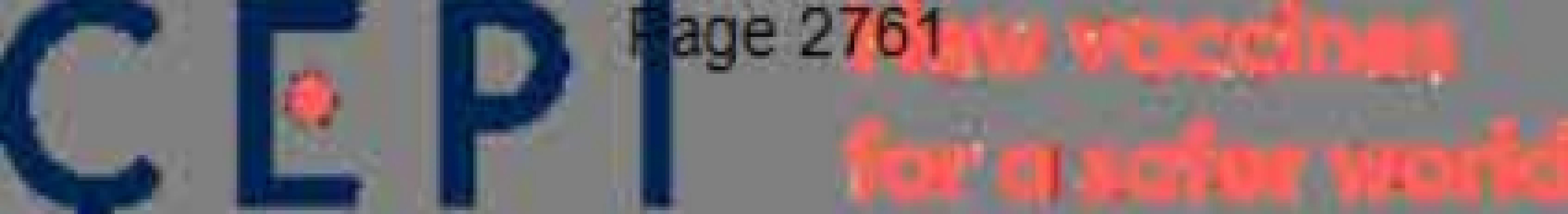




From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Mon, 17 Feb 2020 14:52:04 +0000
To: Gerber, Susan I. (CDC/DDID/NCIRD/DVD)
Subject: Fwd: URGENT: Diamond Princess epidemiology
Attachments: image002.png

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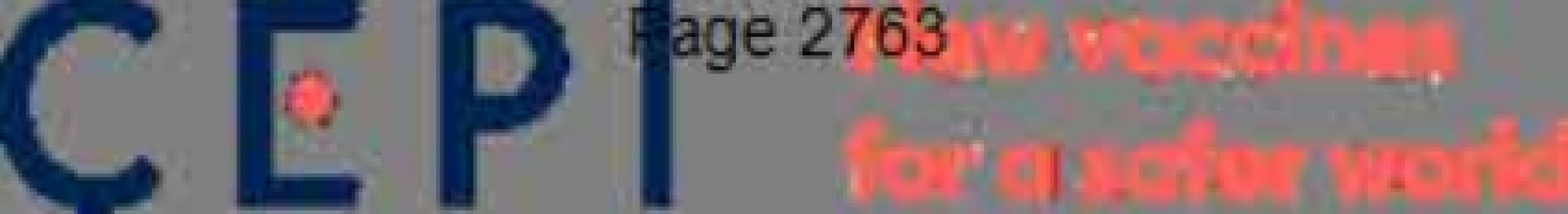




From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Mon, 17 Feb 2020 14:48:20 +0000
To: Richard Hatchett
Subject: Re: URGENT: Diamond Princess epidemiology
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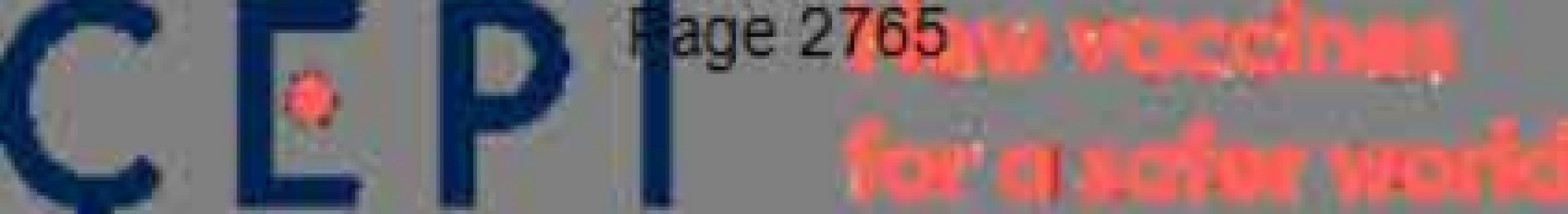




From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Mon, 17 Feb 2020 15:00:58 +0000
To: Richard Hatchett;Gerber, Susan I. (CDC/DDID/NCIRD/DVD)
Subject: Re: URGENT: Diamond Princess epidemiology
Attachments: image001.png

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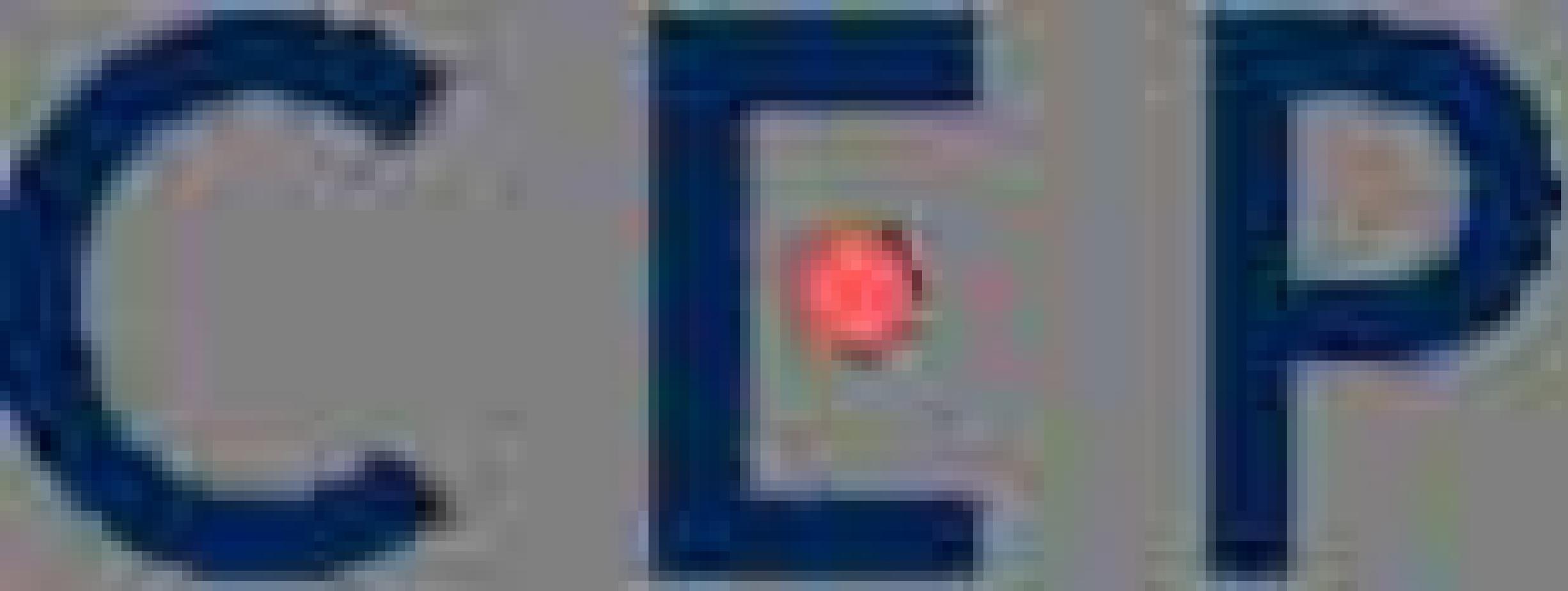




From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Mon, 27 Jul 2020 18:59:53 +0000
To: Solomon Abebe Yimer
Cc: Raul Gomez Roman;Rihana Diabo
Subject: Re: Kickoff meeting
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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 28 Jan 2020 13:59:57 +0000
To: McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP)
Subject: Re: CEPI-IABS Cross learning experience human and animal vaccine licensure based on technology platforms meeting_Save The Date

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 28 Jan 2020 10:47:42 +0000
To: Barton Behravesh, Casey (CDC/DDID/NCEZID/OD)
Cc: McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP)
Subject: Fwd: CEPI-IABS Cross learning experience human and animal vaccine licensure based on technology platforms meeting_Save The Date
Attachments: IABS-CEPI_Platform Technology Provisional Agenda_v. 28.01.2020.pdf

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**Cross learning experience human and animal vaccine licensure
based on technology platform**

**Organized by
The Coalition for Epidemic Preparedness Innovations
CEPI
&
The International Alliance for Biological Standardization
IABS
Palais de l'Académie Royale des Sciences
Brussels, Belgium**

PROVISIONAL AGENDA – JANUARY 2020

Scientific Committee

Daniel BRASSEUR, co-Chair Scientific Committee; former CHMP-PDCO-VWP chair at the EMA, CEPI consultant

Murray LUMPKIN, co-Chair Scientific Committee; former Deputy Director, FDA - B&M Gates Foundation

Barney GRAHAM

NIH, Deputy Director and Chief, Viral Pathogenesis Laboratory

Mélanie SAVILLE

Director, Vaccine Development, CEPI

Prof. Dr. Johan NEYTS

Rega Institute Louvain, Belgium, specialist of DNA vaccine PLLAV

Dr. Marion GRÜBER

FDA Center for Biologics Evaluation and Research

Dr. Ivo CLAASSEN

EMA, head of veterinary medicines

Dr. Marco CAVALERI

EMA, head of human medicines

Prof Dr. Jeffery ALMOND

Oxford University; Chairman of the Board, Osivax

Dr. Jean-Christophe AUDONNET

**Head, Vaccine Research, Boehringer Ingelheim An Health;
ZAPI coordinator**

Dr. Emmanuel HANON

GSK

Dr Ajoy CHAKRABARTI

BMGF Vaccine Development

Dr Steve BLACK

Global Vaccine Data Network

MONDAY MARCH 16th

08:00	Welcome
9:00	Opening
9:00	<p>1. Welcome and Introduction - CEPI & IABS Richard HATCHETT, Coalition for Epidemic Preparedness Innovations (CEPI) Joris VANDEPUTTE, International Alliance for Biological Standardization (IABS)</p>
9:15	<p>2. Focus/Objective Vaccine Technology Platforms: What are we speaking about? David VAUGHN, Bill & Melinda Gates Foundation</p>
9:30	<p>Emergency Preparedness Emergency Preparedness: Lessons learned in the development of an Ebola vaccine Jayanthi WOLF, Merck</p>
9:45	Discussion
10:00	<p>3. Scene setting Past Experience with Emergency situations: success & failures Animal : state of the current licensing situation: regulatory requirements in force and currently licensed vaccines Ivo CLAASSEN, European Medicines Agency</p>
10:15	<p>Human: influenza past experience success & failure Prof Klaus CICHUTEK, Paul-Ehrlich-Institut</p>
10:30	Discussion
10:45	Coffee break
11:15	<p>4. New Technologies Animal vaccines: ZAPI project Jean-Christophe Audonnet, Boehringer Ingelheim An Health; ZAPI coordinator</p>
11:30	<p>Experience with technology platforms in animal vaccines - US regulatory approach Carol Gibbs, US Center for Veterinary Biologics Policy, Evaluation & Licensing</p>
11:45	<p>Advanced human vaccines in the pipe-line (Viral vectors, VSV-Measles-ChAd...) and RNA, DNA technologies Experience with technology platforms in animal vaccines - US regulatory approach TBC</p>
12:00	Discussion
12:30	Lunch

- 5. Commonalities and Particulars & Challenges of Platforms**
- 13:30** Manufacturing & quality control – what is platform generic, what is vaccine specific?
TBC
- 13:45** Vaccine platforms : pre-clinical package, how far can we go?
Kaat Smith, Federal Agency for Medicines and Health Products, FAMHP
- 14:00** To what extent can clinical trails be pre-arranged?
TBC
- 14:15** **Discussion**
- 14:45** **Coffee break**
- 15:30** How can use of platform technologies influence the size of the safety database needed to support product safety? Can the risks of the antigen and the platform be dissociated?
Steve Black, Global Vaccine Data Network
- 15:45** What kind of risk taking in emergency situation?
Jean-Michel Dogné, European Medicines Agency
- 16:00** Challenges regarding the way proof of Efficacy/Protection can be demonstrated
The design of a ‘responsive’ antigen likely to elicit a immune response and the way to demonstrate clinical protection would be considered here (mechanism of action, surrogacy, field trial.) Animal rule
TBC
- 16:15** **General Discussion**

TUESDAY, MARCH 17th

- 08:00** **Welcome**
- 8:30** **Opening**
- 8:30** **6. Regulatory issues**
Introduction of challenges to date: the CEPI portfolio?
Melanie Saville, Coalition for Epidemic Preparedness Innovations (CEPI)
Potential use of Platform Master Files
- 9:00** EU approach
Marco Cavaleri, European Medicines Agency
- Facilitating vaccine development through the use of platform technologies: US FDA perspective
Marion Gruber, FDA Center for Biologics Evaluation and Research
- AVAREF, Asian regulators
Mimi Darko, African Vaccine Regulatory Forum (AVAREF)
- WHO perception in the PQ process
TBC

10:00 **Coffee break**

10:30 **Panel Discussion**

How can « tried and true » vaccine platform streamline vaccine development and gain regulatory acceptance ?

FDA – Marion Gruber ; **EMA** – Marco Cavaleri ; **BMGF** – Ajoy Chakrabarti

11:15 **General Discussion**

12:00 Conclusions & Recommendations
The Way Forward....

12:30 **End of meeting**

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 28 Jan 2020 13:15:33 +0000
To: Barton Behravesh, Casey (CDC/DDID/NCEZID/OD)
Subject: Re: CEPI-IABS Cross learning experience human and animal vaccine licensure based on technology platforms meeting_Save The Date
Attachments: image001.jpg

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WORLD

HEALTH

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 28 Jan 2020 13:19:21 +0000
To: Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP);Hoffmaster, Alex (CDC/DDID/NCEZID/DHCPP);Olson, Victoria (CDC/DDID/NCEZID/DHCPP)
Cc: Barton Behravesh, Casey (CDC/DDID/NCEZID/OD);McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP)
Subject: Fwd: CEPI-IABS Cross learning experience human and animal vaccine licensure based on technology platforms meeting_Save The Date
Attachments: IABS-CEPI_Platform Technology Provisional Agenda_v. 28.01.2020.pdf

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**Cross learning experience human and animal vaccine licensure
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Dr. Marco CAVALERI

EMA, head of human medicines

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Oxford University; Chairman of the Board, Osivax

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**Head, Vaccine Research, Boehringer Ingelheim An Health;
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9:30	<p>Emergency Preparedness Emergency Preparedness: Lessons learned in the development of an Ebola vaccine Jayanthi WOLF, Merck</p>
9:45	Discussion
10:00	<p>3. Scene setting Past Experience with Emergency situations: success & failures Animal : state of the current licensing situation: regulatory requirements in force and currently licensed vaccines Ivo CLAASSEN, European Medicines Agency</p>
10:15	<p>Human: influenza past experience success & failure Prof Klaus CICHUTEK, Paul-Ehrlich-Institut</p>
10:30	Discussion
10:45	Coffee break
11:15	<p>4. New Technologies Animal vaccines: ZAPI project Jean-Christophe Audonnet, Boehringer Ingelheim An Health; ZAPI coordinator</p>
11:30	<p>Experience with technology platforms in animal vaccines - US regulatory approach Carol Gibbs, US Center for Veterinary Biologics Policy, Evaluation & Licensing</p>
11:45	<p>Advanced human vaccines in the pipe-line (Viral vectors, VSV-Measles-ChAd...) and RNA, DNA technologies Experience with technology platforms in animal vaccines - US regulatory approach TBC</p>
12:00	Discussion
12:30	Lunch

- 5. Commonalities and Particulars & Challenges of Platforms**
- 13:30** Manufacturing & quality control – what is platform generic, what is vaccine specific?
TBC
- 13:45** Vaccine platforms : pre-clinical package, how far can we go?
Kaat Smith, Federal Agency for Medicines and Health Products, FAMHP
- 14:00** To what extent can clinical trails be pre-arranged?
TBC
- 14:15** **Discussion**
- 14:45** **Coffee break**
- 15:30** How can use of platform technologies influence the size of the safety database needed to support product safety? Can the risks of the antigen and the platform be dissociated?
Steve Black, Global Vaccine Data Network
- 15:45** What kind of risk taking in emergency situation?
Jean-Michel Dogné, European Medicines Agency
- 16:00** Challenges regarding the way proof of Efficacy/Protection can be demonstrated
The design of a ‘responsive’ antigen likely to elicit a immune response and the way to demonstrate clinical protection would be considered here (mechanism of action, surrogacy, field trial.) Animal rule
TBC
- 16:15** **General Discussion**

TUESDAY, MARCH 17th

- 08:00** **Welcome**
- 8:30** **Opening**
- 8:30** **6. Regulatory issues**
Introduction of challenges to date: the CEPI portfolio?
Melanie Saville, Coalition for Epidemic Preparedness Innovations (CEPI)
Potential use of Platform Master Files
- 9:00** EU approach
Marco Cavaleri, European Medicines Agency
- Facilitating vaccine development through the use of platform technologies: US FDA perspective
Marion Gruber, FDA Center for Biologics Evaluation and Research
- AVAREF, Asian regulators
Mimi Darko, African Vaccine Regulatory Forum (AVAREF)
- WHO perception in the PQ process
TBC

10:00 **Coffee break**

10:30 **Panel Discussion**

How can « tried and true » vaccine platform streamline vaccine development and gain regulatory acceptance ?

FDA – Marion Gruber ; **EMA** – Marco Cavaleri ; **BMGF** – Ajoy Chakrabarti

11:15 **General Discussion**

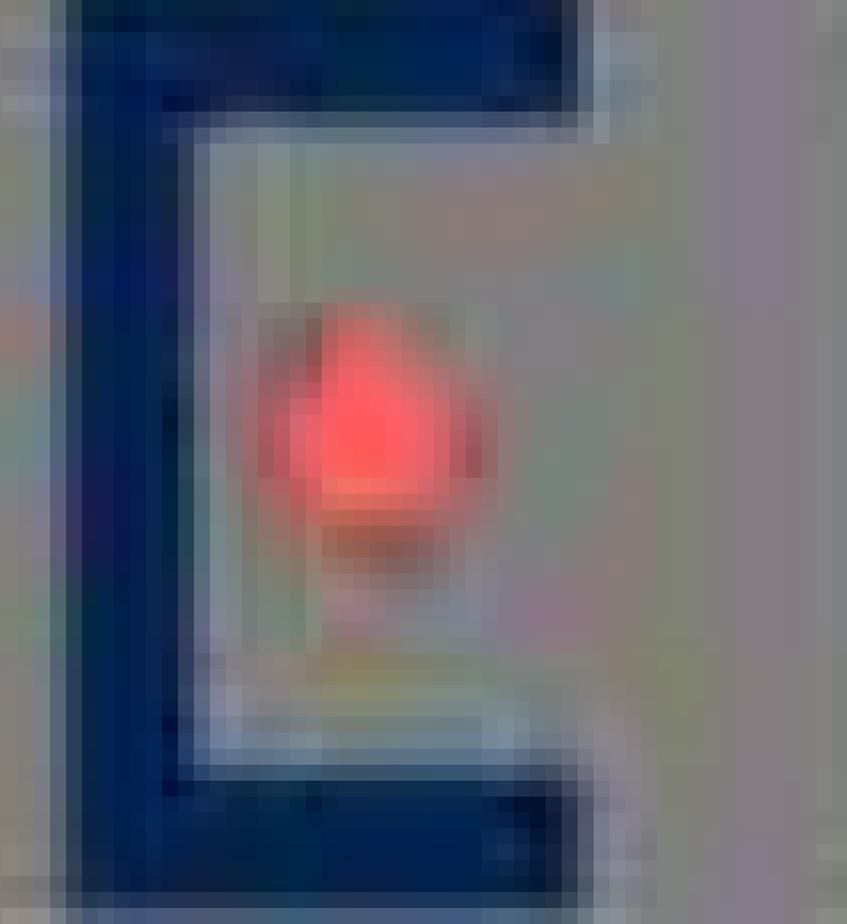
12:00 Conclusions & Recommendations
The Way Forward....

12:30 **End of meeting**

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Fri, 26 Jun 2020 15:15:58 +0000
To: Helfand, Rita (CDC/DDID/NCEZID/OD);Hyde, Terri (CDC/DDPHSIS/CGH/GID)
Subject: Fwd: Announcement: COVAX, the ACT-Accelerator Vaccines pillar
Attachments: image007.png, image008.png, image009.png, COVAX Pillar narrative_1500CEST.pdf, COVAX Pillar backgrounder.pdf, COVAX Infographic.pdf

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COVAX, the ACT-Accelerator Vaccines pillar

Public Narrative

An unprecedented partnership for an unprecedented time

To minimize further loss of life and economic impact caused by COVID-19, every country in the world needs vaccines, and needs them fast. The COVAX pillar is an end-to-end solution for the world that will address this need.

To ensure that vaccines are developed as rapidly as possible, manufactured at scale in the right volumes without compromising on safety and delivered to those that need them most, the world needs unprecedented global collaboration between governments, business, health organizations, civil society, communities and philanthropies. Action today will mean more lives will be saved and a faster economic recovery.

The effort to develop and deploy vaccines goes hand in hand with efforts to ensure equitable access to world-class diagnostics and therapeutics, and to enhance public health and social measures.

Why we need to act now

1. **Mitigate economic damage** – for every month that this pandemic continues, \$375 billion^[1] is lost from the global economy. Acting now to accelerate development, manufacture, and distribution of a COVID-19 vaccine will save hundreds of thousands of lives and protect the livelihoods of millions more.
2. **Accelerate availability of vaccine** – if we follow the traditional course of vaccine development, we could face years of delay. Such a delay will cost lives and trillions of dollars in economic damage. COVAX will enable at-risk investments in production capacity across several candidates now – to ensure that, upon regulatory approval, doses can be made immediately available at scale.
3. **Ensure globally fair allocation and access for low and middle income countries (LMIC)** - nobody is safe from COVID-19 until everybody is safe. COVAX not only represents the best solution to end this pandemic, it is also the fairest way to allocate vaccine for all countries to ensure that access can be provided for every country.

From development, manufacture and stockpiling...

Globally, there are currently over 220 vaccine candidates in development. Most will fail. But with so many candidates in development the chance of success is raised. The COVAX pillar's role is to make sure the most promising ones get the funding that they need, when they need it, and to ensure that regulatory conditions are in place to allow the most seamless passage from early stages of development through to licensure – whilst maintaining the highest standards of safety and expectations of efficacy.

The more traditional path of waiting for vaccines to reach licensure or regulatory prequalification before investing in manufacturing will not work in the age of COVID-19. Waiting one month now could mean having 200 million fewer doses in 2021. Instead, the COVAX pillar is investing at-risk in production

^[1]IMF estimates, published on April 14 <https://blogs.imf.org/2020/04/14/the-great-lockdown-worst-economic-downturn-since-the-great-depression/>.

capacity across several candidates now – to ensure that, upon regulatory approval, doses can be made immediately available at scale instead of a business as usual approach which would mean waiting years after a vaccine has been proven effective before it is available at scale.

... to regulation and allocation ...

Clinical trial protocols and regulatory approvals for COVID-19 vaccines will require new levels of collaboration and flexibility, but must at the same time preserve quality assurance as well as not compromise on safety and efficacy. The World Health Organization will lead regulatory work of the ACT Accelerator as a whole. WHO is also leading the effort to ensure fair and equitable allocation of limited supplies on the basis of ethical values and public health goals. Criteria will include considering population groups with higher risk of mortality, or higher risks of infection, country burden of disease, and global health security priorities.

... and procurement and delivery ...

Investment in development and manufacturing may ensure that we get a future supply of vaccines, but it won't alone ensure that they reach everybody that needs them or that everyone will be able to afford them, unless a global facility exists to make that happen. This is the COVAX Facility. By working together for the pandemic period,, countries not only share risk by accessing the widest portfolio of candidates, they optimize their chance of getting the number of doses they need, regardless of whether they are able to finance procurement themselves or rely on official development assistance from others.

... on a global scale

Ending the acute phase of the COVID-19 pandemic as soon as possible will require large up-front capital. Commitments from high income and upper middle income countries (HIC, UMIC) are needed, (1) to procure ~950 M doses through the COVAX Facility; and (2) to ensure that vaccine can be delivered at the greatest possible speed by underwriting the costs of manufacturing at risk as needed. \$18.1 B is needed to cover these latter costs as well as the costs of procuring and delivering vaccine for low and middle income countries (LMIC). Such investment will secure the development of, and fair access to, up to two billion doses of vaccine by the end of 2021, assuming a safe and effective vaccine is developed in the near future. Of this total, \$11.3 B is needed urgently to cover investments within the next 6 months. This includes ~\$2 B in funding for advanced market commitments to secure doses for low and lower middle-income countries It also accounts for an emergency buffer of doses with mixed funding sources.

These numbers are estimates and will become more precise once we get a better idea of, among other factors, the technology that the successful vaccine candidates will be based on, and the number of doses required.

Collaboration and innovation are key

In the age of COVID-19, nobody is safe until everybody is safe and every country needs access to the best vaccines. Working with industry partners, the COVAX pillar of the ACT Accelerator is not only the most effective way to help accelerate development, manufacturing and delivery of vaccines, it is the fairest way of doing so.

The COVAX pillar is radical in its ambition but practical in its end to end approach. By combining CEPI's leadership in vaccine development and investment in manufacturing with Gavi, the Vaccine Alliance's track record in revolutionizing access and delivery and WHO's technical and scientific expertise, the

pillar builds on a heritage of success in promoting global health and will have the largest impact on reducing mortality and transmission of COVID-19. In this unique collaboration of CEPI, Gavi and WHO, lies our best chance of achieving escape velocity from the worst global health crisis the world has faced in over one hundred years.

Working alongside our public and private sector partners, as well as civil society and communities, we have hope that we can and will end this pandemic.

Act now. Act together. Act boldly to end Covid-19.

COVAX, the ACT-Accelerator Vaccines pillar

Insuring accelerated vaccine development and manufacture

Introduction

Developing a vaccine against COVID-19 is the most pressing challenge of our time. The global pandemic has already caused the loss of hundreds of thousands of lives and disrupted the lives of billions more. As well as reducing the tragic loss of life, introduction of a vaccine will prevent the loss \$375 B¹ to the global economy every month.

Developing one or more safe and effective vaccines is also one of the most complex challenges of our time. Unlike with past vaccine development, scaling up manufacturing and completion of human trials for vaccine candidates must be done in parallel. Even with accelerated investment in manufacturing, and the completion of trials to ensure vaccine candidates are safe and effective, there is no scenario in which supply over the next 18 months will exceed demand although at today's anticipated trajectory some vaccine candidates could become available within this time frame.

Governments are answerable to their populations and to their taxpayers, and with so many lives and livelihoods at stake some are understandably pursuing bilateral deals with manufacturers to secure access to scarce future vaccine supplies. As treasuries around the world seek to address unprecedented revenue shocks, such strategies bring hope and instill confidence. But they also bring risk. In normal times, vaccine development is long, complicated, and more often than not ends in failure; it is difficult to know which deals will actually result in getting any vaccine.

Many leaders have called for a global solution to address a global issue and for a shared endeavor that involves the best shared science to resolve in the shortest possible time a pandemic involving every region and territory on the planet. The COVAX Pillar provides this solution: through portfolio diversification, pooling of financial and scientific resources, and economies of scale, participating governments and blocs can hedge the risk of backing unsuccessful candidates just as governments with limited or no ability to finance their own bilateral procurement can be assured access to life-saving vaccines that would otherwise have been beyond their reach.

The goal of the COVAX Pillar is to end the acute phase of the global pandemic by the end of 2021. If it succeeds in this goal, through the appropriate allocation of safe and effective doses of vaccines in phases determined by epidemiology and public health to slow and ultimately to stop the pandemic, it could save millions of lives and transform the economic prospects of governments and individuals.

The COVAX Pillar is an urgently needed approach to getting a safe and effective vaccine faster, through financing that shares the risks of development and creates the capacity for manufacturing vaccine doses now, in parallel with clinical development, and before they are shown to work. It will show how participating countries, by buying into a share of many vaccine candidates instead of just a few, will be able to insure themselves against the failure of any individual candidate and secure successful vaccines in a cost-effective, targeted way.

COVAX: The Context

When a successful vaccine is found, worldwide demand will be in the billions of doses to address the epidemiologic needs. But initial supply will inevitably be limited. The current best-case estimate is that no more than a few hundred million doses will be available by December 2020 in the current environment, scaling to a cumulative 2 billion doses by end 2021.

¹ IMF estimates, published on April 14 <https://blogs.imf.org/2020/04/14/the-great-lockdown-worst-economic-downturn-since-the-great-depression/>

It is difficult to predict which vaccine(s) will be successful. Indeed, the vast majority of vaccines in early development fail. The probability of success for a vaccine in early stage development is less than 20% prior to Phase 2 clinical trial.

This means that the best chance of success for any country is to diversify and access a broad portfolio of vaccine candidates. This increases the chances of success and allows the vaccines that are successful to be shared. Such an approach would enable every country to gain access to a much broader array of vaccines than they would otherwise have through multiple bilateral agreements with individual manufacturers. For countries with local development or manufacturing capacity, this 'portfolio approach' insures countries against the risk of their own candidates proving unsuccessful or less effective, or that domestic manufacturing capacity is unsuitable, leaving them with no vaccines at all.

Pooling risks not only means a greater chance at shared rewards through access to successful vaccine candidates, it also means lower prices as competition in a non-pooled risks scenario leads to a disorderly market with price gouging as individual buyers seek to outbid each other for limited resources.

Over time, there will be adequate doses available to vaccinate all who need vaccination, assuming a safe and effective vaccine is found, sufficient investment in manufacturing capacity is secured, and adequate market incentives are established for manufacturers. In the meantime, an allocation methodology is required that stratifies and prioritizes risk groups (for example, healthcare workers, elderly, vulnerable groups) for vaccination in such a way to reduce the spread of virus and the impact of the virus on lives, livelihoods, health systems and economies as quickly as possible.

The biggest challenge will be supply of vaccines for the period while supply is scaling up. While massive efforts are underway to establish large production capacity, initial supplies will need to be prioritized. The main allocation criteria are based on the most urgent goal of *reducing mortality, protecting health systems and policy*.

Priority populations will be determined based on the characteristics of the specific vaccine(s) that demonstrate safety and efficacy. Policy recommendations will lay out the priority populations with the first round of vaccination likely to consider:

- Health care system workers (1% of global population)
- Adults over 65 years old (8% of global population)
- Other high-risk adults with underlying conditions such as hypertension, diabetes, etc. (15%)

COVAX: The ACT-Accelerator Vaccines pillar

The ACT-Accelerator is a global collaboration to accelerate the development, production and equitable access to new COVID-19 diagnostics, therapeutics and vaccines. It is a partnership of key stakeholders – political leaders, public and private sector partners, civil society, academia – that leverages each partner's strengths to drive towards accelerated and equitable access.

Within the ACT-Accelerator, COVAX, the vaccines pillar, is driving the work on vaccine development, manufacturing, procurement and delivery at scale, as well as policy and allocation, bringing it together into the type of agreement described above. It leverages the expertise of existing organisations (CEPI, Gavi and WHO) and industry partners in a new way to meet the challenge of a pandemic.

The COVAX Pillar also ensures that the required additional activities for the successful launch of vaccine are supported in parallel – including detailed demand and supply scenarios, the regulatory dialogue to avoid time lags, the setup of an allocation framework and mechanism and supporting the buildup of infrastructure and health systems preparedness.

A fully financed COVAX pillar could give all participating governments a guaranteed share of any future successful vaccine production.

The COVAX pillar will simultaneously address both *pull* financing (advance market commitments), and *push* financing (at-risk investments for R&D, manufacturing capacity reservation & inventory), and agree to do so *now* to drive investment at high speed, volume, and ‘at risk’, and to secure manufacturing inventory build-up and future supply. By combining the power and expertise of CEPI’s R&D role on the push side with Gavi’s procurement and allocation function on the pull side, the COVAX pillar is able to ensure the manufacturing of doses *now*, something neither organisation, government or financier could achieve entirely on its own. Supported by the World Health Organization in assuring effective regulation and optimal allocation, both CEPI and Gavi will use the depth and breadth of their partnerships with governments, private sector, academia, civil society, and financiers to achieve the accelerated impact the world needs from the COVAX pillar.

Why we need to act now

1. **Mitigate economic damage** – for every month that this pandemic continues, \$375 billion¹ is lost from the global economy. Acting now to accelerate development, manufacture, and distribution of a COVID-19 vaccine will save hundreds of thousands of lives and protect the livelihoods of millions more.
2. **Accelerate availability of vaccine** – if we follow the traditional course of vaccine development, we could face years of delay. Such a delay will cost lives and trillions of dollars in economic damage. COVAX will enable at-risk investments in production capacity across several candidates now – to ensure that, upon regulatory approval, doses can be made immediately available at scale.
3. **Ensure globally fair allocation and access for low and middle income countries (LMIC)** - nobody is safe from COVID-19 until everybody is safe. COVAX not only represents the best solution to end this pandemic, it is also the fairest way to allocate vaccine for all countries to ensure that access can be provided for every country.

The COVID-19 Vaccine Global Access (COVAX) Facility

When sufficiently capitalized, the COVAX pillar will immediately offer advance purchase agreements to vaccine candidates meeting technical threshold criteria. This will be done to produce vaccines at risk before we have results of efficacy trials. Offering between five to ten such contracts will allow a specially created financial instrument, the COVAX Facility, which sits within the pillar, to:

- a) procure cumulative 2 billion doses by end 2021, ensuring that participating countries receive allocations of vaccine as quickly as possible including an emergency buffer (10% of doses)
- b) procure the highest possible volume of vaccine from each manufacturer, resulting in the greatest number of doses at the most economically efficient price
- c) provide for globally fair and equitable allocation of vaccine, saving millions of lives, and protecting millions more livelihoods, and bringing the acute phase of the pandemic to an end in the most efficient fashion possible.

Initial capitalization would provide an equitable distribution of doses and begin to dent the epidemic in participating countries. The COVAX pillar is for all countries. It will include a fair and equitable allocation of limited supplies on the basis of ethical values and public health goals. Criteria will include population groups with higher risk of mortality, burden of disease, threat, vulnerability, product supply and logistics, country context, and global health security priorities. As further scale-up of production occurs, and the market is considered orderly, countries will have continued allocation of doses as needed, or could revert to bilateral deals where that makes sense for them to do so.

COVAX in numbers

¹IMF estimates, published on April 14 <https://blogs.imf.org/2020/04/14/the-great-lockdown-worst-economic-downturn-since-the-great-depression/>.

Ending the acute phase of the COVID-19 pandemic as soon as possible will require large up-front capital. Commitments from high income and upper middle income countries (HIC, UMIC), are needed (1) to procure ~950 M doses through the COVAX Facility; and (2) to ensure that vaccine can be delivered at the greatest possible speed by underwriting the costs of manufacturing at risk are needed. \$18.1 B is needed to cover these latter costs as well as the costs of procuring and delivering vaccine for low and middle income countries (LMIC). Such investment will secure the development of, and fair access to, up to two billion doses of vaccine by the end of 2021, assuming a safe and effective vaccine is developed in the near future. Of this total, \$11.3 B is needed urgently to cover investments within the next 6 months. This includes ~\$2 B in funding for advance market commitments to secure doses for LMICs. It also accounts for an emergency buffer of doses with mixed funding sources.

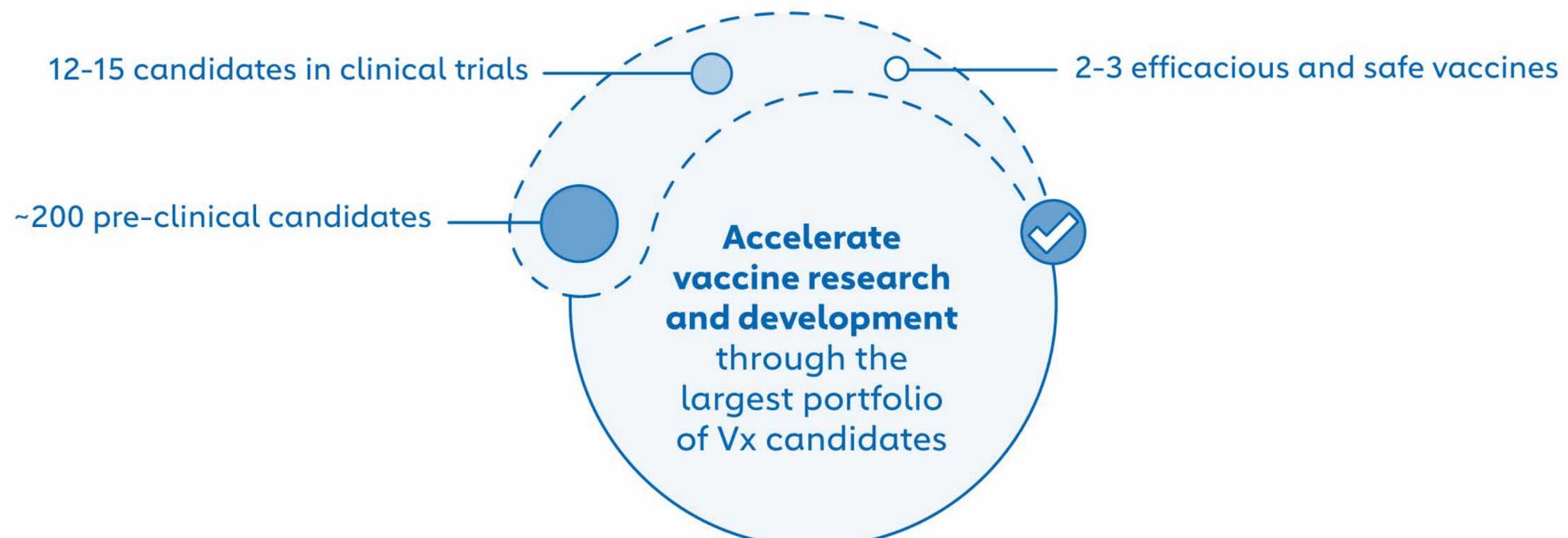
These numbers are estimates and will become more precise once we get a better idea of, among other factors, the technology that the successful vaccine candidates will be based on, and the number of doses required.

The total funding need of \$18.1 B for 2020/2021 is made up of:

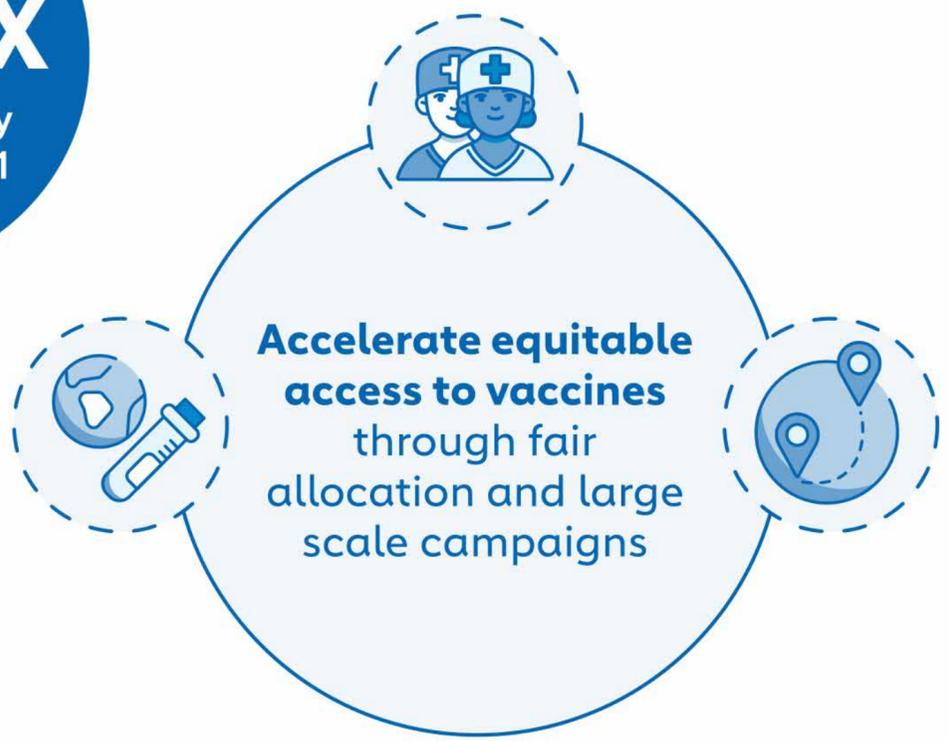
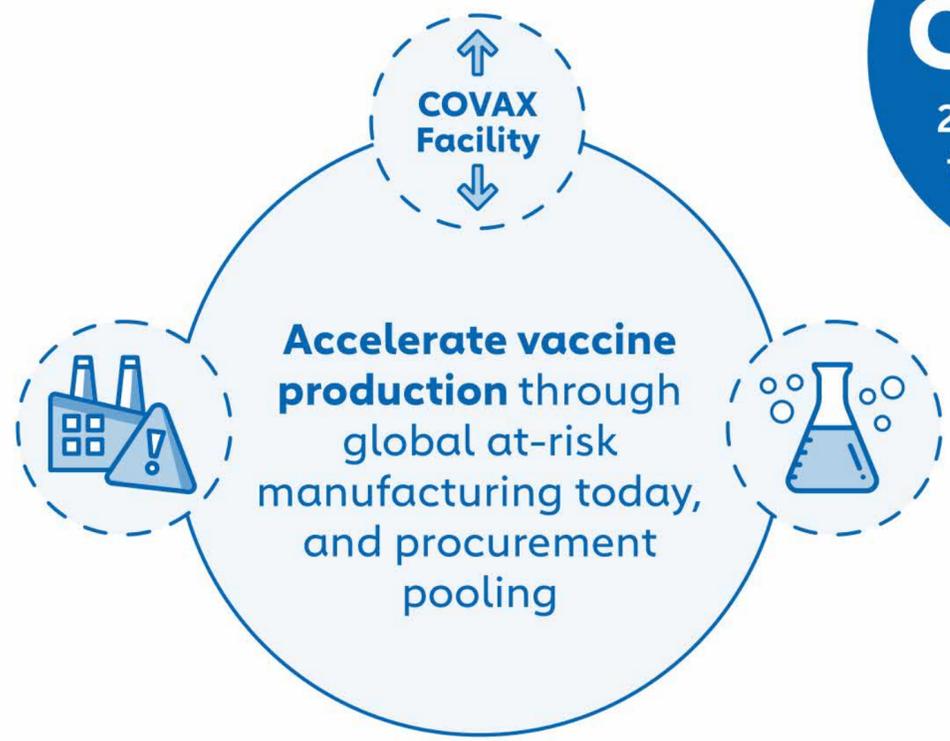
- **Research & development and manufacturing:** Investment in R&D of \$2.4 B (\$1.5 B urgent need), tech transfer/scale-up and out of \$1.7 B (\$1.2 B urgent need), at-risk manufacturing of \$5.3 B (\$5.2 B urgent need) are required. ~\$4.3 B from at-risk manufacturing is expected to be recovered as inventory value for successful candidates.
- **Volume guarantees/procurement:** Significant amounts of capital will be required for manufacturer-specific and market-wide volume guarantees and advance procurement for countries of all income levels, including \$5.5 B (\$2.0 B urgent need for AMC) for immunizing for example healthcare workers and high risk population of LMICs through the Gavi Advance Market Commitment (AMC) and securing an emergency vaccine stockpile of ~200 M doses. In addition, a commitment from HIC and UMIC to procure ~950 M doses through the COVAX Facility is needed. The final cost will depend on the eventual vaccines that are developed. Payments will only be made once candidates reach licensure or an equivalent regulatory milestone (e.g., recommendation of use). It is necessary to have funding and guarantees in place to protect volumes and encourage manufacturers to scale up and enter multilateral deals with the COVAX Facility.
- **Delivery costs:** ~\$3.2 B (\$1.4 B urgent need) are needed for in-country delivery to build up supply chain capacity and carry out vaccine campaigns in LIC and LMIC as well as for global coordination and technical assistance. Delivery for UMIC and HIC is expected to be covered by domestic health budgets.

Against the human costs of the pandemic, and the estimated \$375 B¹ impact on the global economy *every month* we delay, the imperative to act now, and to act together, and to act boldly, is clear.

¹IMF estimates, published on April 14 <https://blogs.imf.org/2020/04/14/the-great-lockdown-worst-economic-downturn-since-the-great-depression/>.



COVAX
2bn vaccines by the end of 2021



- Cost for 2 billion doses by end of 2021: \$18.1bn
- Of this, \$11.3bn (incl. \$2bn for advanced market commitments for LMIC) are needed in the first 6 months alongside full guarantees for the rest
- In addition this requires commitments from HIC/UMIC to purchase 900m doses through Facility, which includes an emergency buffer

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 30 Jun 2020 18:27:04 +0000
To: Spiropoulou, Christina (CDC/DDID/NCEZID/DHCPP)
Subject: Re: CEPI this morning

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Tue, 30 Jun 2020 18:21:53 +0000
To: Spiropoulou, Christina (CDC/DDID/NCEZID/DHCPP)
Subject: Re: CEPI this morning

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From: Peter Daszak
Sent: Wed, 5 Feb 2020 17:17:14 +0000
To: Pavlin, Julie;'Kester, Kent /US';Khabbaz, Rima (CDC/DDID/NCEZID/OD)
Cc: Amponsah, Edith;Goodtree, Hannah
Subject: RE: Forum on Microbial Threats

Andrew's right that this would be extremely topical, but you're right that we don't have enough time to line this up, and in any case, all the key speakers are at other meetings...

We could certainly bring some discussion of the nCoV into the introduction and to a couple of the sessions. We should also address it at the closed part of our meeting, I think.

Cheers,

Peter

Peter Daszak
President

EcoHealth Alliance
460 West 34th Street – 17th Floor
New York, NY 10001

Tel. +1 212-380-4474

Website: www.ecohealthalliance.org

Twitter: [@PeterDaszak](https://twitter.com/PeterDaszak)

EcoHealth Alliance leads cutting-edge research into the critical connections between human and wildlife health and delicate ecosystems. With this science we develop solutions that prevent pandemics and promote conservation.

From: Pavlin, Julie [mailto:JPavlin@nas.edu]
Sent: Wednesday, February 5, 2020 7:23 AM
To: Peter Daszak; 'Kester, Kent /US'; 'Khabbaz, Rima (CDC/DDID/NCEZID/OD)'
Cc: Amponsah, Edith; Goodtree, Hannah
Subject: FW: Forum on Microbial Threats

FYI – Andrew's idea below. With how busy everyone is on the topic, I think it might be difficult to get speakers to commit to anything right now, and of course, there are still a lot of uncertainties to determine what are the most relevant issues to discuss. We'd also have to go back to our governing

board with a new topic and get approval, which takes about a month. But still, obviously of high interest right now – let me know your thoughts and whether we should bring this to the entire Forum for their input.

From: Andrew Clements <aclements@usaid.gov>
Sent: Wednesday, February 5, 2020 6:43 AM
To: Pavlin, Julie <JPavlin@nas.edu>
Subject: Re: Forum on Microbial Threats

Tomorrow or Friday works for me.

Is there any appetite to push the vaccine workshop back to December 2020 to make space for a nCoV workshop during the May 28-29, 2020 slot?

Andrew Clements, Ph.D.
Senior Scientific Advisor
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: (b)(6)
E-mail: aclements@usaid.gov

For more information on USAID's Emerging Pandemic Threats program, see: <http://www.usaid.gov/ept2>

On Tue, Feb 4, 2020 at 10:33 PM Pavlin, Julie <JPavlin@nas.edu> wrote:
Hi Andrew,

Hope everything is going well – are you getting involved in the coronavirus issues? Just checking to see if there is a good time to talk about USAID's continued support to the FMT for 2020 – let me know if I can send you any documentation or if there are others I should include in a conversation.

Thanks for all your support!

Julie

Julie A. Pavlin, MD, PhD, MPH
Director, Board on Global Health
Health and Medicine Division – Find us at nationalacademies.org/HMD
The National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW
Washington, DC 20001
Phone: 202-334-2171

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From: Amponsah, Edith
Sent: Mon, 1 Jun 2020 18:23:23 +0000
To: 'Kester, Kent /US';Khabbaz, Rima (CDC/DDID/NCEZID/OD);Peter Daszak;'Alison Andre'
Cc: Pavlin, Julie;Goodtree, Hannah;Buckley, Gillian
Subject: RE: New workshop dates and times
Attachments: August Vaccines Agenda 5.29.docx

Thank you Kent. As of now (if the dates and times work for Rima and Peter), Monday August 17th would be 11am – 2pm, Tuesday August 18th 11am – 1pm, Wednesday August 19 11am – 2pm, and Thursday August 20 11am – 1:30pm. I've attached a first draft of the reshaped agenda here if it would be helpful.

Also, the presentation by Nickie Lurie on “new vaccines in the midst of an outbreak” you'll be moderating would be on Thursday August 20th at 11:00am but we can shift things around if needed.

Best,
Edith

From: Kester, Kent /US <Kent.Kester@sanofi.com>
Sent: Monday, June 1, 2020 1:39 PM
To: Amponsah, Edith <EAmponsah@nas.edu>; Rima F. Khabbaz <rpk1@cdc.gov>; Peter Daszak <daszak@ecohealthalliance.org>; 'Alison Andre' <andre@ecohealthalliance.org>
Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: RE: New workshop dates and times

Dear Edith—

The proposed dates/times work for me—just need to have final clarity in order to adjust other items on my daily schedule.

Kent

From: Amponsah, Edith <EAmponsah@nas.edu>
Sent: Monday, June 1, 2020 1:16 PM
To: Kester, Kent /US <Kent.Kester@sanofi.com>; Rima F. Khabbaz <rpk1@cdc.gov>; Peter Daszak <daszak@ecohealthalliance.org>; 'Alison Andre' <andre@ecohealthalliance.org>
Cc: Pavlin, Julie <JPavlin@nas.edu>; Goodtree, Hannah <HGoodtree@nas.edu>; Buckley, Gillian <GBuckley@nas.edu>
Subject: [EXTERNAL] New workshop dates and times

EXTERNAL : Real sender is EAmponsah@nas.edu

Hello Rima, Peter, and Kent,

As we discussed during our last meeting, we will be holding the August workshop online over several days. We are thinking of doing it that same week from **Monday August 17th to Thursday August 20th** and having one session a day. Some days will be 2 hours long and others will be 3 hours long. We are thinking of doing from **11 – 1 pm ET** for the shorter sessions and **11-2pm ET** for the longer sessions. Please let us know if those dates and time frames are okay with you all. We can also plan to have our Forum closed session meeting the following week.

Please also complete this doodle [poll](#) with your availability in July, September, and November for the remaining leadership calls of the year.

Please let me know if you have any questions.

Thank you,
Edith Amponsah, MPH, IBCLC
Associate Program Officer
Forum on Microbial Threats
Health and Medicine Division
The National Academies of Sciences, Engineering, and Medicine
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**The Critical Public Health Value of Vaccines – Tackling Issues of Access
and Hesitancy**
A Workshop

DRAFT Agenda
AUGUST 17 - 20, 2020

Washington, DC

Objectives:

This virtual meeting is the second of a series of two workshops on the critical public health value of vaccines. The workshop series will feature invited presentations and discussions on the following topics. This four day workshop will explore health systems, research opportunities, communication strategies, and policies that could be considered to address access, perceptions, attitudes, and behaviors toward vaccination.

Specifically, this workshop will feature invited presentations and discussions on the following topics:

- The global impact of declining immunization rates on vaccine-preventable diseases from lack of access and confidence;
- Trends and indicators to monitor attitudes surrounding vaccine safety and efficacy, including a focus on regional and cultural differences;
- The complex determinants of vaccination that hinder or promote vaccine uptake;
- The role of health systems and professionals in improving access, influencing vaccine behavior, protecting at-risk communities from vaccine-preventable

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

disease outbreaks, and preserving and building confidence in immunization strategies and practices;

- The role of media, anti-vaccine networks, and online misinformation in reinforcing anxieties about vaccine safety and drivers of vaccine hesitancy;
- Strategies to enhance community-based approaches and community engagement efforts for improving access and reducing vaccine hesitancy;
- Communication approaches that would help assuage anxieties about vaccine safety and strengthen public trust in science and health professionals;
- The ethics and effectiveness of legislation that aim to address vaccine hesitancy; and
- Potential priority actions as well as partnerships and collaborations among policy makers, health professionals, national and international health organizations, parents, and community groups to increase immunization access and vaccine confidence.

Workshop speakers and discussants will contribute perspectives from government, academia, private, and nonprofit sectors.

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF ACCESS AND HESITANCY

DAY 1 – MONDAY, August 17 2020

11:00 am – 2:00pm

11:00am **Welcome Remarks**
PETER DASZAK, *Chair of the Forum on Microbial Threats*
President
EcoHealth Alliance

Workshop Overview and Goals
HEIDI LARSON, *Workshop Co-Chair*
Professor of Anthropology, Risk and Decision Science
Director, The Vaccine Confidence Project
London School of Hygiene & Tropical Medicine

Moderator: Matthew Zahn, Orange County Health Care Agency, Workshop Co-Chair

Keynote Addresses

Exploring the Global Impact of Vaccination and Understanding the Immunization Landscape Today

Speaker TBD

The Global State of Vaccine Confidence: How Do We Enhance the Uptake of Vaccines?

SAAD B. OMER (confirmed)

Director

Yale Institute for Global Health

Commented [AE1]: KATHERINE O'BRIEN (declined for August)
Director, Department of Immunization, Vaccines, and Biologicals
World Health Organization

11:45am **Q&A**

Commented [AE2]: Only do two questions total. One for each keynote speaker. Or can combine with session 1 Q&A and make that one longer.

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Session I: Improving Access and Closing the Global Immunization Gap

12:00pm Session I objectives:

- Assess the current state of vaccine-preventable diseases globally, delineating the key barriers to dissemination and uptake of vaccines.
- Examine evidence-based strategies to improve access to vaccines and increase immunization coverage, globally and locally.

Moderator: Noni MacDonald, Dalhousie University

Applying an Equity Lens in Immunization to Close the Global Immunization Gap

ANURADHA GUPTA (**confirmed**)

Deputy Chief Executive Officer

Gavi, The Vaccine Alliance

Case Presentations

Door to Door Strategy for Improving Access and Utilization of Immunization Services

JEAN-MARC OLIVE (**confirmed**)

Independent Consultant

Using mHealth Interventions to Improve Vaccination Coverage

MOMIN ABDUL KAZI (**confirmed**)

Assistant Professor

The Aga Khan University, Pakistan

The Role of Community-Based Pharmacy Interventions in Increasing Vaccine Uptake

JEFF GOAD (**confirmed**)

Chair, Department of Pharmacy Practice

Chapman University School of Pharmacy

Reducing Barriers and Increasing Vaccine Uptake Among Adults

LITJEN (L.J.) TAN (**confirmed**)

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
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Chief Strategy Officer
Immunization Action Coalition

1:00pm **Q&A**

1:45pm **Observations from Day 1**
HEIDI LARSON, *Workshop Co-Chair*
Professor of Anthropology, Risk and Decision Science
Director, The Vaccine Confidence Project
London School of Hygiene & Tropical Medicine

2:00pm **Adjourn**

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
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DAY 2 – TUESDAY, August 18 2020

11:00 am – 1:00pm

Session II: Assessing Global and Local Drivers of Vaccine Hesitancy

Session II Objectives:

- Examine trends in hesitant attitudes toward vaccination and the impact on declining immunization rates.
- Evaluate the complex determinants and drivers of vaccine uptake, including sociocultural factors that influence perceptions, attitudes, and behaviors towards vaccination.
- Explore methods to monitor and measure vaccine hesitancy to better address concerns, and to sustain confidence in vaccination.

11:00am

Welcome and Recap Day 1

MATTHEW ZAHN, *Workshop Co-Chair*

Medical Director, Division of Epidemiology and Assessment

Orange County Health Care Agency

Moderator: Alison Buttenheim, University of Pennsylvania

A Conceptual Model of Vaccine Hesitancy: Understanding Drivers of Vaccine Uptake

JULIE BETTINGER (**confirmed**)

Associate Professor

Vaccine Evaluation Center

Determinants of Vaccine Hesitancy Among Healthcare Professionals in Europe

PIERRE VAN DAMME (**invited**)

Director

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
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Center for the Evaluation of Vaccination

Assessing Parental Beliefs and Attitudes Using A Caregiver Vaccination Attitudes Scale

AARON WALLACE (**confirmed**)

Epidemiologist, Global Immunization Division
US Centers for Disease Control and Prevention

Case Presentation

**Vaccine-Attributable Severe Dengue in the Philippines and the Impact on National
Immunization Programs**

STEFAN FLASCHE (**confirmed**)

Associate Professor
London School of Hygiene and Tropical Medicine

12:00pm **Q&A**

12:45pm **Observations from Day 2**
MATTHEW ZAHN, *Workshop Co-Chair*
Medical Director, Division of Epidemiology and Assessment
Orange County Health Care Agency

1:00pm **Adjourn**

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
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DAY 3 – WEDNESDAY, August 19 2020

11:00am – 2:00pm

**Session III: Employing a Systems Approach to Building Confidence and Increasing
Uptake**

Session III – Part A Objectives:

- Explore opportunities in research, communication, legislation, and technology in influencing vaccine behavior, improving access, and building confidence in immunization practices.

11:00am

Welcome and Recap Day 2

WALTER ORENSTEIN

Professor and Associate Director

Emory Vaccine Center

Moderator: TBD

Commented [AE3]: Suggestion: Chandy C. John

Adaptation of the COM-B Model to Increase Vaccination Acceptance and Uptake

CATHERINE JACKSON (**confirmed**)

Director

Valid Research Limited

Harnessing Cultural Insights to Increase Vaccination Uptake and Compliance

DAN CARUCCI (**confirmed**)

Global Medical Director

McCann Health

The Role of Physicians in Building Vaccine Confidence and Acceptance

TODD WOLYNN (**confirmed**)

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF ACCESS AND HESITANCY

Chief Executive Officer
Kids Plus Pediatrics

Legal Approaches to Promoting Parental Compliance with Childhood Immunization Recommendations

DORIT REISS (**confirmed**)
Professor of Law
University of California Hastings College of the Law

Impact of Eliminating Non-Medical Exemptions in California

MICHELLE MELLO (**confirmed**)
Professor of Law and Medicine
Stanford University

12:00pm **Q&A**

12:40pm Session III – Part B Objectives:

- Discuss how community-based approaches and strategies can effectively and ethically be employed to reduce vaccine hesitancy and increase vaccine confidence.

Moderator: Rafael Obregon, UNICEF, Paraguay

Social Mobilization as a Strategy to Increase Vaccine Acceptance and Uptake

DIMITRI PRYBYLSKI (**confirmed**)
Associate Director for Science
U.S. Centers for Disease Control (CDC)

Engaging with Faith Communities to Increase Vaccine Acceptance and Uptake: A Charedi Orthodox Jewish Community Example

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF ACCESS AND HESITANCY

LOUISE LETLEY (invited)

Nurse Manager for Research, Immunisation Operations,
Public Health England

The Immunity Community: A Community Engagement Strategy to Boost Vaccine Confidence

CLARISSA HSU (confirmed)

Assistant Investigator
Kaiser Permanente Washington Health Research Institute

Strengthening Community Engagement to Increase Measles Vaccine Uptake in Pakistan

DEEPA RISAL POKHAREL (invited)

Chief of Communication for Development
UNICEF

Commented [AE4]: Alternate: Lisa Menning

1:20pm Q&A

1:50pm **Observations from Day 3**
WALTER ORENSTEIN
Professor and Associate Director
Emory Vaccine Center

2:00pm **Adjourn**

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
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DAY 4 – THURSDAY, August 20 2020

11:00am – 1:30pm

Session IV: Moving Forward: Optimizing the Utilization of Vaccines

- 11:00am Session IV – Part A Objective:
- Discuss the impact of vaccines in mitigating the effects of emerging threats during an outbreak.
- Welcome and Recap Day 2**
ANDREW CLEMENTS
Deputy Director
Pandemic Influenza and Other Emerging Threats Unit
U.S. Agency for International Development
- Moderator: Kent Kester, Sanofi Pasteur (Vice-Chair of the Forum on Microbial Threats)*
- 11:10am Plenary Presentation
New Vaccines in the Midst of an Outbreak
NICOLE LURIE (**tentatively confirmed**)
Strategic Advisor to the CEO
Coalition for Epidemic Preparedness Innovations (CEPI)
- 11:30am **Q&A**
-
- 12:00pm Session IV – Part B Objectives:
- Discuss approaches to strengthen public trust in science and public health programs.

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF ACCESS AND HESITANCY

- Synthesize priority actions that could ensure that immunization programs reach the last mile.

Moderator: TBD

Panel: Inoculating Against Misinformation and Rebuilding The Public's Trust in Science

SANDER VAN DER LINDEN (confirmed)

Director

Cambridge Social Decision-Making Laboratory

IMRAN KHAN (confirmed)

Head of public Engagement

Wellcome Trust

ETHAN LINDENBERGER (confirmed)

Activist

KASISOMAYAJULA VISWANATH (invited)

Lee Kum Kee Professor of Health Communication

Harvard T. H. Chan School of Public Health

JAN BONHOEFFER (invited)

Founder

Heart Based Medicine

IFEOMA OZOMA

Public Policy and Social Impact Manager

Pinterest

12:30pm

Visionary Statements on Priorities in Building Vaccine Acceptance and Uptake for the Next Generation

Commented [AE5]: I included Sander van der Linden (Bad New Good News Game) here because I'm not sure how playing the game would go virtually but the objectives of the game does fit in this panel.

Also, I think we can do 1 question for each panelist pre-written by P.C. members for the first 15 minutes then take audience questions the last 15 minutes or so (we would tell them before the panel begins to send in questions specifically for the panelists).

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Moderator: Amanda Cohn, U.S. Centers for Disease Control and Prevention

PETER HOTEZ (**confirmed**)

Dean, National School of Tropical Medicine
Baylor College of Medicine

JULIE LEASK (**confirmed - virtual presentation**)

Visiting Professorial Fellow
National Centre for Immunisation Research and Surveillance
Sydney, Australia

NARENDRA ARORA (**confirmed**)

Executive Director
Inclen

MONIKA NAUS (**invited**)

Medical Director
Communicable Diseases & Immunization Service
BC Centre for Disease Control

1:00pm

Final Synthesis

AMANDA COHN

Executive Secretariat, Advisory Committee on Immunization Practices
Acting Chief Medical Officer, National Center for Immunization and Respiratory Diseases
U.S. Centers for Disease Control and Prevention

1:15pm

Closing Remarks

RIMA KHABBAZ, *Vice-Chair of the Forum on Microbial Threats*

Director, National Center for Emerging and Zoonotic Infectious Diseases
U.S. Centers for Disease Control and Prevention

PETER DASZAK, *Chair of the Forum on Microbial Threats*

WORKSHOP ON THE CRITICAL PUBLIC HEALTH VALUE OF VACCINES – TACKLING ISSUES OF
ACCESS AND HESITANCY

President
EcoHealth Alliance

1:30pm **Adjourn**

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Mon, 16 Mar 2020 18:03:59 +0000
To: itsoservicedesk@cdc.gov
Subject: SRT
Attachments: image001.png

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The screenshot shows a web browser window with the URL <https://my.inmeeting.no/meet/39680396/>. The browser tabs include 'SRT - Software Product Name...', 'SRT - Software Search Form', 'SRT - FAQ', and 'InMeeting'. The main content area displays the meeting title 'Cepi VMR - SAC's VMR' and asks 'How would you like to join?'. A prominent dark blue button says 'Join room with the Pexip desktop app'. Below this, it says 'OR JOIN USING' and shows five circular icons: a cloud, a speech bubble with 'S', a computer monitor, a telephone, and a three-dot menu. At the bottom left is a 'Privacy policy' link, and at the bottom right is the text 'Proudly brought to you by intility'.

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Cepi VMR - SAC's VMR

How would you like to join?

Join room with the Pexip desktop app

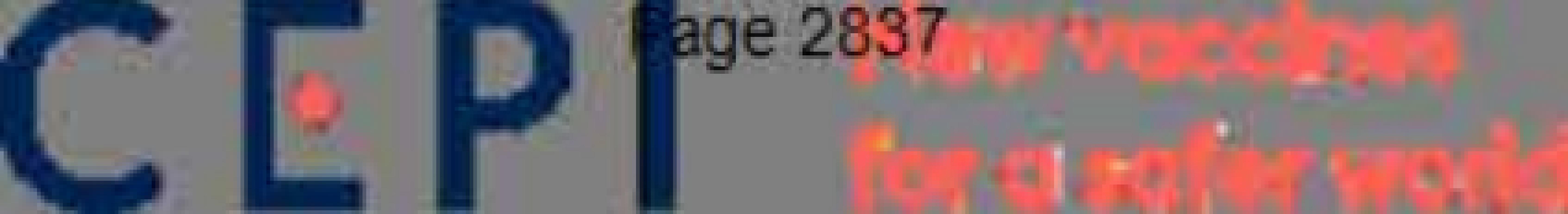
OR JOIN USING



From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Mon, 13 Jul 2020 15:45:27 +0000
To: Stig Tollefsen
Subject: RE: COVID-19: CEPI partner University of Queensland launches clinical trials of vaccine candidate
Attachments: image001.png, image002.png, image003.png

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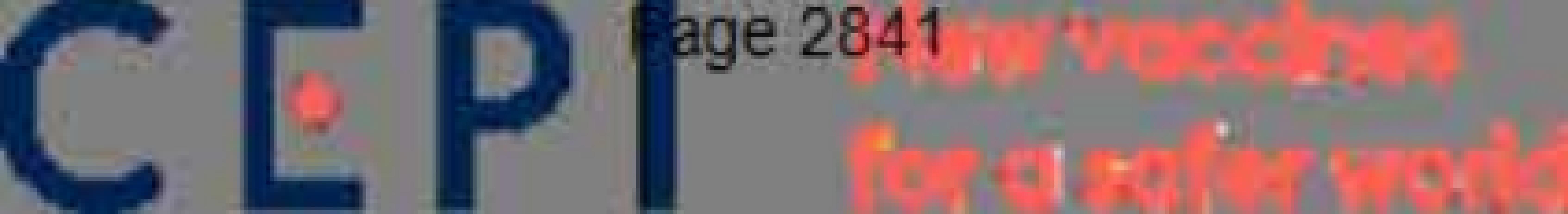
Page

2000

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Sent: Wed, 15 Jul 2020 17:39:42 +0000
To: Helfand, Rita (CDC/DDID/NCEZID/OD);Hyde, Terri (CDC/DDPHSIS/CGH/GID);Schrag, Stephanie (CDC/DDID/NCIRD/DBD)
Subject: Fw: COVAX – More than 150 countries engage in COVAX Facility
Attachments: image007.png, image008.png, image009.png

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From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD)
Sent: Wed, 29 Jul 2020 09:43:28 +0000
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP);Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);Guerra, Marta (CDC/DDPHSIS/CGH/DGHP);Millman, Alexander J. (CDC/DDID/NCIRD/ID)
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Olga:

We have gotten permission for these 5 to attend along with Inger, Alex and me. Marta--can you please send the call information below to everyone?

Also, Inger—you are kindly requested to test the link at the time indicated in item 3 below. Beijing time is 12 hours ahead of Atlanta, so the 20:00 time is 8AM Wednesday.

Thank you very much!

RJ

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Tuesday, July 28, 2020 9:09 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hzg4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

RJ,

Thank you following up on this. The remaining attendees will be: Terri Hyde, Ben Dahl, Adam Cohen, Olga Henao, and Marta Guerra. If it is not possible to have all extra attendees participate, please let us know the number that is feasible and we can prioritize.

Kind regards,

Olga

Olga L Henao, PhD. MPH
 International Task Force Lead
 2019 Novel Coronavirus Response
 U.S. Centers for Disease Control and Prevention
 1600 Clifton Road
 Atlanta, GA 30329-4018
 t: 404-639-3393 / m: (b)(6)
ohenao@cdc.gov

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Sent: Tuesday, July 28, 2020 7:52 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Fwd: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Inger et al:

Inger, thanks again for agreeing to represent CDC by giving 3 minutes of remarks. Here is the call in information for Thursday's China videoconference.

If you know who else besides Inger plans to join, please let me know ASAP.

Thanks.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Tuesday, July 28, 2020 3:40 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD)
Cc: 曹晓斌; 王晓琪; You, Na (CDC/DDPHSIS/CGH/OD); Millman, Alexander J. (CDC/DDID/NCIRD/ID)
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Thank you so much, RJ. Please see the following webinar information:

1. Connecting to the webinar:

"The COVID-19 Response Strategies in the New Normal Era" webinar link is as follows:

(b)(6)

Meeting number (access code): (b)(6)

Meeting password: (b)(6)

Thursday, July 30, 2020

8:00 pm | China Time (Beijing, GMT+08:00)

You could also dial by telephone in your location, please find global dial in numbers from:

(b)(6)

2. Attached please find the materials including:

- 1) Updated webinar agenda (still working on the final version);
- 2) Webinar participation guide (**highly recommended to read**)

3. Test before the webinar (*very important*):

Our IT staff will arrange a test session to confirm you can connect without any issues. Please use the same link:

(b)(6)

for testing session – Wednesday July 29 at 14:00-16:00pm or 20:00-21:00pm (Beijing Time)

If you have any connecting questions, please feel free to find our IT staff :

Jason NI (Mobile) (b)(6) (Office) +86-21-20423996
(email) (b)(6)

For the speakers and panelists, we'd like to ensure everyone of you accessing the test;
For all the participants, we highly recommend you access the test.

(*very important*) Please remember to **list your full name when you are logging in** for the webinars through Webex. This will help us identify who the participants are in the webinar.

Thank you again for your support!

With best regards,
Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/28/2020 08:10 , [Simonds, R. J. \(CDC/DDPHSIS/CGH/OD\) <rxs5@cdc.gov>](mailto:rxs5@cdc.gov) wrote :

Jingran:

Dr. Inger Damon (Director, Division of High Consequence Pathogens and Pathology) will represent US CDC for this event. Her email address is: iad7@cdc.gov. I hope to get you names of a few other US CDC attendees (including Alex and me) soon.

Thank you very much.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Saturday, July 25, 2020 5:36 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Dear RJ,

Good afternoon. Would you please keep me informed any updates from US CDC? Most of the participants are already confirmed, I prepare to send accessing and testing link next Monday. Thank you!

Please kindly find the attached agenda (not the final version). We also greatly welcome you, Alex and 1-3 experts of your colleagues who are interested to attend this Webinar, please share the name list with me.

Best,
Jingran

胡静然/Hu Jingran
高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/23/2020 11:41 , [胡静然<hujr@chinacdc.cn>](mailto:hujr@chinacdc.cn) wrote :

Dear RJ,
I attached the updated agenda for your information. In addition of the panelists and speakers, there are also some participants from Africa, Asia and Europe countries will attend the meeting.

Looking forward to your reply.

Best regards,
Jingran

胡静然/Hu Jingran
高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/20/2020 18:35 , [胡静然<hujr@chinacdc.cn>](mailto:hujr@chinacdc.cn) wrote :

Dear RJ,

Thank you for your swift reply. Please well know that audiences refer to all the participants involved, the counterparts we invited. You could understand as same as "all the attendees". Only our familiar technical experts will be invited to this webinar, no media or company will be there.

It's no doubt US CDC has a strong vaccine team, I'm Looking forward to your good news:)

Best,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

On 7/20/2020 17:37 , [Simonds, R. J. \(CDC/DDPHSIS/CGH/OD\)<rxs5@cdc.gov>](mailto:Simonds, R. J. (CDC/DDPHSIS/CGH/OD)<rxs5@cdc.gov>) wrote :

Thank you very much Jingran. I will investigate whether US CDC can provide an appropriate panelist for this webinar and will get back with you soon. Could you please clarify who the audience will be for this webinar?

Thanks much.

RJ

From: 胡静然 <hujr@chinacdc.cn>

Sent: Monday, July 20, 2020 1:52 PM

To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>

Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

Subject: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar - 30th July

Dear RJ,

China CDC would like to host a 2.5 hours Webinar (online seminar) “Dancing with the COVID-19: response strategies in the New Normal Era” on Thursday July 30 at 8:00 pm, Beijing time.

The aims of this online event is to provide a forum for senior experts and frontline responders from global public health & academic institutes to meet and exchange their experiences and knowledge in the field of understanding of this novel infectious disease threat and how best to respond it. **The Webinar will have 2 panel discussions, focusing on “Reopening & restarting strategies in the setting of COVID-19 pandemic” and “Immunity response and its significance on vaccination” . Each panelist is expected to give an approximately 3-minute comment on one specific topic, followed by interaction with the audience and the other panelists of the session for approximately 30 minutes.**

I am writing on behalf of Prof. George Fu Gao, Director General of China CDC, to invite a US CDC expert as a **panelist** on the topic of **“Immunity response and its significance on vaccination”** .

We also intend to invite directors/senior experts from ECDC, KCDC, NIID Japan, PHE etc. to join the two panels. Please find more details in the attached agenda.

Could you please help us to recommend the right person? Many thanks!

With best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD)
Sent: Wed, 29 Jul 2020 07:30:11 +0000
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP);Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);Guerra, Marta (CDC/DDPHSIS/CGH/DGHP);Millman, Alexander J. (CDC/DDID/NCIRD/ID)
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Thanks, Olga. We have gotten permission for the five to join if we can provide their titles. Could someone please send?

RJ

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Tuesday, July 28, 2020 9:09 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hzg4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

RJ,

Thank you following up on this. The remaining attendees will be: Terri Hyde, Ben Dahl, Adam Cohen, Olga Henao, and Marta Guerra. If it is not possible to have all extra attendees participate, please let us know the number that is feasible and we can prioritize.

Kind regards,

Olga

Olga L Henao, PhD. MPH
 International Task Force Lead
 2019 Novel Coronavirus Response
 U.S. Centers for Disease Control and Prevention
 1600 Clifton Road
 Atlanta, GA 30329-4018
 t: 404-639-3393 / m: (b)(6)
ohenao@cdc.gov

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Sent: Tuesday, July 28, 2020 7:52 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hzg4@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>;

Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

Subject: Fwd: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Inger et al:

Inger, thanks again for agreeing to represent CDC by giving 3 minutes of remarks. Here is the call in information for Thursday's China videoconference.

If you know who else besides Inger plans to join, please let me know ASAP.

Thanks.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Tuesday, July 28, 2020 3:40 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD)
Cc: 曹晓斌; 王晓琪; You, Na (CDC/DDPHSIS/CGH/OD); Millman, Alexander J. (CDC/DDID/NCIRD/ID)
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Thank you so much, RJ. Please see the following webinar information:

1. Connecting to the webinar:

"The COVID-19 Response Strategies in the New Normal Era" webinar link is as follows:

(b)(6)

Meeting number (access code): (b)(6)

Meeting password: (b)(6)

Thursday, July 30, 2020

8:00 pm | China Time (Beijing, GMT+08:00)

You could also dial by telephone in your location, please find global dial in numbers from:

(b)(6)

2. Attached please find the materials including:

- 1) Updated webinar agenda (still working on the final version);
- 2) Webinar participation guide (**highly recommended to read**)

3. Test before the webinar (***very important***):

Our IT staff will arrange a test session to confirm you can connect without any issues.

Please use the same link:

(b)(6)

for testing session – Wednesday July 29 at 14:00-16:00pm or 20:00-21:00pm (Beijing Time)

If you have any connecting questions, please feel free to find our IT staff :

Jason NI (Mobile) (b)(6) Office) +86-21-20423996

(email) (b)(6)

For the speakers and panelists, we'd like to ensure everyone of you accessing the test;
For all the participants, we highly recommend you access the test.

(*very important*) Please remember to **list your full name when you are logging in** for the webinars through Webex. This will help us identify who the participants are in the webinar.

Thank you again for your support!

With best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

On 7/28/2020 08:10 , [Simonds, R. J. \(CDC/DDPHSIS/CGH/OD\) <rxs5@cdc.gov>](mailto:Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>) wrote :

Jingran:

Dr. Inger Damon (Director, Division of High Consequence Pathogens and Pathology) will represent US CDC for this event. Her email address is: iad7@cdc.gov. I hope to get you names of a few other US CDC attendees (including Alex and me) soon.

Thank you very much.

RJ

From: 胡静然 <hujr@chinacdc.cn>

Sent: Saturday, July 25, 2020 5:36 PM

To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>

Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Dear RJ,

Good afternoon. Would you please keep me informed any updates from US CDC? Most of the participants are already confirmed, I prepare to send accessing and testing link next Monday. Thank you!

Please kindly find the attached agenda (not the final version). We also greatly welcome you, Alex and 1-3 experts of your colleagues who are interested to attend this Webinar, please share the name list with me.

Best,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/23/2020 11:41 , [胡静然<hujr@chinacdc.cn>](mailto:hujr@chinacdc.cn) wrote :

Dear RJ,
I attached the updated agenda for your information. In addition of the panelists and speakers, there are also some participants from Africa, Asia and Europe countries will attend the meeting.

Looking forward to your reply.

Best regards,
Jingran

胡静然/Hu Jingran
高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/20/2020 18:35 , [胡静然<hujr@chinacdc.cn>](mailto:hujr@chinacdc.cn) wrote :

Dear RJ,
Thank you for your swift reply. Please well know that audiences refer to all the participants involved, the counterparts we invited. You could understand as same as "all the attendees". Only our familiar technical experts will be invited to this webinar, no media or company will be there.
It's no doubt US CDC has a strong vaccine team, I'm Looking forward to your good news:)

Best,
Jingran

胡静然/Hu Jingran
高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/20/2020 17:37 , [Simonds, R. J. \(CDC/DDPHSIS/CGH/OD\)<rxs5@cdc.gov>](mailto:rxs5@cdc.gov) wrote :

Thank you very much Jingran. I will investigate whether US CDC can provide an appropriate panelist for this webinar and will get back with you soon. Could you please clarify who the audience will be for this webinar?

Thanks much.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Monday, July 20, 2020 1:52 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar - 30th July

Dear RJ,

China CDC would like to host a 2.5 hours Webinar (online seminar) "Dancing with the COVID-19: response strategies in the New Normal Era" on Thursday July 30 at 8:00 pm, Beijing time.

The aims of this online event is to provide a forum for senior experts and frontline responders from global public health & academic institutes to meet and exchange their experiences and knowledge in the field of understanding of this novel infectious disease threat and how best to respond it. **The Webinar will have 2**

panel discussions, focusing on “Reopening & restarting strategies in the setting of COVID-19 pandemic” and “Immunity response and its significance on vaccination” . Each panelist is expected to give an approximately 3-minute comment on one specific topic, followed by interaction with the audience and the other panelists of the session for approximately 30 minutes.

I am writing on behalf of Prof. George Fu Gao, Director General of China CDC, to invite a US CDC expert as a **panelist** on the topic of **“Immunity response and its significance on vaccination”** .

We also intend to invite directors/senior experts from ECDC, KCDC, NIID Japan, PHE etc. to join the two panels. Please find more details in the attached agenda.

Could you please help us to recommend the right person? Many thanks!

With best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

From: 胡静然
Sent: Wed, 29 Jul 2020 05:14:22 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Cc: Simonds, R. J. (CDC/DDPHSIS/CGH/OD); 王晓琪; 曹晓斌
Subject: important information about the webinar on 30th July
Attachments: 20200729 Tentative Agenda -The COVID-19 Response Strategies in the New Normal Era.docx, Webinar participation guide.pptx

Dear Dr. Inger Damon,

China CDC highly appreciates your participation to the "The COVID-19 Response Strategies in the New Normal Era" webinar which will be held on 30 July at 8:00 pm, Beijing time. Please kindly find the following information about the webinar:

1. Connecting to the webinar:

"The COVID-19 Response Strategies in the New Normal Era" webinar link is as follows:

(b)(6)

Meeting number (access code): (b)(6)

Meeting password: (b)(6)

Thursday, July 30, 2020

8:00 pm | China Time (Beijing, GMT+08:00)

You could also dial by telephone in your location, please find global dial in numbers from:

(b)(6)

2. Attached please find the materials including:

- 1) Updated webinar agenda ;
- 2) Webinar participation guide (**highly recommended to read**)

3. Test before the webinar (*very important*):

Our IT staff will arrange a test session to confirm you can connect without any issues. Please use the same link:

(b)(6)

for testing session – Wednesday July 29 at 14:00-16:00pm or 20:00-21:00pm (Beijing Time)

If you have any connecting questions, please feel free to find our IT staff :

Jason NI (Mobile) (b)(6) Office) +86-21-20423996

(email (b)(6)

For the speakers and panelists, we'd like to ensure everyone of you accessing the test;

For all the participants, we highly recommend you access the test.

(***very important***) Please remember to **list your full name when you are logging in** for the webinars through Webex. This will help us identify who the participants are in the webinar.

Thank you again for your support!

With best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

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Tel: (86) 10 58900216

Fax: (86) 10 58900241

The COVID-19 Response Strategies in the New Normal Era

Webinar: July 30, 2020 (Beijing Time)

Tentative Agenda

(b)(5)

(b)(5)

Webex User guide:The COVID-19 Response Strategies in the New Normal Era

Technical Support : Jason NiPhone: (Mobile)
(Office) +86-21-20423996

(b)(6)

Option 1: Join Webex on PC

1. Clicking on the "Join meeting" button in the invitation email

invites you to join this Webex meeting.

Meeting number (access code)

Meeting password:

Thursday, July 30, 2020 8:00

pm | China Time (Beijing, GMT+08:00) | 3 hrs 30 mins

Join meeting

[Click to See More Call-In Number](#)

Tap to join from a mobile device (attendees only) # Singapore Toll

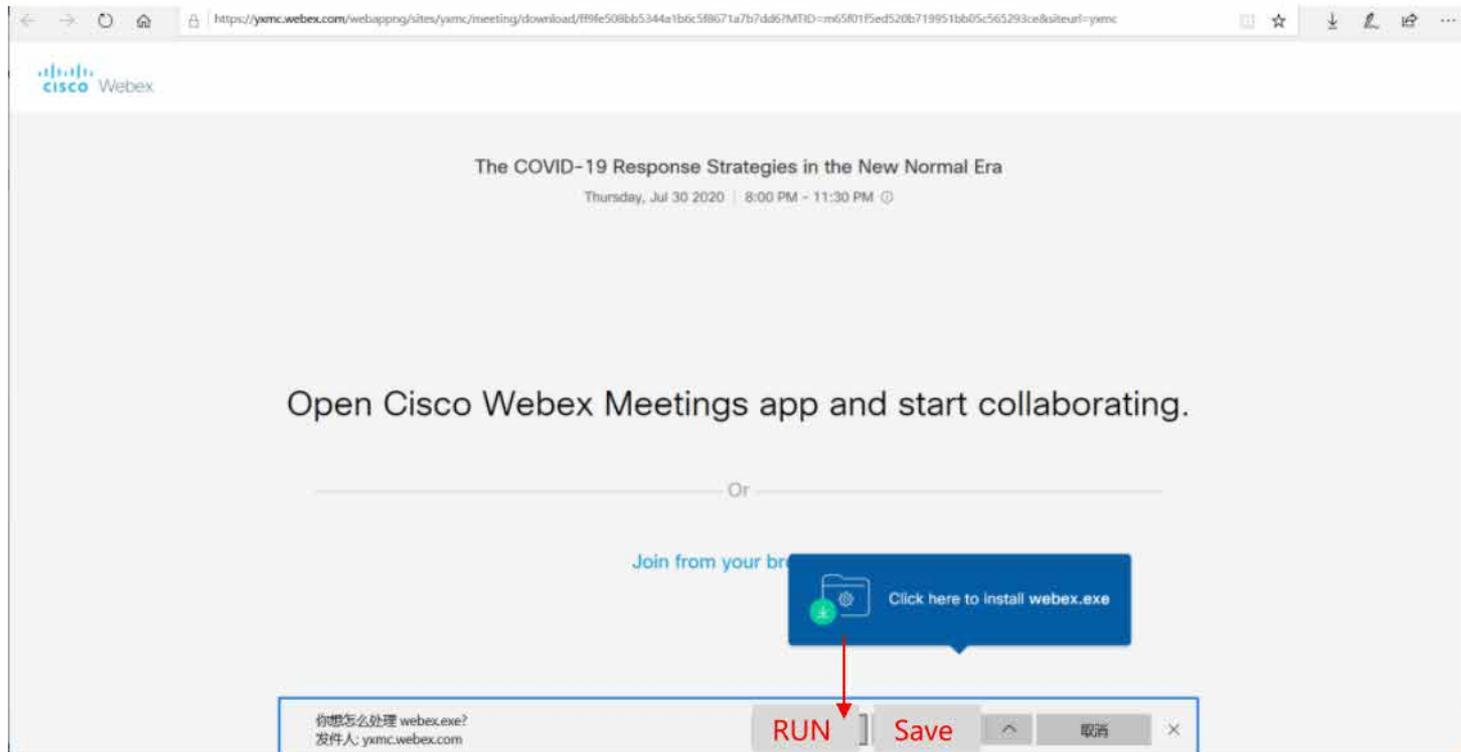
Join by phone

6442 Singapore Toll Global call-in numbers



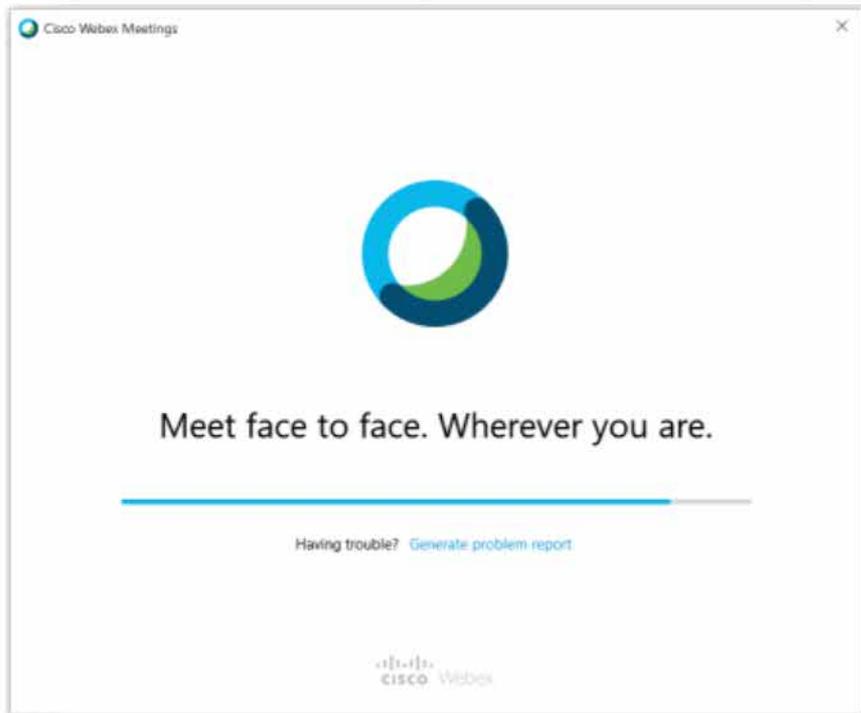
Option 1: Join Webex on PC (Cont' d)

Run the Webex.exe as below



Option 1: Join Webex on PC (Cont' d)

Running the Webex application

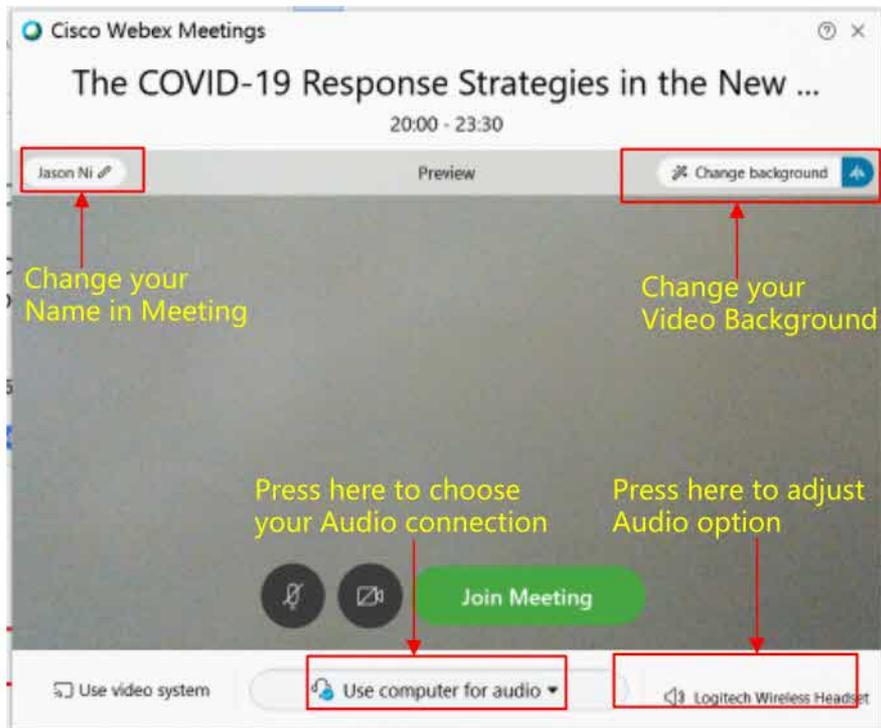


Type in your Name and Email Address Then Click the “Next” button



Option 1: Join Webex on PC (Cont' d)

Adjust your Audio/Video before join the meeting



Option 1: Join Webex on PC (Cont' d)

Meeting essentials

Click on the information button to view meeting details



Join Webex Event
Host: jasni jasni

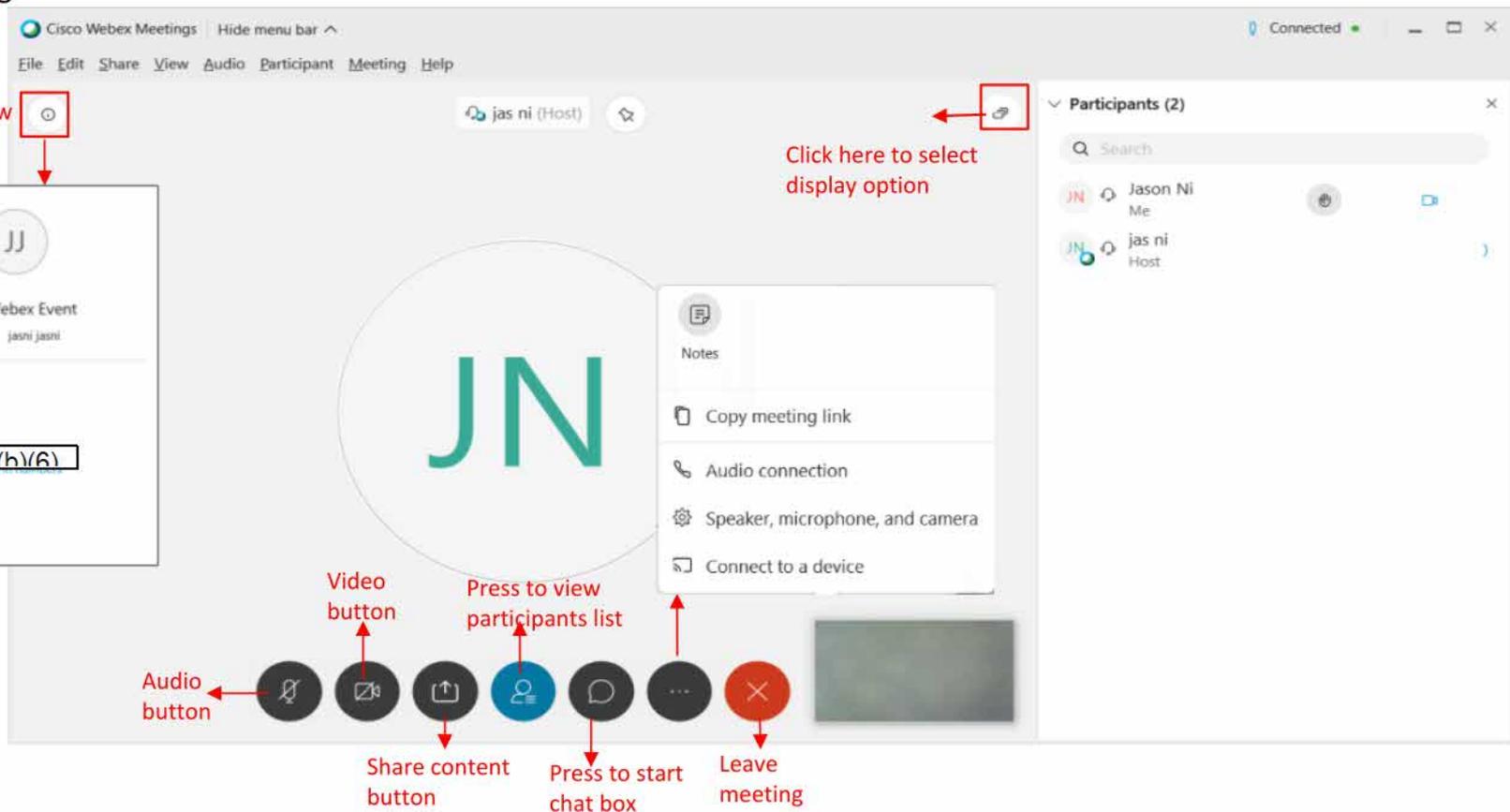
Event number:
(b)(6)

Audio connection:
Singapore Toll: (b)(6)
Show all global

Access code:
(b)(6)

Attendee ID:
175

Click here to select display option



Audio button

Video button

Share content button

Press to view participants list

Press to start chat box

Leave meeting

Participants (2)

- Jason Ni Me
- jas ni Host

Notes

Copy meeting link

Audio connection

Speaker, microphone, and camera

Connect to a device

Option 2: Join Webex on phone – call in

1. Follow the steps in Option 1. Click on the “information button” to view meeting details. Choose “Show all global call-in numbers” to select your location for corresponding local number. Use phone to dial the toll number. Follow the audio instruction to select language. Input the Access Code on the phone. Input the attendee ID, which is unique for each attendee.

The screenshot shows the Cisco Webex Meetings interface. The top bar includes the Cisco Webex Meetings logo, a 'Hide menu bar' option, and a menu with 'File', 'Edit', 'Share', 'View', 'Audio', 'Participant', and 'Meeting'. The main content area displays a meeting titled 'The COVID-19 Response Strategies in the New Normal Era' hosted by 'jas ni'. Below the title, there are fields for 'Meeting number', 'Video address', and 'Audio connection'. The 'Audio connection' section shows 'Singapore Toll' with a red box around the '(b)(6)' value. To the left of the interface, red arrows point to specific elements: 'Step 2 ->' points to a circular 'i' icon in the top left; 'Step 3 ->' points to a red box around the 'Show all global call-in numbers' link; 'Step 6 ->' points to a red box around the '(b)(6)' value in the 'Access code' field; and 'Step 7 ->' points to a red box around the '(b)(6)' value in the 'Attendee ID' field.

Step 2 ->

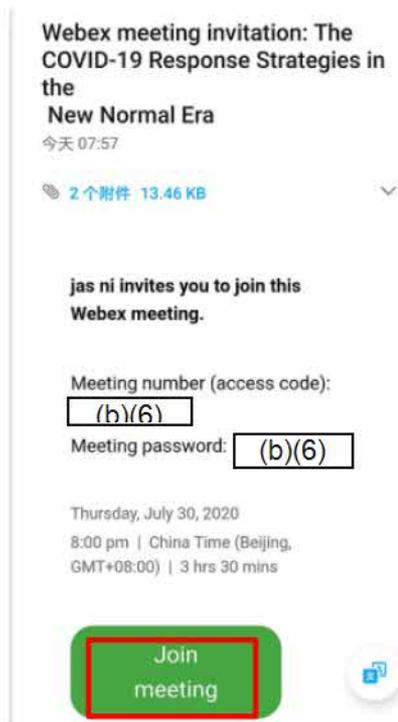
Step 3 ->

Step 6 ->

Step 7 ->

Option 3: Join Webex on phone – Mobile Apps

1. Open the invitation email from your phone and click “Join Meeting” button

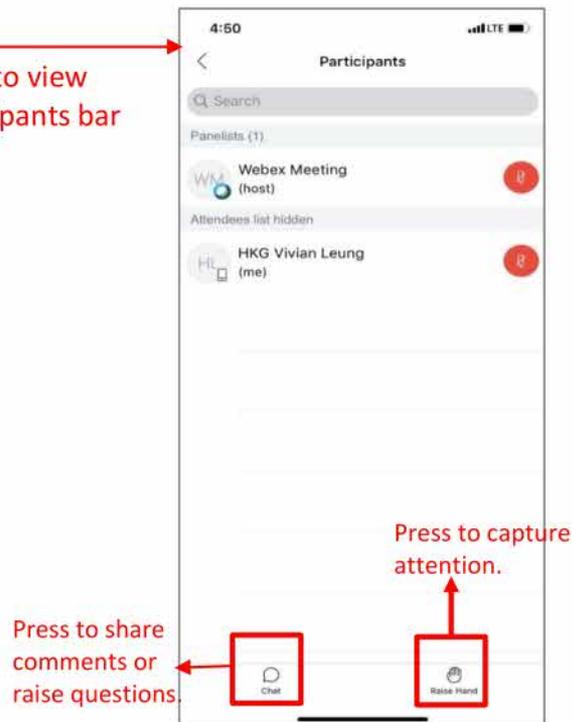


2. In Meeting



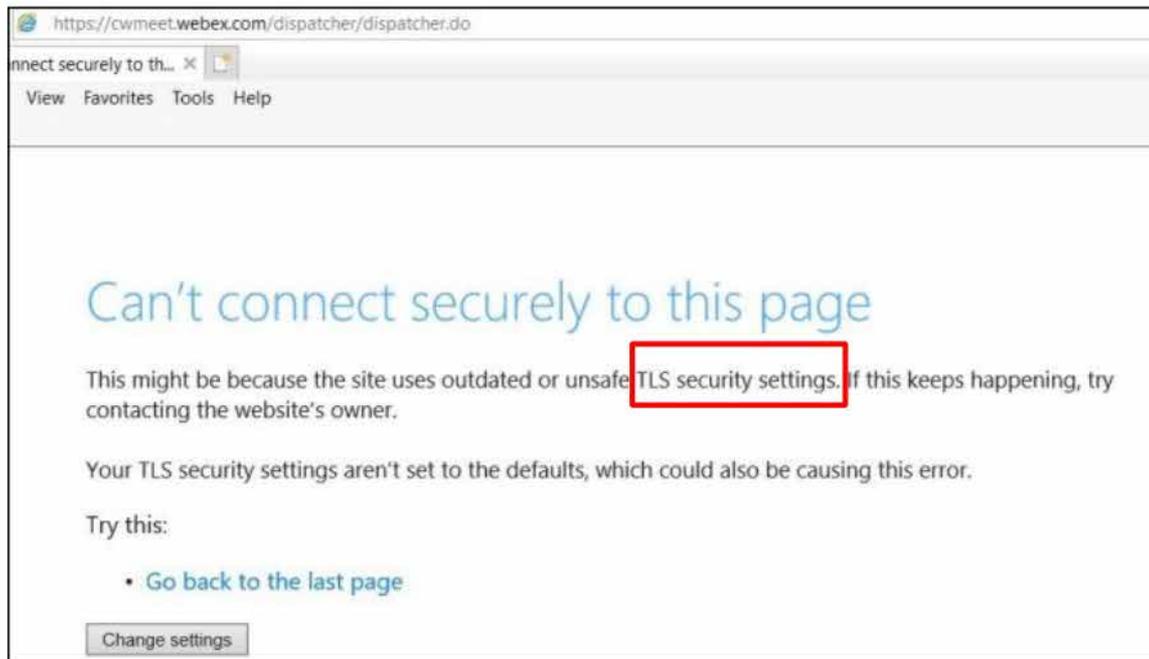
Press to view participants bar

2. See Participants



Cannot join the meeting?

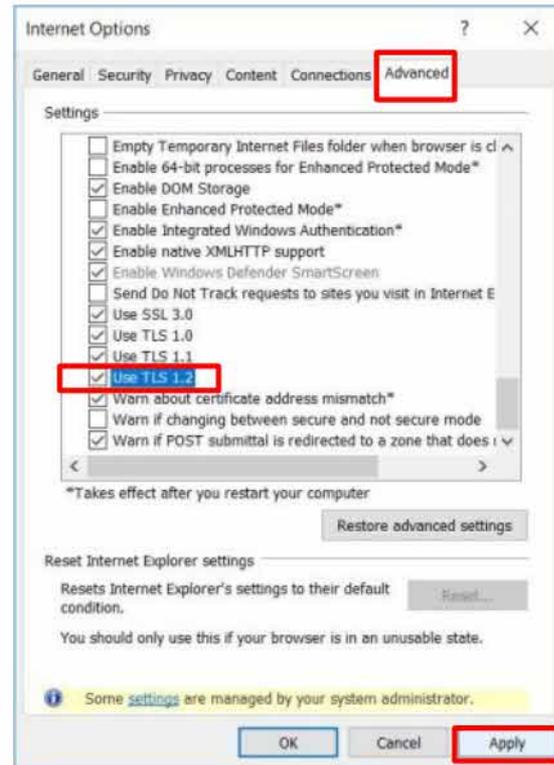
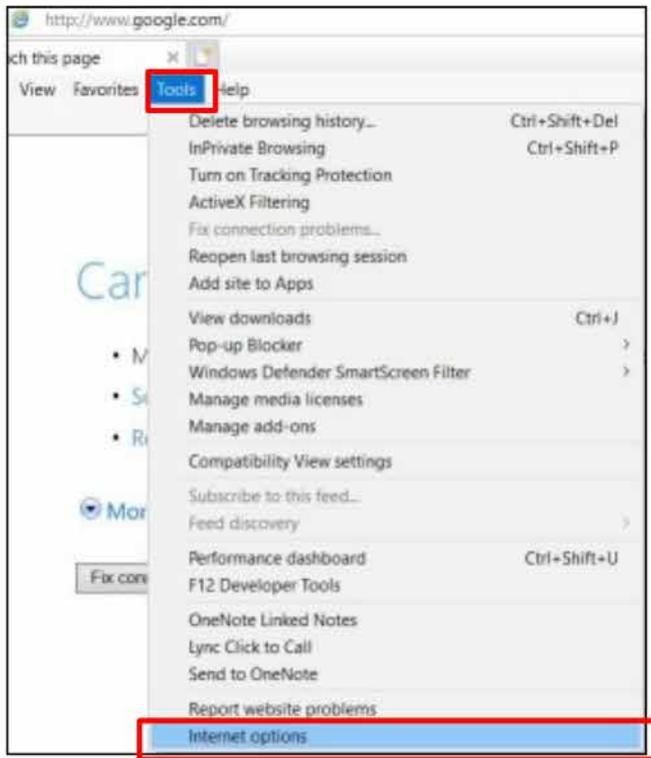
If you encounter the below alert, please check your computer's TLS1.2 Settings according to the next step.



Cannot join the meeting? (Cont'd)

1. Open an IE browser 2. Go to the Tools Menu3. Click "Internet Options"

4. In Advance Tab, select "Use TLS1.2", and click "Apply"5. Join the meeting again



From: Stig Tollefsen
Sent: Wed, 15 Jul 2020 17:03:48 +0000
To: Barrett, Alan; Alash'le Abimiku; Alloueche, Ali; christian.brechot; cbrechot; happic; Schmaljohn, Connie (NIH/NIAID) [E]; Daniel Brasseur; mimi darko; dongxp238; HRees@wrhi.ac.za; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); James Robinson; Jean Lang; Van Hoof, Johan [JRDBE]; John Edmunds; Josie Golding; kneuzil; Jansen, Kathrin; Shibuya, Kenji; Michel De Wilde; Levine, Myron; Bryant, Paula (NIH/NIAID) [E]; Penny Heaton; Peter Smith; Krause, Philip (FDA/CBER); Ralf Clemens; Stanley Plotkin; Tom Kariuki; SATHIYAMOORTHY, Vaseeharan; yves.levy
Cc: Manisha Tirvassen; Jodie Rogers; Rebeka Yasmin; CEPI SAC
Subject: COVAX – More than 150 countries engage in COVAX Facility

Dear SAC members,

This is for your information trying to be a little ahead of the news:

- CEPI, Gavi and the World Health Organization (WHO) have today announced that over 150 countries have engaged in the COVID-19 Vaccine Global Access (COVAX) Facility, a mechanism designed to guarantee rapid, fair and equitable access to COVID-19 vaccines worldwide.
- The COVAX Facility forms a key part of COVAX, the vaccines pillar of the Access to COVID-19 Tools (ACT) Accelerator, which is an end-to-end solution to accelerate the development and manufacture of COVID-19 vaccines, and to guarantee fair and equitable access for every country in the world. The ultimate goal of COVAX is to deliver 2 billion doses of safe and effective vaccine by the end of 2021 to end the acute phase of the global pandemic, saving millions of lives and transforming the economic prospects of societies around the world.
- In total, **75 countries** have submitted expressions of interest to join the COVAX Facility.
- These countries, which would finance the vaccines from their own public finance budgets, partner with up to **90 lower-income countries** that could be supported through voluntary donations to Gavi's COVAX Advance Market Commitment (AMC).
- Together, this group of **up to 165 countries** represents **more than 60% of the world's population**. Among the group are representatives from every continent and more than half of the world's G20 economies.
- Through the COVAX initiative, vaccines will be delivered equally to all participating countries, proportional to their populations, initially prioritising healthcare workers then expanding to cover 20% of the population of participating countries – regardless of income level.
- Further doses will then be made available based on country need, vulnerability and COVID-19 threat. The COVAX Facility will also maintain a buffer of doses for emergency and humanitarian use, including dealing with severe outbreaks before they spiral out of control.
- The success of these efforts will ultimately depend on securing enough funding from governments and commitments from vaccine manufacturers to participate at a scale large enough to deliver a global solution.
- The formal expressions of interest submitted are non-binding; the COVAX pillar will now begin a process of consultation with all 165 countries.
- For further information, please see [our press release](#).

On behalf of the secretariat

Best wishes

Stig

STIG TOLLEFSEN

Head of Strategic Science



(+47) 901 50 770

stig.tollefsen@cepi.net

Visiting address: Marcus Thranes gate 2, 0473 Oslo, Norway

Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

www.cepi.net



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From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP)
Sent: Wed, 29 Jul 2020 13:43:34 +0000
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD); Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); Guerra, Marta (CDC/DDPHSIS/CGH/DGHP); Millman, Alexander J. (CDC/DDID/NCIRD/ID)
Cc: Dahl, Benjamin A. (CDC/DDPHSIS/CGH/GID); Cohen, Adam (CDC/DDPHSIS/CGH/DGHP); Hyde, Terri (CDC/DDPHSIS/CGH/GID)
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

RJ,

Thank you. Please find the information for the additional participants below:

Terri B. Hyde, MD, MPH
CAPT, US Public Health Service
Global Team Lead – Vaccine Planning Unit
COVID-19 Emergency Response
U.S. Centers for Disease Control and Prevention
Atlanta, GA

Olga L. Henao, PhD, MPH
Lead – COVID-19 International Task Force
U.S. Centers for Disease Control and Prevention
Atlanta, GA

Benjamin A. Dahl, PhD, MPH
Deputy for Science – COVID-19 International Task Force
U.S. Centers for Disease Control and Prevention
Atlanta, GA

Adam Cohen, MD, MPH
CAPT, US Public Health Service
Deputy for Science – COVID-19 International Task Force
U.S. Centers for Disease Control and Prevention
Atlanta, GA

Marta A. Guerra, DVM, MPH, PhD, Dipl ACVPM
CAPT, US Public Health Service
Regional Advisor – COVID-19 International Task Force
U.S. Centers for Disease Control and Prevention
Atlanta, GA

Best,

Olga

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Sent: Wednesday, July 29, 2020 5:43 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Olga:

We have gotten permission for these 5 to attend along with Inger, Alex and me. Marta--can you please send the call information below to everyone?

Also, Inger—you are kindly requested to test the link at the time indicated in item 3 below. Beijing time is 12 hours ahead of Atlanta, so the 20:00 time is 8AM Wednesday.

Thank you very much!

RJ

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Tuesday, July 28, 2020 9:09 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

RJ,

Thank you following up on this. The remaining attendees will be: Terri Hyde, Ben Dahl, Adam Cohen, Olga Henao, and Marta Guerra. If it is not possible to have all extra attendees participate, please let us know the number that is feasible and we can prioritize.

Kind regards,

Olga

Olga L Henao, PhD. MPH
International Task Force Lead
2019 Novel Coronavirus Response
U.S. Centers for Disease Control and Prevention
1600 Clifton Road
Atlanta, GA 30329-4018
t: 404-639-3393 / m: (b)(6)
ohenao@cdc.gov

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Sent: Tuesday, July 28, 2020 7:52 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hzg4@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Fwd: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Inger et al:

Inger, thanks again for agreeing to represent CDC by giving 3 minutes of remarks. Here is the call in information for Thursday' s China videoconference.

If you know who else besides Inger plans to join, please let me know ASAP.

Thanks.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Tuesday, July 28, 2020 3:40 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD)
Cc: 曹晓斌; 王晓琪; You, Na (CDC/DDPHSIS/CGH/OD); Millman, Alexander J. (CDC/DDID/NCIRD/ID)
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Thank you so much, RJ. Please see the following webinar information:

1. Connecting to the webinar:

"The COVID-19 Response Strategies in the New Normal Era" webinar link is as follows:

(b)(6)

Meeting number (access code): (b)(6)

Meeting password: (b)(6)

Thursday, July 30, 2020

8:00 pm | China Time (Beijing, GMT+08:00)

You could also dial by telephone in your location, please find global dial in numbers from:

(b)(6)

2. Attached please find the materials including:

- 1) Updated webinar agenda (still working on the final version);
- 2) Webinar participation guide (**highly recommended to read**)

3. Test before the webinar (*very important*):

Our IT staff will arrange a test session to confirm you can connect without any issues. Please use the same link:

(b)(6)

for testing session – Wednesday July 29 at 14:00-16:00pm or 20:00-21:00pm (Beijing Time)

If you have any connecting questions, please feel free to find our IT staff :

Jason NI (Mobile) (b)(6) (Office) +86-21-20423996

(email) (b)(6)

For the speakers and panelists, we'd like to ensure everyone of you accessing the test;

For all the participants, we highly recommend you access the test.

(*very important*) Please remember to **list your full name when you are logging in** for the webinars through Webex. This will help us identify who the participants are in the webinar.

Thank you again for your support!

With best regards,

Jingran

胡静然/Hu Jingran
高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/28/2020 08:10 , [Simonds, R. J. \(CDC/DDPHSIS/CGH/OD\) <rxs5@cdc.gov>](mailto:Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>) wrote :

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Dr. Inger Damon (Director, Division of High Consequence Pathogens and Pathology) will represent US CDC for this event. Her email address is: iad7@cdc.gov. I hope to get you names of a few other US CDC attendees (including Alex and me) soon.

Thank you very much.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Saturday, July 25, 2020 5:36 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

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It's no doubt US CDC has a strong vaccine team, I'm Looking forward to your good news:)

Best,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

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Fax: (86) 10 58900241

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RJ

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Sent: Monday, July 20, 2020 1:52 PM

To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>

Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

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I am writing on behalf of Prof. George Fu Gao, Director General of China CDC, to invite a US CDC expert as a **panelist** on the topic of **“Immunity response and its significance on vaccination”** .

We also intend to invite directors/senior experts from ECDC, KCDC, NIID Japan, PHE etc. to join the two panels. Please find more details in the attached agenda.

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Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP)
Sent: Wed, 29 Jul 2020 17:26:30 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Perfect. No clearance required!

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 1:11 PM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

how is this?

Inger K Damon MD PhD

Director, Division of High Consequence Pathogens and Pathology

National Center for Emerging and Zoonotic Infectious Diseases

Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 11:07 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

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Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

OK - will put it together!

Inger K Damon MD PhD

Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 11:06 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Inger,

From my end, (b)(5)

(b)(5)

Olga

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 10:59 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

<https://www.cdc.gov/vaccines/acip/meetings/index.html>

Inger K Damon MD PhD

Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 10:50 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
 Webinar -30th July

I think (b)(5)
(b)(5)

thoughts?

Inger K Damon MD PhD
 Director, Division of High Consequence Pathogens and Pathology
 National Center for Emerging and Zoonotic Infectious Diseases
 Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 10:48 AM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
 Webinar -30th July

RJ,

Marta and I discussed and I will send the information on the call and associated materials to the participants.

Kind regards,

Olga

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Sent: Tuesday, July 28, 2020 7:52 AM

To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hzg4@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Fwd: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Inger et al:

Inger, thanks again for agreeing to represent CDC by giving 3 minutes of remarks. Here is the call in information for Thursday' s China videoconference.

If you know who else besides Inger plans to join, please let me know ASAP.

Thanks.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Tuesday, July 28, 2020 3:40 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD)
Cc: 曹晓斌; 王晓琪; You, Na (CDC/DDPHSIS/CGH/OD); Millman, Alexander J. (CDC/DDID/NCIRD/ID)
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Thank you so much, RJ. Please see the following webinar information:

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Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

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外事处/Office of International Cooperation

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Tel: (86) 10 58900216

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From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD)
Sent: Thu, 30 Jul 2020 14:48:03 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); Henao, Olga (CDC/DDPHSIS/CGH/DGHP)
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Inger:

Thanks again for agreeing to do this. I thought your remarks were spot on and your willingness to clearly explain the RNA/DNA question was great. I hope you got some value out of the exchange as well.

Thanks!

RJ

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Thursday, July 30, 2020 8:43:07 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Can do either – I can always simply put the link to ACIP in the chat box

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Sent: Thursday, July 30, 2020 8:42 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Can you just share your screen?
If not, can you just do without it?

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Thursday, July 30, 2020 8:40:22 PM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

I only sent the slide to you, so unless RJ sent it, they do not have it!

Get [Outlook for iOS](#)

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Thursday, July 30, 2020 8:35:55 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

I am not sure of the answer for this. Do they have your slide? If so you can ask them to project it. I added RJ for his thoughts

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Thursday, July 30, 2020 8:29 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Will I need to share my screen to show my one slide, or will the organizers do that?

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 1:27 PM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

my thought, exactly

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 1:26 PM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

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Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
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how is this?

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Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
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Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
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OK - will put it together!

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
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Sent: Wednesday, July 29, 2020 11:06 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hzg4@cdc.gov>;

Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Inger,

From my end, I think

(b)(5)

(b)(5)

Olga

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Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
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(b)(6)

Meeting number (access code) (b)(6)

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Thursday, July 30, 2020

8:00 pm | China Time (Beijing, GMT+08:00)

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for testing session – Wednesday July 29 at 14:00-16:00pm or 20:00-21:00pm (Beijing Time)

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Jason NI (Mobile) (b)(6) (Office) +86-21-20423996

(email) (b)(6)

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Thank you again for your support!

With best regards,

Jingran

胡静然/Hu Jingran

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外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

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It's no doubt US CDC has a strong vaccine team, I'm Looking forward to your good news:)
Best,
Jingran

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I am writing on behalf of Prof. George Fu Gao, Director General of China CDC, to invite a US CDC expert as a **panelist** on the topic of "Immunity response and its significance on vaccination" .

We also intend to invite directors/senior experts from ECDC, KCDC, NIID Japan, PHE etc. to join the two panels. Please find more details in the attached agenda.

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Sent: Thu, 30 Jul 2020 01:23:54 +0000
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Cc: Dahl, Benjamin A. (CDC/DDPHSIS/CGH/GID);Cohen, Adam (CDC/DDPHSIS/CGH/DGHP);Hyde, Terri (CDC/DDPHSIS/CGH/GID)
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Perfect, thanks.
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Sent: Wednesday, July 29, 2020 9:44 PM
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Cc: Dahl, Benjamin A. (CDC/DDPHSIS/CGH/GID) <bid5@cdc.gov>; Cohen, Adam (CDC/DDPHSIS/CGH/DGHP) <dvj1@cdc.gov>; Hyde, Terri (CDC/DDPHSIS/CGH/GID) <tkh4@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

RJ,

Thank you. Please find the information for the additional participants below:

Terri B. Hyde, MD, MPH
 CAPT, US Public Health Service
 Global Team Lead – Vaccine Planning Unit
 COVID-19 Emergency Response
 U.S. Centers for Disease Control and Prevention
 Atlanta, GA

Olga L. Henao, PhD, MPH
 Lead – COVID-19 International Task Force
 U.S. Centers for Disease Control and Prevention
 Atlanta, GA

Benjamin A. Dahl, PhD, MPH
 Deputy for Science – COVID-19 International Task Force
 U.S. Centers for Disease Control and Prevention
 Atlanta, GA

Adam Cohen, MD, MPH
 CAPT, US Public Health Service

Deputy for Science – COVID-19 International Task Force
U.S. Centers for Disease Control and Prevention
Atlanta, GA

Marta A. Guerra, DVM, MPH, PhD, Dipl ACVPM
CAPT, US Public Health Service
Regional Advisor – COVID-19 International Task Force
U.S. Centers for Disease Control and Prevention
Atlanta, GA

Best,

Olga

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Sent: Wednesday, July 29, 2020 5:43 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Olga:

We have gotten permission for these 5 to attend along with Inger, Alex and me. Marta--can you please send the call information below to everyone?

Also, Inger—you are kindly requested to test the link at the time indicated in item 3 below. Beijing time is 12 hours ahead of Atlanta, so the 20:00 time is 8AM Wednesday.

Thank you very much!

RJ

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Tuesday, July 28, 2020 9:09 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

RJ,

Thank you following up on this. The remaining attendees will be: Terri Hyde, Ben Dahl, Adam Cohen, Olga Henao, and Marta Guerra. If it is not possible to have all extra attendees participate, please let us know the number that is feasible and we can prioritize.

Kind regards,

Olga

Olga L Henao, PhD. MPH

International Task Force Lead
2019 Novel Coronavirus Response
U.S. Centers for Disease Control and Prevention
1600 Clifton Road
Atlanta, GA 30329-4018
t: 404-639-3393 / m: (b)(6)
ohenao@cdc.gov

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>

Sent: Tuesday, July 28, 2020 7:52 AM

To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

Subject: Fwd: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Inger et al:

Inger, thanks again for agreeing to represent CDC by giving 3 minutes of remarks. Here is the call in information for Thursday's China videoconference.

If you know who else besides Inger plans to join, please let me know ASAP.

Thanks.

RJ

From: 胡静然 <hujr@chinacdc.cn>

Sent: Tuesday, July 28, 2020 3:40 PM

To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD)

Cc: 曹晓斌; 王晓琪; You, Na (CDC/DDPHSIS/CGH/OD); Millman, Alexander J. (CDC/DDID/NCIRD/ID)

Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Thank you so much, RJ. Please see the following webinar information:

1. Connecting to the webinar:

"The COVID-19 Response Strategies in the New Normal Era" webinar link is as follows:

(b)(6)

Meeting number (access code): (b)(6)

Meeting password: (b)(6)

Thursday, July 30, 2020

8:00 pm | China Time (Beijing, GMT+08:00)

You could also dial by telephone in your location, please find global dial in numbers from:

(b)(6)

2. Attached please find the materials including:

- 1) Updated webinar agenda (still working on the final version);
- 2) Webinar participation guide (**highly recommended to read**)

3. Test before the webinar (*very important*):

Our IT staff will arrange a test session to confirm you can connect without any issues. Please use the same link:

(b)(6)

for testing session – Wednesday July 29 at 14:00-16:00pm or 20:00-21:00pm (Beijing Time)

If you have any connecting questions, please feel free to find our IT staff :

Jason NI (Mobile) (b)(6) (Office) +86-21-20423996

(email) jason.ni@yunxuetech.com

For the speakers and panelists, we'd like to ensure everyone of you accessing the test;
For all the participants, we highly recommend you access the test.

(***very important***) Please remember to **list your full name when you are logging in** for the webinars through Webex. This will help us identify who the participants are in the webinar.

Thank you again for your support!

With best regards,
Jingran

胡静然/Hu Jingran
高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/28/2020 08:10 , [Simonds, R. J. \(CDC/DDPHSIS/CGH/OD\) <rxs5@cdc.gov>](mailto:rxs5@cdc.gov) wrote :

Jingran:

Dr. Inger Damon (Director, Division of High Consequence Pathogens and Pathology) will represent US CDC for this event. Her email address is: iad7@cdc.gov. I hope to get you names of a few other US CDC attendees (including Alex and me) soon.

Thank you very much.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Saturday, July 25, 2020 5:36 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD)

<loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"

Webinar -30th July

Dear RJ,

Good afternoon. Would you please keep me informed any updates from US CDC? Most of the participants are already confirmed, I prepare to send accessing and testing link next Monday. Thank you!

Please kindly find the attached agenda (not the final version). We also greatly welcome you, Alex and 1-3 experts of your colleagues who are interested to attend this Webinar, please share the name list with me.

Best,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

On 7/23/2020 11:41 , [胡静然<hujr@chinacdc.cn>](mailto:hujr@chinacdc.cn) wrote :

Dear RJ,

I attached the updated agenda for your information. In addition of the panelists and speakers, there are also some participants from Africa, Asia and Europe countries will attend the meeting.

Looking forward to your reply.

Best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/20/2020 18:35 , [胡静然<hujr@chinaccdc.cn>](mailto:hujr@chinaccdc.cn) wrote :

Dear RJ,
Thank you for your swift reply. Please well know that audiences refer to all the participants involved, the counterparts we invited. You could understand as same as "all the attendees". Only our familiar technical experts will be invited to this webinar, no media or company will be there.
It's no doubt US CDC has a strong vaccine team, I'm Looking forward to your good news:)
Best,
Jingran

胡静然/Hu Jingran
高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/20/2020 17:37 , [Simonds, R. J. \(CDC/DDPHSIS/CGH/OD\)<rxs5@cdc.gov>](mailto:rxs5@cdc.gov) wrote :

Thank you very much Jingran. I will investigate whether US CDC can provide an appropriate panelist for this webinar and will get back with you soon. Could you please clarify who the audience will be for this webinar?

Thanks much.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Monday, July 20, 2020 1:52 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar - 30th July

Dear RJ,

China CDC would like to host a 2.5 hours Webinar (online seminar) "Dancing with the COVID-19: response strategies in the New Normal Era" on Thursday July 30 at 8:00 pm, Beijing time.

The aims of this online event is to provide a forum for senior experts and frontline responders from global public health & academic institutes to meet and exchange their experiences and knowledge in the field of understanding of this novel infectious disease threat and how best to respond it. **The Webinar will have 2 panel discussions, focusing on "Reopening & restarting strategies in the setting of COVID-19 pandemic" and "Immunity response and its significance on vaccination" . Each panelist is expected to give an approximately 3-minute comment on one specific topic, followed by interaction with the audience and the other panelists of the session for approximately 30 minutes.**

I am writing on behalf of Prof. George Fu Gao, Director General of China CDC, to invite a US CDC expert as a **panelist** on the topic of **"Immunity response and its significance on vaccination" .**

We also intend to invite directors/senior experts from ECDC, KCDC, NIID Japan, PHE etc. to join the two panels. Please find more details in the attached agenda.

Could you please help us to recommend the right person? Many thanks!

With best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

From: Gabrielle Breugelmans
Sent: Fri, 12 Jun 2020 07:23:40 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);Chitale, Rohit;McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP);Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP);Towner, Jonathan (Jon) (CDC/DDID/NCEZID/DHCPP);Monroe, Steve (CDC/DDPHSS/OLSS/OD);Hummel, Kim (CDC/DDID/NCEZID/DHCPP)
Cc: Zamisch, Monica (contr-bto);Miller, Kristina Krasnov (contr-bto);Skinner, Anna (contr-sto);Alison Bettis
Subject: RE: Introductions: U.S. CDC and CEPI

Dear Ro, Inger and Jenny,

@ Ro, many thanks for the introductions to the VSP team at the CDC.

@ Inger and Jenny, very nice to e-meet you and it would be great if we could set up a meeting in the near future with some of your team members where we can update you on our epi-plans for Lassa Fever, Nipah and RVF.

Kind regards,

Gabrielle

GABRIELLE BREUGELMANS

Head Epidemiology



(+47) 47793 433
gabrielle.breugelmans@cepi.net

Visiting address: Marcus Thranes gate 2, 0473 Oslo, Norway
Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

www.cepi.net



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sender immediately and destroy this e-mail. Any unauthorized copying, disclosure or distribution of the material in this e-mail is strictly prohibited.

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: fredag 12. juni 2020 00:02
To: Chitale, Rohit <rohit.chitale@darpa.mil>; McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP) <fzh7@cdc.gov>; Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP) <ztq9@cdc.gov>; Towner, Jonathan (Jon) (CDC/DDID/NCEZID/DHCPP) <jit8@cdc.gov>; Monroe, Steve (CDC/DDPHSS/OLSS/OD) <stm2@cdc.gov>; Hummel, Kim (CDC/DDID/NCEZID/DHCPP) <kbh2@cdc.gov>; Gabrielle Breugelmans <gabrielle.breugelmans@cepi.net>; Alison Bettis <alison.bettis@cepi.net>
Cc: Zamisch, Monica (contr-bto) <monica.zamisch.ctr@darpa.mil>; Miller, Kristina Krasnov (contr-bto) <kristina.miller.ctr@darpa.mil>; Skinner, Anna (contr-sto) <anna.skinner.ctr@darpa.mil>
Subject: Re: Introductions: U.S. CDC and CEPI

Thanks, Ro.

I believe we interacted with Gabrielle's predecessor, so I am sure our folks would love to connect

Inger

Inger K Damon MD PhD
 Director, Division of High Consequence Pathogens and Pathology
 NCEZID
 CDC

From: Chitale, Rohit <rohit.chitale@darpa.mil>
Sent: Thursday, June 11, 2020 5:59 PM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP); Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP); Towner, Jonathan (Jon) (CDC/DDID/NCEZID/DHCPP); Monroe, Steve (CDC/DDPHSS/OLSS/OD); Hummel, Kim (CDC/DDID/NCEZID/DHCPP); Gabrielle Breugelmans; Alison Bettis
Cc: Zamisch, Monica (contr-bto); Miller, Kristina Krasnov (contr-bto); Skinner, Anna (contr-sto)
Subject: RE: Introductions: U.S. CDC and CEPI

Hi Inger and Jenny,

Great to hear this, I wasn't aware of Inger's role in CEPI. Gabrielle is head of epi at CEPI, and we were connected (through Melanie) wrt general intersections and also potential transition opportunities for tech developed out of the DARPA program that I manage, PREEMPT. Sounds like at least a subset of you (esp Joel/Jon) might want to chat with Gabrielle and Alison, to start, but it also seems that you are already well linked!

Best wishes,
 Ro

-----Original Message-----

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>

Sent: Thursday, June 11, 2020 5:54 PM

To: McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP) <fzh7@cdc.gov>; Chitale, Rohit <rohit.chitale@darpa.mil>; Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP) <ztq9@cdc.gov>; Towner, Jonathan (Jon) (CDC/DDID/NCEZID/DHCPP) <jit8@cdc.gov>; Monroe, Steve (CDC/DDPHSS/OLSS/OD) <stm2@cdc.gov>; Hummel, Kim (CDC/DDID/NCEZID/DHCPP) <kbh2@cdc.gov>; Gabrielle Breugelmans <gabrielle.breugelmans@cepi.net>; Alison Bettis <alison.bettis@cepi.net>
 Cc: Zamisch, Monica (contr-bto) <monica.zamisch.ctr@darpa.mil>; Miller, Kristina Krasnov (contr-bto) <kristina.miller.ctr@darpa.mil>; Skinner, Anna (contr-sto) <anna.skinner.ctr@darpa.mil>
 Subject: Re: Introductions: U.S. CDC and CEPI

We had Richard and Melanie and a few others from CEPI visit to talk about lassa and RVF with our viral special pathogens folks. We have also had some of our VSP scientists engage per the Nipah work, as well. I think they also used some of that tome to talk about coronavirus efforts at the agency (predating COVID)

Inger

Inger K Damon MD PhD
 Director, Division of High Consequence Pathogens and Pathology NCEZID CDC

From: McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP) <fzh7@cdc.gov>
 Sent: Thursday, June 11, 2020 3:55:36 PM
 To: Chitale, Rohit <rohit.chitale@darpa.mil>; Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP) <ztq9@cdc.gov>; Towner, Jonathan (Jon) (CDC/DDID/NCEZID/DHCPP) <jit8@cdc.gov>; Monroe, Steve (CDC/DDPHSS/OLSS/OD) <stm2@cdc.gov>; Hummel, Kim (CDC/DDID/NCEZID/DHCPP) <kbh2@cdc.gov>; Gabrielle Breugelmans <gabrielle.breugelmans@cepi.net>; Alison Bettis <alison.bettis@cepi.net>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
 Cc: Zamisch, Monica (contr-bto) <monica.zamisch.ctr@darpa.mil>; Miller, Kristina Krasnov (contr-bto) <kristina.miller.ctr@darpa.mil>; Skinner, Anna (contr-sto) <anna.skinner.ctr@darpa.mil>
 Subject: RE: Introductions: U.S. CDC and CEPI

Hi Rohit, thanks for this. I am cc'ing Inger Damon, our Division Director. Not sure if you were aware, but Inger is actually on the CEPI Scientific Advisory Committee, so this is a group with whom we have a strong relationship.

Thanks so much,
 Jennifer

CAPT Jennifer McQuiston
 Deputy Division Director, Division of High Consequence Pathogens and Pathology, CDC Fzh7@cdc.gov;
 404-639-0041, new mobile # (b)(6)

-----Original Message-----

From: Chitale, Rohit <rohit.chitale@darpa.mil>
 Sent: Thursday, June 11, 2020 9:23 AM
 To: Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP) <ztq9@cdc.gov>; Towner, Jonathan (Jon)

(CDC/DDID/NCEZID/DHCPP) <jit8@cdc.gov>; Monroe, Steve (CDC/DDPHSS/OLSS/OD) <stm2@cdc.gov>; Hummel, Kim (CDC/DDID/NCEZID/DHCPP) <kbh2@cdc.gov>; McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP) <fzh7@cdc.gov>; Gabrielle Breugelmans <gabrielle.breugelmans@cepi.net>; Alison Bettis <alison.bettis@cepi.net>
Cc: Zamisch, Monica (contr-bto) <monica.zamisch.ctr@darpa.mil>; Miller, Kristina Krasnov (contr-bto) <kristina.miller.ctr@darpa.mil>; Skinner, Anna (contr-sto) <anna.skinner.ctr@darpa.mil>
Subject: Introductions: U.S. CDC and CEPI

Dear U.S. CDC and CEPI colleagues,

I would like to introduce you to each other. Some key colleagues and friends at the U.S. CDC, and CEPI, the Coalition for Epidemic Preparedness Innovations. CEPI was born out of the W Africa Ebola outbreak a few years ago. I am attaching slides that CEPI sent us this morning, which includes a Lassa programme as well as efforts on other high consequence pathogens and now including SARS-CoV-2. If and when possible, I'd recommend that you find a quick hour to chat about your programs and efforts, esp given the likely intersections wrt vaccine efforts.

Thanks and kind regards,
Rohit (Ro)

--

Rohit A Chitale, PhD MPH
Program Manager
Biological Technologies Office (BTO)
DARPA
Office: +1.703.526.2052
Work mobile: +1.571.835.5128
Personal mobile:
Rohit.Chitale@darpa.mil

From: Tom Kariuki
Sent: Thu, 16 Jul 2020 07:40:41 +0000
To: Stig Tollefsen;Barrett, Alan;Alash'le Abimiku;Allouche, Ali;christian.brechot;cbrechot;Christian Happi;Schmaljohn, Connie (NIH/NIAID) [E];Daniel Brasseur;mimi darko;dongxp238;HRees@wrhi.ac.za;Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);James Robinson;Jean Lang;Van Hoof, Johan [JRDBE];John Edmunds;Josie Golding;kneuzil;Jansen, Kathrin;Shibuya, Kenji;Michel De Wilde;Levine, Myron;Bryant, Paula (NIH/NIAID) [E];Penny Heaton;Peter Smith;Krause, Philip (FDA/CBER);Ralf Clemens;Stanley Plotkin;SATHIYAMOORTHY, Vaseeharan;yves.levy
Cc: Manisha Tirvassen;Jodie Rogers;Rebeka Yasmin;CEPI SAC
Subject: RE: COVAX – More than 150 countries engage in COVAX Facility

Thank you Stig, well received.

As you can imagine there are many African governments being asked questions from media houses, on the question of equity and equitable partnerships for a future vaccine. We will distribute the press release.

Regards

Tom Kariuki

Thomas Kariuki, PhD
Director of Programmes
African Academy of Sciences
Alliance for Accelerating Excellence in Science in Africa (AESA Platform),
Honorary Professor, Liverpool School of Tropical Medicine & Hygiene (LSTM)



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The AAS vision is to see transformed lives on the African continent through science. Our tripartite mandate is **recognising excellence**, providing **advisory and think tank functions**, and **implementing key Science, Technology & Innovation programmes** addressing Africa's R&D priorities through the AESA Platform. **Due to the Covid-19 global pandemic, the AAS has embraced a work from home culture in line with recommended disease mitigations. We expect that although business process and delivering on time could be slow and affected, we endeavour to remain engaged and in regular communication with all our stakeholders and partners.**

From: Stig Tollefsen <stig.tollefsen@cepi.net>

Sent: Wednesday, 15 July 2020 20:04

To: Barrett, Alan <abarrett@utmb.edu>; Alash'le Abimiku <aabimiku@ihv.umaryland.edu>; Allouche, Ali <Ali.allouche@takeda.com>; christian.brechot <christian.brechot@pasteur.fr>; cbrechot <cbrechot@usf.edu>; Christian Happi <happic@run.edu.ng>; Schmaljohn, Connie (NIH/NIAID) [E] <Connie.schmaljohn@nih.gov>; Daniel Brasseur <(b)(6)>; mimi darko <(b)(6)>; dongxp238 <dongxp238@sina.com>; HRees@wrhi.ac.za; Damon, Inger K. (CDC/OID/NCEZID) <iad7@cdc.gov>; James Robinson <(b)(6)>; Jean Lang <Jean.Lang@sanofipasteur.com>; Van Hoof, Johan [JRDBE] <JVHOOF1@its.jnj.com>; John Edmunds <John.Edmunds@LSHTM.ac.uk>; Josie Golding <j.golding@wellcome.ac.uk>; kneuzil <kneuzil@som.umaryland.edu>; Jansen, Kathrin <kathrin.jansen@pfizer.com>; Shibuya, Kenji <kenji.shibuya@kcl.ac.uk>; Michel De Wilde <(b)(6)>; Levine, Myron <Mlevine@som.umaryland.edu>; Bryant, Paula (NIH/NIAID) [E] <paula.bryant@nih.gov>; Penny Heaton <penny.heaton@gatesmri.org>; Peter Smith <Peter.Smith@lshtm.ac.uk>; Phil Krause <philip.krause@fda.hhs.gov>; Ralf Clemens <(b)(6)>; Stanley Plotkin <stanley.plotkin@vaxconsult.com>; Tom Kariuki <t.kariuki@aasciences.africa>; SATHIYAMOORTHY, Vaseeharan <moorthyv@who.int>; yves.levy <yves.levy@inserm.fr>

Cc: Manisha Tirvassen <manisha.tirvassen@cepi.net>; Jodie Rogers <Jodie.rogers@cepi.net>; Rebeka Yasmin <rebeka.yasmin@cepi.net>; CEPI SAC <CEPISAC@cepi.net>

Subject: COVAX – More than 150 countries engage in COVAX Facility

Dear SAC members,

This is for your information trying to be a little ahead of the news:

- CEPI, Gavi and the World Health Organization (WHO) have today announced that over 150 countries have engaged in the COVID-19 Vaccine Global Access (COVAX) Facility, a mechanism designed to guarantee rapid, fair and equitable access to COVID-19 vaccines worldwide.
- The COVAX Facility forms a key part of COVAX, the vaccines pillar of the Access to COVID-19 Tools (ACT) Accelerator, which is an end-to-end solution to accelerate the development and manufacture of COVID-19 vaccines, and to guarantee fair and equitable access for every country in the world. The ultimate goal of COVAX is to deliver 2 billion doses of safe and effective vaccine by the end of 2021 to end the acute phase of the global pandemic, saving millions of lives and transforming the economic prospects of societies around the world.
- In total, **75 countries** have submitted expressions of interest to join the COVAX Facility.
- These countries, which would finance the vaccines from their own public finance budgets, partner with up to **90 lower-income countries** that could be supported through voluntary donations to Gavi's COVAX Advance Market Commitment (AMC).
- Together, this group of **up to 165 countries** represents **more than 60% of the world's population**. Among the group are representatives from every continent and more than half of the world's G20 economies.
- Through the COVAX initiative, vaccines will be delivered equally to all participating countries, proportional to their populations, initially prioritising healthcare workers then expanding to cover 20% of the population of participating countries – regardless of income level.

- Further doses will then be made available based on country need, vulnerability and COVID-19 threat. The COVAX Facility will also maintain a buffer of doses for emergency and humanitarian use, including dealing with severe outbreaks before they spiral out of control.
- The success of these efforts will ultimately depend on securing enough funding from governments and commitments from vaccine manufacturers to participate at a scale large enough to deliver a global solution.
- The formal expressions of interest submitted are non-binding; the COVAX pillar will now begin a process of consultation with all 165 countries.
- For further information, please see [our press release](#).

On behalf of the secretariat

Best wishes

Stig

STIG TOLLEFSEN

Head of Strategic Science



(+47) 901 50 770

stig.tollefsen@cepi.net

Visiting address: Marcus Thranes gate 2, 0473 Oslo, Norway

Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

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From: Guerra, Marta (CDC/DDPHSIS/CGH/DGHP)
Sent: Thu, 30 Jul 2020 12:01:14 +0000
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP);Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);Hyde, Terri (CDC/DDPHSIS/CGH/GID);Dahl, Benjamin A. (CDC/DDPHSIS/CGH/GID);Cohen, Adam (CDC/DDPHSIS/CGH/DGHP)
Subject: RE: The COVID-19 Response Strategies in the New Normal Era Webinar: July 30, 2020 (Beijing Time)

Reminder

-----Original Appointment-----

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 10:55 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP); Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); Hyde, Terri (CDC/DDPHSIS/CGH/GID); Dahl, Benjamin A. (CDC/DDPHSIS/CGH/GID); Cohen, Adam (CDC/DDPHSIS/CGH/DGHP); Guerra, Marta (CDC/DDPHSIS/CGH/DGHP)
Subject: The COVID-19 Response Strategies in the New Normal Era Webinar: July 30, 2020 (Beijing Time)
When: Thursday, July 30, 2020 8:00 AM-10:30 AM (UTC-05:00) Eastern Time (US & Canada).
Where: WebEx (info in text)

1. Connecting to the webinar:

"The COVID-19 Response Strategies in the New Normal Era" webinar link is as follows:

(b)(6)

Meeting number (access code): (b)(6)

Meeting password: (b)(6)

Thursday, July 30, 2020

8:00 pm | China Time (Beijing, GMT+08:00)

You could also dial by telephone in your location, please find global dial in numbers from:

(b)(6)

2. Attached please find the materials including:

- 1) Updated webinar agenda (still working on the final version);
- 2) Webinar participation guide (highly recommended to read)

3. (INGER ONLY) **Test before the webinar (*very important*):**

Our IT staff will arrange a test session to confirm you can connect without any issues.

Please use the same link:

(b)(6)

for testing session – Wednesday July 29 at 14:00-16:00pm or 20:00-21:00pm (Beijing Time)

If you have any connecting questions, please feel free to find our IT staff :

Jason NI (Mobile) (b)(6) (Office) +86-21-20423996

(email) (b)(5)

For the speakers and panelists, we'd like to ensure everyone of you accessing the test;

For all the participants, we highly recommend you access the test.

(*very important*) Please remember to **list your full name when you are logging in** for the webinars through Webex. This will help us identify who the participants are in the webinar.

Thank you again for your support!

With best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

From: Stefano Malvolti
Sent: Tue, 7 Apr 2020 07:49:03 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: CEPI Mid-term review survey, gentle reminder

Dear colleague,

I hope you would excuse us for coming back and asking for 10-15 minutes of your time to respond to this survey commissioned from CEPI as part of their Mid Term Review.

Your views and insights can prove unvaluable to identify opportunities for the continued improvement of this organization which, I guess we all agree, is a critical component of the Global Health ecosystem.

Thanks in advance for your collaboration

Stefano Malvolti
MMGH Consulting GmbH
malvoltis@mmglobalhealth.org

Follow this link to the Survey:

[Take the Survey](#)

Or copy and paste the URL below into your internet browser:

https://mmghconsulting.eu.qualtrics.com/jfe/form/SV_1SRWStWbfnxX3WR?Q_DL=cUVGwMdM8UOoj0V_1SRWStWbfnxX3WR_MLRP_cMGSgBNf7XLqlY9&Q_CHL=email

Follow the link to opt out of future emails:

[Click here to unsubscribe](#)

From: Syed Arif
Sent: Thu, 16 Jul 2020 10:44:40 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: CEPI - Request for critical feedback: CEPIs response to SARS-CoV-2

Dear Inger Damon,

I am sending this email on behalf of Samia Saad, Director of Resource Mobilisation and Investor Relations, CEPI.

The Coalition for Epidemic Preparedness Innovation (CEPI) have commissioned independent research to collect opinions on CEPIs response during 2020 to the SARS-CoV-2 pandemic. **You have been identified as a key stakeholder whose input will be of utmost importance to this research.** I encourage you to both complete a 15-minute online survey and to request that you kindly participate in a 30-minute interview.

The insights collected will provide important input that will complement other research findings as part of CEPI's independent Mid-term Review (MTR) and will contribute to setting CEPI's future direction. Survey responses will be interpreted as personal perspectives, and not those of your present or past institutions.

To access the survey you will receive an email from Stefano Malvolti (noreply@gemilsever.com) of MMGH Consulting with a personal link to the online survey platform Qualtrics . You can complete the survey via your laptop, tablet or smartphone. All responses will be anonymized. Finally, the treatment of the data in the survey and the service providers are compliant with the European Union's General Data Protection Regulations (GDPR).

You will be contacted directly by a member of the MMGH Consulting team to request a convenient time to conduct the interview. As with the survey, all interview responses will be anonymized.

Should there be any questions, please do not hesitate to contact MMGH Consulting (hwanga@mnglobalhealth.org or malhamem@mnglobalhealth.org).

With best regards,

Syed Arif on behalf of Samia Saad

SAMIA SAAD

Director of Resource Mobilisation and Investor Relations

CEPI New vaccines
for a safer world

Mobile: +44 777 503 8223

Office: +44 203 929 3718

samia.saad@cepi.net

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From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP)
Sent: Thu, 30 Jul 2020 12:35:55 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); Simonds, R. J. (CDC/DDPHSIS/CGH/OD)
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

I am not sure of the answer for this. Do they have your slide? If so you can ask them to project it. I added RJ for his thoughts

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Thursday, July 30, 2020 8:29 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Will I need to share my screen to show my one slide, or will the organizers do that?

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 1:27 PM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

my thought, exactly

Inger K Damon MD PhD

Director, Division of High Consequence Pathogens and Pathology

National Center for Emerging and Zoonotic Infectious Diseases

Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 1:26 PM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Perfect. No clearance required!

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 1:11 PM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

how is this?

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 11:07 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Thank you!

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 11:07 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

OK - will put it together!

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 11:06 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
 Webinar -30th July

Inger,

From my end, I think (b)(5)

(b)(5)

Olga

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 10:59 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
 Webinar -30th July

<https://www.cdc.gov/vaccines/acip/meetings/index.html>

Inger K Damon MD PhD

Director, Division of High Consequence Pathogens and Pathology

National Center for Emerging and Zoonotic Infectious Diseases

Centers for Disease Control and Prevention

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 10:50 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
 Webinar -30th July

(b)(5)

thoughts?

Inger K Damon MD PhD

Director, Division of High Consequence Pathogens and Pathology

National Center for Emerging and Zoonotic Infectious Diseases

Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>

Sent: Wednesday, July 29, 2020 10:48 AM

To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

RJ,

Marta and I discussed and I will send the information on the call and associated materials to the participants.

Kind regards,

Olga

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>

Sent: Tuesday, July 28, 2020 7:52 AM

To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

Subject: Fwd: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Inger et al:

Inger, thanks again for agreeing to represent CDC by giving 3 minutes of remarks. Here is the call in information for Thursday' s China videoconference.

If you know who else besides Inger plans to join, please let me know ASAP.

Thanks.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Tuesday, July 28, 2020 3:40 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD)
Cc: 曹晓斌; 王晓琪; You, Na (CDC/DDPHSIS/CGH/OD); Millman, Alexander J. (CDC/DDID/NCIRD/ID)
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Thank you so much, RJ. Please see the following webinar information:

1. Connecting to the webinar:

"The COVID-19 Response Strategies in the New Normal Era" webinar link is as follows:

(b)(6)

Meeting number (access code) (b)(6)

Meeting password (b)(6)

Thursday, July 30, 2020

8:00 pm | China Time (Beijing, GMT+08:00)

You could also dial by telephone in your location, please find global dial in numbers from:

(b)(6)

2. Attached please find the materials including:

- 1) Updated webinar agenda (still working on the final version);
- 2) Webinar participation guide (**highly recommended to read**)

3. Test before the webinar (***very important***):

Our IT staff will arrange a test session to confirm you can connect without any issues. Please use the same link:

(b)(6)

for testing session – Wednesday July 29 at 14:00-16:00pm or 20:00-21:00pm (Beijing Time)

If you have any connecting questions, please feel free to find our IT staff :

Jason NI (Mobile (b)(6) (Office) +86-21-20423996

(email) (b)(5)

For the speakers and panelists, we'd like to ensure everyone of you accessing the test;

For all the participants, we highly recommend you access the test.

(*very important*) Please remember to **list your full name when you are logging in** for the webinars through Webex. This will help us identify who the participants are in the webinar.

Thank you again for your support!

With best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

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Fax: (86) 10 58900241

On 7/28/2020 08:10 , [Simonds, R. J. \(CDC/DDPHSIS/CGH/OD\)<rxs5@cdc.gov>](mailto:Simonds, R. J. (CDC/DDPHSIS/CGH/OD)<rxs5@cdc.gov>) wrote :

Jingran:

Dr. Inger Damon (Director, Division of High Consequence Pathogens and Pathology) will represent US CDC for this event. Her email address is: iad7@cdc.gov. I hope to get you names of a few other US CDC attendees (including Alex and me) soon.

Thank you very much.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Saturday, July 25, 2020 5:36 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Dear RJ,

Good afternoon. Would you please keep me informed any updates from US CDC? Most of the participants are already confirmed, I prepare to send accessing and testing link next Monday. Thank you!

Please kindly find the attached agenda (not the final version). We also greatly welcome you, Alex and 1-3 experts of your colleagues who are interested to attend this Webinar, please share the name list with me.

Best,
Jingran

胡静然/Hu Jingran
高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/23/2020 11:41 , [胡静然<hujr@chinacdc.cn>](mailto:hujr@chinacdc.cn) wrote :

Dear RJ,

I attached the updated agenda for your information. In addition of the panelists and speakers, there are also some participants from Africa, Asia and Europe countries will attend the meeting.

Looking forward to your reply.

Best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

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Tel: (86) 10 58900216

Fax: (86) 10 58900241

On 7/20/2020 18:35 , [胡静然<hujr@chinacdc.cn>](mailto:hujr@chinacdc.cn) wrote :

Dear RJ,

Thank you for your swift reply. Please well know that audiences refer to all the participants involved, the counterparts we invited. You could understand as same as "all the attendees". Only our familiar technical experts will be invited to this webinar, no media or company will be there.

It's no doubt US CDC has a strong vaccine team, I'm Looking forward to your good news:)

Best,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

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Fax: (86) 10 58900241

On 7/20/2020 17:37 , [Simonds, R. J. \(CDC/DDPHSIS/CGH/OD\)<rxs5@cdc.gov>](mailto:Simonds, R. J. (CDC/DDPHSIS/CGH/OD)<rxs5@cdc.gov>) wrote :

Thank you very much Jingran. I will investigate whether US CDC can provide an appropriate panelist for this webinar and will get back with you soon. Could you please clarify who the audience will be for this webinar?

Thanks much.

RJ

From: 胡静然 <hujr@chinacdc.cn>

Sent: Monday, July 20, 2020 1:52 PM

To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>

Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

Subject: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar - 30th July

Dear RJ,

China CDC would like to host a 2.5 hours Webinar (online seminar) "Dancing with the COVID-19: response strategies in the New Normal Era" on Thursday July 30 at 8:00 pm, Beijing time.

The aims of this online event is to provide a forum for senior experts and frontline responders from global public health & academic institutes to meet and exchange their experiences and knowledge in the field of understanding of this novel infectious disease threat and how best to respond it. **The Webinar will have 2 panel discussions, focusing on "Reopening & restarting strategies in the setting of COVID-19 pandemic" and "Immunity response and its significance on vaccination" . Each panelist is expected to give an approximately 3-minute comment on one specific topic, followed by interaction with the audience and the other panelists of the session for approximately 30 minutes.**

I am writing on behalf of Prof. George Fu Gao, Director General of China CDC, to invite a US CDC expert as a **panelist** on the topic of **"Immunity response and its significance on vaccination" .**

We also intend to invite directors/senior experts from ECDC, KCDC, NIID Japan, PHE etc. to join the two panels. Please find more details in the attached agenda.

Could you please help us to recommend the right person? Many thanks!

With best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

From: Stig Tollefsen
Sent: Sun, 16 Feb 2020 11:57:33 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Cc: Raimonda Viburiene;Melanie Saville;Nick Jackson
Subject: Proposal review COVID-2019

Dear Inger,

I hope this email reach you well.

CEPI has received an enormous interest for our COVID-19 call with more than 48 applications.

We are about to finish the eligibility review. And it looks like 14-18 will go to peer review.

You so kindly offered to help us with the review earlier, and now is the time that we would like to ask you of your availability and interest to help us?

The peer review process will be mainly Monday and Tuesday. Please let us know if you have the time and capacity to help us.

Raimonda will potentially send you conflict of interest docs.

We hope to hear from you soon.

Best wishes

Stig

STIG TOLLEFSEN

Head of Strategic Science

CEPI New vaccines
for a safer world

(+47) 901 50 770

stig.tollefsen@cepi.net

Visiting address: Marcus Thranes gate 2, 0473 Oslo, Norway

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sender immediately and destroy this e-mail. Any unauthorized copying, disclosure or distribution of the material in this e-mail is strictly prohibited.

From: Karem, Kevin (CDC/DDPHSIS/CGH/OD)
Sent: Wed, 29 Jan 2020 12:53:45 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);Jernigan, Daniel B. (CDC/DDID/NCIRD/ID)
Cc: Weldon, William C. (CDC/DDID/NCIRD/DVD);Carroll, Darin (CDC/DDID/NCEZID/OD)
Subject: RE: WHO Consultation regarding nCoV Reagents and Cross -Reactivity

Thanks.

I have a call with them on Friday morning as well. We spoke on Tuesday.

I'll try to join tomorrow.

Kevin

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, January 29, 2020 5:26 AM
To: Jernigan, Daniel B. (CDC/DDID/NCIRD/ID) <dbj0@cdc.gov>
Cc: Weldon, William C. (CDC/DDID/NCIRD/DVD) <wiw4@cdc.gov>; Carroll, Darin (CDC/DDID/NCEZID/OD) <zuz4@cdc.gov>; Karem, Kevin (CDC/DDPHSIS/CGH/OD) <kdk6@cdc.gov>
Subject: Fwd: WHO Consultation regarding nCoV Reagents and Cross -Reactivity

WHO is pulling a Lab meeting Together tomorrow

Inger K Damon MD PhD
 Director, Division of High Consequence Pathogens and Pathology
 NCEZID
 CDC

From: William Dowling <william.dowling@cepi.net>
Sent: Wednesday, January 29, 2020 11:18 AM
To: William Dowling
Subject: WHO Consultation regarding nCoV Reagents and Cross -Reactivity

Hello all

In advance of the meeting, I thought it would be useful to assemble information on materials that are available or in progress as well as plans for assessing cross-reactivity in order to help facilitate the discussion. I have prepared a table below and would appreciate if you could fill it in and return to me. I will assemble and send it out prior to the call.

Thank you

Bill Dowling

Institution	
nCoV and SARS Viruses and other reagents currently available	
Generation of viruses and	

other reagents planned/ in progress	
Reagent sharing	
Cross reactivity assessments planned/in progress	

William Dowling, PhD

Non-Clinical Vaccine Development Leader (seconded to WHO)



(+1) 202 800-3148 (o)

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William.dowling@cepi.net

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From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD)
Sent: Thu, 30 Jul 2020 12:41:48 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); Henao, Olga (CDC/DDPHSIS/CGH/DGHP)
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Can you just share your screen?

If not, can you just do without it?

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Thursday, July 30, 2020 8:40:22 PM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

I only sent the slide to you, so unless RJ sent it, they do not have it!

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From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Thursday, July 30, 2020 8:35:55 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Thursday, July 30, 2020 8:29 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Will I need to share my screen to show my one slide, or will the organizers do that?

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 1:27 PM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

my thought, exactly

Inger K Damon MD PhD

Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 1:26 PM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Perfect. No clearance required!

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 1:11 PM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

how is this?

Inger K Damon MD PhD

Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 11:07 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Thank you!

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 11:07 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

OK - will put it together!

Inger K Damon MD PhD

Director, Division of High Consequence Pathogens and Pathology

National Center for Emerging and Zoonotic Infectious Diseases

Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 11:06 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Inger,

From my end, (b)(5)
(b)(5)

Olga

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 10:59 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

<https://www.cdc.gov/vaccines/acip/meetings/index.html>

Inger K Damon MD PhD

Director, Division of High Consequence Pathogens and Pathology

National Center for Emerging and Zoonotic Infectious Diseases

Centers for Disease Control and Prevention

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, July 29, 2020 10:50 AM
To: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

(b)(5)

thoughts?

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention

From: Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>
Sent: Wednesday, July 29, 2020 10:48 AM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hgz4@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: RE: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

RJ,

Marta and I discussed and I will send the information on the call and associated materials to the participants.

Kind regards,

Olga

From: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>
Sent: Tuesday, July 28, 2020 7:52 AM

To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; Guerra, Marta (CDC/DDPHSIS/CGH/DGHP) <hzg4@cdc.gov>; Henao, Olga (CDC/DDPHSIS/CGH/DGHP) <dot8@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>
Subject: Fwd: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Inger et al:

Inger, thanks again for agreeing to represent CDC by giving 3 minutes of remarks. Here is the call in information for Thursday's China videoconference.

If you know who else besides Inger plans to join, please let me know ASAP.

Thanks.

RJ

From: 胡静然 <hujr@chinacdc.cn>
Sent: Tuesday, July 28, 2020 3:40 PM
To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD)
Cc: 曹晓斌; 王晓琪; You, Na (CDC/DDPHSIS/CGH/OD); Millman, Alexander J. (CDC/DDID/NCIRD/ID)
Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar -30th July

Thank you so much, RJ. Please see the following webinar information:

1. Connecting to the webinar:

"The COVID-19 Response Strategies in the New Normal Era" webinar link is as follows:

(b)(6)

Meeting number (access code): (b)(6)

Meeting password: (b)(6)

Thursday, July 30, 2020

8:00 pm | China Time (Beijing, GMT+08:00)

You could also dial by telephone in your location, please find global dial in numbers from:

(b)(6)

2. Attached please find the materials including:

- 1) Updated webinar agenda (still working on the final version);
- 2) Webinar participation guide (**highly recommended to read**)

3. Test before the webinar (*very important*):

Our IT staff will arrange a test session to confirm you can connect without any issues. Please use the same link:

(b)(6)

for testing session – Wednesday July 29 at 14:00-16:00pm or 20:00-21:00pm (Beijing Time)

If you have any connecting questions, please feel free to find our IT staff :

Jason NI (Mobile) (b)(6) (Office) +86-21-20423996

(email) (b)(6)

For the speakers and panelists, we'd like to ensure everyone of you accessing the test;
For all the participants, we highly recommend you access the test.

(*very important*) Please remember to **list your full name when you are logging in** for the webinars through Webex. This will help us identify who the participants are in the webinar.

Thank you again for your support!

With best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

On 7/28/2020 08:10 , [Simonds, R. J. \(CDC/DDPHSIS/CGH/OD\)<rxs5@cdc.gov>](mailto:rxs5@cdc.gov) wrote :

Jingran:

Dr. Inger Damon (Director, Division of High Consequence Pathogens and Pathology) will represent US CDC for this event. Her email address is: jad7@cdc.gov. I hope to get you names of a few other US CDC attendees (including Alex and me) soon.

Thank you very much.

RJ

From: 胡静然 <hujr@chinacdc.cn>

Sent: Saturday, July 25, 2020 5:36 PM

To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>

Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

Subject: Re: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era"
Webinar -30th July

Dear RJ,

Good afternoon. Would you please keep me informed any updates from US CDC? Most of the participants are already confirmed, I prepare to send accessing and testing link next Monday. Thank you!

Please kindly find the attached agenda (not the final version). We also greatly welcome you, Alex and 1-3 experts of your colleagues who are interested to attend this Webinar, please share the name list with me.

Best,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

On 7/23/2020 11:41 , [胡静然<hujr@chinacdc.cn>](mailto:hujr@chinacdc.cn) wrote :

Dear RJ,

I attached the updated agenda for your information. In addition of the panelists and speakers, there are also some participants from Africa, Asia and Europe countries will attend the meeting.

Looking forward to your reply.

Best regards,
Jingran

胡静然/Hu Jingran
高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/20/2020 18:35 , [胡静然<hujr@chinacdc.cn>](mailto:hujr@chinacdc.cn) wrote :

Dear RJ,

Thank you for your swift reply. Please well know that audiences refer to all the participants involved, the counterparts we invited. You could understand as same as "all the attendees". Only our familiar technical experts will be invited to this webinar, no media or company will be there.

It's no doubt US CDC has a strong vaccine team, I'm Looking forward to your good news:)

Best,
Jingran

胡静然/Hu Jingran
高级项目官员/Senior Program Officer
外事处/Office of International Cooperation
Chinese Center for Disease Control and Prevention
Address: 155 Changbai Road, Beijing 102206, China
Tel: (86) 10 58900216
Fax: (86) 10 58900241

On 7/20/2020 17:37 , [Simonds, R. J. \(CDC/DDPHSIS/CGH/OD\)<rxs5@cdc.gov>](mailto:rxs5@cdc.gov) wrote :

Thank you very much Jingran. I will investigate whether US CDC can provide an appropriate panelist for this webinar and will get back with you soon. Could you please clarify who the audience will be for this webinar?

Thanks much.

RJ

From: 胡静然 <hujr@chinacdc.cn>

Sent: Monday, July 20, 2020 1:52 PM

To: Simonds, R. J. (CDC/DDPHSIS/CGH/OD) <rxs5@cdc.gov>

Cc: 曹晓斌 <caoxb@chinacdc.cn>; 王晓琪 <wangxq@chinacdc.cn>; You, Na (CDC/DDPHSIS/CGH/OD) <loe5@cdc.gov>; Millman, Alexander J. (CDC/DDID/NCIRD/ID) <irm6@cdc.gov>

Subject: Invitation-"Dancing with the COVID-19: response strategies in the New Normal Era" Webinar - 30th July

Dear RJ,

China CDC would like to host a 2.5 hours Webinar (online seminar) "Dancing with the COVID-19: response strategies in the New Normal Era" on Thursday July 30 at 8:00 pm, Beijing time.

The aims of this online event is to provide a forum for senior experts and frontline responders from global public health & academic institutes to meet and exchange their experiences and knowledge in the field of understanding of this novel infectious disease threat and how best to respond it. **The Webinar will have 2 panel discussions, focusing on "Reopening & restarting strategies in the setting of COVID-19 pandemic" and "Immunity response and its significance on vaccination" . Each panelist is expected to give an approximately 3-minute comment on one specific topic, followed by interaction with the audience and the other panelists of the session for approximately 30 minutes.**

I am writing on behalf of Prof. George Fu Gao, Director General of China CDC, to invite a US CDC expert as a **panelist** on the topic of "Immunity response and its significance on vaccination" .

We also intend to invite directors/senior experts from ECDC, KCDC, NIID Japan, PHE etc. to join the two panels. Please find more details in the attached agenda.

Could you please help us to recommend the right person? Many thanks!

With best regards,

Jingran

胡静然/Hu Jingran

高级项目官员/Senior Program Officer

外事处/Office of International Cooperation

Chinese Center for Disease Control and Prevention

Address: 155 Changbai Road, Beijing 102206, China

Tel: (86) 10 58900216

Fax: (86) 10 58900241

From: Gerber, Susan I. (CDC/DDID/NCIRD/DVD)
Sent: Mon, 17 Feb 2020 22:05:58 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: RE: URGENT: Diamond Princess epidemiology

Hi Inger,

I know that our international task forces are sharing some materials with other countries- regarding diamond princess. However, the epidemiologic investigation is still in progress. Not sure what role Richard has in mind for cepi.....

S

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Monday, February 17, 2020 9:52 AM
To: Gerber, Susan I. (CDC/DDID/NCIRD/DVD) <bhx1@cdc.gov>
Subject: Fwd: URGENT: Diamond Princess epidemiology

FYSA
Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
NCEZID
CDC

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Monday, February 17, 2020 7:48 AM
To: Richard Hatchett
Subject: Re: URGENT: Diamond Princess epidemiology

Agree and I don't know what has already been discussed in our EOC. OK if I loop Susan into the discussion? She may have more influence as she is one of the Scientific advisors for the response

Inger

Get [Outlook for iOS](#)

From: Richard Hatchett <richard.hatchett@cepi.net>
Sent: Monday, February 17, 2020 7:35:22 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: URGENT: Diamond Princess epidemiology

Dear Inger,

Are you free for a quick call? Just wanted to chat about the outbreak on the cruise ship.

You or others at CDC may already be working this, but it would be great if someone (probably only CDC or WHO at this point could pull this off) could arrange for a complete accounting of the outbreak as a unique and our best current opportunity to get a fix on the severity of COVID-19. With complete testing of everyone on board we could have a fully documented and hermetically sealed outbreak that would provide a true denominator against which to measure asymptomatic carriage, hospitalization rates, rates of severe and critical disease, etc.

It would be tragic to let this opportunity pass as it would help the world more properly calibrate its response to the virus. With the US, Hong Kong, and now Italy, Canada, and South Korea soon to evacuate (and presumably perform complete testing in) their nationals, it would seem that international coordination to agree the terms and perform such an analysis needs to be arranged urgently. Once the opportunity is lost, it's lost.

Best regards,
Richard

RICHARD HATCHETT
CEO



+4479 564 53 146

richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK

Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

From: Carroll, Darin (CDC/DDID/NCEZID/OD)
Sent: Wed, 29 Jan 2020 13:58:54 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);Jernigan, Daniel B. (CDC/DDID/NCIRD/ID)
Cc: Weldon, William C. (CDC/DDID/NCIRD/DVD);Karem, Kevin (CDC/DDPHSIS/CGH/OD);Kuhnert-Tallman, Wendi (CDC/DDID/OD)
Subject: RE: WHO Consultation regarding nCoV Reagents and Cross -Reactivity

+ Wendi and will forward the invite.
dc

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, January 29, 2020 5:26 AM
To: Jernigan, Daniel B. (CDC/DDID/NCIRD/ID) <dbj0@cdc.gov>
Cc: Weldon, William C. (CDC/DDID/NCIRD/DVD) <wiw4@cdc.gov>; Carroll, Darin (CDC/DDID/NCEZID/OD) <zuz4@cdc.gov>; Karem, Kevin (CDC/DDPHSIS/CGH/OD) <kdk6@cdc.gov>
Subject: Fwd: WHO Consultation regarding nCoV Reagents and Cross -Reactivity

WHO is pulling a Lab meeting Together tomorrow

Inger K Damon MD PhD
Director, Division of High Consequence Pathogens and Pathology
NCEZID
CDC

From: William Dowling <william.dowling@cepi.net>
Sent: Wednesday, January 29, 2020 11:18 AM
To: William Dowling
Subject: WHO Consultation regarding nCoV Reagents and Cross -Reactivity

Hello all

In advance of the meeting, I thought it would be useful to assemble information on materials that are available or in progress as well as plans for assessing cross-reactivity in order to help facilitate the discussion. I have prepared a table below and would appreciate if you could fill it in and return to me. I will assemble and send it out prior to the call.

Thank you
Bill Dowling

Institution	
nCoV and SARS Viruses and other reagents currently available	
Generation of viruses and other reagents planned/ in progress	
Reagent sharing	

Cross reactivity assessments planned/in progress	
--	--

William Dowling, PhD

Non-Clinical Vaccine Development Leader (seconded to WHO)



(+1) 202 800-3148 (o)

(b)(6) (m)

William.dowling@cepi.net

1901 Pennsylvania Ave, NW, Suite 1003, Washington, DC 20006 USA

www.cepi.net



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From: Chitale, Rohit
Sent: Thu, 11 Jun 2020 21:58:13 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP);Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP);Towner, Jonathan (Jon) (CDC/DDID/NCEZID/DHCPP);Monroe, Steve (CDC/DDPHSS/OLSS/OD);Hummel, Kim (CDC/DDID/NCEZID/DHCPP);Gabrielle Breugelmans;Alison Bettis
Cc: Zamisch, Monica (contr-bto);Miller, Kristina Krasnov (contr-bto);Skinner, Anna (contr-sto)
Subject: RE: Introductions: U.S. CDC and CEPI

Hi Inger and Jenny,

Great to hear this, I wasn't aware of Inger's role in CEPI. Gabrielle is head of epi at CEPI, and we were connected (through Melanie) wrt general intersections and also potential transition opportunities for tech developed out of the DARPA program that I manage, PREEMPT. Sounds like at least a subset of you (esp Joel/Jon) might want to chat with Gabrielle and Alison, to start, but it also seems that you are already well linked!

Best wishes,
 Ro

-----Original Message-----

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Thursday, June 11, 2020 5:54 PM
To: McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP) <fzh7@cdc.gov>; Chitale, Rohit <rohit.chitale@darpa.mil>; Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP) <ztq9@cdc.gov>; Towner, Jonathan (Jon) (CDC/DDID/NCEZID/DHCPP) <jit8@cdc.gov>; Monroe, Steve (CDC/DDPHSS/OLSS/OD) <stm2@cdc.gov>; Hummel, Kim (CDC/DDID/NCEZID/DHCPP) <kbh2@cdc.gov>; Gabrielle Breugelmans <gabrielle.breugelmans@cepi.net>; Alison Bettis <alison.bettis@cepi.net>
Cc: Zamisch, Monica (contr-bto) <monica.zamisch.ctr@darpa.mil>; Miller, Kristina Krasnov (contr-bto) <kristina.miller.ctr@darpa.mil>; Skinner, Anna (contr-sto) <anna.skinner.ctr@darpa.mil>
Subject: Re: Introductions: U.S. CDC and CEPI

We had Richard and Melanie and a few others from CEPI visit to talk about lassa and RVF with our viral special pathogens folks. We have also had some of our VSP scientists engage per the Nipah work, as well. I think they also used some of that tome to talk about coronavirus efforts at the agency (predating COVID)

Inger

Inger K Damon MD PhD
 Director, Division of High Consequence Pathogens and Pathology NCEZID CDC

From: McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP) <fzh7@cdc.gov>
Sent: Thursday, June 11, 2020 3:55:36 PM
To: Chitale, Rohit <rohit.chitale@darpa.mil>; Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP) <ztq9@cdc.gov>; Towner, Jonathan (Jon) (CDC/DDID/NCEZID/DHCPP) <jit8@cdc.gov>; Monroe, Steve (CDC/DDPHSS/OLSS/OD) <stm2@cdc.gov>; Hummel, Kim (CDC/DDID/NCEZID/DHCPP) <kbh2@cdc.gov>; Gabrielle Breugelmans <gabrielle.breugelmans@cepi.net>; Alison Bettis <alison.bettis@cepi.net>; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Cc: Zamisch, Monica (contr-bto) <monica.zamisch.ctr@darpa.mil>; Miller, Kristina Krasnov (contr-bto) <kristina.miller.ctr@darpa.mil>; Skinner, Anna (contr-sto) <anna.skinner.ctr@darpa.mil>
Subject: RE: Introductions: U.S. CDC and CEPI

Hi Rohit, thanks for this. I am cc'ing Inger Damon, our Division Director. Not sure if you were aware, but Inger is actually on the CEPI Scientific Advisory Committee, so this is a group with whom we have a strong relationship.

Thanks so much,
Jennifer

CAPT Jennifer McQuiston
Deputy Division Director, Division of High Consequence Pathogens and Pathology, CDC Fzh7@cdc.gov; 404-639-0041, new mobile # [REDACTED] (b)(6)

-----Original Message-----

From: Chitale, Rohit <rohit.chitale@darpa.mil>
Sent: Thursday, June 11, 2020 9:23 AM
To: Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP) <ztq9@cdc.gov>; Towner, Jonathan (Jon) (CDC/DDID/NCEZID/DHCPP) <jit8@cdc.gov>; Monroe, Steve (CDC/DDPHSS/OLSS/OD) <stm2@cdc.gov>; Hummel, Kim (CDC/DDID/NCEZID/DHCPP) <kbh2@cdc.gov>; McQuiston, Jennifer H. (CDC/DDID/NCEZID/DHCPP) <fzh7@cdc.gov>; Gabrielle Breugelmans <gabrielle.breugelmans@cepi.net>; Alison Bettis <alison.bettis@cepi.net>
Cc: Zamisch, Monica (contr-bto) <monica.zamisch.ctr@darpa.mil>; Miller, Kristina Krasnov (contr-bto) <kristina.miller.ctr@darpa.mil>; Skinner, Anna (contr-sto) <anna.skinner.ctr@darpa.mil>
Subject: Introductions: U.S. CDC and CEPI

Dear U.S. CDC and CEPI colleagues,

I would like to introduce you to each other. Some key colleagues and friends at the U.S. CDC, and CEPI, the Coalition for Epidemic Preparedness Innovations. CEPI was born out of the W Africa Ebola outbreak a few years ago. I am attaching slides that CEPI sent us this morning, which includes a Lassa programme as well as efforts on other high consequence pathogens and now including SARS-CoV-2. If and when possible, I'd recommend that you find a quick hour to chat about your programs and efforts, esp given the likely intersections wrt vaccine efforts.

Thanks and kind regards,
Rohit (Ro)

--

Rohit A Chitale, PhD MPH
Program Manager
Biological Technologies Office (BTO)
DARPA
Office: +1.703.526.2052
Work mobile: [REDACTED] (b)(6)
Personal mobile: [REDACTED] (b)(6)
Rohit.Chitale@darpa.mil
[REDACTED] (b)(6)

From: William Dowling
Sent: Tue, 18 Feb 2020 12:59:39 +0000
To: cheryl@gisaid.org;peter@gisaid.org;Carolyn Clark;Florence, Clint (NIH/NIAID) [E];Wolfram, Larry (NIH/NIAID) [E];Raul Gomez Roman;Miles.Carroll@phe.gov.uk;barney.graham@nih.gov;Schmaljohn, Connie (NIH/NIAID) [E];Holbrook, Michael (NIH/NIAID) [C];Hensley, Lisa (NIH/NIAID) [E];rbaric@email.unc.edu;HENAO RESTREPO, Ana Maria;GSELL, Pierre;COSTA, Alejandro Javier;RIVEROS BALTA, Alina Ximena;Munster, Vincent (NIH/NIAID) [E];daszak@ecohealthalliance.org;b.haagmans@erasmusmc.nl;Vasan, Vasan (H&B, Geelong AAHL;linfa.wang@duke-nus.edu.sg;jokim@ivi.int;mksong@ivi.int;Volker.gerds@usask.ca;Giada.Mattiuzzo@nibsc.org;zlishi@wh .io.v.cn;Barbara.Schnierle@pei.de;leejooyeon@korea.kr;limhy0919@korea.kr;Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);christian.brehot;Kayvon Modjarrad;Amy C. Shurtleff;Stemmy, Erik (NIH/NIAID) [E];Julia.Tree@phe.gov.uk;Mark Page;Graham, Barney (NIH/VRC) [E];Falzarano, Darryl;Thue, Tracey;Hodgson, Paul;Napper, Scott;Nicola Rose;M.P.G. Koopmans;sgerber@cdc.gov;Jernigan, Daniel B. (CDC/DDID/NCIRD/ID);Gerber, Susan I. (CDC/DDID/NCIRD/DVD);Carroll, Darin (CDC/DDID/NCEZID/OD);Lathey, Janet (NIH/NIAID) [E];Degrace, Marciela (NIH/NIAID) [E];SATHIYAMOORTHY, Vaseeharan;gustavo.f.palacios.civ@mail.mil;Pallansch, Mark A. (CDC/DDID/NCIRD/DVD);MFrieman@som.umaryland.edu;REIRELAND@mail.dstl.gov.uk;SPoehlmann@d pz.eu;mhoffmann@dpz.eu;sylvie.van-der-werf@pasteur.fr;Nelson Michelle;Lever Steve;Prior Joann L;Marston, Hilary (NIH/NIAID) [E];De wit, Emmie (NIH/NIAID) [E];mit666666@pitt.edu;Mellors, John W;tlying@fudan.edu.cn;christian.drosten@charite.de
Cc: Watson, John (CDC/DDID/NCIRD/DVD);Baric, Toni C
Subject: WHO Consultation regarding nCoV Reagents and Cross -Reactivity - 1 PM CET
Attachments: nCoV Viruses and Reagents_2-13-2020.xlsx

Dear Colleagues,

Attached is a copy of the table we have been using to keep track of viruses , reagents and cross reactivity studies. Please update this and send back to me if you can.

Also, if you are interested in participating in a call on animal models, please let us know and also indicate which models you are working on. We will be sending an invite out this week.

Thank you,
 Bill

William Dowling, PhD

Non-Clinical Vaccine Development Leader

CEPI New vaccines
 for a safer world

(+1) 202 800-3148 (o)

(b)(6) (m)

William.dowling@cepi.net

1901 Pennsylvania Ave, NW, Suite 1003, Washington, DC 20006 USA

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Section 3	Text describing the third part of the document, including various clauses and provisions.
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Section 5	Text describing the fifth part of the document, including various clauses and provisions.
Section 6	Text describing the sixth part of the document, including various clauses and provisions.
Section 7	Text describing the seventh part of the document, including various clauses and provisions.
Section 8	Text describing the eighth part of the document, including various clauses and provisions.
Section 9	Text describing the ninth part of the document, including various clauses and provisions.
Section 10	Text describing the tenth part of the document, including various clauses and provisions.

From: William Dowling
Sent: Wed, 8 Apr 2020 11:00:20 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Thanks . I have invited Dr. Sun to present on his results and he will give a full presentation next week. If there are others that you know of, please send my way and we will include them, especially assays like this that have associated data from patients.

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, April 8, 2020 6:52 AM
To: William Dowling <william.dowling@cepi.net>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Bill – I won't make the call (I have 2 conflicts) and I forwarded the invite to Sathesh who shared the preprint with us/you this past weekend – which seems a long time ago

Inger

-----Original Appointment-----

From: William Dowling <william.dowling@cepi.net>
Sent: Tuesday, April 7, 2020 2:53 PM
To: William Dowling; Holbrook, Michael (NIH/NIAID) [C]; Hensley, Lisa (NIH/NIAID) [E]; rbaric@email.unc.edu; HENAO RESTREPO, Ana Maria; GSELL, Pierre; COSTA, Alejandro Javier; RIVEROS BALTA, Alina Ximena; Munster, Vincent (NIH/NIAID) [E]; daszak@ecohealthalliance.org; b.haagmans@erasmusmc.nl; Vasan, Vasan (H&B, Geelong AAHL; linfa.wang@duke-nus.edu.sg; jokim@ivi.int; mksong@ivi.int; Volker.gerds@usask.ca; Giada.Mattiuzzo@nibsc.org; zlshi@wh.iov.cn; Barbara.Schnierle@pei.de; leejooyeon@korea.kr; limhy0919@korea.kr; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); christian.brechot; Kayvon Modjarrad; Amy C. Shurtleff; Stemmy, Erik (NIH/NIAID) [E]; Julia.Tree@phe.gov.uk; Mark Page; Graham, Barney (NIH/VRC) [E]; Falzarano, Darryl; Thue, Tracey; Hodgson, Paul; Napper, Scott; Nicola Rose; M.P.G. Koopmans; sgerber@cdc.gov; Jernigan, Daniel B. (CDC/DDID/NCIRD/ID); Gerber, Susan I. (CDC/DDID/NCIRD/DVD); Carroll, Darin (CDC/DDID/NCEZID/OD); Watson, John (CDC/DDID/NCIRD/DVD); Lathey, Janet (NIH/NIAID) [E]; Degrace, Marciela (NIH/NIAID) [E]; SATHIYAMOORTHY, Vaseeharan; gustavo.f.palacios.civ@mail.mil; Pallansch, Mark A. (CDC/DDID/NCIRD/OD); MFrieman@som.umaryland.edu; REIRELAND@mail.dstl.gov.uk; SPoehlmann@dpz.eu; mhoffmann@dpz.eu; sylvie.van-der-werf@pasteur.fr; Nelson Michelle; Lever Steve; Prior Joann L; Marston, Hilary (NIH/NIAID) [E]; De wit, Emmie (NIH/NIAID) [E]; mit666666@pitt.edu; Mellors, John W; tlying@fudan.edu.cn; christian.drosten@charite.de; David Vaughn; Jacqueline Kirchner; Karen Makar; florian.krammer@mssm.edu; perkinsm@who.int; Guthrie, Erica (CDC/DDID/NCIRD/ID); Thornburg, Natalie (CDC/DDID/NCIRD/DVD); Baric, Toni C; SALAMI, Kolawole; Simon Funnell; Cesar Munoz-fontela; Monalisa Chatterji; Smith, Ashley (OS/ASPR/BARDA); Erlandson, Karl (OS/ASPR/BARDA); Kovacs, Gerald (OS/ASPR/BARDA) (CTR); Little, James (OS/ASPR/BARDA); Jayashankar, Lakshmi (OS/ASPR/BARDA); wilsonp@uchicago.edu; Florence, Clint (NIH/NIAID) [E]; Delgado Vazquez.Rafael; Morabito, Kaitlyn (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; N.M.A. Okba

Cc: (b)(6); teresa.lambe@ndm.ox.ac.uk; Bozick, Brooke (NIH/OD) [E]; Luc Gagnon; Greg Kulnis; Schmaljohn, Connie (NIH/NIAID) [E]; Nalca, Aysegul CIV USARMY MEDCOM USAMRIID (USA); SWAMINATHAN, Soumya; MORGAN, Oliver; Ragini.Shivji@ema.europa.eu; Krause, Philip (FDA/CBER); PScott@eidresearch.org; Pitt, Margaret L CIV USARMY MEDCOM USAMRIID (USA); Sarah Mudrak, Ph.D.; Georgia Tomaras, Ph.D.; Solomon Abebe Yimer; schendel@lji.org; sunL@antibodychina.com; 93353503@qq.com; Erica Ollmann Saphire; Chu, May; Leader, Troy; Cassandra.Kelly@finddx.org
Subject: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET
When: Wednesday, April 8, 2020 9:00 AM-10:00 AM (UTC-05:00) Eastern Time (US & Canada).
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From: William Dowling
Sent: Tue, 28 Jan 2020 19:58:31 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: RE: WHO Consultation regarding the Wuhan coronavirus

Hi Inger

There will be another meeting this Thursday. I would love to have someone from cdc on the call. Can I please have Dan or Sues email addresses to add them?

Thanks
 Bill

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Thursday, January 23, 2020 4:59 PM
To: William Dowling <william.dowling@cepi.net>
Subject: RE: WHO Consultation regarding the Wuhan coronavirus

Congratulations on your new position!

I forwarded this to Dan Jernigan (the CDC IM for the CDC EOC nCOV efforts, and to Sue Gerber, our coronavirus SME

Inger

From: William Dowling <william.dowling@cepi.net>
Sent: Thursday, January 23, 2020 4:40 PM
To: Carolyn Clark <carolyn.clark@cepi.net>; Florence, Clint (NIH/NIAID) [E] <clint.florence@nih.gov>; Wolfraim, Larry (NIH/NIAID) [E] <larry.wolfraim@nih.gov>; Raul Gomez Roman <raul.gomezroman@cepi.net>; Miles.Carroll@phe.gov.uk; barney.graham@nih.gov; Schmaljohn, Connie (NIH/NIAID) [E] <connie.schmaljohn@nih.gov>; Holbrook, Michael (NIH/NIAID) [C] <michael.holbrook@nih.gov>; Hensley, Lisa (NIH/NIAID) [E] <lisa.hensley@nih.gov>; rbaric@email.unc.edu; Munster, Vincent (NIH/NIAID) [E] <Vincent.Munster@nih.gov>; daszak@ecohealthalliance.org; b.haagmans@erasmusmc.nl; Vasan, Vasan (H&B, Geelong AAHL) <Vasan.Vasan@csiro.au>; linfa.wang@duke-nus.edu.sg; jokim@ivi.int; mksong@ivi.int; Volker.gerds@usask.ca; Giada.Mattiuzzo@nibsc.org; zlshi@wh.gov.cn; Barbara.Schnierle@pei.de; leejooyeon@korea.kr; limhy0919@korea.kr; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>; christian.brechot@pasteur.fr; Kayvon Modjarrad <kmodjarrad@eidresearch.org>
Cc: HENAO RESTREPO, Ana Maria <henaorestrepoa@who.int>; GSELL, Pierre <gsellp@who.int>; COSTA, Alejandro Javier <costaa@who.int>; RIVEROS BALTA, Alina Ximena <lauriex@who.int>
Subject: WHO Consultation regarding the Wuhan coronavirus

Hello all,

On behalf of the WHO R&D Blueprint team, I am writing to request your participation on a call tomorrow at 9 PM Central European time (which will be Saturday morning for some of

you). The purpose of the call is to lend your expertise to coordination of WHO response efforts. To that end, we would like to discuss the current status of efforts to culture the Wuhan coronavirus (or generate a recombinant virus); recent sequence data and modeling of the Spike protein; and potential next steps to assess cross reactivity with other coronaviruses. We realize that this is very short notice, but the situation is very dynamic. This would be an initial call with lengthier and more detailed calls in the near future.

Also, for those who have not seen them, I am attaching two reports on this topic that just came out and are highly relevant to the conversation.

Please let us know if you can make it. Call in details will be sent tomorrow.

Thank you,

Bill Dowling (seconded to WHO)

William Dowling, PhD

Non-Clinical Vaccine Development Leader



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(b)(6)m

William.dowling@cepi.net

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From: William Dowling
Sent: Wed, 8 Apr 2020 11:04:40 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Next week we may also have vaccine developers on the line – we are planning to start including them once every third or fourth week so they can hear the state of the art, and so we can hear about their in house efforts.

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, April 8, 2020 7:03 AM
To: William Dowling <william.dowling@cepi.net>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Of course! I will definitely try to get on the call next week – will move meetings around.

From: William Dowling <william.dowling@cepi.net>
Sent: Wednesday, April 8, 2020 7:00 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Thanks . I have invited Dr. Sun to present on his results and he will give a full presentation next week. If there are others that you know of, please send my way and we will include them, especially assays like this that have associated data from patients.

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, April 8, 2020 6:52 AM
To: William Dowling <william.dowling@cepi.net>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Bill – I won't make the call (I have 2 conflicts) and I forwarded the invite to Sathesh who shared the preprint with us/you this past weekend – which seems a long time ago

Inger

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From: William Dowling <william.dowling@cepi.net>
Sent: Tuesday, April 7, 2020 2:53 PM
To: William Dowling; Holbrook, Michael (NIH/NIAID) [C]; Hensley, Lisa (NIH/NIAID) [E]; rbaric@email.unc.edu; HENAO RESTREPO, Ana Maria; GSELL, Pierre; COSTA, Alejandro Javier; RIVEROS BALTA, Alina Ximena; Munster, Vincent (NIH/NIAID) [E]; daszak@ecohealthalliance.org; b.haagmans@erasmusmc.nl; Vasan, Vasan (H&B, Geelong AAHL; linfa.wang@duke-nus.edu.sg; jokim@ivi.int; mksong@ivi.int; Volker.gerds@usask.ca; Giada.Mattiuzzo@nibsc.org; zlshi@wh.iov.cn; Barbara.Schnierle@pei.de; leejooyeon@korea.kr; limhy0919@korea.kr; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); christian.brechot; Kayvon Modjarrad; Amy C. Shurtleff; Stemmy, Erik

(NIH/NIAID) [E]; Julia.Tree@phe.gov.uk; Mark Page; Graham, Barney (NIH/VRC) [E]; Falzarano, Darryl; Thue, Tracey; Hodgson, Paul; Napper, Scott; Nicola Rose; M.P.G. Koopmans; sgerber@cdc.gov; Jernigan, Daniel B. (CDC/DDID/NCIRD/ID); Gerber, Susan I. (CDC/DDID/NCIRD/DVD); Carroll, Darin (CDC/DDID/NCEZID/OD); Watson, John (CDC/DDID/NCIRD/DVD); Lathey, Janet (NIH/NIAID) [E]; Degrace, Marciela (NIH/NIAID) [E]; SATHIYAMOORTHY, Vaseeharan; gustavo.f.palacios.civ@mail.mil; Pallansch, Mark A. (CDC/DDID/NCIRD/OD); MFrieman@som.umaryland.edu; REIRELAND@mail.dstl.gov.uk; SPoehlmann@dpz.eu; mhoffmann@dpz.eu; sylvie.van-der-werf@pasteur.fr; Nelson Michelle; Lever Steve; Prior Joann L; Marston, Hilary (NIH/NIAID) [E]; De wit, Emmie (NIH/NIAID) [E]; mit666666@pitt.edu; Mellors, John W; tlying@fudan.edu.cn; christian.drosten@charite.de; David Vaughn; Jacqueline Kirchner; Karen Makar; florian.krammer@mssm.edu; perkinsm@who.int; Guthrie, Erica (CDC/DDID/NCIRD/ID); Thornburg, Natalie (CDC/DDID/NCIRD/DVD); Baric, Toni C; SALAMI, Kolawole; Simon Funnell; Cesar Munoz-fontela; Monalisa Chatterji; Smith, Ashley (OS/ASPR/BARDA); Erlandson, Karl (OS/ASPR/BARDA); Kovacs, Gerald (OS/ASPR/BARDA) (CTR); Little, James (OS/ASPR/BARDA); Jayashankar, Lakshmi (OS/ASPR/BARDA); wilsonp@uchicago.edu; Florence, Clint (NIH/NIAID) [E]; Delgado Vazquez.Rafael; Morabito, Kaitlyn (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; N.M.A. Okba

Cc: dj56wood@gmail.com; teresa.lambe@ndm.ox.ac.uk; Bozick, Brooke (NIH/OD) [E]; Luc Gagnon; Greg Kulnis; Schmaljohn, Connie (NIH/NIAID) [E]; Nalca, Aysegul CIV USARMY MEDCOM USAMRIID (USA); SWAMINATHAN, Soumya; MORGAN, Oliver; Ragini.Shivji@ema.europa.eu; Krause, Philip (FDA/CBER); PScott@eidresearch.org; Pitt, Margaret L CIV USARMY MEDCOM USAMRIID (USA); Sarah Mudrak, Ph.D.; Georgia Tomaras, Ph.D.; Solomon Abebe Yimer; schendel@lji.org; sunL@antibodychina.com; 93353503@qq.com; Erica Ollmann Saphire; Chu, May; Leader, Troy; Cassandra.Kelly@finddx.org

Subject: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

When: Wednesday, April 8, 2020 9:00 AM-10:00 AM (UTC-05:00) Eastern Time (US & Canada).

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From: Richard Hatchett
Sent: Mon, 17 Feb 2020 14:35:22 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: URGENT: Diamond Princess epidemiology

Dear Inger,

Are you free for a quick call? Just wanted to chat about the outbreak on the cruise ship.

You or others at CDC may already be working this, but it would be great if someone (probably only CDC or WHO at this point could pull this off) could arrange for a complete accounting of the outbreak as a unique and our best current opportunity to get a fix on the severity of COVID-19. With complete testing of everyone on board we could have a fully documented and hermetically sealed outbreak that would provide a true denominator against which to measure asymptomatic carriage, hospitalization rates, rates of severe and critical disease, etc.

It would be tragic to let this opportunity pass as it would help the world more properly calibrate its response to the virus. With the US, Hong Kong, and now Italy, Canada, and South Korea soon to evacuate (and presumably perform complete testing in) their nationals, it would seem that international coordination to agree the terms and perform such an analysis needs to be arranged urgently. Once the opportunity is lost, it's lost.

Best regards,
Richard

RICHARD HATCHETT
CEO

CEPI New vaccines
for a safer world

+4479 564 53 146

richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK

Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

From: William Dowling
Sent: Wed, 8 Apr 2020 11:08:48 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Which Jon Cohen article?

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, April 8, 2020 7:06 AM
To: William Dowling <william.dowling@cepi.net>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Great. I have the Jon Cohen Science article next to me – have not had a chance to read it.

From: William Dowling <william.dowling@cepi.net>
Sent: Wednesday, April 8, 2020 7:05 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

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Sent: Wednesday, April 8, 2020 7:03 AM
To: William Dowling <william.dowling@cepi.net>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

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Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

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Inger

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From: William Dowling <william.dowling@cepi.net>

Sent: Tuesday, April 7, 2020 2:53 PM

To: William Dowling; Holbrook, Michael (NIH/NIAID) [C]; Hensley, Lisa (NIH/NIAID) [E]; rbaric@email.unc.edu; HENAO RESTREPO, Ana Maria; GSELL, Pierre; COSTA, Alejandro Javier; RIVEROS BALTA, Alina Ximena; Munster, Vincent (NIH/NIAID) [E]; daszak@ecohealthalliance.org; b.haagmans@erasmusmc.nl; Vasan, Vasan (H&B, Geelong AAHL); linfa.wang@duke-nus.edu.sg; jokim@ivi.int; mksong@ivi.int; Volker.gerds@usask.ca; Giada.Mattiuzzo@nibsc.org; zlshi@wh.iov.cn; Barbara.Schnierle@pei.de; leejooyeon@korea.kr; limhy0919@korea.kr; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); christian.brechot; Kayvon Modjarrad; Amy C. Shurtleff; Stemmy, Erik (NIH/NIAID) [E]; Julia.Tree@phe.gov.uk; Mark Page; Graham, Barney (NIH/VRC) [E]; Falzarano, Darryl; Thue, Tracey; Hodgson, Paul; Napper, Scott; Nicola Rose; M.P.G. Koopmans; sgerber@cdc.gov; Jernigan, Daniel B. (CDC/DDID/NCIRD/ID); Gerber, Susan I. (CDC/DDID/NCIRD/DVD); Carroll, Darin (CDC/DDID/NCEZID/OD); Watson, John (CDC/DDID/NCIRD/DVD); Lathey, Janet (NIH/NIAID) [E]; Degrace, Marciela (NIH/NIAID) [E]; SATHIYAMOORTHY, Vaseeharan; gustavo.f.palacios.civ@mail.mil; Pallansch, Mark A. (CDC/DDID/NCIRD/OD); MFrieman@som.umaryland.edu; REIRELAND@mail.dstl.gov.uk; SPoehlmann@dpz.eu; mhoffmann@dpz.eu; sylvie.van-der-werf@pasteur.fr; Nelson Michelle; Lever Steve; Prior Joann L; Marston, Hilary (NIH/NIAID) [E]; De wit, Emmie (NIH/NIAID) [E]; mit666666@pitt.edu; Mellors, John W; tlying@fudan.edu.cn; christian.drosten@charite.de; David Vaughn; Jacqueline Kirchner; Karen Makar; florian.krammer@mssm.edu; perkinsm@who.int; Guthrie, Erica (CDC/DDID/NCIRD/ID); Thornburg, Natalie (CDC/DDID/NCIRD/DVD); Baric, Toni C; SALAMI, Kolawole; Simon Funnell; Cesar Munoz-fontela; Monalisa Chatterji; Smith, Ashley (OS/ASPR/BARDA); Erlandson, Karl (OS/ASPR/BARDA); Kovacs, Gerald (OS/ASPR/BARDA) (CTR); Little, James (OS/ASPR/BARDA); Jayashankar, Lakshmi (OS/ASPR/BARDA); wilsonp@uchicago.edu; Florence, Clint (NIH/NIAID) [E]; Delgado Vazquez.Rafael; Morabito, Kaitlyn (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; N.M.A. Okba

Cc: (b)(6) teresa.lambe@ndm.ox.ac.uk; Bozick, Brooke (NIH/OD) [E]; Luc Gagnon; Greg Kulnis; Schmaljohn, Connie (NIH/NIAID) [E]; Nalca, Aysegul CIV USARMY MEDCOM USAMRIID (USA); SWAMINATHAN, Soumya; MORGAN, Oliver; Ragini.Shivji@ema.europa.eu; Krause, Philip (FDA/CBER); PScott@eidresearch.org; Pitt, Margaret L CIV USARMY MEDCOM USAMRIID (USA); Sarah Mudrak, Ph.D.; Georgia Tomaras, Ph.D.; Solomon Abebe Yimer; schendel@lji.org; sunL@antibodychina.com; 93353503@qq.com; Erica Ollmann Saphire; Chu, May; Leader, Troy; Cassandra.Kelly@finddx.org

Subject: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

When: Wednesday, April 8, 2020 9:00 AM-10:00 AM (UTC-05:00) Eastern Time (US & Canada).

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From: Richard Hatchett
Sent: Mon, 17 Feb 2020 14:52:53 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: RE: URGENT: Diamond Princess epidemiology

Yes, of course. This is totally out of CEPI's lane and I'm only involved because of professional links with officials in all the countries involved. I tried to get Mike Ryan and WHO to lean in on this but radio silence. CDC is the only institution that could organize an effective international collaboration quickly and given the criticality of the information that could be derived I just want to see someone step up and own it.

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: 17 February 2020 14:48
To: Richard Hatchett <richard.hatchett@cepi.net>
Subject: Re: URGENT: Diamond Princess epidemiology

Agree and I don't know what has already been discussed in our EOC. OK if I loop Susan into the discussion? She may have more influence as she is one of the Scientific advisors for the response

Inger

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From: Richard Hatchett <richard.hatchett@cepi.net>
Sent: Monday, February 17, 2020 7:35:22 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: URGENT: Diamond Princess epidemiology

Dear Inger,

Are you free for a quick call? Just wanted to chat about the outbreak on the cruise ship.

You or others at CDC may already be working this, but it would be great if someone (probably only CDC or WHO at this point could pull this off) could arrange for a complete accounting of the outbreak as a unique and our best current opportunity to get a fix on the severity of COVID-19. With complete testing of everyone on board we could have a fully documented and hermetically sealed outbreak that would provide a true denominator against which to measure asymptomatic carriage, hospitalization rates, rates of severe and critical disease, etc.

It would be tragic to let this opportunity pass as it would help the world more properly calibrate its response to the virus. With the US, Hong Kong, and now Italy, Canada, and South Korea soon to evacuate (and presumably perform complete testing in) their nationals, it would seem that international coordination to agree the terms and perform such an analysis needs to be arranged urgently. Once the opportunity is lost, it's lost.

Best regards,

Richard

RICHARD HATCHETT

CEO



+4479 564 53 146

richard.hatchett@cepi.net

Visiting address: Gibbs building, 215 Euston Rd, Bloomsbury, London NW1 2BE, UK

Postal address: P.O. BOX 123, Torshov, 0412 Oslo, Norway

From: William Dowling
Sent: Wed, 8 Apr 2020 11:12:36 +0000
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)
Subject: Re: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Thanks I will look at it

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From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, April 8, 2020 7:11:25 AM
To: William Dowling <william.dowling@cepi.net>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

April 3 Science: “ Vaccine designers take first shots at COVID-19” page 14-16, discusses CEPI and potential need for human challenges.....(Stanley P. is quoted)

From: William Dowling <william.dowling@cepi.net>
Sent: Wednesday, April 8, 2020 7:09 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Which Jon Cohen article?

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, April 8, 2020 7:06 AM
To: William Dowling <william.dowling@cepi.net>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Great. I have the Jon Cohen Science article next to me – have not had a chance to read it.

From: William Dowling <william.dowling@cepi.net>
Sent: Wednesday, April 8, 2020 7:05 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Next week we may also have vaccine developers on the line – we are planning to start including them once every third or fourth week so they can hear the state of the art, and so we can hear about their in house efforts.

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, April 8, 2020 7:03 AM
To: William Dowling <william.dowling@cepi.net>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Of course! I will definitely try to get on the call next week – will move meetings around.

From: William Dowling <william.dowling@cepi.net>
Sent: Wednesday, April 8, 2020 7:00 AM
To: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Thanks . I have invited Dr. Sun to present on his results and he will give a full presentation next week. If there are others that you know of, please send my way and we will include them, especially assays like this that have associated data from patients.

From: Damon, Inger K. (CDC/DDID/NCEZID/DHCPP) <iad7@cdc.gov>
Sent: Wednesday, April 8, 2020 6:52 AM
To: William Dowling <william.dowling@cepi.net>
Subject: RE: WHO Consultation on SARS-CoV -2 Viruses, Reagents and immune Assays - Wed 3 PM CET

Bill – I won't make the call (I have 2 conflicts) and I forwarded the invite to Sathesh who shared the preprint with us/you this past weekend – which seems a long time ago

Inger

-----Original Appointment-----

From: William Dowling <william.dowling@cepi.net>
Sent: Tuesday, April 7, 2020 2:53 PM
To: William Dowling; Holbrook, Michael (NIH/NIAID) [C]; Hensley, Lisa (NIH/NIAID) [E]; rbaric@email.unc.edu; HENAO RESTREPO, Ana Maria; GSELL, Pierre; COSTA, Alejandro Javier; RIVEROS BALTA, Alina Ximena; Munster, Vincent (NIH/NIAID) [E]; daszak@ecohealthalliance.org; b.haagmans@erasmusmc.nl; Vasan, Vasan (H&B, Geelong AAHL); linfa.wang@duke-nus.edu.sg; jokim@ivi.int; mksong@ivi.int; Volker.gerdt@usask.ca; Giada.Mattiuzzo@nibsc.org; zshi@wh.iov.cn; Barbara.Schnierle@pei.de; leejooyeon@korea.kr; limhy0919@korea.kr; Damon, Inger K. (CDC/DDID/NCEZID/DHCPP); christian.brechot; Kayvon Modjarrad; Amy C. Shurtleff; Stemmy, Erik (NIH/NIAID) [E]; Julia.Tree@phe.gov.uk; Mark Page; Graham, Barney (NIH/VRC) [E]; Falzarano, Darryl; Thue, Tracey; Hodgson, Paul; Napper, Scott; Nicola Rose; M.P.G. Koopmans; sgerber@cdc.gov; Jernigan, Daniel B. (CDC/DDID/NCIRD/ID); Gerber, Susan I. (CDC/DDID/NCIRD/DVD); Carroll, Darin (CDC/DDID/NCEZID/OD); Watson, John (CDC/DDID/NCIRD/DVD); Lathey, Janet (NIH/NIAID) [E]; Degrace, Marciela (NIH/NIAID) [E]; SATHIYAMOORTHY, Vaseeharan; gustavo.f.palacios.civ@mail.mil; Pallansch, Mark A. (CDC/DDID/NCIRD/OD); MFrieman@som.umaryland.edu; REIRELAND@mail.dstl.gov.uk; SPoehlmann@dpz.eu; mhoffmann@dpz.eu; sylvie.van-der-werf@pasteur.fr; Nelson Michelle; Lever Steve; Prior Joann L; Marston, Hilary (NIH/NIAID) [E]; De wit, Emmie (NIH/NIAID) [E]; mit666666@pitt.edu; Mellors, John W; tlying@fudan.edu.cn; christian.drosten@charite.de; David Vaughn; Jacqueline Kirchner; Karen Makar; florian.krammer@mssm.edu; perkinsm@who.int; Guthrie, Erica (CDC/DDID/NCIRD/ID); Thornburg, Natalie (CDC/DDID/NCIRD/DVD); Baric, Toni C; SALAMI, Kolawole; Simon Funnell; Cesar Munoz-fontela; Monalisa Chatterji; Smith, Ashley (OS/ASPR/BARDA); Erlandson, Karl (OS/ASPR/BARDA); Kovacs, Gerald (OS/ASPR/BARDA) (CTR); Little, James (OS/ASPR/BARDA); Jayashankar, Lakshmi (OS/ASPR/BARDA); wilsonp@uchicago.edu; Florence, Clint (NIH/NIAID) [E]; Delgado Vazquez.Rafael; Morabito, Kaitlyn (NIH/VRC) [E]; Corbett, Kizzmekia (NIH/VRC) [E]; N.M.A. Okba
Cc: (b)(6) teresa.lambe@ndm.ox.ac.uk; Bozick, Brooke (NIH/OD) [E]; Luc Gagnon; Greg

Kulnis; Schmaljohn, Connie (NIH/NIAID) [E]; Nalca, Aysegul CIV USARMY MEDCOM USAMRIID (USA); SWAMINATHAN, Soumya; MORGAN, Oliver; Ragini.Shivji@ema.europa.eu; Krause, Philip (FDA/CBER); PScott@eidresearch.org; Pitt, Margaret L CIV USARMY MEDCOM USAMRIID (USA); Sarah Mudrak, Ph.D.; Georgia Tomaras, Ph.D.; Solomon Abebe Yimer; schendel@lji.org; sunL@antibodychina.com; 93353503@qq.com; Erica Ollmann Saphire; Chu, May; Leader, Troy; Cassandra.Kelly@finddx.org
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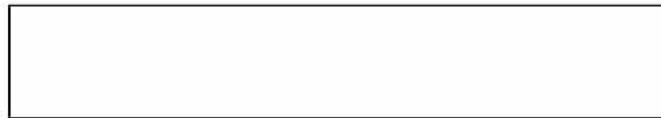
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From: Melanie Saville
Sent: Tue, 18 Feb 2020 19:19:51 +0000
To: Barrett, Alan;Alash'le Abimiku;CBRECHOT@USF.EDU;happic;Schmaljohn, Connie (NIH/NIAID) [E];Daniel Brasseur;mimi darko;dongxp238;hrees;Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);James Robinson;John Edmunds;Josie Golding;kneuzil;Jansen, Kathrin;Kenji Shibuya;Michel De Wilde;Levine, Myron;Bryant, Paula (NIH/NIAID) [E];Penny Heaton;Peter Smith;Krause, Philip (FDA/CBER);Ralf Clemens;Stanley Plotkin;Tom Kariuki;SATHIYAMOORTHY, Vaseeharan;yves.levy
Cc: Richard Hatchett;Stig Tollefsen;Nick Jackson;Raimonda Viburiene;Nicole Lurie;Oyeronke Oyebanji
Subject: Update COVID19

Dear CEPI SAC,

Discussing with Helen, we wanted to update you on the CEPI COVID19 activities and in particular on the call for proposal for additional vaccine candidates, building on the SAC's recommendation to increase the portfolio for the current 4 candidates to 6-8 candidates.

- The four candidates currently in the portfolio are advancing and are all currently in preclinical phase [REDACTED] (b)(4) [REDACTED] (b)(4) [REDACTED]
- The call closed on 14 February [REDACTED] (b)(4) [REDACTED], and have been sent out for review.
- The review process is being conducted rapidly, but rigorously, including CEPI staff, SAC members, and partner and external experts (e.g. [REDACTED] (b)(4) [REDACTED]). We are particularly thankful to Jim Robinson, Alan Barrett, Michel DeWilde, Daniel Brasseur, Penny Heaton and Ralf Clemens for their review. These evaluations will be the basis of recommendations made at the Portfolio Strategy and Management committee (PSMB) at the end of the week and to the Executive and Investment committee (EIC) next week. Key considerations are speed, scalability and geography to ensure access globally to vaccines.
- Due to the need for expedited review, the SAC review has been fully integrated in the expert review process. However we wanted to keep you abreast of the candidates under evaluation for any important considerations for the portfolio. Please see the summary table below and ***note this information remains confidential at this point in time***. Your feedback is welcome.
- In addition, Peter Smith, John Edmonds and Stanley Plotkin will be evaluating the available Epi data and projections from modeling of the outbreak to inform on the need for vaccine candidates in the coming days.
- As requested by SAC members, we are working on ensuring that the SAC has regular updates of the COVID19 activities and we count on your continued support and guidance through this important time.

Kind regards
 Melanie

Proposal title	Technology Platform
(b)(4)	

(b)(4)

(b)(4)

MELANIE SAVILLE

Director of Vaccine Research & Development



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Sent: Sat, 9 May 2020 11:56:32 +0000
To: wilsonp@uchicago.edu;David Vaughn;Falzarano, Darryl;Holbrook, Michael (NIH/NIAID) [C];mit666666@pitt.edu;schendel@lji.org;Erica Ollmann Sapphire;Jacqueline Kirchner;Johnson, Reed (NIH/NIAID) [E];Baric, Toni C;Baric, Ralph;cheryl@gisaid.org;Bok, Karin (NIH/VRC) [E];Boyle, David;Bozick, Brooke (NIH/OD) [E];christian.brechot;Christine.bruce@phe.gov.uk;Carroll, Darin (CDC/DDID/NCEZID/OD);Miles.Carroll;Marco.Cavaleri@ema.europa.eu;Monalisa Chatterji;Chu, May;Carolyn Clark;Corbett, Kizzmekia (NIH/VRC) [E];Alejandro Javier COSTA;Crozier, Ian (NIH) [C];Damon, Inger K. (CDC/DDID/NCEZID/DHCPP);daszak@ecohealthalliance.org;De wit, Emmie (NIH/NIAID) [E];Degrace, Marciela (NIH/NIAID) [E];Delgado Vazquez.Rafael;Drosten, Christian;Erlandson, Karl (OS/ASPR/BARDA);Florence, Clint (NIH/NIAID) [E];MFrieman@som.umaryland.edu;Simon Funnell;Luc Gagnon;Gerber, Susan I. (CDC/DDID/NCIRD/DVD);Volker.gerds@usask.ca;Raul Gomez Roman;barney.graham@nih.gov;Gromowski, Gregory D CIV USARMY MEDCOM WRAIR (USA);GSELL, Pierre;Guthrie, Erica (CDC/DDID/NCIRD/ID);b.haagmans@erasmusmc.nl;HENAO RESTREPO, Ana Maria;Hensley, Lisa (NIH/NIAID) [E];Hodgson, Paul;REIRELAND@mail.dstl.gov.uk;Jayashankar, Lakshmi (OS/ASPR/BARDA);Jernigan, Daniel B. (CDC/DDID/NCIRD/ID);Cassandra.Kelly@finddx.org;M.P.G. Koopmans;Kovacs, Gerald (OS/ASPR/BARDA) (CTR);Krammer, Florian;Shelly Krebs;Greg Kulnis;Arun Kumar;teresa.lambe@ndm.ox.ac.uk;Lathey, Janet (NIH/NIAID) [E];Leader, Troy;leejooyeon@korea.kr;Lever Steve;limhy0919@korea.kr;Little, James (OS/ASPR/BARDA);Karen Makar;Giada Mattiuzzo;McDermott, Adrian (NIH/VRC) [E];jmcelrat@fredhutch.org;Mellors, John W;Kayvon Modjarrad;Morabito, Kaitlyn (NIH/VRC) [E];MORGAN, Oliver;Sarah Mudrak, Ph.D.;Cesar Munoz-fontela;Munster, Vincent (NIH/NIAID) [E];Nalca, Aysegul CIV USARMY MEDCOM USAMRIID (USA);Napper, Scott;Nelson Michelle;N.M.A. Okba
Subject: WHO SARS-COV-2 assays call - new invite

Hello all

I had sent a recurring Outlook invite for the meeting with a Skype number (now transitioned to Teams by my organization). But going forward, you will receive a new Webex invite each week from Pierre Gsell at WHO. I am going to cancel my invite, and wanted to make sure there was not confusion – there will be a meeting this week.

Thanks
 Bill

William Dowling, PhD
 Non-Clinical Vaccine Development Leader

CEPI New vaccines
 for a safer world

(+1) 202 800-3148 (o)

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From: Stanley Plotkin
Sent: Tue, 18 Feb 2020 19:50:33 +0000
To: 'Melanie Saville'; 'Barrett, Alan'; 'Alash'le Abimiku'; 'CBRECHOT@USF.EDU'; 'happic'; 'Schmaljohn, Connie (NIH/NIAID) [E]'; 'Daniel Brasseur'; 'mimi darko'; 'dongxp238'; 'hrees'; 'Damon, Inger K. (CDC/DDID/NCEZID/DHCPP)'; 'James Robinson'; 'John Edmunds'; 'Josie Golding'; 'kneuzil'; 'Jansen, Kathrin'; 'Kenji Shibuya'; 'Michel De Wilde'; 'Levine, Myron'; 'Bryant, Paula (NIH/NIAID) [E]'; 'Penny Heaton'; 'Peter Smith'; 'Krause, Philip (FDA/CBER)'; 'Ralf Clemens'; 'Tom Kariuki'; 'SATHIYAMOORTHY, Vaseeharan'; 'yves.levy'
Cc: 'Richard Hatchett'; 'Stig Tollefsen'; 'Nick Jackson'; 'Raimonda Viburiene'; 'Nicole Lurie'; 'Oyeronke Oyebanji'
Subject: RE: Update COVID19

Dear Melanie:

Thanks for this.

Obviously, CEPI cannot support all of the candidate SARS-Cov2 candidates. I think we can agree that the most attractive are those that give responses after one dose, or at the most two. I think schedules of 0, 7 days should be tested in the way of generating rapid responses. There is general agreement to use the spike protein and perhaps only the receptor binding domain as the antigens. I also wonder about the availability of adjuvants. Is GSK willing to make their adjuvants available?

Best wishes,

Stanley

From: Melanie Saville [mailto:melanie.saville@cepi.net]
Sent: Tuesday, February 18, 2020 2:20 PM
To: Barrett, Alan; Alash'le Abimiku; CBRECHOT@USF.EDU; happic; Schmaljohn, Connie (NIH/NIAID) [E]; Daniel Brasseur; mimi darko; dongxp238; hrees; Damon, Inger K. (CDC/OID/NCEZID); James Robinson; John Edmunds; Josie Golding; kneuzil; Jansen, Kathrin; Kenji Shibuya; Michel De Wilde; Levine, Myron; Bryant, Paula (NIH/NIAID) [E]; Penny Heaton; Peter Smith; Phil Krause; Ralf Clemens; Stanley Plotkin; Tom Kariuki; SATHIYAMOORTHY, Vaseeharan; yves.levy
Cc: Richard Hatchett; Stig Tollefsen; Nick Jackson; Raimonda Viburiene; Nicole Lurie; Oyeronke Oyebanji
Subject: Update COVID19
Sensitivity: Confidential

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- Due to the need for expedited review, the SAC review has been fully integrated in the expert review process. However we wanted to keep you abreast of the candidates under evaluation for any important considerations for the portfolio. Please see the summary table below and ***note this information remains confidential at this point in time.*** Your feedback is welcome.
- In addition, Peter Smith, John Edmonds and Stanley Plotkin will be evaluating the available Epi data and projections from modeling of the outbreak to inform on the need for vaccine candidates in the coming days.
- As requested by SAC members, we are working on ensuring that the SAC has regular updates of the COVID19 activities and we count on your continued support and guidance through this important time.

Kind regards
Melanie

Proposal title	Technology Platform
(b)(4)	

(b)(4)

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