From: "Liao, Julie" <JLiao@nas.edu>
Sent: 09/03/2020 2:47:08 PM (-07:00)
To: [redacted] "'Rushton, Jonathan'" <[redacted]; "'MUMFORD, Elizabeth'" <[redacted]>; "'Barton Behravesh, Casey (CDC/OID/NCEZID)'" <dlx9@cdc.gov>; "'cstroud@onehealthcommission.org'" <cstroud@onehealthcommission.org>; "'Umair.Shah@phs.hctx.net'" <Umair.Shah@phs.hctx.net>; "'kevin.anderson@dhs.gov'" <kevin.anderson@dhs.gov>; "'daszak@ecohealthalliance.org'" <daszak@ecohealthalliance.org>; "'Hermsen, Elizabeth D'" <elizabeth.hermsen@merck.com>; "'Miller, Sally'" <miller.769@osu.edu>; "'Hughes, James M'" <jmhughe@emory.edu>; "'mlichtve@tulane.edu'" <mlichtve@tulane.edu>; "'John Parrish-Sprowl'" <johparri@iupui.edu>; "'Amy Pruden'" <apruden@vt.edu>; "'David Rizzo'" <dmrizzo@ucdavis.edu>; "'mewilson@hsph.harvard.edu'" <mewilson@hsph.harvard.edu>; "[redacted]
Cc: "Pavlin, Julie" <JPavlin@nas.edu>; "Minicucci, Charles" <CMinicucci@nas.edu>; "'Mary Radford'" <maradford@ucdavis.edu>; "'Laura.Garcia@phs.hctx.net'" <Laura.Garcia@phs.hctx.net>; "'Wendie.Veloz@phs.hctx.net'" <Wendie.Veloz@phs.hctx.net>; "'andre@ecohealthalliance.org'" <andre@ecohealthalliance.org>; "'Geraldine Neville'" <gneville@tulane.edu>
Subject: Operationalizing One Health op-ed (OHAC)
Attachments: What happens after Disease X oped 4-1-20_FINAL_Persp-format MW.docx

Hi everyone,

It was great to virtually "meet" everyone today! I'm here to help keep the momentum going on this op-ed and hope to get it submitted to NAM Perspectives soon!

Please see attached for the most recent version with comments from Mary, and add any additional comments by next week (Sep 10). We will work with the authors to incorporate the comments and finalize the manuscript after that.

Julie L

Julie Liao
Associate Program Officer
Board on Global Health
Health and Medicine Division | Find us at nationalacademies.org/HMD
(202) 334-2191 | jliao@nas.edu

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Commentary

What happens after Disease X: Breaking through to the other side of the COVID-19 pandemic

Gail Hansen, DVM, MPH, Hansen Consulting, LLC; **Jonna Mazet, DVM, MPVM, PhD,** University of California, Davis One Health Institute; **Elizabeth Mumford, DVM, MS,** World Health Organization; **Jonathan Rushton, MAgSci, PhD,** University of Liverpool; **Cheryl Stroud, DVM, PhD,** One Health Commission

On March 11, the World Health Organization officially declared COVID-19 a pandemic. This is the first time we have seen a pandemic sparked by a coronavirus, but it is not likely the last pandemic we will see. While it apparently originated in animals, it is now a human-to-human transmitted disease. This is the fifth emergence of a major zoonotic disease in the last two decades. How many more times must we watch this happen?

Nearly 75 percent of new emerging human infections are zoonotic – meaning they moved from animals to humans. Ebola, HIV, dengue, and most recently COVID-19 are a few examples. The continuing expansion of human populations and increasing complexity of our food systems has led to greater and more frequent incursions into wildlife habitats, more interactions between humans and wild animals, and increasing exposure to new pathogens. The COVID-19 pandemic is just the latest expression of that 21st century human population expansion trend. And though our public health systems have planned and practiced for pandemics in the past, those efforts have often focused primarily on the human medical response, ignoring the source of the infection, the need for rapid diagnostics, routes of transmission identification, and how interconnected we humans are to animals, ecosystems, and everything on the planet.

Rahm Emanuel once observed, "you never want a serious crisis to go to waste" and described the opportunity for change that comes in the wake of a catastrophe. That is a reminder to view the current pandemic not only as a global health crisis, but also a chance to help us fully implement One Health as we work to contain COVID-19. This terrible crisis is impacting families and communities in many ways, so let's now prepare to not let the next threat get out of control.

One Health recognizes that human, animal, plant, and environmental health are interconnected. It is a collaborative framework for education, research, industry, government agencies, and health offices at the local, regional, national, and global levels. Human, veterinary, and environmental health systems have historically functioned in isolation from one another. Barriers to sharing information, goals, tools, priorities, and processes contributed to our failure to predict, prevent, and respond to this pandemic. Interdisciplinary and interagency thinking—One Health—will allow us to be better prepared for the next crisis and could even help now if adopted, enabling more efficient response and minimizing loss of life. Let's use the lessons of Covid-19 to build a better system now.

The emergence of the COVID-19 pandemic is a One Health challenge that needs collaborative efforts from multiple disciplines and authorities. But we must implement a roadmap. While a number of notable organizations have developed policies and content embracing and advancing a global One Health approach, little guidance exists for U.S. state and local organizations to operationalize and implement One Health policies and actions. An ad hoc activity of the Forum on Microbial Threats at the National Academies of Sciences, Engineering, and Medicine, is engaging with other stakeholders to fill this gap by recommending a workable framework for local and regional health departments and other organizations to use when planning, implementing, and evaluating their One Health policies, strategies, and practices.

The World Health Organization has released an annual list of blueprint priority diseases in an effort to direct governments' attention to research and development on conditions that pose serious threats to society. "Disease X", a placeholder name serving as a reminder that the most serious disease threat is likely the one as yet unknown, topped the 2018 list. Today's Disease X is COVID-19, but there will surely be another. While we don't know when the next threat will arrive or what it will be, we can seize this COVID-19 moment as an opportunity for a reckoning about the complex interactions among humans, animals, and the environment and be ready to collaboratively tackle the next complex One Health challenges that we will inevitably face.

We will get through this COVID-19 pandemic. But we do not have to wait until the next pandemic to begin implementing the One Health approach.

Suggested Citation

Hansen, G., J. Mazet, E. Mumford, J. Rushton, and C. Stroud. 2020. What happens after Disease X: Breaking through to the other side of the Covid19 pandemic. *NAM Perspectives.* Commentary, National Academy of Medicine, Washington, DC. https://nam.edu/what-happens-after-disease-x-breaking-through-to-other-side-of-covid19.

Author Information

The authors are members of the One Health Action Collaborative at the National Academies of Sciences, Engineering, and Medicine. **Gail Hansen, DVM, MPH,** is Senior Advisor at Hansen Consulting, LLC. **Jonna Mazet, DVM, MPVM, PhD,** is Executive Director of the University of California, Davis One Health Institute. **Elizabeth Mumford, DVM, MS,** is a Technical Officer at the World Health Organization. **Jonathan Rushton, MAgSci, PhD,** is Professor of Animal Health and Food Systems Economics at the University of Liverpool; **Cheryl Stroud, DVM, PhD,** is Executive Director of the One Health Commission.

Acknowledgments

Optional.

Conflict-of-Interest Disclosures

X has received grants from XX organization. **Or, None disclosed. Optional for commentary.**

Correspondence

Questions or comments should be directed to X. **Optional.**

Disclaimer

The views expressed in this paper are those of the authors and not necessarily of the authors' organizations, the National Academy of Medicine (NAM), or the National Academies of Sciences, Engineering, and Medicine (the National Academies). The paper is intended to help inform and stimulate discussion. It is not a report of the NAM or the National Academies. Copyright by the National Academy of Sciences. All rights reserved.

From:	Harvey V. Fineberg <harvey.fineberg@moore.org>
To:	Jonna Mazet <jkmazet@ucdavis.edu>;Pavlin, Julie <JPavlin@nas.edu>;Brown, Lisa <LBrown@nas.edu>
CC:	Peter Daszak <daszak@ecohealthalliance.org>
Sent:	9/18/2020 5:26:47 PM
Subject:	Re: 9/18 Expert Meeting on the Impact of Globalization on Future Health Crises

Thank you, Jonna, for your good contributions to the discussion.

Best,

Harvey

Harvey V. Fineberg, MD, PhD
President
Gordon and Betty Moore Foundation

1661 Page Mill Rd
Palo Alto CA 94304

T: 650.213.3100

From: Jonna Mazet
Date: Friday, September 18, 2020 at 12:33 PM
To: Pavlin, Julie , Brown, Lisa
Cc: Harvey V. Fineberg , Peter Daszak
Subject: Re: 9/18 Expert Meeting on the Impact of Globalization on Future Health Crises

Struggling to get off a pre-scheduled call with FDA to join. I will join as soon as possible.
Sorry for the delay,
Jonna

On Mon, Sep 14, 2020 at 1:45 PM Pavlin, Julie <JPavlin@nas.edu> wrote:
Dear Members of the Forum on Microbial Threats,

We hope you are well!

With apologies for short notice, at the request of the Office of the Assistant Secretary for Preparedness and Response, in coordination with the Office of the Director of National Intelligence (ODNI), we've been asked to convene the members of our Standing Committee on Emerging Infections and 21st Century Health Threats, the Forum on Microbial Threats and the Board on Global Health to have an expert meeting on the impact of globalization on future health crises. The meeting will be this **Friday, September 18, from 3:30 p.m. – 5:30 p.m. ET.** The purpose of the meeting is to have a joint discussion and consider potential topics for further exploration.

Globalization has improved the world in many ways, but has also introduced fragility in supply chains, adversely affected the environment, witnessed the greatest number of refugees and internally displaced persons, expanded economic disparities, and increased the ability for novel pathogens to spread quickly around the globe. Factors such as extreme weather events and social and economic disruptions, including armed conflict, have also adversely affected global interdependence.

We would like to start a discussion on:

- What changes are associated with globalization that increase the probability of crises such as

pandemics and other infectious disease events?

- What are potential mitigating factors against these threats?

- How do these different factors interact and create risks of compound events or cascading effects?

- And is there any predictability of how this is changing in frequency or impact?

We would like to discuss how the National Academies and the Standing Committee can advance the understanding of these risks, and the currently available mitigation methods. Based on our discussions, we may develop further efforts to delve deeper into the topics.

Please let us know if you can join us this Friday, September 18, from 3:30 p.m. – 5:30 p.m. ET. If so, a calendar invite and link will follow shortly.

Many 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: Samantha Maher <maher@ecohealthalliance.org>
Sent: Mon, 21 Sep 2020 11:47:53 -0700
Subject: GVP BoD Meeting Follow up
To: Daszak Peter <daszak@ecohealthalliance.org>, Aleksei Chmura <chmura@ecohealthalliance.org>, Alison Andre <andre@ecohealthalliance.org>, Mazet Jonna <jkmazet@ucdavis.edu>, Carroll Dennis [redacted] Eddy Rubin [redacted] Jennifer Gardy <jennifer.gardy@gatesfoundation.org>, [redacted] "Dr. Suzan Murray" <murrays@si.edu>, [redacted] "Pablos-Mendez, Ariel" <ap39@cumc.columbia.edu>, Ariel Pablos [redacted]
September 2020 Meeting Agenda and Notes.docx

Hi All,
Thanks everyone for an efficient and exciting meeting- there's a lot in the works for the GVP!

Attached are the notes from today's meeting as well as some bolded action items.. They can also be found in our dropbox here.

Our next meeting all together will be in December. Here is a when2meet- **please fill that out** soon so that we can get a meeting on the calendar before schedules fill up. Those days correspond to the week of Dec 7th through the 11th. If it looks like there's availability, maybe we could stake out 2 hours for the meeting since we usually go over.

Dennis had requested a working group meeting to discuss a fiscal management strategy for the GVP with Eddy and Peter. If anyone else is interested in being a part of that, **please respond here** and I will work to set that up in another thread.

Best,

Sam
--

Samantha Maher, MESc
Research Scientist, Conservation and Health

EcoHealth Alliance
520 8th Avenue Ste. 1200
New York, NY 10018

212.380.4464 (direct)
[redacted] (mobile)
(fax)
www.ecohealthalliance.org

EcoHealth Alliance develops science-based solutions to prevent pandemics and promote conservation.

GVP BoD
September 2020 Quarterly Meeting

Sign up document for committees: REDACTED

REDACTED

Updates

1. Board expansion working group (Eddy/Suzanne)
   a. Two key places where we need to build out:
      i. Resource development
      ii. Communications director
   b. Focus on bringing in funding while maintaining a multi-dimensionally diverse board
   c. Search for a person who could identify 5-10 resources in 4 different categories outside of our current gambit:
      i. High wealth individuals
      ii. Foundations
      iii. corporate foundations
      iv. Government
   d. Once we identify people that meet that criteria, we should look into diversity criteria (gender, geographic, etc.)
   e. Feedback from group:
      i. Good to having guiding principles (JM)
      ii. Framework is good, but want to secure some financing before inviting people to assure lifetime of project over next few years. In the end, will have to build a board with government links, but that would come in later. (AP)
   f. ACTION: keep populating the chart for board member candidates

REDACTED

2. Fundraising working group (Ariel/Peter/Dennis)
   a. Ariel in contact with Rockefeller, some of same avenues as the rest of the board have gone down before.
   b. Ariel in contact with pharmaceutical companies as well.
   c. Japan Council of International Exchange: invited Dennis/Ariel for discussion on innovation in response to pandemics.
   d. Former President Zedillo of Mexico based at Yale- Ariel in contact with him, Club of Madrid (groups of former head of state world-wide)
      i. Zedillo offers support, open ended, and that David Cameron is interested in spearheading, and to be careful with politics over Brexit.
      ii. If successful we will need governments behind GVP
         1. Play those cards, communicate with UN
      iii. ACTION: do some homework and approach (Jeff?) about working with UN
      iv. DC- endorsement can be better model than funding because it allows more degrees of freedom.
      v. ACTION: continue in working groups to discuss this
   e. Dennis still in conversation with David Cameron's office on G20 summit
   f. JM: we have our first donations (wohoo!)

i. JM will contribute personally 20k to keep staffing in interim
ii. [redacted] will stay on for time being

g. JM on board of Bay Area Global Health Alliance
   i. FB, etc all founding members of Alliance
   ii. They joined Trinity challenge
   iii. GVP part of trinity challenge without initial donation of 1 million pounds, but they let us in without minimum contribution
h. Rockefeller: JM on visiting committee for pandemics, her and ER still in contact.
i. HealthMap
   i. Could be a database partner. Hosting PREDICT website elements
   ii. ACTION: talk to them about next steps, connection to Harvard
j. FDA: pitched 10 million project to them, they got positive reactions, wanted GVP as sweeps opportunity at end of federal year
   i. Only 100k left, we sent them a prime and budget for it, they wanted to put us in with UTMB
      1. Doesn't seem like it will be more than 30k, JM asked for more, currently there.
k. AP: global fund doesn't seem to be common future option except maybe for pandemics. Current Global fund didn't pan out well
   i. Repayment if no pandemic in 3 years + bond premium
   ii. But then COVID just within 3 years so investors lost money
   iii. IDA: only source of funding growing in last 3 years, we should think about world bank and talk to technical folk about where they're at (AP)
      1. Could be a way to leverage resources
   iv. Creative funding mechanism with state of CA (JM)
      1. Worked well in past, should look into that
      2. World Economic Forum: could go to them for this (Smithsonian)
         a. SM: talking with WEF currently, suggests we put together panel to present to WEF
      3. Earth biogenome project and barcode for life
         a. Want to do WEF presentation with us
         b. Could pull these together
         c. Need to finish MOU- Peter needs to approve
      4. Talk about inter-agency agreement for moving funds (SM)

3. Outreach
   a. Amazon, AWS web services for 500k (SM)
      a. Not cash, but includes their services, products, and programmers
      b. Would pay for hosting database services
      c. ACTION: follow up for what we want to do with that
   b. Illumina (ER)
      a. Interested in channeling money to Trinity challenge, use for GPV data problem
      b. Have experience with the data aspects of what we are trying to do
      c. ER to reach out to healthmap and other groups for partnering
      d. Option to pull this all together, but we need clear vision (ER)
         i. ACTION: get group together to figure out what those specific steps are
         ii. ER to come up with plan and reach out

e. Lots of PREDICT data will soon become available for that, just waiting for USAID
    i. Biggest data set they've ever received
    ii. Data visualizations look good.
    iii. More than 20 orgs have requested data in addition to Illumina

c. OT to follow with M. Pate ?? and link up with Ariel and Dennis about next steps
    a. Prime whoever is working under him technically.

d. Trinity Challenge (ZG)
    a. Launched last week officially
    b. Several articles mentioned GVP as founding member
    c. Asking that we promote Trinity Challenge in engagements
        i. Mention them in press engagements
    d. Have enough money for secretariat and getting close to goal of 10 million
    e. Have worked w/ Illumina beyond what ER has been doing

e. KAA
    a. Part of exprise(??) initiative, Amazon health
    b. Using drones to collect data for GVP
    c. Signed an LOA, they want to present to the board

4. Communications strategy (Dennis/Zoe)
    a. AP recommends a calendar with all important dates and deadlines
    b. ?? donates 1 day a week to GVP, coming up with communication plan
    c. ACTION: create communications working group, start formulating strategy before next board meeting and work with Davis to keep media up to date.
    d. Need a clear strategy before we start editing the website
    e. Instagram for GVP

5. Establishing GVP fiscal management capability
    a. We are a 501c3 but aren't set up to receive large funds yet
    b. We need to figure out how to establish fiscal accountability once we start getting money
        i. Need peter on that committee
        ii. Needs DUNS, indirect cost return, etc.
    c. ACTION: Sam to set up a call to create fiscal management portal and plan with ER, DC

From: "Andrew Clements" <aclements@usaid.gov>
Sent: 03/03/2017 6:41:06 AM (-08:00)
To: "Jonna Mazet" <jkmazet@ucdavis.edu>
Cc: "PREDICTMGT" <predictmgt@usaid.gov>; "predict-outbreak@ucdavis.edu" <predict-outbreak@ucdavis.edu>
Subject: Re: URGENT - Notice of Nipah virus cases in Bangladesh

Thanks, Jonna. I will let the Mission know of your plans.

Andrew

Andrew P. Clements, Ph.D.
Senior Scientific Adviser
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

On Mar 3, 2017, at 3:10 PM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

> Thanks,
> We'll evaluate the situation while taking some samples with minimal associated costs initially and come back with an assessment of the situation and likely budget implications before expending too much funds.
> Thank you,
> Jonna
>
> On Thu, Mar 2, 2017 at 11:16 PM, Andrew Clements <aclements@usaid.gov> wrote:
> Thanks, Jonna.
>
> If you think it will provide useful information then please go ahead. My only concern is how much would it decrease the outbreak reserve funding. If only a little, then no problem. If it leaves very little funding in the reserve then we should discuss further.
>
> Andrew
>
> *Andrew P. Clements, Ph.D.*
> *Senior Scientific Adviser*
> *Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health*
> *U.S. Agency for International Development*
> *Mobile phone: 1-571-345-4253*
> *Email: aclements@usaid.gov*
>
> On Mar 3, 2017, at 12:56 AM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:
>
> > Dear Andrew, Alisa, and Shana,
> > Please see the message below regarding the opportunity to evaluate transmission dynamics for Nipah in Bangladesh. This type of opportunistic sampling has also

been suggested as a target for collaboration between Predict and the CDC Special Pathogens Branch in the past (not yet discussed for this outbreak).
Please advise on you thoughts, concerns, and/or encouragements regarding moving forward. The proposed activities would fit within the general scope of Predict activities but would likely represent an expansion of sites and possibly dip into our outbreak funding reserve.
Thanks in advance for your advice,
Jonna

From: Dr. Melinda Rostal [mailto:rostal@ecohealthalliance.org]
Sent: Thursday, March 2, 2017 2:02 PM
To: Peter Daszak
Cc: Jon Epstein; William B. Karesh; Ariful Islam; Emily Hagan
Subject: Notice of Nipah virus cases in Bangladesh

Dear Peter,

I wanted to let you know that Arif has been informed that there are cases of Nipah virus in people in Bangladesh right now (it is Nipah season). The director of IEDCR (Institute of Epidemiology, Disease Control and Research) unofficially offered to let PREDICT sample bats in coordination with the human investigation. This is not a formal request at this time. Right now there are no plans for any institution there to sample the bats during the investigation.

While the government has not announced outbreak to the media yet, we thought you should be informed at this time because the CDC and, perhaps more importantly, the USAID Mission are already aware of the cases. The Mission did ask Arif whether PREDICT would be responding to the outbreak. At this time we are not planning any field activities in response to the outbreak as we have not been officially requested to help nor do we have USAID DC approval.

Please let us know if you have any questions regarding this notice.

Best,

Mindy

Melinda Rostal DVM, MPH

Senior Research Scientist

PREDICT 2 Surveillance Coordinator for EcoHealth Alliance

Rift Valley Fever Virus Project Manager

EcoHealth Alliance
460 West 34th Street – 17th floor
New York, NY 10001

1.212.380.4489 (direct)
1.212.380.4465 (fax)
www.ecohealthalliance.org

Visit our blog: www.ecohealthalliance.org/blog

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 promote conservation and prevent pandemics.

--
You received this message because you are subscribed to the Google Groups "PREDICTMGT" group.
To unsubscribe from this group and stop receiving emails from it, send an email to predictmgt+unsubscribe@usaid.gov.
To post to this group, send email to predictmgt@usaid.gov.
To view this discussion on the web visit https://groups.google.com/a/usaid.gov/d/msgid/predictmgt/CAO5tDrGhAJ4rxqj9NGZ9bVtVZuKRAsB4znfj6YryPx7GT-UOYA%40mail.gmail.com.

From: "Nathan Wolfe" <nwolfe@metabiota.com>
Sent: 03/03/2017 12:21:43 PM (-08:00)
To: "Jonna Mazet" <jkmazet@ucdavis.edu>; "Peter Daszak" <daszak@ecohealthalliance.org>
Cc: "Dennis Carroll" <dcarroll@usaid.gov>; "Cara Chrisman" <cchrisman@usaid.gov>; "Eddy Rubin" <erubin@metabiota.com>; "Brooke Watson" <watson@ecohealthalliance.org>; "Alison Andre" <andre@ecohealthalliance.org>; "Taylor Elnicki" <telnicki@metabiota.com>; "Rebecca Benmahdi" <rbenmahdi@metabiota.com>; "Elizabeth S Chase" <eschase@ucdavis.edu>
Subject: Re: URGENT - re. potential abstract for APHA - Due TODAY

Ditto!

From: Jonna Mazet [REDACTED] on behalf of Jonna Mazet <jkmazet@ucdavis.edu>
Date: Friday, March 3, 2017 at 10:15 AM
To: Peter Daszak <daszak@ecohealthalliance.org>
Cc: Dennis Carroll <dcarroll@usaid.gov>, Cara Chrisman <cchrisman@usaid.gov>, Eddy Rubin <erubin@metabiota.com>, Brooke Watson <watson@ecohealthalliance.org>, Nathan Wolfe <nwolfe@metabiota.com>, Alison Andre <andre@ecohealthalliance.org>, Taylor Elnicki <telnicki@metabiota.com>, Rebecca Benmahdi <rbenmahdi@metabiota.com>, Elizabeth S Chase <eschase@ucdavis.edu>
Subject: Re: URGENT - re. potential abstract for APHA - Due TODAY

Sounds great--thanks for doing it!
J

On Fri, Mar 3, 2017 at 9:38 AM, Peter Daszak <daszak@ecohealthalliance.org> wrote:

> Dear all,
>
> After the GVP call, I found out that Leilani Francisco (our new PREDICT behavioral risk coordinator) is scheduled to be going to the APHA meeting later this year. I thought this might be a good venue for a GVP talk, but of course, when I checked, as usual the abstract deadline is TODAY!!!
>
> Is it ok with all of you if I modify the IMED abstract and submit it as a potential standard talk at APHA, with all of you as authors, and the addition of Brooke, Yasha (APHA wants abstracts with data and analysis, so I'll add the econ ROI), Leilani and Cara, as follows:
>
> Peter, Dennis, Eddy, Nathan, Cara, Leilani, Brooke, Yasha, Jonna.
>
> Let me know if you really don't want to be on it – we'll plan to submit by 5pm today, and I'll make sure Brooke sends a version round to you all for quick edits etc..
>
> …and apologies for the urgency.
>
> Cheers,
>
> Peter

Peter Daszak
President

EcoHealth Alliance
460 West 34th Street – 17th Floor
New York, NY 10001

+1.212.380.4473 (direct)
+1.212.380.4465 (fax)
www.ecohealthalliance.org

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 promote conservation and prevent pandemics.

From: Cara Chrisman [mailto:cchrisman@usaid.gov]
Sent: Thursday, February 23, 2017 10:31 AM
To: Nathan Wolfe
Cc: Eddy Rubin; Alison Andre; Taylor Elnicki; Dennis Carroll; Rebecca Benmahdi; Brooke Watson; Peter Daszak; Jonna Mazet; Elizabeth S Chase
Subject: Re: Today's GVP Call - 10am/1pm

Hi All,

Thanks, Eddy & Nathan. We discussed on our end and it sounds as though we should postpone and plan to meet again next week.

Liz - could you please ensure that it's on our calendars for next week and going forward?

In the interim, please make sure to take a look at the Exec Summary that Brooke shared and make any comments.

Best,
Cara

Cara J. Chrisman, PhD
Senior Infectious Diseases Technical Advisor
Emerging Threats Division
Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (202) 712-1161
Cell: REDACTED
E-mail: cchrisman@usaid.gov

On Thu, Feb 23, 2017 at 10:22 AM, Nathan Wolfe <nwolfe@metabiota.com> wrote:
Sorry folks, I am booked for the proposed slot for today.

From: Eddy Rubin <erubin@metabiota.com>
Sent: Thursday, February 23, 2017 6:17 AM
Subject: Re: Today's GVP Call - 10am/1pm
To: Cara Chrisman <cchrisman@usaid.gov>
Cc: Elizabeth S Chase <eschase@ucdavis.edu>, Alison Andre <andre@ecohealthalliance.org>, Dennis Carroll <dcarroll@usaid.gov>, Rebecca Benmahdi <rbenmahdi@metabiota.com>, Taylor Elnicki <telnicki@metabiota.com>, Brooke Watson <watson@ecohealthalliance.org>, Jonna Mazet <jkmazet@ucdavis.edu>, Peter Daszak <daszak@ecohealthalliance.org>, Nathan Wolfe <nwolfe@metabiota.com>

Unfortunately it is not on my calendar and I have another meeting booked. Can try to move things around but is a challenge

Eddy

On Feb 23, 2017, at 6:02 AM, Cara Chrisman <cchrisman@usaid.gov> wrote:

> Hi All,
>
> The calendar notice for the GVP calls going forward is no longer showing up on Dennis or my calendars. We were still planning to speak **today at 10am/1pm.**If this no longer works (aka you've double-booked), please let us know. Otherwise, we'll plan to speak then and a tentative agenda is below (please note that the order may shift).
>
> Liz - Could you look into this and resend if necessary, with the conference line information?
>
> Thanks,
> Cara
>
> Agenda
>
> - Exec Summary (ES) - review/feedback
> - Org chart - have we agreed upon structure (as put forth in the ES) and can draft new diagram?
> - Mtgs - who will attend and which should happen regularly (expanded core group/secretariat, thematic area leads, etc)
> - Modeling email & next steps with the team
> - Newsletter - blurbs due COB next Tuesday to Amalhin
> - Senior Advisory Group - sent out list, waiting until other items settled
> - Outreach - need an assessment of who we need to circle back with (and what we need done before doing so).
> - Communications - Social media & requests from Ilaria
> - Pitch Deck & Outreach Deck - Next steps
> - AOB
>
> Cara J. Chrisman, PhD
> Senior Infectious Diseases Technical Advisor
> Emerging Threats Division

Office of Infectious Disease
Bureau for Global Health
U.S. Agency for International Development (USAID)

Desk: (202) 712-1161
Cell: [redacted]
E-mail: cchrisman@usaid.gov

From: "Brooke Watson" <watson@ecohealthalliance.org>
Sent: 03/03/2017 1:07:40 PM (-08:00)
To: "Peter Daszak" <daszak@ecohealthalliance.org>
Cc: "Dennis Carroll" <dcarroll@usaid.gov>; "Cara Chrisman" <cchrisman@usaid.gov>; "Eddy Rubin" <erubin@metabiota.com>; "Jonna Mazet" <jkmazet@ucdavis.edu>; "Nathan Wolfe" <nwolfe@metabiota.com>; "Alison Andre" <andre@ecohealthalliance.org>; "Taylor Elnicki" <telnicki@metabiota.com>; "Rebecca Benmahdi" <rbenmahdi@metabiota.com>; "Elizabeth S Chase" <eschase@ucdavis.edu>
Subject: Re: URGENT - re. potential abstract for APHA - Due TODAY
Attachments: GVP Abstract for APHA .docx

Hi all,

Attached is the GVP abstract for the APHA conference in November.
Please let me know if you have any edits or suggestions - I'm shooting to submit by 5 PM EST.

Thanks for your quick responses!

Best,

Brooke

On Fri, Mar 3, 2017 at 12:38 PM, Peter Daszak <daszak@ecohealthalliance.org> wrote:

> Dear all,
>
> After the GVP call, I found out that Leilani Francisco (our new PREDICT behavioral risk coordinator) is scheduled to be going to the APHA meeting later this year. I thought this might be a good venue for a GVP talk, but of course, when I checked, as usual the abstract deadline is TODAY!!!
>
> Is it ok with all of you if I modify the IMED abstract and submit it as a potential standard talk at APHA, with all of you as authors, and the addition of Brooke, Yasha (APHA wants abstracts with data and analysis, so I'll add the econ ROI), Leilani and Cara, as follows:
>
> Peter, Dennis, Eddy, Nathan, Cara, Leilani, Brooke, Yasha, Jonna.
>
> Let me know if you really don't want to be on it – we'll plan to submit by 5pm today, and I'll make sure Brooke sends a version round to you all for quick edits etc..
>
> …and apologies for the urgency.

Cheers,

Peter

Peter Daszak

President

EcoHealth Alliance

460 West 34th Street – 17th Floor

New York, NY 10001

+1.212.380.4473 (direct)

+1.212.380.4465 (fax)

www.ecohealthalliance.org

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 promote conservation and prevent pandemics.

--

Brooke Watson, MSc
Research Scientist

EcoHealth Alliance
460 West 34th Street – 17th floor
New York, NY 10001

1.212.380.4497 (direct)
REDACTED (mobile)
1.212.380.4465 (fax)
www.ecohealthalliance.org

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 promote conservation and prevent pandemics.

Draft Abstract for APHA

Author: Peter Daszak, Dennis Carroll, Eddy Rubin, Nathan Wolfe, Cara Chrisman, Leilani Francisco, Brooke Watson, Yasha Feferholtz, Jonna Mazet.

Purpose: Rapid demographic and environmental change and the interconnectedness of global networks are driving a non-linear increase in the frequency of emerging infectious diseases (EIDs). Zoonotic viruses from mammalian and waterbird hosts are a particular threat, as evidenced by outbreaks of SARS, MERS, Ebola, Zika and avian influenza over the past 15 years. This study aimed to estimate: the number of zoonotic viruses of potential human consequence residing in mammalian and waterbird hosts, the total costs of discovering these viruses, and the return on investment of a 10-year Global Virome Project (GVP).

Methods: We used ecological mark-recapture techniques to determine the total number of samples required to discover 100% of *Pteropus Giganteus* and *Macaca mulatta* viromes. We multiplied the average number of viruses per host family by the 23 viral families of human interest (those harboring the majority of human pathogens), and the total number of known mammal and waterfowl species. This provided an estimate of the total number of unknown viruses residing in wildlife. The costs of viral sampling and testing for these model species were then used to estimate expenditures for viral discovery for all mammalian and waterfowl species. Finally, we projected the total costs of all predicted emerging infectious disease (EID) events over the next 50 years to determine return on investment for the GVP.

Results: Calculations resulted in an estimated 1,330,208 viruses residing in mammals and birds, of which between 542,481 and 699,446 are potential zoonoses. Multiplying total costs of data collection and analysis for viromes of the model species across all 5,291 mammalian and 871 waterfowl species leads to a total cost of $7.454 billion. Due to the asymptotic rarefaction discovery curves, reducing the budget by half (to $3.73 billion) results in only a 1% reduction in discovery of unknown viruses. Using global pandemic frequency, EID mortality rates, and Gross Domestic Product (GDP) growth rates, we calculate total global damages from zoonotic EIDs to be $3.6 trillion over the next 50 years, and use this to estimate a 95:1 return on investment for the GVP.

Conclusion: Our work suggests only an estimated 1% of potential viral threats residing in wildlife have been identified. A Global Virome Project that identifies 99% of these viruses would cost $3.73 billion in total, or $373 million annually over 10 years. Having a baseline of identified viral sequences could lead to earlier detection and quicker response times, lowering both epidemic frequency and impact. If data from the Global Virome Project were to reduce costs from EIDs by 10%, it would return over $95 for every dollar invested.

From: "Dennis Carroll" <dcarroll@usaid.gov>
Sent: 03/19/2017 8:41:13 PM (-07:00)
To: "Eddy Rubin" <erubin@metabiota.com>; "Jonna Mazet" <jkmazet@ucdavis.edu>; "Peter Daszak" <daszak@ecohealthalliance.org>
Subject: CUGH presentation
Attachments: , GVP.UCSF.3.1.17.pptx

Eddy, we can divide the presentation up like we did at Pasteur. Attached is the version I gave at UCSF - why don't you all edit to carve out your space per Pasteur.

d

Dr Dennis Carroll
Director, Emerging Threats Program
U.S. Agency for International Development
Office: (202) 712-5009
Mobile: REDACTED

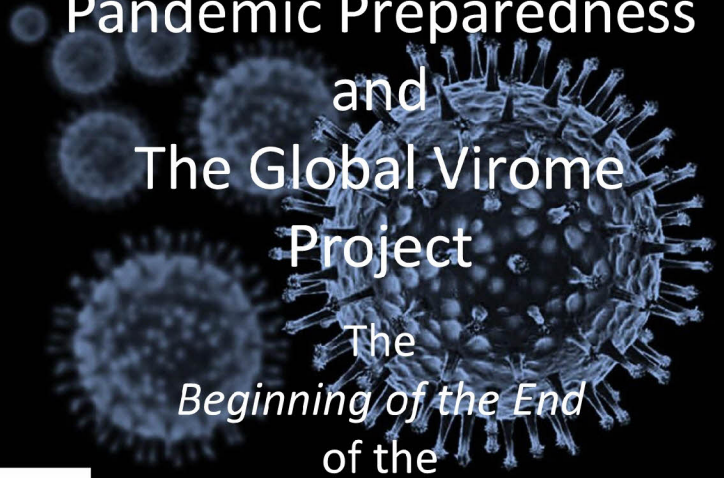
Begin forwarded message:

From: Dennis Carroll <dcarroll@usaid.gov>
To: DCarroll <dcarroll@usaid.gov>, Dowen Carroll REDACTED
Subject: GVP.UCSF

--
Dr. Dennis Carroll
Director, Emerging Threats Program
Bureau for Global Health
U.S. Agency for International Development

Office: 202-712-5009
Mobile: REDACTED

Pandemic Preparedness and The Global Virome Project



The *Beginning of the End* of the Pandemic Era

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Five Take Home Thoughts

- In the 21st century disease "emergence" is accelerating - driven by population growth and related impact on the environment
- The world, however, is ill prepared to respond to an emerging threat
- Our capacity to deploy effective "counter measures" is limited by what we "don't know" about future threats
- Success will require changing from a culture that is "reactive" to one that is "proactive"
- The Global Virome Project will transition the sciences of Emerging Viral Diseases into being Big Data sciences – allowing us to think differently about "Problems and Solutions"

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If you know your enemies and know yourself, you will not be imperiled in a hundred battles; .....if you do not know your enemies nor yourself, you will be imperiled in every single battle.

Sun Tzu

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We Are Not Prepared!

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Our Response: *A Day Late and A Dollar Short*

- HIV, SARS, H1N1 Influenza, MERS, Ebola, Zika = examples of the futility of developing countermeasures AFTER emergence
- Their emergence and spread have outpaced our ability to develop new countermeasures
- Urgent need to develop countermeasures in ADVANCE of emergence

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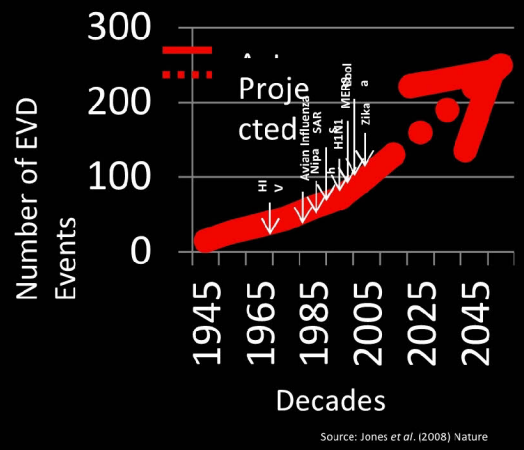
...Even as the Threat from Novel Viruses is Increasing



Source: Jones *et al*. (2008) Nature

- **~ 3 new Emerging Viral Diseases (EVD) annually**
- Driven by population expansion (1.6 billion in 1900 to 11.5 billion people in 2100)
- Increased encroachment into wildlife habitat is accelerating the "spillover" of novel viral threats from wildlife to humans

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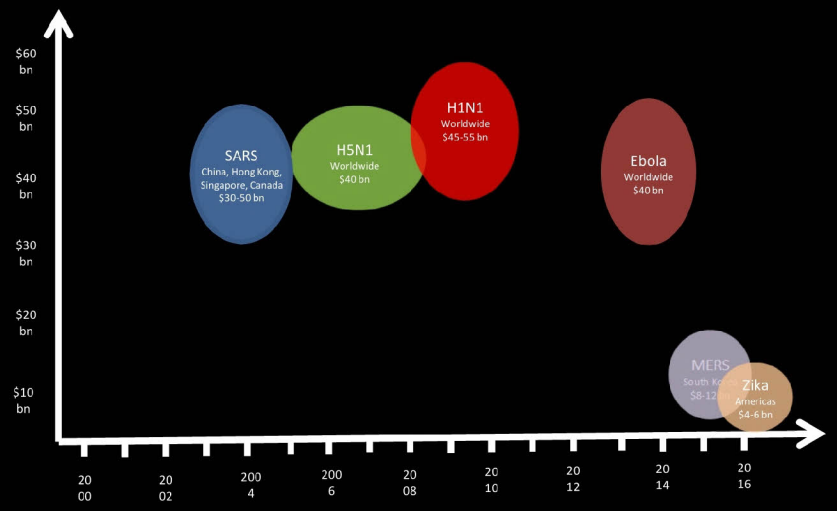
Economic Impact of Recent EVDs



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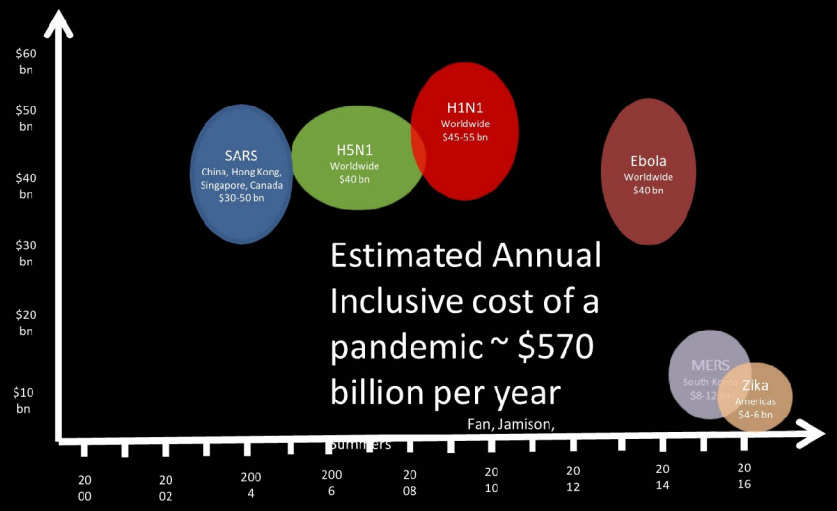
Economic Impact of Recent EVDs



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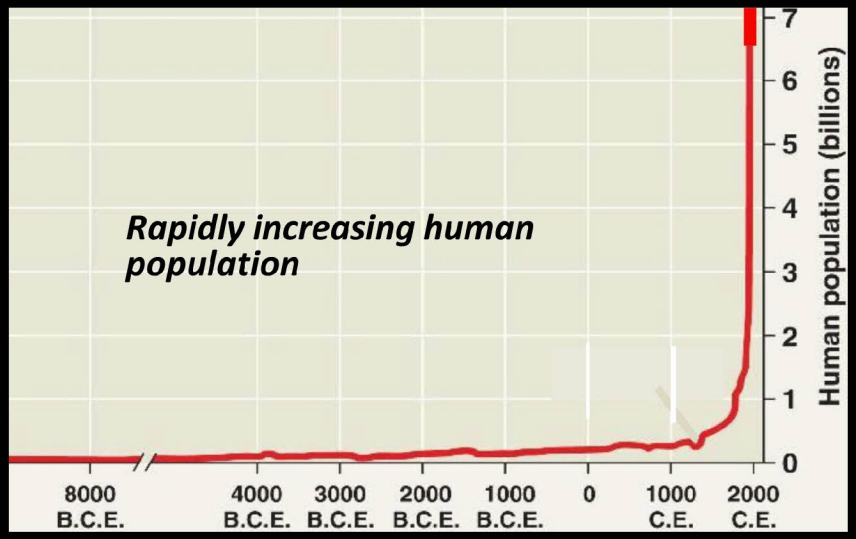
Why are there more EVDs?

Drivers for Disease Emergence are Intensifying



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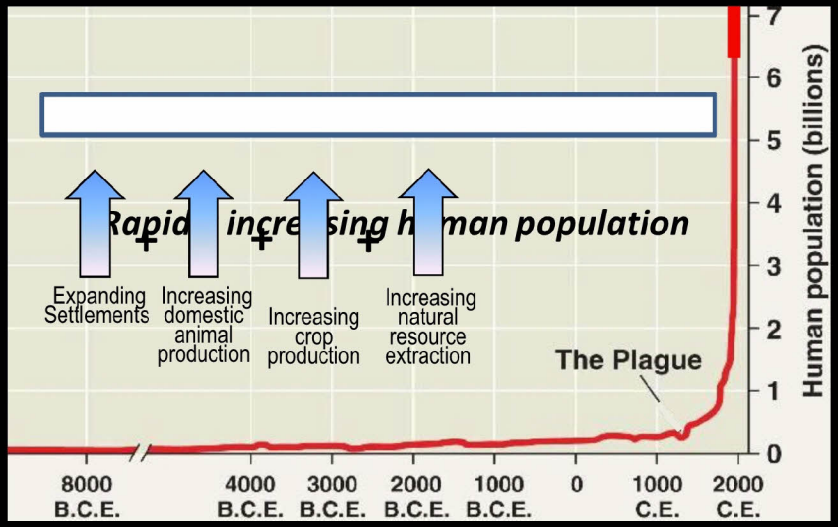
Drivers for Disease Emergence are Intensifying



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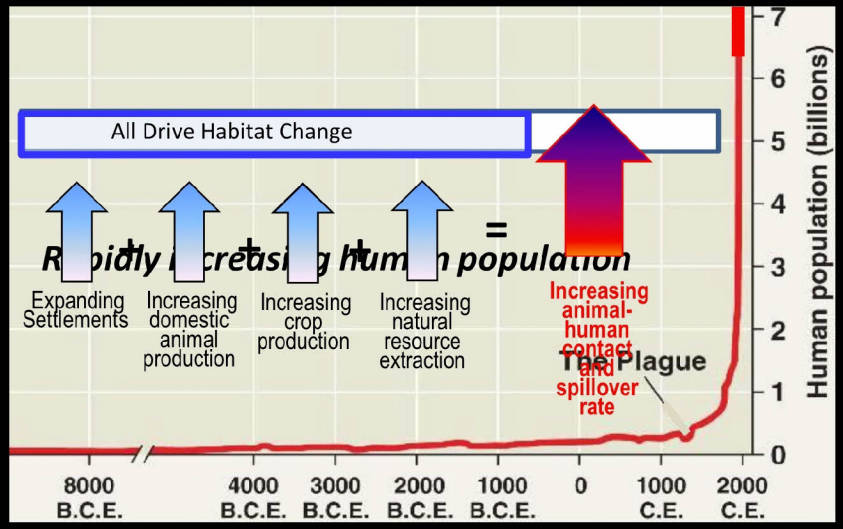
Drivers for Disease Emergence are Intensifying



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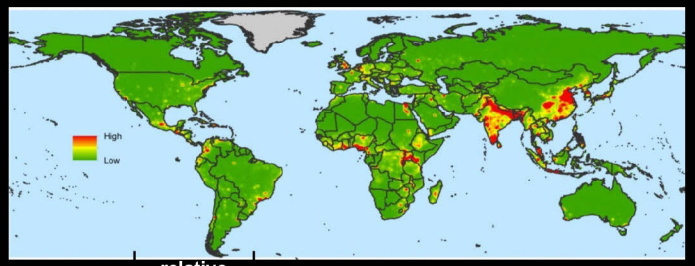
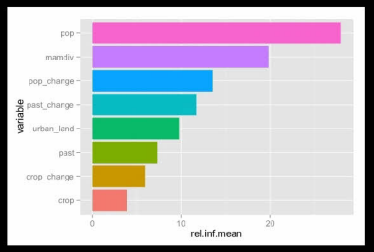
‘Hotspots’ for Disease Emergence during 20th Century



	relative influence (%)	std. dev.
population	27.99	2.99
mammal diversity	19.84	3.30
change: pop	13.54	1.54
change: pasture	11.71	1.30
urban extent	9.77	1.62



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….. But as we consider future risk ….

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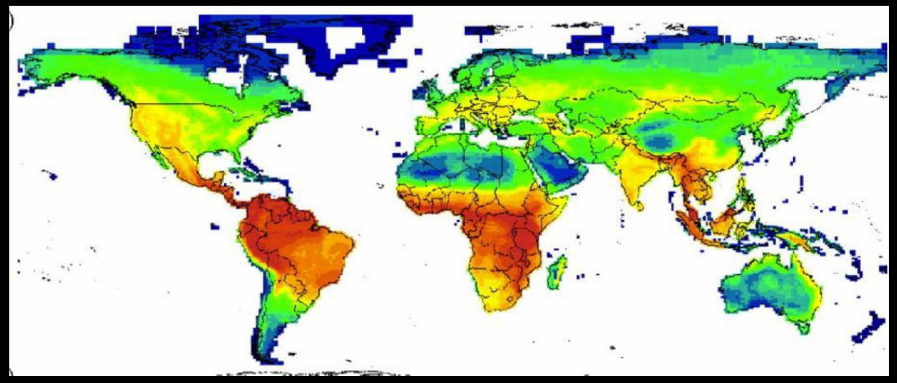
Likely “Hot Spots” for Viral Diversity



Viral diversity is closely related to mammalian diversity, allowing for geographic targeting

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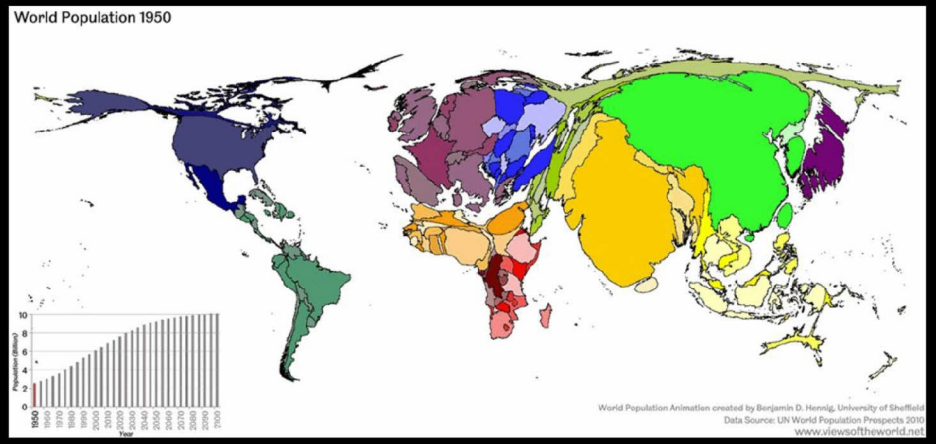
Distribution of Population Change

1950-2100



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We Also Know …..

Developing Countermeasures AFTER Emergence Leaves the World Vulnerable to the Worst Consequences

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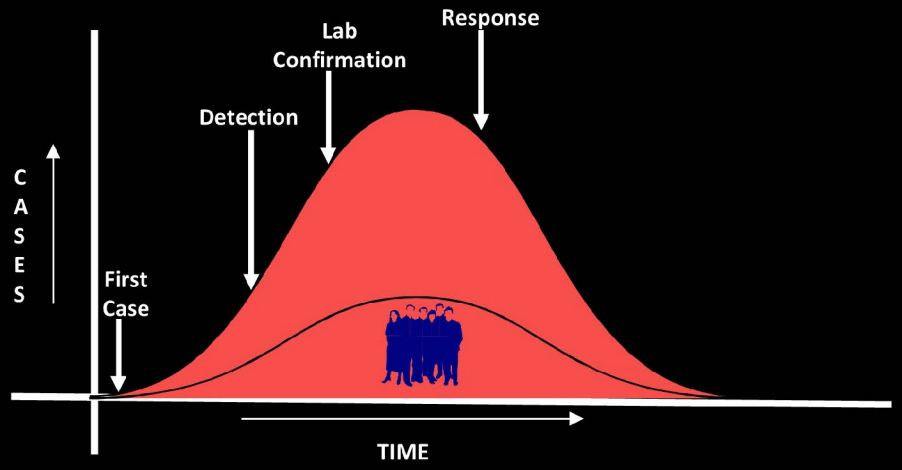
Standard Model for Detection and Response



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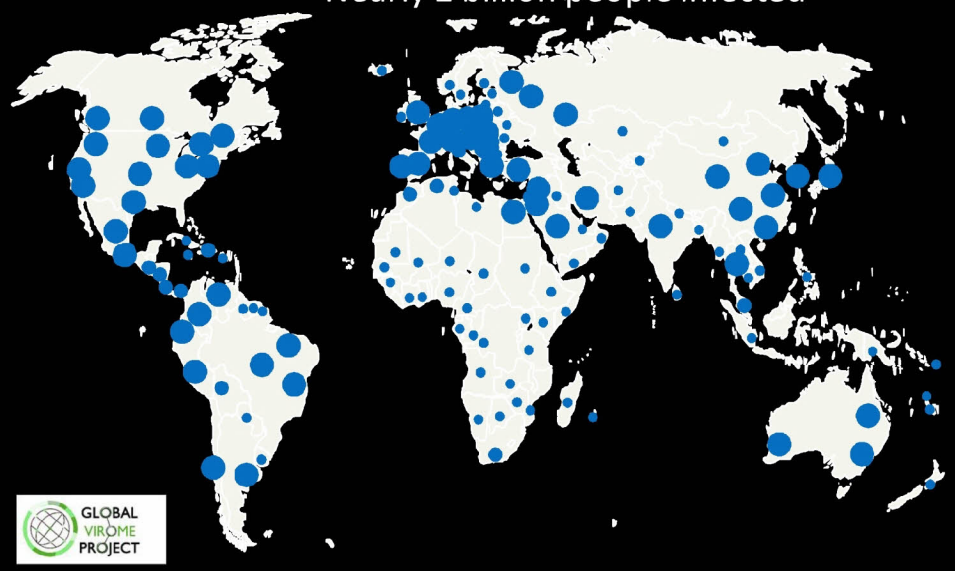
H1N1 Spread

April 10, 2010

73 countries reporting H1N1 cases

Nearly 2 billion people infected

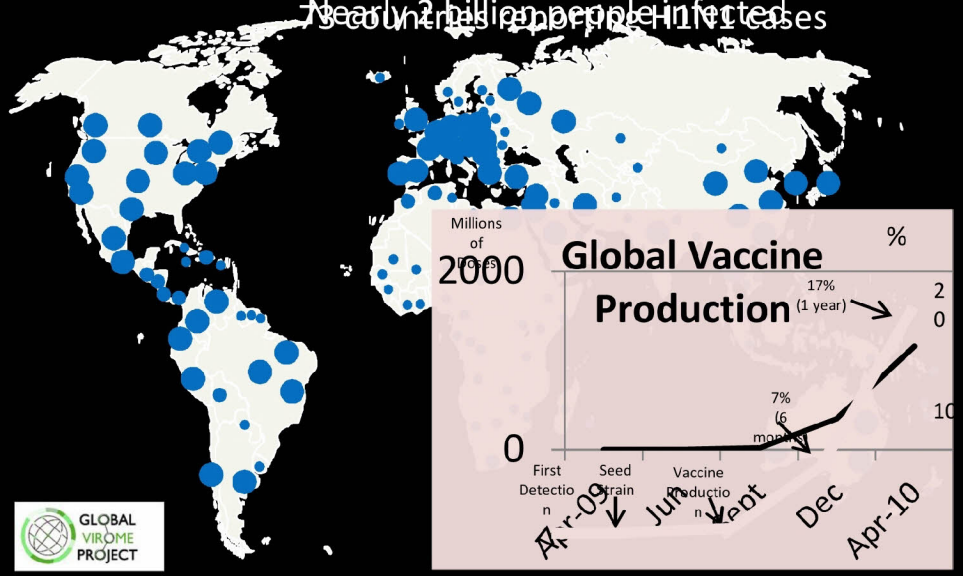


H1N1 Spread vs Vaccine Development

April 10, 2010

Nearly 3 billion people infected

73 countries reporting H1N1 cases



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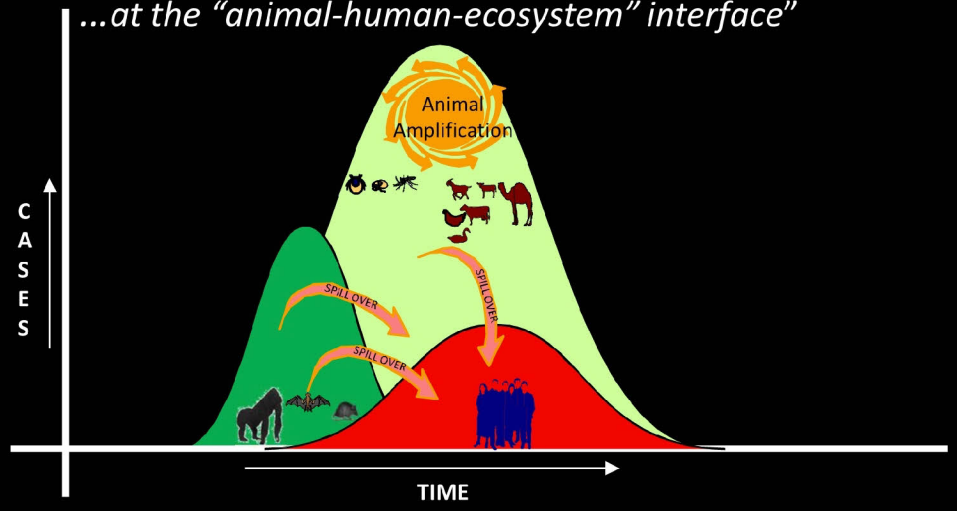
The “ecology” of disease emergence …..

…at the “animal-human-ecosystem” interface”



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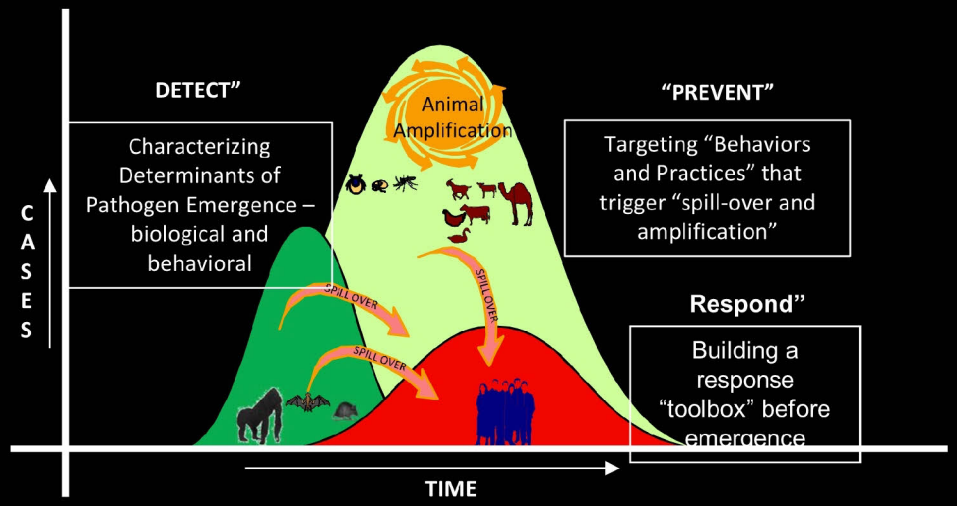
Moving Preparedness to the "Left"



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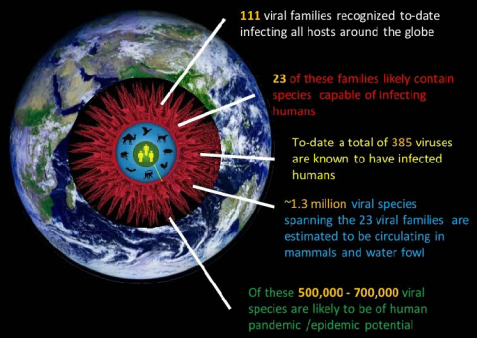
We also know…….

Global Travel can turn local epidemics into "global epidemics"

GLOBAL VIROME PROJECT

....Making the "Unknown Known"

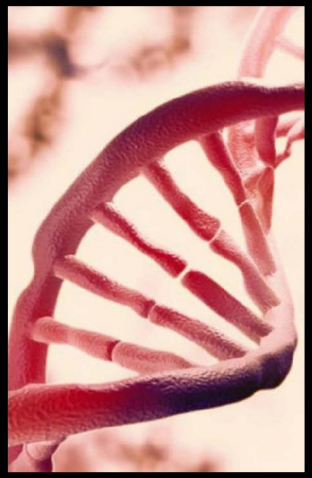


- There are ~500,000 viruses spanning 23 viral families in wildlife that have the potential to cause human infection
- This means, for every "known" Ebola virus there are likely 20,000 distinct "unknown" "Ebola-like" viruses of the same Filo-virus family circulating among an "unknown" pool of wild animals
- The same holds for HIV and retroviruses, SARS and coronaviruses etc.

The Global Virome Projects presents a path to the identification all viruses in wildlife that can infect humans - *so we can prepare for them before they jump to us*

GLOBAL VIROME PROJECT

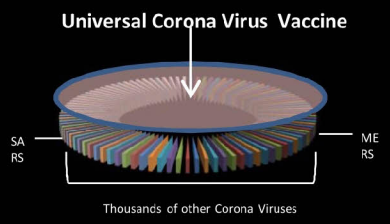
The Global Virome Project



- The Global Virome Project (GVP) is a global venture to document and characterize within ten years virtually all of the planet's viruses in wildlife that could pose a threat to mankind
- The GVP aims to create a data rich field - enabling disruptive approaches for the development of countermeasures
- The GVP will make it possible to analyze data for entire viral families spanning tens of thousands of viruses, rather than just a few viral members
- The GVP will transform the culture – *from being Reactive (and ineffective) to one that is Proactive (and effective)*

GLOBAL VIROME PROJECT

The Impact (1) – Disruptive & Transformative



GVP's Big Data Will Drive:

The Next-Gen of Broad Spectrum Countermeasures

GVP will enable the comparative analysis of thousands of members of each viral family and development of countermeasures that are broadly effective – rather than against individual viruses (i.e. MERS, SARS, etc.)

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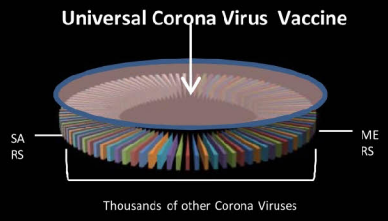
The Impact (1) – Disruptive & Transformative



GVP's Big Data Will Drive:

The Next-Gen of Broad Spectrum Countermeasures

GVP will enable the comparative analysis of thousands of members of each viral family and development of countermeasures that are broadly effective – rather than against individual viruses (i.e. MERS, SARS, etc.)

Targeted, High Impact Risk Mitigation

GVP's detailed characterization of every virus's ecologic profile - spanning host range, geographic distribution, and epidemiology – will enable the identification of viruses that pose the greatest potential threat - and the targeting of measures to prevent spillover

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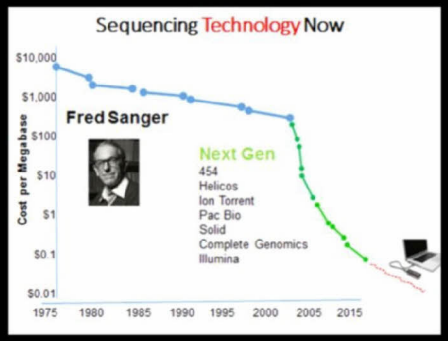
Impact (II): The "Halo Effect"

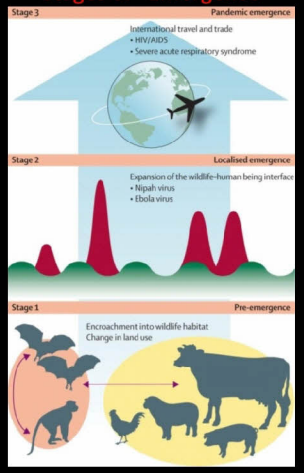


- As in the Human Genome Project, data generated by the GVP will dramatically accelerate the development of new diagnostic & analytic tools
- Data generated will have unanticipated impact – for example, the potential identification of unknown viral causes of chronic diseases like cancer
- GVP's surveillance and lab platforms will remain after GVP is completed as a long term system for monitoring evolving viral threats

GLOBAL VIROME PROJECT

The “Halo Effect” – Building a Long-Term Global Surveillance Network for Emerging Viral Threats

Stages of “Emergence”



- Investing in a global GVP database will serve as a critically important “snap shot in time” on viral ecology, epidemiology, and genetics
- However, an inherent characteristic of the most dangerous EVDs is that their host range, epidemiology, and genetic profiles will evolve over time – elevating their threat to human populations
- GVP’s surveillance and laboratory platforms have the potential to remain beyond the GVP as a long term system for monitoring evolving viral threats – ensuring early and effective deployment of biomedical and preventive countermeasures

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Feasibility (I): A large scale "Proof of Concept"

The feasibility of GVP was validated through USAID's PREDICT Project

- Spanning >30 countries
- Over $130 million invested to date
- Seven years +

Systems and Capacities Built

Train

field & lab staff

Optimize

labs

Sampled

wild animals

Viruses detected

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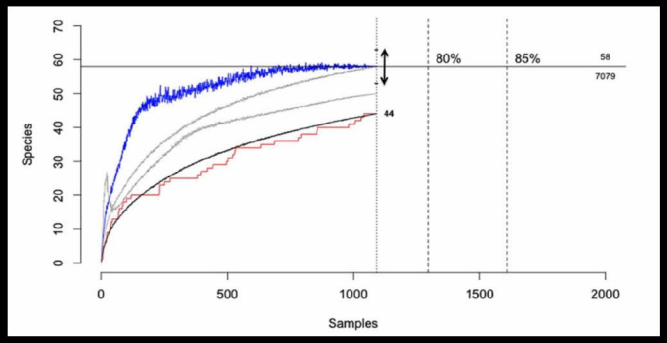
Feasibility (II): Extrapolating from PREDICT

Discovery Curves Show the Number of Samples Required



- PREDICT research has demonstrated that far fewer samples than previously expected are required to identify most threatening viruses
- These viral discovery curve studies provide a roadmap to sampling needs for GVP

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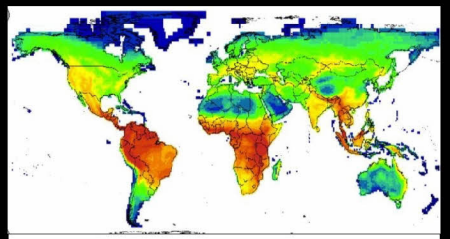
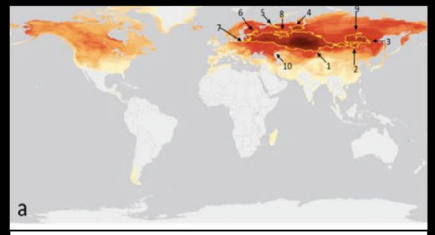
GVP: The Approach – Get to the Source

Mammals and water fowl are viral reservoirs



Mammalian Habitat ranges



Waterfowl breeding hotspots

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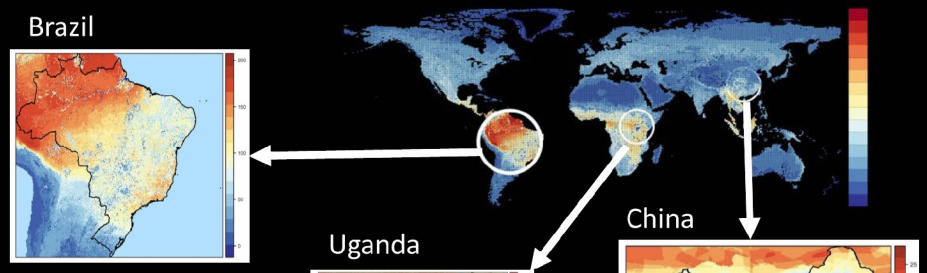
Targeting Rich Mammalian Diversity



- 648 Mammal species
- Up to 1.3 million mammal samples

- 319 Mammal species
- Up to 638K mammal samples

- 560 Mammal species and 120 water bird species
- Up to 1.4 million total samples

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Targeting "High Risk" Species

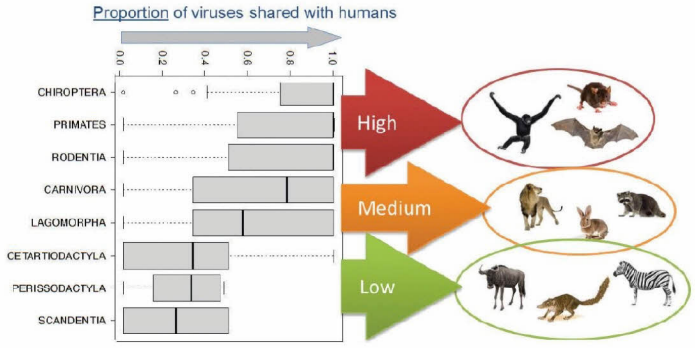

Figure 11. Some taxonomic groups of mammals, particularly bats, rodents, and nonhuman primates, have a very high proportion of viruses shared with humans when analyzing data at a species level. This is notable given that number of total known viruses is not significantly different across groups.

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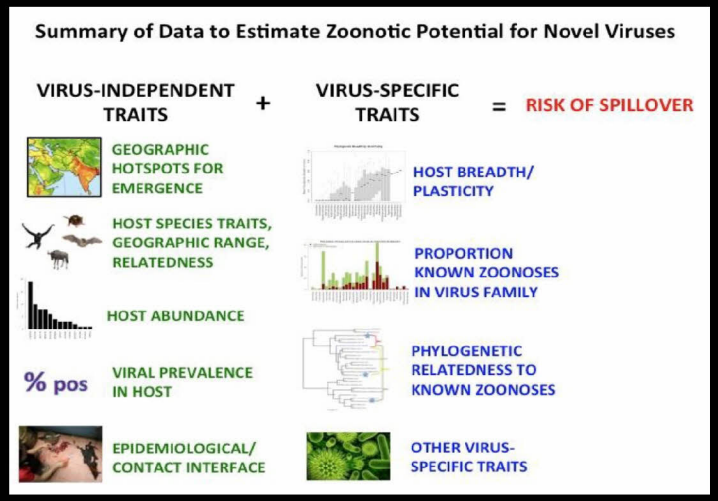
Ranking Which Viruses Are Most "Risky"



GLOBAL VIROME PROJECT

If you know your enemies and know yourself, you will not be imperiled in a hundred battles; ..... if you do not know your enemies nor yourself, you will be imperiled in every single battle.

Sun Tzu

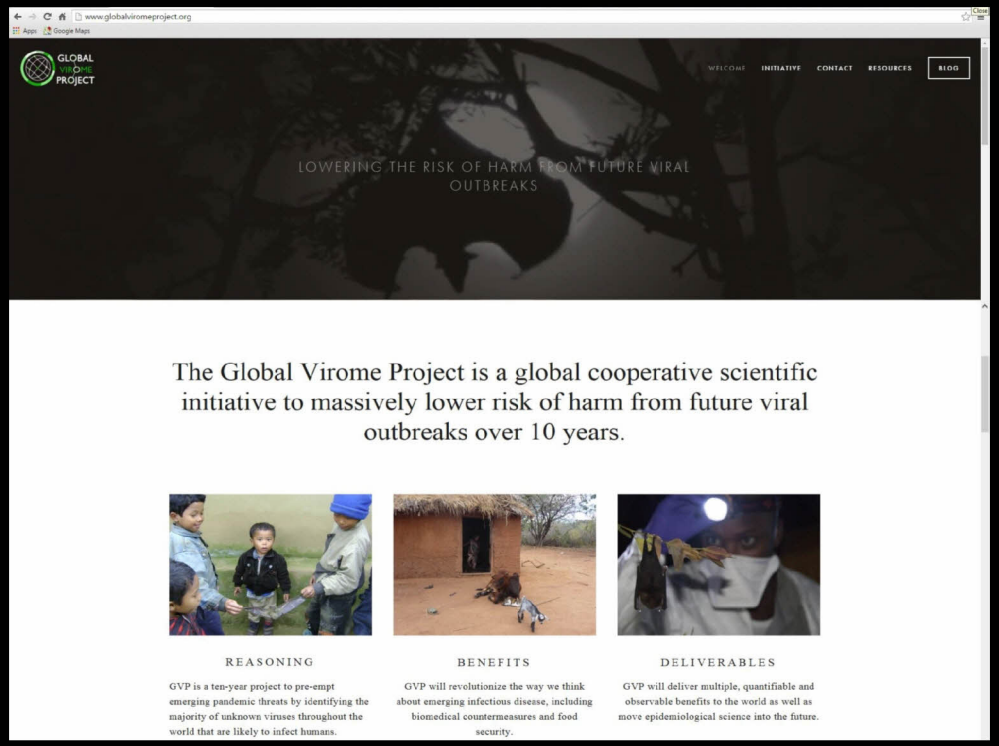
The Global Virome Project
will
Make the "Enemy" We Don't Know Known

GLOBAL VIROME PROJECT

"We can't solve problems by using the same kind of thinking we used when we created them"

Albert Einstein

GLOBAL VIROME PROJECT



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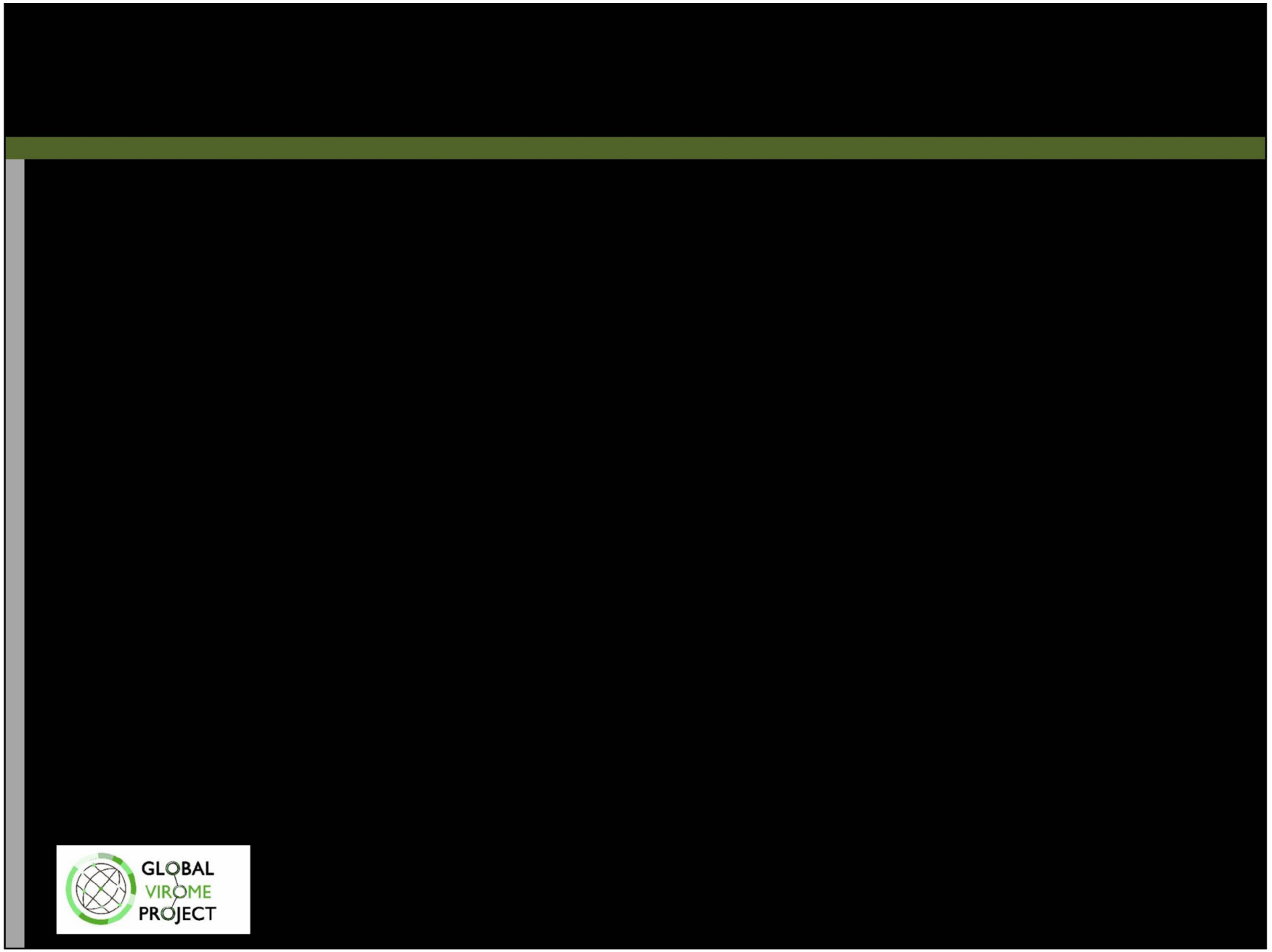
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From: REDACTED on behalf of "Jonna Mazet" <jkmazet@ucdavis.edu>
Sent: 04/08/2017 12:12:00 PM (-07:00)
To: "Peter Daszak" <daszak@ecohealthalliance.org>
Cc: "Dennis Carroll" <dcarroll@usaid.gov>; "Eddy Rubin" <erubin@metabiota.com>; "Elizabeth S Chase" <eschase@ucdavis.edu>; "Brooke Watson" <watson@ecohealthalliance.org>
Subject: Re: CUGH presentation

Can you guys also send me your preferred short bios for introductions? I want to highlight your preferred accomplishments.
Thanks,
J

On Saturday, April 8, 2017, Jonna Mazet <jkmazet@ucdavis.edu> wrote:

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CUGH GVP Session.pptx

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President

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www.ecohealthalliance.org

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From: REDACTED **On Behalf Of** Jonna Mazet
Sent: Saturday, April 8, 2017 10:38 AM
To: Peter Daszak
Cc: Dennis Carroll; Eddy Rubin; Elizabeth S Chase; Brooke Watson
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To: Eddy Rubin; Jonna Mazet; Peter Daszak
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Dr Dennis Carroll

Director, Emerging Threats Program

U.S. Agency for International Development

Office: (202) 712-5009

Mobile: REDACTED

Begin forwarded message:

From: Dennis Carroll <dcarroll@usaid.gov>
To: DCarroll <dcarroll@usaid.gov>, Dowen Carroll [redacted]
Subject: GVP.UCSF

--

Dr. Dennis Carroll

Director, Emerging Threats Program

Bureau for Global Health

U.S. Agency for International Development

Office: 202-712-5009

Mobile: [redacted]

From: "Peter Daszak" <daszak@ecohealthalliance.org>
Sent: 04/08/2017 12:42:22 PM (-07:00)
To: "Jonna Mazet" <jkmazet@ucdavis.edu>
Cc: "Dennis Carroll" <dcarroll@usaid.gov>; "Eddy Rubin" <erubin@metabiota.com>; "Elizabeth S Chase" <eschase@ucdavis.edu>; "Brooke Watson" <watson@ecohealthalliance.org>
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To: Peter Daszak
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> --
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Mobile: REDACTED

From: predict-request@ucdavis.edu on behalf of "William B. Karesh" <karesh@ecohealthalliance.org>
Sent: 04/26/2017 7:50:49 AM (-07:00)
To: "Andrew Clements" <AClements@usaid.gov>
Cc: "predict@ucdavis.edu" <predict@ucdavis.edu>; "Patrick Dawson" <dawson@ecohealthalliance.org>; "PREDICTMGT" <predictmgt@usaid.gov>
Subject: [predict] JEE for Hashemite Kingdom
Attachments: JEE Jordan WHO-WHE-CPI-2017.01-eng.pdf, ATT00001.htm

Not sure if someone from the Mission or WHO has already sent this to you. The assessment was conducted in August/Sept last year.

BK

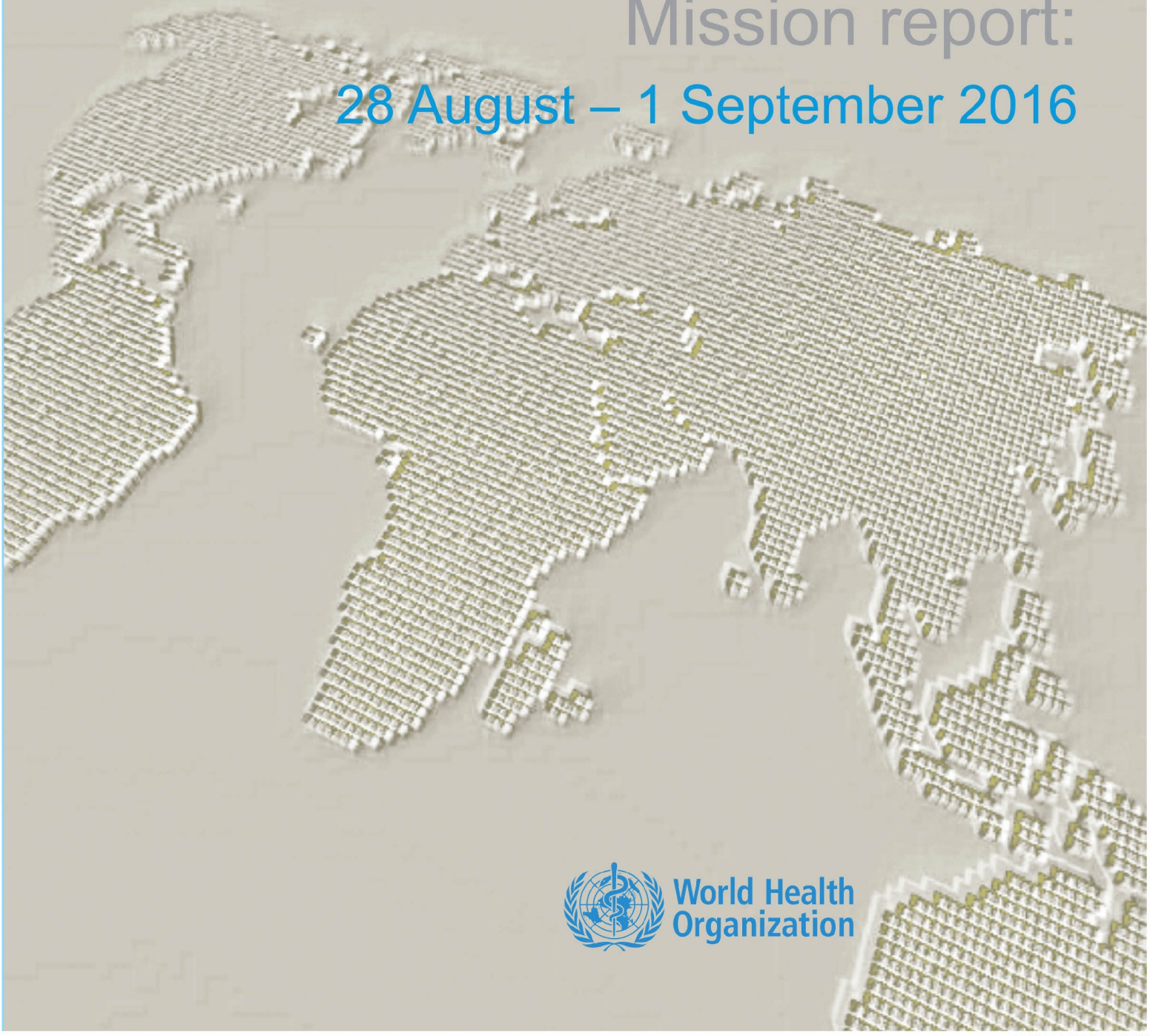
JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES

of the

HASHEMITE KINGDOM OF JORDAN

Mission report:

28 August – 1 September 2016



World Health Organization

UCDUSR0013487

UCDUSR0013488

JOINT EXTERNAL EVALUATION OF IHR CORE CAPACITIES

of the

[redacted]

Mission report:

28 August – 1 September 2016

World Health Organization

UCDUSR0013489

WHO/WHE/CPI/2017.01

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Design and layout by Jean-Claude Fattier

Printed by the WHO Document Production Services, Geneva, Switzerland

UCDUSR0013490

ACKNOWLEDGEMENTS

The WHO JEE Secretariat would like to acknowledge the following, whose support and commitment to the principles of the International Health Regulations (2005) have ensured a successful outcome to this JEE mission:

- The Government and national experts of Jordan for their support of, and work in, preparing for the JEE mission.
- The governments of Australia, Finland, the Islamic Republic of Iran, Italy, Saudi Arabia, Switzerland, the United Arab Emirates, the United Kingdom, and the United States of America, for providing technical experts for the peer review process.
- The Food and Agriculture Organization of the United Nations (FAO), and the World Organization for Animal Health (OIE), for their contribution of experts and expertise.
- The governments of Germany and Finland for their financial support to this mission.
- The following WHO entities: Country Office of Jordan and WHO Regional Office for Eastern Mediterranean.
- Global Health Security Agenda Initiative for their collaboration and support.

UCDUSR0013491

UCDUSR0013492

Contents

UCDUSR0013493

Abbreviations

AMR	antimicrobial resistance
BCG	Bacillus Calmette–Guérin
BRM	biorisk management
BSL	biosafety level
CBRN	chemical, biological, radiological and nuclear (incidents)
CDC	US Centers for Disease Control and Prevention
CMU	Crisis Management Unit
CPHL	Central Public Health Laboratory
DPT	diphtheria, pertussis and tetanus
EET	external evaluation team
EMPHNET	Eastern Mediterranean Public Health Network
EOC	Emergency Operations Centre
EPI	Expanded Programme for Immunization
EQAS	external quality assurance scheme
FE(L)TP	(Applied) Field Epidemiology Training Programme
FAO	Food and Agriculture Organization of the United Nations
GDP	gross domestic product
HCAI	health care-associated infections
HCCD	Higher Council of Civil Defence
IHR	International Health Regulations (2005)
INFOSAN	International Food Safety Authorities Network
ISO	International Organization for Standardization
JEE	Joint External Evaluation of the IHR
JFDA	Jordan Food and Drug Administration
JUST	Jordan University of Science and Technology
MERS-CoV	Middle East respiratory syndrome coronavirus
MoH	Ministry of Health
NFP	National Focal Point
NCD	National Civil Defence
NCSCM	National Centre for Security and Crises Management
OIE	World Organisation for Animal Health
OPV	oral poliovirus vaccine
PHEIC	public event emergency of international concern
PoE	point(s) of entry
RMS	Royal Medical Services
SOP	standard operating procedures
TB	tuberculosis
UNICEF	United Nations Children's Fund
VPD	vaccine-preventable disease
WHO	World Health Organization

UCDUSR0013494

Executive summary

Jordan has established capacity in most of the 19 technical areas relevant for the International Health Regulations (IHR 2005), and has many excellent practices in place. Especially impressive is the level of capability maintained despite the recent influx of migrants from neighbouring countries. However, in parallel to its strengths and good practices in public health, the World Health Organization (WHO) Joint External Evaluation (JEE) process identified gaps and processes to address for full compliance with the IHR. The main findings are summarized as follows.

While the Public Health Law is well known, including among powers able to implement the IHR, and the country has assessed how the Law can fulfil IHR requirements, it has not yet resulted in changes to allow the health laws to operate alongside other emergency laws to meet IHR capabilities. Current legislation on IHR implementation needs to be complemented by a formal assessment of legislation in sectors other than human health.

Jordan has formally established a national focal point for IHR, for the World Organisation for Animal Health, International Food Safety Authorities Network, and for the International Atomic Energy Agency. While there is willingness and ad hoc cooperation across the technical areas, most processes are ad hoc and triggered by individual judgements. Formal processes such as standard operating procedures are needed for coordinated cooperation and structured information exchange between the human health, food safety, veterinary health and civil defence authorities. Such a formalized system would allow an easier transfer of knowledge.

The Government of Jordan has recognized antimicrobial resistance as a major threat to health and efforts are under way to establish a national AMR surveillance system capable of generating quality data for informed national policies, strategies and plans, along with standardized laboratory methods and interpretation metrics for antimicrobial resistance testing.

The agricultural and livestock sector in Jordan is economically important and crucial for consistent food security. Increasing density of the human population facilitates human–livestock–wildlife interaction enhances the risk of infection with zoonoses, and Jordan has prioritized a number of zoonotic diseases. Formal documented links are being established across the human and animal health sectors in case of foodborne outbreaks and zoonotic disease with clear triggers and protocols for coordinated activity. Furthermore, food safety inspection and control functions, including trace-back and recall capabilities will be strengthened.

Good laboratory practices are in place for clinical diagnosis of priority infectious diseases, and a national licensing system exists for private laboratories. Systematic accreditation of services is not in place, but could be achieved with modest investment. Application of systematic quality management/analysis systems should be considered as a licensing requirement for all laboratories, and for accreditation of key analytical services. Cooperation and systematic information exchange between clinical microbiology, food safety and veterinary laboratories dealing with zoonotic diseases should be established.

Immunization, and vaccination cards for school entry, are mandatory in Jordan. These are provided free of charge to all target populations living in the country regardless of their nationality, including refugees. The programme is highly successful and, despite outbreaks of polio and other infectious diseases in neighbouring countries, has been successful in maintaining high vaccination coverage and protection of its population. It is crucial from a health security and public health perspective to maintain and support the immunization programme at the current level in the foreseeable future.

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The country has attained reasonable capacities to detect events of significance for both human and animal health, as well as for other health security threats of concern, by establishing and enhancing indicator-based surveillance with an automated electronic notification surveillance system that enhances real-time surveillance and analysis.

However, intersectoral routine information and data exchange on zoonotic events only takes place during zoonotic outbreaks. To improve "one health" surveillance capabilities, Jordan should consolidate data into a "one platform" notification system to ensure efficiency gains, to rapidly detect any public health event, and to ensure event-based surveillance. While Jordan has achieved 1/200 000 in its field epidemiologist training programme, personnel turnover and "brain drain" is high in relation to countries of the region.

The country has a multisectoral coordination mechanism that includes health emergencies. This mechanism, led by the Higher Council of Civil Defence, has authority to ask for support from any sector. Its strategic plan outlines detailed roles and responsibilities in responding to emergencies, including public health events. The National Centre for Security and Crises Management (NCSCM) has recently been established to support the response to emergencies including public health concern. The division of work between these two entities remained unclear to the External Evaluation Team.

The health system established the Crisis Management Unit in 2008 which reports to the Minister of Health. An Emergency Operations Centre (EOC) has been shaped under this unit to include representatives from different units of the Ministry of Health (MoH), but is not yet functional or integrated into the top level crisis management structures of the NCSCM. The country should review and update its multi-hazard national health emergency preparedness and response plan, and develop contingency plans accordingly.

Jordan's Royal Medical Services is the main organization providing regional/international medical humanitarian assistance. It has demonstrated good practices and capability for public health emergencies and disasters. Nevertheless, the national plan for medical countermeasures and personnel deployment in public health emergencies should be reviewed and updated, and the MoH should maintain a revolving stockpile of emergency drugs and medical supplies through a formal agreement with local manufacturers and suppliers.

Jordan is able to conduct multi-channel, multi-target audience public communication on health issues, coordinate communication with key stakeholders and manage local level engagement. While some information is gathered on audience reactions and concerns on an ad hoc basis, Jordan's risk communication capacity would benefit from more systematic and routine feedback, and from more staff receiving specialist training in emergency risk communication.

The country has three IHR designated points of entry (PoE): Queen Alya international airport, Aqaba port and Al Omary ground crossing. The public health and medical services are provided mainly by the MoH and the airport, ground crossing and port operators. The Ministry of Agriculture controls the import of animals and agricultural products at all PoE. Mechanisms are available to share information on public health events/measures. However, there is a need to improve animal quarantine services and enhance coordination between the MoH and the different stakeholders at PoEs; and to use the IHR recommended model of ship sanitation certificates at Aqaba port. Public health contingency plans for all hazards are available at the Queen Alya airport; these should be urgently developed for the other PoEs.

The growing chemical industry is an important element in Jordan's economy. Several laws cover the safe use of chemicals in manufacturing, transport, sale and waste treatment, and public health. Jordan has ratified international chemical conventions with the national focal points within the Ministry of Environment and MoH. Laws on the safe use and storage of hazardous chemicals have also been updated. The WHO-recognized Poisons Centre at Jordan University Hospital needs strengthening and its national mandate clarified. The country should develop a national strategic plan for chemical safety that prioritizes actions between chemical stakeholders. This should be complemented by updating the national intersectoral plan

for chemical emergencies, which describes the roles and responsibilities of different stakeholders and takes into account IHR requirements.

The National Committee for Radiological Emergencies drafted a national radiological emergency plan detailing the roles and responsibilities in responding to radiation emergencies, which should be integrated into the NCSCM arrangements and strategy. The Government also established a National Nuclear Security Committee by order of the Cabinet and has a published policy on nuclear safety and a national register of radiation sources. The Energy and Minerals Regulatory Commission as the competent regulatory authority has a range of legislation, policies and procedures on the safe use and control of radiation across all relevant sectors. However, communication and information sharing with other relevant sectors, including with the IHR NFP, is lacking.

In summary, the Hashemite Kingdom of Jordan is close to achieving compliance with the IHR. The major gap identified is the unstructured and informally based (and thus vulnerable) cross-sector coordination and the unclear and relatively weak role of the national IHR focal point. During broad discussions with all relevant sectors, high willingness and commitment to increase cooperation was evident. The next steps will largely be to formalize and operationalize protocols and standard operation procedures, particularly for scenarios that do not occur very often.

The country is in a good position to fill many of the gaps with modest investment. This report may be used as leverage to engage partners in a dialogue to develop a plan to achieve health security and IHR implementation. This responsibility lies not only with the Government of Jordan but equally with its international partners.

The External Evaluation Team extends its warmest regards to the national health authorities and all engaged sector representatives and teams for their support and openness during the mission, which reflect the spirit of the WHO Eastern Mediterranean Regional Committee Resolution EMRC 62.3 of independence and transparency. The strong support of the WHO Representative to Jordan and her office is highly appreciated.

UCDUSR0013497

Introduction

The joint assessment of International Health Regulations (IHR 2005) core capacities in the Hashemite Kingdom of Jordan was carried out from 28 August to 1 September 2016 using the World Health Organization (WHO) IHR Joint External Evaluation (JEE) tool. A multisector External Evaluation Team (EET) consisting of individuals selected for their technical expertise from a number of countries and advisors from international organizations conducted the assessment. The mission comprised site visits and discussions between the EET experts and their Jordanian peers representing all sectors relevant to the 19 technical areas of the IHR. This report presents jointly developed recommendations and priority actions that resulted from these discussions.

Jordan is to be commended for its strong commitment to meet the core capacities required by the IHR. Prior to the arrival of the EET, the Government of Jordan had completed a self-assessment based on rigorous preparatory work to compile data and information in the JEE assessment tool. The results of the self-assessment for all 19 technical areas were presented and discussed in detail with the EET at the start of external assessment. The EET and host country experts then participated in a series of facilitated discussions to jointly assess Jordan's strengths and best practices; areas that need strengthening or challenges; and scores. For each technical area, 3–5 priority actions were recommended, and supporting information provided to the EET.

The technical area scores are summarized below, followed by the discussion, indicators, strengths, challenges, scores, priorities, and key information documents within each of the 19 technical area sections.

Jordan is a constitutional monarchy. It is divided into 12 governorates that are informally grouped into three major regions: northern, central and southern. According to the November 2015 census, the population of Jordan is 9.5 million, with a per capita yearly income of US$ 12 162 based on purchasing power parity [International Monetary Fund data, 2016]. The budgetary allocation for health is 7.5% of gross domestic product (GDP), with 5% of which is spent on public health and 2.5% on private sector health care.

In general, the country has coped exceptionally well with the pressure on its health system as a consequence of a population increase of up to 1.5 million.

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Jordan scores

Capacities	Indicators	Score
National legislation, policy and financing	P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR	2
	P.1.2 The state can demonstrate that it has adjusted and aligned its domestic legislation, policies and administrative arrangements to enable compliance with the IHR (2005)	2
IHR coordination, communication and advocacy	P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR	2
Antimicrobial resistance	P.3.1 Antimicrobial resistance (AMR) detection	2
	P.3.2 Surveillance of infections caused by AMR pathogens	2
	P.3.3 Health-care associated infection prevention and control programmes	3
	P.3.4 Antimicrobial stewardship activities	1
Zoonotic diseases	P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens	3
	P.4.2 Veterinary or animal health workforce	3
	P.4.3 Mechanisms for responding to zoonoses and potential zoonoses are established and functional	2
Food safety	P.5.1 Mechanisms are established and functioning for detecting and responding to foodborne disease and food contamination	3
Biosafety and biosecurity	P.6.1 Whole-of-government biosafety and biosecurity system is in place for human, animal, and agriculture facilities	2
	P.6.2 Biosafety and biosecurity training and practices	3
Immunization	P.7.1 Vaccine coverage (measles) as part of national programme	5
	P.7.2 National vaccine access and delivery	5
National laboratory system	D.1.1 Laboratory testing for detection of priority diseases	4
	D.1.2 Specimen referral and transport system	4
	D.1.3 Effective modern point-of-care and laboratory based diagnostics	3
	D.1.4 Laboratory quality system	2
Real-time surveillance	D.2.1 Indicator- and event-based surveillance systems	3
	D.2.2 Interoperable, interconnected, electronic real-time reporting system	3
	D.2.3 Analysis of surveillance data	3
	D.2.4 Syndromic surveillance systems	4
Reporting	D.3.1 System for efficient reporting to WHO, FAO and OIE	3
	D.3.2 Reporting network and protocols in country	2
Workforce development	D.4.1 Human resources are available to implement IHR core capacity requirements	3
	D.4.2 Field Epidemiology Training Programme or other applied epidemiology training programme in place	4
	D.4.3 Workforce strategy	3

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Preparedness	R.1.1 Multi-hazard National Public Health Emergency Preparedness and Response Plan is developed and implemented	2
	R.1.2 Priority public health risks and resources are mapped and utilized	1
Emergency response operations	R.2.1 Capacity to activate emergency operations	2
	R.2.2 Emergency operations centre operating procedures and plans	1
	R.2.3 Emergency operations programme	3
	R.2.4 Case management procedures are implemented for IHR-relevant hazards	5
Linking public health and security authorities	R.3.1 Public health and security authorities, (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event	4
Medical countermeasures and personnel deployment	R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency	5
	R.4.2 System is in place for sending and receiving health personnel during a public health emergency	5
Risk communication	R.5.1 Risk communication systems (plans, mechanisms, etc.)	2
	R.5.2 Internal and partner communication and coordination	3
	R.5.3 Public communication	3
	R.5.4 Communication engagement with affected communities	2
	R.5.5 Dynamic listening and rumour management	2
Points of entry (PoE)	PoE.1 Routine capacities are established at PoE	3
	PoE.2 Effective public health response at PoE	1
Chemical events	CE.1 Mechanisms are established and functioning for detecting and responding to chemical events or emergencies	2
	CE.2 Enabling environment is in place for management of chemical events	2
Radiation emergencies	RE.1 Mechanisms are established and functioning for detecting and responding to radiological and nuclear emergencies	3
	RE.2 Enabling environment is in place for management of radiation emergencies	3

Score 1: no capacity; **score 2**: limited capacity; **score 3**: developed capacity; **score 4**: demonstrated capacity; **score 5**: sustainable capacity.

Note on scoring the technical areas of the JEE tool

The entire JEE process is a peer to peer review, i.e. a collaborative effort between host country experts and External Evaluation Team members, to seek agreement on all elements of the evaluation. In completing the self-evaluation, the first step in the process, host countries are asked to focus on providing information on their capabilities based on the indicators and technical questions included in the JEE Tool. The host country may score their self-evaluation or propose a score during the on-site consultation with the external team. Should there be significant or irreconcilable disagreement between or among the external team members and/or the host country experts, the EET Lead will decide on the final score and this will be noted in the final report, along with the justification for each party's position.

UCDUSR0013500

PREVENT

National legislation, policy and financing

Introduction

The IHR provide obligations and rights for States Parties. In some States Parties, implementation of the IHR may require new or modified legislation. Implementing legislation could serve to institutionalize and strengthen the role of IHR and operations within the State Party. It can also facilitate coordination among the different entities involved in their implementation.[1] In addition, policies that identify national structures and responsibilities as well as the allocation of adequate financial resources through the national budget or other mechanism are important.

Target

States Parties should have an adequate legal framework to support and enable the implementation of all of their obligations and rights to comply with and implement the IHR (2005). In some States Parties, implementation of the IHR (2005) may require new or modified legislation. Even where new or revised legislation may not be specifically required under the State Party's legal system, States may still choose to revise some legislation, regulations or other instruments in order to facilitate their implementation and maintenance in a more efficient, effective or beneficial manner.

Jordan level of capabilities

Jordan is well served by its Public Health Law No. 47 of 2008. Presenters in the evaluation are fully aware of the Law, including some of the relevant articles and many of the available powers to implement parts of the IHR, e.g.

- The mandate of the Ministry of Health (MoH) covers all health affairs in the Kingdom;
- Strong powers exist on management of communicable disease outbreaks;
- Article 23 appears to target support for compliance with IHR, epidemic surveillance measures, taking laboratory samples and quarantine;
- The Minister has powers to authorize other ministries or institutions to undertake some MoH responsibilities; and
- Broad regulation-making powers are covered.

Gaps in the Law include:

- Lack of a planning function;
- Lack of a comprehensive list of notifiable diseases, particularly some foodborne diseases;
- Potential weakness in the power to respond to communicable diseases, which are only triggered by a national event, and some relevant events may not be national;
- English translation of the Law appears to forbid use or import of generic drugs, which has some relevance to capability to respond to a public health emergency of international concern (PHEIC);

[1] Detailed guidance on IHR implementation in national legislation is available on the WHO website at www.who.int/ihr/legal_issues/legislation/en/index.html.

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- No evidence that Article 23 on IHR powers has been used for ministerial instructions on matters relevant to IHR implementation;
- No information was available on how various laws governing a national response to health events and emergencies might align with the powers under the Public Health Law, particularly those related to the Higher Council for Civil Defence (HCCD) and the National Centre for Security and Crises Management (NCSCM); and
- While the IHR requires compliance with human rights principles, the Public Health Law is not compliant with the Siracusa Principles which stipulate that state power should be the least restrictive and intrusive means available, and not arbitrary, unreasonable or discriminatory.

Recommendations for priority actions

- Review complementarity of Public Health Law No. 47 with laws establishing the HCCD and the NCSCM; in particular, adopt amendments to ensure that roles are aligned and triggers are clear for powers of the MoH, the Minister, the Higher Council and the National Centre.
- Share the laws needed to implement IHR with all relevant ministries and authorities so that a joint review of these may lead to the development of a multisectoral IHR implementation plan.
- Review the regulation-making powers in Public Health Law No. 47 to fulfil specific IHR-related needs, e.g.
  - an endorsed national health disaster plan;
  - intersectoral coordination protocols;
  - important guides such as that for biosafety and biosecurity; and
  - protocols for roles of various emergency operating centres across governorates and ministries and how these fit with the roles and functions of the Higher Council and National Centre.

Indicators and scores

P.1.1 Legislation, laws, regulations, administrative requirements, policies or other government instruments in place are sufficient for implementation of IHR

Score 2: Limited capacity.

Strengths/best practices

- Very good opportunities exist within Public Health Law No. 47 to implement the IHR, including the MoH health system mandate and powers to manage outbreaks of communicable diseases, enact regulations, work with other authorities and issue instructions (Article 23 references international conventions).
- There is a high level of awareness of this Law and many of the powers it provides.
- Laws establishing the Higher Council for Civil Defence and National Centre for Security and Crises Management may provide strong powers for a coordinated national response.

Areas that need strengthening/challenges

- There is no evidence as to how Public Health Law No. 47 law is used to implement the IHR.
- While Article 23 of the Law may allow the Minister to issue instructions related to implementation of the IHR, this needs to be put in practice.
- The review to align relevant laws across sectors and ministries needs to be completed. The available powers in these laws must be fine-tuned into a coherent and well understood matrix of responsibilities for a coordinated, multisectoral response to public health events as they escalate.

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- Awareness of available laws across relevant ministries and agencies and how they are aligned is lacking.

P.1.2 The state can demonstrate that it has adjusted and aligned its domestic legislation, policies and administrative arrangements to enable compliance with the IHR (2005)

Score 2: Limited capacity.

Strengths/best practices

- The MoH has reviewed its laws and has a strong domestic health sector law providing good legislative support for implementation of the IHR.

Areas that need strengthening/challenges

- All domestic legislation and policies across relevant sectors should be adjusted to ensure implementation of the IHR.
- There is a need to consolidate knowledge of the available multisectoral legal powers and responsibilities to make it easier to coordinated their use. A manual recording all relevant laws, regulations, governmental instructions and orders related to the IHR may assist in achieving this target.

Relevant documentation

An English translation of Public Health Law No. 47 was provided. Other laws were described and it is believed that the following laws exist, although they were not seen or analysed.

- Constitution of Jordan (The Basic Law). Official Gazette No. 1093 of 8/1/1952, last amendment in Official Gazette No. 5117 of 1/10/2011.
- Civil Law No. 43, 1976.
- Sanction Law No. 16, 1960 and amendments.
- Family Protection Law No. 6, 2008.
- Food and Drug Administration Law No. 31, 2003.
- Labour Law No. 8, 1996 and amendments.
- Social Security Law No. 19, 2001 and amendments.
- Environment Protection Law No. 52, 2006.
- Residence and Foreigners' Affairs Law No. 24, 1973.
- Traffic Law No. 49, 2008.
- High Health Council Law No. 9, 1999.
- Food Control Law No. 79, 2001.
- The Right of Persons with Disabilities No. 31.
- Medicines and Pharmacy Law No. 80, 2001.
- Clinical Studies Law No. 97, 2001.
- Food and Drug Administration Law No. 31, 2003.
- Law of Water Authority No. 18, 1988.
- Import and Export Law No. 21, 2001.
- Standards and Metrology Law No. 22, 2000.

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- Industry and Trade Law No. 18, 1998.
- Professional Licences Law No. 28, 1999.
- Custom Law No. 20, 1998.
- Narcotics and Psychotropic Substances Law.
- Social Security Act.
- Nuclear Energy Act.
- Transportation Law.
- Civil Aviation Law.
- Public Transport Act, 2006.
- Income and Sales Tax Law.

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IHR coordination, communication and advocacy

Introduction

The effective implementation of the IHR requires multisectoral/multidisciplinary approaches through national partnerships for effective alert and response systems. Coordination of nationwide resources, including the designation of an IHR National Focal Point (NFP) as a national centre for IHR communications is a key requisite for IHR implementation.

Target

The NFP should be accessible at all times to communicate with the WHO IHR Regional Contact Points and with all relevant sectors and other stakeholders in the country. States Parties should provide WHO with contact details of NFPs, continuously update and annually confirm them.

Jordan level of capabilities

Jordan declared its readiness to meet the obligations to IHR by 2014. Multisectoral IHR coordination committees exist since 2008. An assessment was carried out, and an action plan for IHR implementation is addressed within the binary Joint Program Review Mission (JPRM). Different committees have been established related to health events e.g. epidemics, Middle East respiratory syndrome coronavirus (MERS-CoV), Ebola. Meetings and decisions of the IHR coordination committees are documented and circulated to all stakeholders. Multisector involvement in infectious disease outbreak detection and response is documented by the Directorate of Communicable Diseases and directly shared with concerned sectors (Ministries of Agriculture, Environment, Health, and Interior, Jordan Food and Drug Administration (JFDA), etc.) through focal point emails.

Jordan complies with IHR notification to WHO and shares information on PHEIC in a timely manner.

The Directorate of Communicable Diseases in collaboration with WHO conducts training and advocacy programmes periodically, e.g. on chemical hazards in 2014 and for PoE in 2012, to strengthen capacities for IHR implementation.

Recommendations for priority actions

- Develop standard operating procedures (SOPs) and terms of reference for IHR NFP and coordinating stakeholders.
- Identify the roles and responsibilities of each stakeholder and sensitize incumbents on their roles for implementation of the IHR core capacities.
- Share the action plan for implementing the IHR core capacities.
- Ensure sustainable reporting and exchange of information through regular meetings, training and planning methods for IHR implementation programmes.
- Conduct regular exercises to test the effectiveness of the multisectoral coordination mechanism and the IHR NFP functions through real events or simulations.

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Indicators and scores

P.2.1 A functional mechanism is established for the coordination and integration of relevant sectors in the implementation of IHR

Score 2: Limited capacity. A coordination mechanism between relevant ministries is in place, and national SOPs or equivalent exist for the coordination between IHR NFP and relevant sectors.

Strengths/best practices

- A multisectoral committee ensures IHR implementation.
- Efficient reporting is carried out of PHEIC to WHO, the Food and Agriculture Organization (FAO) and the World Organisation for Animal Health (OIE).
- During a public health event there is generally good coordination among all the relevant sectors.

Areas that need strengthening/challenges

- Terms of reference, composition, and job description of the IHR NFP should be developed and the roles of all nominated focal points in the different sectors identified.
- Procedures and SOPs for IHR communication with WHO and stakeholders should be developed with clearly defined communication mechanisms and protocols.
- Advocacy and better planning between sectors are needed to recognize IHR as a national responsibility.
- Coordination between relevant ministries on PHEIC should be strengthened.
- Functional mechanisms for intersectoral collaboration between animal and human health surveillance units need to be reviewed and strengthened.

Relevant documentation

- Circulars for pandemics.
- Zika, MERS-CoV, H1N1.
- Minutes of meetings.
- Circulars that established the IHR multisectoral committee, the zoonotic and the epidemic committees.

UCDUSR0013506

Antimicrobial resistance

Introduction

Bacteria and other microbes evolve in response to their environment and inevitably develop mechanisms to resist being killed by antimicrobial agents. For many decades, the problem was manageable as the growth of resistance was slow and the pharmaceutical industry continued to create new antibiotics. Over the past decade, however, antimicrobial resistance (AMR) is growing at an alarming rate and is outpacing the development of new countermeasures capable of thwarting infection in humans. This situation threatens patient care, economic growth, public health, agriculture, economic security, and national security.

Target

Support work being coordinated by WHO, FAO, and OIE to develop an integrated and global package of activities to combat antimicrobial resistance, spanning human, animal, agricultural, food and environmental aspects (i.e. a One Health approach), including: a) Each country has its own national comprehensive plan to combat antimicrobial resistance; b) Strengthen surveillance and laboratory capacity at the national and international level following agreed international standards developed in the framework of the Global Action Plan, considering existing standards and; c) Improved conservation of existing treatments and collaboration to support the sustainable development of new antibiotics, alternative treatments, preventive measures and rapid, point-of-care diagnostics, including systems to preserve new antibiotics.

Jordan level of capabilities

The Government has recognized AMR as a major threat to the people's health and development. Despite the fact that many of the components needed for AMR surveillance exist, additional work is required to develop a national AMR detection and surveillance system capable of generating quality data for evidence-informed national policies, strategies and plans. There is willingness at the national and provincial levels to establish such a system. Hospital laboratories are capable of performing AMR testing for important pathogens, for which there is an urgent need to standardize laboratory methods and interpretations metrics.

- Programmes for antimicrobial stewardship, surveillance, prevention and control of health care-associated infections (HCAI) are limited to certain tertiary care and universities hospitals. A multidisciplinary national AMR steering committee led by the MoH secretary is expected to have wide regulatory and technical authority. There is a nationwide shortage of qualified infection control, infectious diseases specialists and medical microbiologists.

Recommendations for priority actions

- Activate and empower the national AMR steering committee to develop a national action plan to address detection and surveillance in line with WHO Global Action Plan for influenza vaccines.
- Implement a national programme to oversee infection prevention and control activities in public and private health-care facilities.
- Develop a national antimicrobial stewardship programme that involves the human and animal sectors.
- Strengthen infrastructure of diagnostic labs in public and animal health sectors and standardize antibiotic sensitivity testing and interpretation.

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Indicators and scores

P.3.1 Antimicrobial resistance detection

Score 2: Limited capacity. A National plan for detection and reporting of priority AMR pathogens has been approved.

Strengths/best practices

- Several public, private and university hospital laboratories are able to conduct manual and automated AMR testing. Data are mainly used to guide clinical decisions.
- Recently, a ministerial decree was issued to form a multidisciplinary multisector committee to address AMR, although its terms of reference and membership are yet to be approved.
- The Central Public Health Laboratory (CPHL) receives presumptive multidrug bacterial isolates from public and private institutions and conducts phenotypic confirmatory testing when needed.
- The mycobacteria lab at the National Tuberculosis Programme performs molecular antimicrobial sensitivity tests on clinical isolates referred form all over the country.

Areas that need strengthening/challenges

- AMR testing and interpretation methods are not standardized.
- Biosafety in some hospital microbiology labs is not adequately addressed, e.g. manipulation of Brucella culture in less than biosafety level (BSL)-2 biological safety cabinets.
- No systematic AMR testing is performed on animal samples.

P.3.2 Surveillance of infections caused by AMR pathogens

Score 2: Limited capacity. A National plan for surveillance of infections caused by priority AMR pathogens has been approved.

Strengths/best practices

- Some hospitals collect and monitor data on the resistance patterns of important pathogenic bacteria. Antibiograms are generated and shared on occasion.
- In collaboration with the Naval Medical Research Unit, the country conducted a three-year survey (2012–2015) of selected pathogens from eight intensive care units, the results of which are being analysed.
- Drug-resistant tuberculosis (TB) is monitored by the national TB programme.

Areas that need strengthening/challenges

- Capacity to report and share AMR testing is not widely available.
- Securing adequate human capacity and laboratory supplies are challenges for both the public and private sectors.
- There is a lack of standardized AMR testing and interpretation methods.

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P.3.3 Health care-associated infection prevention and control programmes

Score 3: Developed capacity. Designated facilities are conducting some HCAI programmes.

Strengths/best practices

- Public and private hospitals visited had a functional infection prevention and control programme.
- Total and device-related HCAIs are monitored in some hospitals.
- Hand hygiene compliance is monitored in some hospitals, especially in high risk areas. Feedback on performance is shared with relevant departments and individuals.
- Infection prevention bundles for selected HCAIs are implemented in some hospitals.
- Medical waste, environmental hygiene and sterilization of surgical equipment are supervised by infection prevention and control programmes in some hospitals.

Areas that need strengthening/challenges

- The ratio of infection control professionals to patients is suboptimal. There is no clear career pathway for infection control professionals, and structured training opportunities are scarce.
- Hospital directors do not chair the infection control committee. Administrative support to infection control activities needs to be enhanced.
- Financial constraints and inadequate human resource capacity prevent the full adoption of HCAI prevention bundles.
- Definitions of HCAIs and their reporting mechanisms are not standardized at the national level.

P.3.4 Antimicrobial stewardship activities

Score 1: Limited capacity. There is no national plan for antimicrobial stewardship activities.

Strengths/best practices

- Some hospitals, especially in the private sector and in universities, practice antimicrobial stewardship activities.
- Antimicrobial stewardship is expected be an integral part of the planned national AMR steering committee terms of reference.

Areas that need strengthening/challenges

- Awareness of antimicrobial stewardship is generally low even among health-care providers. Advocacy and knowledge dissemination is needed.
- AMR in the animal sector is not systematically detected or monitored.
- Regulations to monitor and control the use of antibiotics in the human and animal sectors are not adequately enforced.

UCDUSR0013509

Zoonotic diseases

Introduction

Zoonotic diseases are communicable diseases and microbes spreading between animals and humans. These diseases are caused by bacteria, viruses, parasites, and fungi that are carried by animals; insect or inanimate vectors may be needed to transfer the microbe. Approximately 75% of recently emerging infectious diseases affecting humans are of animal origin; approximately 60% of all human pathogens are zoonotic.

Target

Adopted measured behaviours, policies and/or practices that minimize the transmission of zoonotic diseases from animals into human populations.

Jordan level of capabilities

Concern over zoonoses is high in Jordan as the increasing density of human populations resulting from the ongoing regional crisis may lead to hotspot areas and increased interaction with ecosystems that are untouched in the country. The current conflict facilitates human–livestock–wildlife interaction, putting humans and animals at risk of infection with zoonoses. Transmission is heightened by a lack of knowledge on zoonoses and consumption of unpasteurised animal products.

Jordan has identified many zoonotic diseases of importance, which need to be prioritized. Those of greatest public health concern based on ministerial and donor interest include brucellosis, MERS-CoV, cutaneous leishmaniasis, rabies, anthrax and avian influenza. According to local sources, cutaneous leishmaniasis has increased following the regional refugee crisis. Given the increasing number of outbreaks of avian influenza in the western part of Asia, there is a potential risk of its introduction into Jordan, especially through smuggled birds.

The public health system reports zoonotic diseases through the Integrated Disease Surveillance System that has an immediate and a weekly reporting schedule. The animal health sector reports zoonotic diseases on an immediate, weekly and monthly basis. Both systems have elements of event-based reporting, although they are not well established. Routine reporting of zoonotic diseases from both sectors also requires improvement.

Zoonoses of greatest national public health concern are included in the national surveillance system, which covers all health districts with daily and weekly reports. In the animal health sector, however, active surveillance exists only for brucellosis and MERS-COV and passive surveillance for brucellosis, avian influenza, anthrax, and rabies. Capacity gaps in the animal health sector affect zoonoses detection, real-time surveillance (epidemiology and lab capacities) as well as workforce and resources.

Information sharing among animal and public health sectors in the event of zoonotic outbreaks is on a case-by-case basis without an organized coordination mechanism. The One Health approach does not exist and the notification system is not coordinated, a major limiting factor for detecting and preventing the emergence of a PHEIC through real-time surveillance. In view of the above, WHO has recently led many stakeholders to start sharing information and participate in joint events to facilitate the integration of sectors around animal–human–wildlife–ecosystems health.

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Jordan has a good national Disaster Risk Reduction Centre. The National Committee chaired by the Prime Minister meets on an ad hoc basis in case of disasters, including public health emergencies if they are declared of national concern.

Recommendations for priority actions

- Strengthen workforce and capacity of animal health sector through continuing education, training and recruitment of more veterinary officers
- Establish a robust surveillance and reporting system (from paper-based reporting to digital platforms) for major zoonotic diseases
- Develop national preparedness and response plan (expedite One Health approach through setting up Steering Committee and Technical Working groups, joint investigations, etc.)
- Ensure multisectoral coordination and SOPs for response (establish formal mechanism for information sharing between animal and human health sectors and linkages between laboratories to leverage on available expertise and diagnostic capacities).

Indicators and scores

P.4.1 Surveillance systems in place for priority zoonotic diseases/pathogens

Score 3: Developed capacity.

Strengths/best practices

- Functioning ad hoc collaboration and exchange of information is in place for multisectoral responses in case of events of public health concern.
- Disease reporting is obligatory for both human and animal health sectors with daily, weekly or monthly reports received at the national level for priority zoonotic diseases (a website is used for reporting by the public health sector).
- Surveillance systems are in place but are mostly passive and indicator-based, except for specific diseases where active surveillance is employed (e.g. avian influenza, brucellosis and MERS-CoV).
- A well-established public health laboratory provides the necessary diagnostic services for zoonosis and other diseases; and a central animal health laboratory provides these services for animal diseases including selected zoonoses.
- Donor-supported active, event-based surveillance occurs in the animal health sector for selected zoonoses.
- A contingency plan is available for preparedness and response in case of avian Influenza outbreaks.

Areas that need strengthening/challenges

- Zoonotic disease reporting is low, particularly in the animal health sector; surveillance systems should therefore be enhanced to enable interoperability and exchange of data among animal–human–wildlife–ecosystems systems on a real-time basis for effective and timely response.
- Capacity is needed to capture information such as rumours and media reports on zoonotic events of potential risk to public health, with a mechanism for collecting and sharing data quickly: electronic reporting, particularly in the animal sector, would address underreporting and data management issues.

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- A critical mass of skilled workforce for surveillance and response to zoonoses should be maintained in key sectors.
- The zoonotic disease list should be prioritized, and a national control plan created for all zoonoses.
- Laboratories do not share information or reports; linkages should be established between public health and animal health laboratories for real-time sharing, which may require changes in regulations and/or authorizations.

P.4.2 Veterinary or animal health workforce

Score 3: Developed capacity.

Strengths/best practices

- Qualified veterinarians work for the animal health sector.
- Jordan University of Science and Technology (JUST) trains animal health professionals to be quality veterinary doctors and specialized graduates at Master of Veterinary Science level in various veterinary fields.
- A national zoonotic committee exists, although it needs to be activated and operationalized.

Areas that need strengthening/challenges

- Jordan's animal health workforce is less than half the subnational level as there has been a high turnover of skilled veterinarians to Gulf Cooperation Council countries. The country should therefore consider recruiting additional human resources, as well as laboratory technicians, at that level.
- In-service training should be provided on epidemiology, disease control, surveillance and the One Health concept, including tools to support outbreak investigation procedures. For example, veterinary officers might be included in Jordan's Applied Field Epidemiology Training Programme (FELTP), and in continuing animal health education in coordination with JUST to bridge this gap.

P.4.3 Mechanisms for responding to zoonoses and potential zoonoses are established and functional

Score 2: Limited capacity.

Strengths/best practices

- A contingency plan exists for avian Influenza in the animal health sector.
- Jordan has organized the first One Health stakeholder meeting with the support of WHO, paving the way for the formulation of a national One Health strategic plan.
- The National Disaster Management policy and guidelines available at all levels of Government are an opportunity to expedite the One Health approach.
- The country office of the FAO Emergency Centre for Transboundary Animal Diseases, when opened in Jordan, will support the Global Health Security Agenda and the One Health agenda.

Areas that need strengthening/challenges

- Jordan has no formal national plan for major zoonotic diseases.
- Health teams from different sectors need to participate in real zoonotic events or joint exercises for preparedness, e.g. for in avian influenza and MERS-CoV.
- Memoranda of understanding are needed between the animal and human health and the ecosystem

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sectors to streamline joint activities. Regular meetings may facilitate information sharing among health-related sectors.

- Legislation and regulations in the human and animal health sectors need to be updated to reflect the One Health approach.
- Coordination, advocacy and communication on the One Health agenda should be established across different sectors. To achieve this, a One Health Coordinating Unit could be chaired by a Ministerial level and housed within the Disaster Risk Reduction Centre. The coordinating Unit would act as the Secretariat to a higher level One Health Steering Committee that would guide the implementation of One Health activities through technical working groups.
- Guidelines at subnational level for disaster management need to be elaborated to address specific requirements for the health sector in general, and zoonoses in particular.

Relevant documentation

- OIE-PVS Evaluation report of the veterinary services of Jordan.
- Avian Influenza Emergency Preparedness and Response Plan.
- Effects of disease on public health.
- Poultry sector in Jordan.
- Socioeconomic impact of avian influenza risks in Jordan.
- Law and regulations that relates to zoonoses.
- Surveillance of animal diseases in Jordan.
- Control strategy.
- Early notification system.
- Chain of command.
- Protocols for emergency preparedness in case of outbreaks.
- Emergency rooms: central.
- Staff in emergency rooms.
- Emergency rooms: local.
- Laboratory readiness.

UCDUSR0013513

Food safety

Introduction

Food and waterborne diarrhoeal diseases are leading causes of illness and death, particularly in less developed countries. The rapid globalization of food production and trade has increased the potential likelihood of international incidents involving contaminated food. Identification of the source of an outbreak and its containment are critical for control. Risk management capacity with regard to control throughout the food chain continuum must be developed. If epidemiological analysis identifies food as the source of an event, based on a risk assessment, suitable risk management options that ensure the prevention of human (or further) cases need to be put in place.

Target

States Parties should have surveillance and response capacity for food and waterborne diseases' risk or events. It requires effective communication and collaboration among the sectors responsible for food safety and safe water and sanitation.

Jordan level of capabilities

Food safety is a priority in Jordan. To be safe for human consumption, food needs to pass proper production, processing, distribution, preparation, storage and handling. Hazards can occur at any stage of the supply chain and hence controls are essential to avoid the adverse health effects and economic consequences of foodborne illness, injury, and food spoilage. Adequate human resources for food safety controls and investigation of foodborne disease outbreaks and response should be trained, and focal points identified for food safety, animal health and key laboratories to test clinical and/or food samples collected during field investigations.

The country should establish a functioning communication mechanism among food safety stakeholders, including the sharing of laboratory findings. This is particularly important for rapid information exchange during investigations of suspected foodborne disease outbreaks. In addition, a risk profiling of food safety problems would help identify opportunities for authorities to implement appropriate risk management strategies. While the JFDA serves as a regulatory body, the food control system is fragmented across different governmental institutions. Food safety players include the Directorates of Plant Health and Animal Resources (Ministry of Agriculture), and the Jordan Atomic Energy Commission. Other stakeholders include the MoH, municipalities, Ministry of Environment, Aqaba Special Economic Zone Authority, and the Jordan Standard and Metrology Organization. Coordination between the focal points of these stakeholders, in case of food safety events, communication occurs via email and phone calls.

A foodborne surveillance system is implemented by JFDA in all regions, although the number of food inspectors is limited. The Food Law serves as regulation and a number of guidelines ensure its effective enforcement. Jordan has trained food inspectors who conduct inspections using risk-based food inspection guidelines. Food safety hazards are mainly associated with microbial contamination of food and water. The influx of refugees and low level of awareness of food safety issues are important factors. Pesticide residues, additives and aflatoxins have also been identified as chemical hazards for food safety.

Training was recently held by the MoH and the Eastern Mediterranean Public Health Network (EMPHNET). Food safety problems are analysed by a technical committee that meets on a weekly basis, and by a higher level committee that meets monthly. Information between focal points is shared according to Food Law 30/2015 and memoranda of understanding between sectors.

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Recommendations for priority actions

- Improve food safety inspections and control: electronic inspection, tracing and recalls.
- Amend the food poisoning manual, including foodborne notifiable diseases, to fill reporting gaps.
- Develop a risk-based surveillance system for food exposure to chemicals.
- Develop an interactive reporting system as well as a functional network among focal points.
- Launch awareness programmes targeting consumers and food handlers.

Indicators and scores

P.5.1 Mechanisms are established and functioning for detecting and responding to foodborne disease and food contamination

Score 3: Developed capacity.

Strengths/best practices

- JFDA is the National Codex Contact Point and the food standard-setting body recognized by the International Organization for Standardization (ISO).
- Jordan has good laboratory capacity to test for microbial hazards, heavy metals, and pesticides. Laboratory capacity for veterinary drug residues is developing. Although laboratories are not linked; 17 tests are accredited.
- A foodborne surveillance system and guidelines for investigation and control of foodborne diseases are in place. Inspections use relevant regulations and risk-based guidelines.
- Jordan is a member of the International Food Safety Authorities Network (INFOSAN) and OIE (the INFOSAN focal point and the OIE delegate participate regularly in international meetings).
- JFDA and stakeholders review active and passive surveillance programmes every six months.

Areas that need strengthening/challenges

- Intersectoral coordination among food safety players needs to be improved with strong functional links.
- There are no regulations for allergens in food, antibiotic resistance, or pesticide residues.
- Joint exercises on foodborne emergencies would enable teams to act immediately to risks or recalls.
- Food and laboratory information management systems should be Implemented as a tool to share information among sectors.
- Laboratory capacity should be upgraded with new technologies and diagnostics.
- Food safety awareness should be promoted among stakeholders and the public in general.

Relevant documentation

- Agriculture Law and Agreement.
- Food Law.
- Food Poisoning Manual.
- Jordan Customs Memorandum.
- Jordan Institute for Standard and Meteorology.

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- Ministry of Social Development agreement.
- Public Health Law.
- Surveillance Programme.
- Notifiable disease list.

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Biosafety and biosecurity

Introduction

Working with pathogens in the laboratory is vital to ensure that the global community has a robust set of tools –such as drugs, diagnostics, and vaccines – to counter the ever-evolving threat of infectious diseases. Research with infectious agents is critical for the development and availability of public health and medical tools that are needed to detect, diagnose, recognize, and respond to outbreaks of both natural and deliberate origin. At the same time, the expansion of infrastructure and resources dedicated to work with infectious agents have raised concerns regarding proper biosafety and biosecurity measures to protect researchers and the community. Biosecurity is important to secure infectious agents against those who would deliberately misuse them to harm people, animals, plants, or the environment.

Target

A whole-of-government national biosafety and biosecurity system is in place, ensuring that especially dangerous pathogens are identified, held, secured and monitored in a minimal number of facilities according to best practices; biological risk management training and educational outreach are conducted to promote a shared culture of responsibility, reduce dual use risks, mitigate biological proliferation and deliberate use threats, and ensure safe transfer of biological agents; and country-specific biosafety and biosecurity legislation, laboratory licensing, and pathogen control measures are in place as appropriate.

Jordan level of capabilities

Biorisk management (BRM) or biosafety and biosecurity processes are under development in Jordan. No specific legislation exists, although sections of the Public Health Law, and occupational health protection legislation address related issues. Different stakeholders are working on matters related to BRM and implementation of institutional processes from their own perspectives. A partial inspection of MoH hospital laboratories revealed lacunae in supervision for BRM implementation.

Many stakeholders work with microbiological analyses, i.e. the Ministries of Agriculture, Environment, and Health; Royal Medical Services (RMS); Royal Scientific Society; Public Security Directorate; JUST/PHBC and other universities; General Directorate of Civil Defence; and JFDA.

A very useful development is the recent publication of National Guidelines on Biorisk Management by the MoH which, if universally implemented, could substantially advance technical capacity in this area.

Recommendations for priority actions

- Finalize, comprehensive national biosafety and biosecurity legislation, including for laboratory licensing.
- Develop a national strategy and plan of action to implement the BRM guidelines, including legislation to ensure they are enforced.
- Enhance BRM coordination at the national level.
- Reduce the number of facilities that store or process dangerous pathogens and toxins through an inventory; and install and monitor pathogen control measures such as standards for physical containment, operational handling and failure reporting systems.

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Indicators and scores

P.6.1 Whole-of-Government biosafety and biosecurity system is in place for human, animal, and agriculture facilities

Score 2: Limited capacity. Some, but not all, elements of a biosafety and biosecurity system are in place.

Strengths/best practices

- National Biorisk Management guidelines have been developed.
- The MoH has been designated biorisk management coordinator for Jordan, and a national BRM committee has recently been formed.
- There is political commitment to nominate a BRM officer at the level of Laboratory Directorate, Hospital and Central Laboratory; and to amend the by-law licensing private labs to designate a BRM officer.

Areas that need strengthening/challenges

- A BRM system should be fully developed at national level, and the BRM concept institutionalized.
- The number of facilities processing or storing dangerous pathogens and toxins should be minimized, and diagnostic interventions should avoid culturing such pathogens.
- Oversight, monitoring and enforcement mechanisms should be put in place for BRM.

P.6.2 Biosafety and biosecurity training and practices

Score 3: Developed capacity. A training programme on biosafety and biosecurity is being implemented with common curricula at some facilities that maintain or work with dangerous pathogens and toxins. A train-the-trainers programme for biosafety is under development along with sustained academic training for those who work with dangerous substances.

Strengths/best practices

- A well-developed BRM training programme is in place.
- BRM officers have been nominated, trained and designated in all nine MoH hospital labs, central labs in governorates and RMS.

Areas that need strengthening/challenges

- The high staff turnover should be addressed.
- Biosafety and biosecurity should be included in different health-care curricula to build a culture among future health-care workers and research centres.

Relevant documentation

- IHR Assessment Mission Jordan Report, 2014.
- Jordanian Guidelines on Biorisk Management, 2016.

UCDUSR0013518

Immunization

Introduction

Immunization is one of the most successful global health interventions and one of the most cost-effective ways to save lives and prevent disease. Immunizations are estimated to prevent more than 2 million deaths a year globally.

Target

A functioning national vaccine delivery system—with nationwide reach, effective distribution, access for marginalized populations, adequate cold chain, and ongoing quality control—that is able to respond to new disease threats.

Jordan level of capabilities

The national EPI programme was established in 1979, targeting infants with five antigens (Bacillus Calmette–Guérin (BCG); diphtheria, pertussis and tetanus (DPT); and oral poliovirus vaccine (OPV)). Today, the programme covers 11 antigens – BCG, DPT, hepatitis B, *Haemophilus influenzae* type b, OPV/inactivated polio vaccine, measles, mumps and rubella, and rotavirus). Other target population groups will be integrated in the programme, such as schoolchildren up to the age of 15 years, women of childbearing age, pilgrims (for influenza and meningitis), health-care workers (influenza and hepatitis B) and other high-risk groups.

Immunization in Jordan is mandatory for all target populations and vaccination cards are mandatory for school entry. These are provided free of charge, regardless of nationality. EPI has been fully financed by the Government, except for some vaccination campaigns with contributions from WHO, the United Nations Children's Fund (UNICEF) and other partners.

The programme has built a solid vaccine management system. A self-procurement mechanism covers all vaccines including those for the private sector, supported by a strong national regulatory authority and good surveillance systems for vaccine-preventable diseases (VPD) and adverse events following immunization (AEFI). Both the EPI monitoring and VPD surveillance systems meet the recommended performance standards, as confirmed by independent reviews, assessments and surveys. A robust cold chain system covers all administrative levels and secures continuous availability and quality of vaccines to all vaccination points in the country (no vaccine shortages have been reported for at least 10 years).

Routine immunization services are delivered largely through fixed sites – 537 across the country, including those of the MoH and the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) – as well as through outreach sessions to cover remote areas. In addition, EPI implements frequent vaccination campaigns for polio and measles as part of its national VPD control, elimination and eradication strategy. Focused multi-antigen campaigns to improve population immunity are also carried out, particularly in high-risk groups (nomads, gypsies, refugees). Regular health education and population awareness activities with pre-campaign intensification have resulted in strong population demand and trust in the national EPI programme.

The programme operates through dynamic annual action plans that are in line with the global and regional goals and strategies (e.g. WHO's Global Immunization Vision and Strategy and Global Vaccine Action Plan 2011–2020), but has never established a multi-year plan.

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EPI benefits from an active National Immunization Technical Advisory Group that meets regularly to advise on the policy, strategy, and progress towards the programme goals. As a result, very high vaccination coverage rates have been achieved at national level (99% and 94% with the third dose of DPT and the first dose of measles-containing vaccine respectively in 2015, according to WHO and UNICEF estimates), and in almost all districts and population groups (figures confirmed by coverage surveys). The incidence of VPDs thus decreased drastically to reach zero polio cases (sustained since 1995), zero maternal and neonatal tetanus cases (sustained since 2006) as well as zero measles cases for three consecutive years (2009–2011).

The programme was recently challenged by a significant influx of refugees (around 1.5 million), a large proportion of whom live among the Jordanian population across the country. Of the 120 confirmed cases of measles during the outbreak in 2013, the majority were among immigrants. An energetic vaccination campaign targeting all persons aged 6 months to 19 years living in the country, regardless of nationality, was immediately conducted and succeeded in lowering measles incidence to 20 cases in 2014 and zero cases in 2015.

Thanks to the strong immunization system, together with committed political leadership and close coordination with WHO, UNICEF, the United Nations High Commissioner for Refugees nongovernmental organizations and other partners, the programme was able to handle the challenge of the refugee influx through a revision of the national plan, and provision of free vaccines to all refugees. The cold chain was upgraded and the vaccine delivery strategy revised to include regular mandatory vaccination sessions in refugee camps and at frontier areas, as well as for refugee children living within the Jordanian community.

Recommendations for priority actions

- Update the national strategy to make sure all identified high-risk groups in hard-to-reach areas (nomads and gypsies) as well as all refugees are integrated into responsible-area vaccination micro-plans.
- Conduct staff training on identifying underserved populations including refugees and revising respective vaccination micro-plans to implement the Reaching Every Community strategy.
- Sustain the vaccine management achievements through a cold chain inventory and equipment renewal strategy, and introducing the WHO Effective Vaccine Stock Management tool.
- Develop a costed EPI multiyear action plan, based on the WHO tool, in collaboration with partners and stakeholders to sustain government commitment and EPI achievements; and ensure it is endorsed by the MoH and Ministry of Finance.
- Adapt the capabilities established for EPI programmes such as polio to support general immunization activities.

Indicators and scores

P.7.1 Vaccine coverage (measles) as part of national programme

Score 5: Sustainable capacity.

Strengths/best practices

- The national policy is supported by a public health law and high government commitment.
- National financing is 100% except for some vaccination campaigns (partner contributions).
- Vaccination is mandatory for all target populations living in the country regardless of nationality.
- The up-to-date national immunization schedule is in line with the Global Vaccine Action Plan 2009–2011.

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- The solid vaccine procurement and management system has had no vaccine shortage for at least 10 years at all administrative levels.
- The mixed routine vaccination delivery strategy, supported by accelerated or VPD campaigns, are able to reach every corner of the country.
- The robust monitoring, evaluation and surveillance programme has high performance indicators.
- A well-functioning National Immunization Technical Advisory Group exists.
- High routine immunization coverage figures are sustained at national and district levels and population groups (supported by surveys and WHO and UNICEF validation tools).
- The EPI system has demonstrated capacity to handle sudden increases in the target population.

Areas that need strengthening/challenges

- Programme capacity (financial, human and logistical) is overstretched by the high number of refugees, in particular means of transport to ensure smooth and regular mobile vaccination activities.
- The many refugees distributed among the general population needs to be identified for integration into the vaccination programme and VPD surveillance system.
- Refresher training is needed for all EPI staff on identifying the unreached and low vaccination coverage pockets, and developing adequate micro-plans to reach them on regular basis (Reaching Every Community strategy).
- Delays should be addressed in implementing the National Immunization Technical Advisory Group decision relating to pneumococcal conjugate vaccine introduction.
- A multi-year plan should be developed and costed.

P.7.2 National vaccine access and delivery:

Score 5: Sustainable capacity.

Strengths/best practices

- A well-functioning vaccine self-procurement system exists.
- The National Regulatory Authority is effective for all vaccines including those for the private sector.
- The cold chain capacity and vaccine management system are effective, with all districts supplied on a monthly basis and equipped with the necessary cold chain equipment.
- No vaccine shortages have occurred for the last 10 years in any administrative level.
- Recent expansion of the cold chain capacity has enabled temperature monitoring and alarm system at the national, subnational and facility levels; and walk-in cold rooms and 100 Ice-land fridges.

Areas that need strengthening/challenges

- Monitoring of vaccine stocks and quality throughout the various cold chain phases and in all administrative levels should be enhanced.
- There is no regular inventory or renewal strategy for cold chain equipment to ensure sustainability.
- No vaccine management assessment has recently been conducted.

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Relevant documentation

- Public Health Law.
- Immunization guidelines.
- AEFI and AFP surveillance guidelines.
- Vaccination monthly reports and instruction flipcharts.
- WHO vaccine preventable disease monitoring system; 2016 global summary http://apps.who.int/immunization_monitoring/globalsummary/countries?countrycriteria%5Bcountry%5D%5B%5D=JOR.
- WHO EMRO Measles Monthly Bulletin http://www.emro.who.int/vpi/publications/measles-monthly-bulletin.html.

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DETECT

National laboratory system

Introduction

Public health laboratories provide essential services including disease and outbreak detection, emergency response, environmental monitoring, and disease surveillance. State and local public health laboratories can serve as a focal point for a national system, through their core functions for human, veterinary and food safety including disease prevention, control, and surveillance; integrated data management; reference and specialized testing; laboratory oversight; emergency response; public health research; training and education; and partnerships and communication.

Target

Real-time biosurveillance with a national laboratory system and effective modern point-of-care and laboratory-based diagnostics.

Jordan level of capabilities

Jordan has a well-developed, tiered public health microbiology laboratory system complemented by laboratories in the private sector. Several reference laboratories exist at the national level, including one for water quality, the CPHL and a Central Virology Laboratory in Amman. The capital city also hosts a BSL-3 lab with advanced molecular diagnostics, and a laboratory each for TB, polio and malaria and bilharzia. The CPHL and its branches perform bacterial cultures, viral cultures, pulsed-field gel electrophoresis (PFGE) and operate a national influenza centre.

At the governorate level there are seven public health laboratories, and 32 government hospitals across the country have their own laboratories. In addition, basic laboratory capacity exists in 99 comprehensive medical centres and 190 primary health care centres.

Unlike governmental public health laboratories, private laboratories require a licence from the MoH. In addition to the services operating under the supervision of the MoH, many other stakeholders are active in the laboratory sector: RMS, universities, Royal Scientific Society, Jordanian Accreditation and Standardization), Ministry of Agriculture, Public Security Directorate, Ministry of Environment, General Directorate of Civil Defence, JFDA and the private sectors laboratory association.

Jordan can perform 10 core tests in a sustainable manner: for Brucella, cholera, Ebola, hepatitis, HIV, influenza and subtypes, MERS-CoV, polio, Rift Valley and West Nile. The entire population has access to laboratory tests through the public health system (by referral to upper tiers of the laboratory network). Only one accredited lab (ISO 15089) exists, and accreditation is not required for licensure. The criteria for licencing laboratories were not available for the EET. There is a scheme for quality control sample rounds (managed by the Laboratory Directorate under the MoH) but this only covers part of the diagnostic tests (bacterial identification and (drug) sensitivity testing, HIV and hepatitis serology), and only part of the laboratories participate in the rounds.

National guidelines are available for the selection, collection, preservation, packaging and transportation of microbiological samples. Transport of samples for referral to reference laboratories was estimated to be

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available for at least 80% of intermediate level/districts within the country for advanced diagnostics. There is national production/procurement of necessary media and reagents for performance of core laboratory tests.

While there is ad hoc information exchange between different laboratory arms of the public health system (i.e. experts in the different sectors contact each other when necessary), there is no systematic comparison of strains/properties of microbes isolated from humans, animals, food or the environment.

Recommendations for priority actions

- Improve coordination, information exchange and communication between human, food safety, veterinary and environmental laboratories.
- Upgrade quality control processes, seek accreditation for the central and other public health laboratories, and consider this as a requirement for licensing.
- Strengthen laboratory capabilities for infectious diseases important to the country (e.g. rabies, Q fever).

Indicators and scores

D.1.1 Laboratory testing for detection of priority diseases

Score 4: Demonstrated capacity. The national laboratory system is capable of conducting 5 or more of the 10 core tests.

Strengths/best practices

- There are well-equipped molecular, serology and bacteriology units in reference laboratories.
- Staff are well trained.
- Collaboration is good with international agencies (US Naval Medical Research Unit 3 and Centers for Disease Control and Prevention (CDC)).
- A National Laboratory Working Group has been established.

Areas that need strengthening/challenges

- Staff turnover is high.
- Postgraduate medical employees are scarce.
- Specialized vertical programme laboratories may usefully be merged into a larger comprehensive laboratory service.
- Auxiliary laboratory services are weak.

D.1.2 Specimen referral and transport system

Score 4. Demonstrated capacity. A system is in place to transport specimens to national laboratories from at least 80% of intermediate level/districts within the country for advanced diagnostics.

Strengths/best practices

- Instructions for sample transportation exist at national level.

Areas that need strengthening/challenges

- Specimen referral should be available throughout the country.

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D.1.3 Effective modern point-of-care and laboratory based diagnostics

Score 3. Developed capacity. Tier-specific diagnostic testing strategies are documented, but not fully implemented. The country is proficient in classical diagnostic techniques including bacteriology, serology, and PCR in select labs but has limited referral and confirmatory processes. It uses point-of-care diagnostics for priority diseases for the country, and at least one other priority disease. NB. strictly taken bedside point-of-care testing is not used, but rapid laboratory-based molecular tests are used.

Strengths/best practices

- Advanced molecular techniques are available at central reference lab level.

Areas that need strengthening/challenges

- Point-of-care testing should be considered for some diseases.

D.1.4 Laboratory quality system

Score 2: Limited capacity. National quality standards have been developed but there is no system to verify their implementation.

Strengths/best practices

- Participation in external quality assessment schemes in a limited number of countries.

Areas that need strengthening/challenges

- Not all laboratories participate in external quality assessment schemes.
- Laboratory licensing should be updated to require a quality management system, and ideally accreditation of key tests
- Licencing should be required by public health laboratories.

Relevant documentation

- IHR Assessment Mission Jordan Report, 2014.

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Real-time surveillance

Introduction

The purpose of real-time surveillance is to advance the safety, security, and resilience of the nation by leading an integrated biosurveillance effort that facilitates early warning and situational awareness of biological events.

Target

Strengthened foundational indicator- and event-based surveillance systems that are able to detect events of significance for public health, animal health and health security; improved communication and collaboration across sectors and between sub-national, national and international levels of authority regarding surveillance of events of public health significance; improved country and regional capacity to analyse and link data from and between strengthened, real-time surveillance systems, including interoperable, interconnected electronic reporting systems. This can include epidemiologic, clinical, laboratory, environmental testing, product safety and quality, and bioinformatics data; and advancement in fulfilling the core capacity requirements for surveillance in accordance with the IHR and the OIE standards.

Jordan level of capabilities

The country has reached reasonable capacities to detect events of significance for human and animal health as well as for other health security threats of concern. The main generic systems are indicator- and syndrome-based. A comprehensive generic list of notifiable diseases (laboratory confirmed or clinically diagnosed) is available with disease-specific case definitions. Enhancing indicator-based surveillance with an automated electronic notification system has boosted real-time surveillance and analysis capability.

The animal health subsector has active and passive surveillance and notification systems following OIE standards and reporting criteria, utilizing data collected for clinical diagnosis, through herd inspections or from outbreak management/control.

Jordan also has a number of sentinel-based surveillance systems within public health facilities that monitor the trend of specific diseases and any change in the circulating pathogens causing them, using a syndromic approach. Such sentinel surveillance systems, which capture both epidemiological and laboratory data in an integrated manner, exist for diarrhoea, hepatitis and sexually transmitted diseases.

Information and data are exchanged with the Ministry of Agriculture in the event of zoonotic outbreaks on a case by case basis only. The lack of an intersectoral electronic notification system is another major limiting factor for implementing real-time surveillance.

Recommendations for priority actions

- Consolidate a single platform notification system for all health hazards (human, veterinary, chemical, radiological, etc.) to replace the fragmented approach and ensure efficiency in early detection.
- Organize an event-based surveillance system to enhance the rapid capture of information about events of potential risk to public health.
- Improve the exchange of data with concerned bodies on a real-time basis and enhance the feedback system.
- Establish a multidisciplinary surveillance team from relevant entities to investigate events.

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Indicators and scores

D.2.1 Indicator- and event-based surveillance systems

Score 3: Developed capacity.

Strengths/best practices

- An indicator-based surveillance system for human health is functioning.
- The national infectious diseases surveillance guideline has recently been updated (2015) including the list of priority diseases, conditions and case definitions.
- Key information is exchanged between the human and animal health sectors for multisectoral responses to events of public health concern.
- Epidemiological surveillance reports are disseminated weekly on the official website.

Areas that need strengthening/challenges

- The surveillance system for zoonotic diseases and other hazards such as chemicals and radiation needs to be enhanced, and an electronic data sharing system initiated to enable exchange of data among sectors on a real-time basis for effective and timely response.
- A system for the rapid capture of information about events of potential risk to public health (rumours, media) should be set up with facilities to collect the data (facsimile, electronics, phone links).
- A system needs to be developed for data validation and quality assurance.
- A critical mass of public health officers skilled in surveillance and response for emerging diseases should be maintained.

D.2.2 Inter-operable, interconnected, electronic real-time reporting system

Score 3: Developed capacity.

Strengths/best practices

- An electronic reporting system for notifiable diseases has recently been implemented in public hospitals to which the private health entities and laboratories will be linked.
- Trained manpower exists for data collection and analysis.
- FETP fellows are involved in outbreak detection, investigation, and response.

Areas that need strengthening/challenges

- The electronic disease notification surveillance system needs to be expanded to cover all private hospitals and laboratories and to contain all health hazards including those of chemical radiation origin.
- A common electronic platform needs to be established between the animal and human health sectors for exchanging information on diseases of public health concern on a real-time basis.

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D.2.3 Analysis of surveillance data

Score 3: Developed capacity.

Strengths/best practices

- An electronic standardized form for collecting surveillance data is available.
- Data reporting is regular, albeit with delays, and ad hoc teams are in place to analyse data.
- The weekly epidemiological report is published on the MoH website.

Areas that need strengthening/challenges

- The capacity to analyse surveillance data on a real-time basis needs to be increased.
- A mechanism should be developed for sharing the laboratories' data with relevant ministries and agencies.

D.2.4 Syndromic surveillance systems

Score 4: Demonstrated capacity.

Strengths/best practices

- Syndromic-based surveillance systems exist for diarrhoea, hepatitis and sexually transmitted diseases, which demonstrates Jordan's capacity to establish and operate such a surveillance system in the event of any emerging health need.
- Sentinel influenza surveillance has been established in four hospitals (severe acute respiratory infections) and at four comprehensive health-care centres (influenza-like illness) with the ability to subtype influenza.

Areas that need strengthening/challenges

- The system remains somewhat fragmented; there is therefore a need for all efforts to be assessed and then implemented as an integrated strategy and system under a common platform. Challenges will include individual vertical programmes with different reporting frequencies and priorities.

Relevant documentation

- Surveillance guidelines.
- List of notifiable diseases.
- Food poisoning guideline.
- Circulars (Zika, Ebola, MERS-Cov).
- Emerging and re-emerging disease guidelines.

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Reporting

Introduction

Health threats at the human–animal–ecosystem interface have increased over the past decades, as pathogens continue to evolve and adapt to new hosts and environments, imposing a burden on human and animal health systems. Also, threats related to accidental or deliberate release of chemical, radiological and nuclear agents are of increasing concern. Collaborative multidisciplinary reporting on public health events reduces the risk of diseases and their international spread.

Target

Timely and accurate reporting of public health events according to WHO requirements and consistent coordination with FAO, OIE, IAEA and other relevant international organizations enhances the likelihood of rapid and coordinated response to these public health events, nationally and globally.

Jordan level of capabilities

The country has designated an HR NFP, which is operational. Focal points for OIE and INFOSAN are established under the Ministry of Agriculture. The International Atomic Energy Agency (IAEA) focal points are established under the Radiation Safety Department of the Energy and Minerals Commission and the Jordanian National Atomic Energy Commission.

An IHR multisectoral committee has been established by ministerial decree. It is headed by the primary IHR NFP person and includes representatives from the ministries of Agriculture, Environment, Health, and Transportation, JFDA, National Civil Aviation, Customs, Civil Defence, Ports Health Authority and ground crossing. The terms of reference of the Committee are not mentioned in the decree, although it is supposed to play a major role in coordination and communication between the IHR NFP and the respective ministries/ departments, and thus in the implementation of the IHR.

Information sharing related to zoonotic events or foodborne diseases from IHR NFP to OIE and INFOSAN focal points is in place (but not the reverse). However, it is neither based on written protocols nor supported by an information technology platform for the timely sharing of information.

Assessing the risk of national or PHEIC comes under the mandate of the MoH for infectious, zoonotic events and foodborne events in collaboration with the Ministry of Agriculture and JFDA. Assessing the risk of chemical and radiation events is the mandate of the Civil Defence through its teams at different administrative levels in collaboration with the Ministry of Environment and radiation commissions. Also, a national team (HAZMAT) supports assessment of the risk of chemical events; its role will be expanded to support radiation events as well.

Use of the decision instrument (Annex 2 of the IHR) applies only to infectious diseases. However, the instrument is not known to the sectors; hence notification of PHEIC to WHO is not followed. The country does have a system to facilitate the response to potential PHEIC in a coordinated manner through the Supreme Council for Civil Defence.

Recommendations for priority actions

- Develop a policy for notification of potential PHEIC for all reporting entities.

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- Improve understanding of WHO, OIE, and FAO requirements through multisectoral discussions.
- Conduct simulation exercises to test the capacity for early detection, risk assessment and timely (within 24 hours) reporting of events, particularly those related to events of chemical, radiation and unknown origin to WHO through the IHR NFP.
- Establish a mechanism (online portal) for the timely notification and information sharing of potential PHEIC among national stakeholders.

Indicators and scores

D.3.1 System for efficient reporting to WHO, FAO and OIE

Score 3: Developed capacity. The country has functioning focal points for IHR, FAO, OIE and IAEA. It is able to identify and report to WHO potential PHEIC, particularly those related to infectious, zoonotic and foodborne diseases or events; however there is limited capacity to maintain the 24 hours time frame, or to report public health events of chemical, radiation or unknown origin.

Strengths/best practices

- IHR NFP is established in the country with defined functions; focal points for FAO, OIE and IAEA are also available with clear terms of reference.
- An IHR multisectoral committee is in place.
- National laboratories have the capacity to confirm some pathogens, and international and reference laboratories are accessible for the confirmation of public health events.
- Jordan has access to international expertise to assist in assessing the risk of public health events of different origins.

Areas that need strengthening/challenges

- The fact that the IHR NFP has many responsibilities in addition to IHR, and the junior and unclear membership functions of the IHR multisectoral committee, affect the proper implementation of IHR capacities, particularly those related to identification of PHEIC and reporting to WHO.
- There are insufficient human resources within the MoH to support risk assessments for public health events of different origins, and lack of awareness of the decision instrument and its use among the non-health sector. This limits national capacity to identify and report PHEIC to WHO within 24 hours.

D.3.2 Reporting network and protocols in country

Score 2: Limited capacity. The country reports potential PHEIC to WHO and OIE for relevant zoonotic diseases. However, no established protocols or multisectoral coordination exist to respond to potential or real PHEIC.

Strengths/best practices

- Reporting requirements to WHO, OIE and IAEA are known to their national focal points.
- The Supreme Council for Civil Defence includes representation from different sectors with defined terms of reference to coordinate the response to emergencies including PHEIC.
- Civil defence through its teams and HAZMAT have the capacity to conduct initial risk assessments for emergencies including those related to chemical and radiation events.

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Areas that need strengthening/challenges

- IHR NFP is not a member of the different national coordination mechanisms, and hence has no access to information on public health events occurring in the country and coming from non-health origins.
- SOPs for joint investigations and response to public health events of non-health origin are not in place, which may affect a timely and coordinated response.
- The country does not have the capacity to report potential PHEIC from governorate to national level in a timely manner, particularly those related to non-health sectors. Also, protocols are not in place for the timely reporting of potential PHEIC to WHO and OIE.

Relevant documentation

- Ministerial decree on the IHR NFP and its functions.
- Ministerial decree on the IHR Multisectoral Committee.
- Public Health Law of 2008.
- Strategic Plan for the Higher Council of Civil Defence.

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Workforce development

Introduction

Workforce development is important to sustain a public health system by developing and maintaining a highly qualified public health workforce with appropriate technical training, scientific skills, and subject matter expertise.

Target

States Parties should have skilled and competent health personnel for sustainable and functional public health surveillance and response at all levels of the health system and the effective implementation of the IHR (2005).

Jordan level of capabilities

The Government of Jordan spends 7.6% of its GDP expenditure on health care, of which approximately 21% is spent on the workforce. The total expenditure on public health is 5% of GDP. The workforce expenditure includes training of physicians, veterinarians, nurses, paramedical staff (including laboratory technicians etc.). There are academic institutions, both public and private, across the country to provide basic and postgraduate professional training. The number of such institutions varies by governorate based on the availability of infrastructure.

The Government established the FETP in 1998 with the arrival of the first FETP resident advisor from CDC to develop human resources in field epidemiology and response. It has been functioning as a self-sustained MoH institution since 2008 and is currently located as a programme within the Directorate of Primary Healthcare Administration within the Communicable Diseases Director's office. Since its inception, FETP has trained 61 field epidemiologists: 59 physicians and 2 veterinarians. Today, 10 of the 12 governorates have FETP-trained field epidemiologists. Additionally, several graduates are located at the central level, occupying positions such as Director of Communicable Disease Control, Head of the National Cancer Registry, surveillance epidemiologists in the governorates, and other key posts. The Jordan FETP has also built capacity in the region by training residents from Iraq, Syrian Arab Republic, Yemen, and the West Bank and Gaza Strip.

The FETP has institutionalized weekly meetings to review epidemiology and surveillance data at the Directorate. Outbreaks and unusual events are detected, investigated and acted upon by the residents and graduates. The public health laboratory has been incorporated into the FETP curriculum and training and the public health laboratory personnel now fully participate in the weekly epidemiology and surveillance meeting.

The programme was instrumental in improving death notification and cause of death reporting, and mortality data are now analysed periodically. The programme assisted the institutionalization of the behavioural risk factor surveillance survey to better understand risk factors for chronic diseases.

The FETP has achieved the target of 1:200 000 population trained field epidemiologists. It intends to expand the training to include frontline public health workers by establishing a short-course (three months) frontline FETP at district level within the governorates. From the health-care workforce standpoint, according to MoH annual statistical data from 2015, there are currently, per 10 000 population, 22.2 physicians; 7.1 dentists; 12.7 pharmacists; 13.5 nurses; and 2 midwives. There are 6 medical colleges, 14 nursing schools (8 in the private sector and 6 in the public sector) and 30 paramedical training schools in Jordan.

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Recommendations for priority actions

- Develop clear strategies for all components of workforce capacities.
- Make FETP available for other government sectors such as JFDA.
- Ensure sustainability by working with other ministries, and asking those who participate to contribute resources to the overall programme.
- Start frontline FETP (3-month programme) at district level.

Indicators and scores

D.5.1 Human resources are available to implement IHR core capacity requirements

Score 3: Developed capacity. Multidisciplinary human resources are available at national and intermediate level.

Strengths/best practices

- Human resources are available in various disciplines (physicians, epidemiologists, biostatisticians, information systems specialists, veterinarians, social scientists, laboratory technicians/specialists and other public health personnel) trained in public and private sector institutions.
- Capacity is available both at national and governorate level to implement IHR core requirements.

Areas that need strengthening/challenges

- Funding constraints result in attrition of qualified public health professionals due to limited career opportunities. Turnover of experts is high and coordination is lacking among stakeholders.
- Technical capacities of all cadres need strengthening, not only at governorate but also at district level.
- The Government should allocate sustainable resources to introduce new positions within the government structure for various public health professional categories such as epidemiologists with a structured career ladder both at national and governorate levels across the country.

D.5.2 Field epidemiology training program or other applied epidemiology training programme in place

Score 4: Demonstrated capacity. Two levels of training are in place in Jordan: FETP (basic, intermediate, or advanced), and FELTP or comparable applied epidemiology.

Strengths/best practices

- FETP exists across the country, with 61 graduates. In addition to an advanced two-year programme, FETP is also offered at intermediate level.
- Partnership with other countries in the region to share FETP graduates during emergency events exists through EMPHNET. The programme has also helped FETP trainees from the Syrian Arab Republic, West Bank and Gaza Strip, and Yemen.

Areas that need strengthening/challenges

- FETP only targets the MoH and should cater for the public health workforce in other governmental institutions such as JFDA and agricultural sectors.
- Effective placement and utilization of FETP graduates in the field should be improved, to ensure a field epidemiologist in each district of the country.

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- Collaborative mechanisms should be developed at the international level.
- Frontline FETP should be established to train frontline workers at district level.

D.5.3 Workforce strategy

Score 3: Developed capacity. A health-care workforce strategy exists but is not regularly reviewed, updated or implemented consistently.

Strengths/best practices

- A well-established FETP exists in the MoH.
- Political commitment is assured for FETP sustainability.
- A network of academic institutions exists across the country.

Areas that need strengthening/challenges

- The health-care workforce strategy needs to be more comprehensive to include all sectors and should be reviewed, updated and implemented consistently.

Relevant documentation

- CDC FETP score sheet assessment report, 2011.
- Annual statistical data, Ministry of Health Jordan, 2015.

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RESPOND

Preparedness

Introduction

Preparedness includes the development and maintenance of national, intermediate and community/primary level public health emergency response plans for relevant biological, chemical, radiological and nuclear hazards. Other components of preparedness include mapping of potential hazards, the identification and maintenance of available resources, including national stockpiles, and the capacity to support operations at the intermediate and community/primary response levels during a public health emergency.

Target

The effective implementation of the IHR (2005) requires multisectoral/multidisciplinary approaches through national partnerships for effective alert and response systems. Coordination of nationwide resources, including the sustainable functioning of a National IHR Focal Point, which is a national centre for IHR (2005) communications, is a key requisite for IHR (2005) implementation. The NFP should be accessible at all times to communicate with the WHO IHR Regional Contact Points and with all relevant sectors and other stakeholders in the country. States Parties should provide WHO with contact details of NFPs, continuously update and annually confirm them.

Jordan level of capabilities

Jordan is susceptible to both natural and man-made disasters, which cause a significant loss of life, livelihoods and infrastructure, reversing development gains. Apart from being susceptible to epidemics and pandemics, the country is vulnerable to natural threats including floods, earthquakes and extreme heat. In addition, the country is hosting a high number of refugees, which places an extra burden on the health system.

The country has a multisectoral coordination mechanism, including the health system, to respond to emergencies, led by HCCD and NCSCM. The health system established the Crisis Management Unit (CMU) in 2008 which reports to the Minister of Health. Recently, an Emergency Operations Centre (EOC) Committee was formed encompassing representatives from different units of MOH. The EOC was established with CDC support, and WHO is providing support to make it functional. CMU has no mirror structure at governorate and district levels. However, crisis management focal points are assigned and trained at governorate level of the health system. Stronger leadership and additional human resources are required to scale up emergency preparedness and response. An all-hazards disaster risk assessment is also needed to generate the evidence base for national planning and policies.

Recommendations for priority actions

- Conduct a comprehensive health emergency risk assessment with a focus on vulnerability and capacity assessments while considering hazards identification and analysis, in collaboration with both intra- and intersectoral stakeholders.
- Review and update the multi-hazard national health emergency preparedness and response plan, and develop contingency plans to address the findings of the risk assessment. IHR core capacities should be incorporated into the plan. In addition, separate and additional SOPs should be established to activate various components of the plan.

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- Develop and pass appropriate national legislation prepared by the MoH to serve as a robust framework for operationalization of the multi-hazard national health emergency preparedness and response plan. This should also strengthen intra- and intersectoral coordination of health emergency management.

Indicators and scores

R.1.1 Multi-hazard National Public Health Emergency Preparedness and Response Plan is developed and implemented

Score 2: Limited capacity.

Strengths/best practices

- The country has drafted a multi-hazard national health emergency preparedness and response plan with technical support from the WHO Regional Office for the Eastern Mediterranean. Different intra- and intersectoral stakeholders participated in the planning process.
- Jordan has contingency emergency preparedness plans for important communicable diseases such as A(H1N1) that can be added to the national emergency plan.
- CMU organizes or participates in drills and exercise, one of the biggest of which was the Eager Lion exercise conducted by the military.

Areas that need strengthening/challenges

- The national emergency plan lacks an all-hazard, whole-health and multisectoral approach.
- The plan does not incorporate IHR core capacities, and the role of the IHR focal is not well defined.
- Risk communication, like many other functions of emergency management, is not well defined in the national emergency plan such as command and control, logistics, and telecommunication.
- The national emergency plan is a starting point, but needs to be legally endorsed, include other directorates of the MoH and other sectors, and needs to be well disseminated.

R.1.2 Priority public health risks and resources are mapped and utilized

Score 1: No capacity.

Strengths/best practices

- Different sectors have carried out hazard identification/assessment exercises.
- A situation analysis of MoH hospitals for mass casualty incidents and chemical, biological, radiological and nuclear (CBRN) incidents has been done by MoH and WHO.

Areas that need strengthening/challenges

- No comprehensive all-hazards risk assessment has been done in the health system.
- Risk assessments are mistaken for hazard assessments. Risk is a function of hazards probability and their impact which in turn are defined by vulnerability and capacity status.
- Risk assessment should precede, and feed into emergency planning.

Relevant documentation

- Public Health Law.
- Emergency Preparedness and Response Plan.

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- A(H1N1) plan.
- National Health Emergency Preparedness and Response Plan.
- Royal Medical Service Plan for Deployment of Field Hospitals.
- National Strategy for Security and Crises Management.
- Eight contingency plans developed by the National Centre for Security and Crises Management.
- Situation analysis of MoH hospitals for mass casualty incidents and CBRN incidents.

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Emergency response operations

Introduction

A public health emergency operations centre (EOC) is the hub for coordinating operational information and resources for strategic management of public health emergencies and emergency exercises. EOCs provide communication and information tools and services, and a management system during the response to an emergency or emergency exercise. They also provide other essential functions that support decision-making and implementation, coordination, and collaboration.

Target

Countries will have a public health EOC functioning according to minimum common standards; maintaining trained, functioning, multisectoral rapid response teams and "real-time" biosurveillance laboratory networks and information systems; and trained EOC staff capable of activating a coordinated emergency response within 120 minutes of the identification of a public health emergency.

Jordan level of capabilities

Emergency management mainly relies on the services provided by the National Civil Defence (NCD). This is an institution established in 1948 with full capacity to provide preparedness and response in disaster situations, and operates under the Ministry of Interior. The NCD also includes the management of ambulance services, and transportation of patients in an emergency and of patients with particular health needs.

In addition, the Defence Medical Corps (RMS) runs a considerable number of health facilities in the country, which are accessible to civilians. Within this institution, emergency response plans are in place and periodically tested. RMS is often involved in international missions, providing health-care services in emergency situations, including setting up field hospitals at short notice.

A fully equipped Public Health EOC has been officially opened but is not fully operational. The centre represents an opportunity for the MoH to increase its overall capacity to prepare and respond to emergencies. It could considerably enhance coordination among directorates of the MoH and collaboration with all other partners and sectors. In principle, the MoH EOC could operate as the link to the NCM. While the facility was inaugurated in 2014 with international support, it still lacks defined roles and responsibilities, staff, and full recognition within MoH departments. Therefore, the main challenge is to operationalize the Public Health EOC.

Recommendations for priority actions

- Engage the cooperation of all MoH departments to define the role and responsibilities of the Public Health EOC.
- Enhance coordination and collaboration of MoH and its Public Health EOC with the coordination structures of the HCCD and the NCSCM.
- Develop an EOC strategic plan that defines the EOC role, responsibilities and operations; and agenda of tests and drills of the emergency plan.

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Indicators and scores

R.2.1 Capacity to activate emergency operations

Score 2: Limited capacity.

Strengths/best practices

- Emergency response operations, including health, have been handled at all levels by NCD for decades and this institution has proven efficiency and experience. Plans and SOPs are in place and are regularly updated and tested. Ambulance services belong to the organizational plan of the NCD since 1979.

Areas that need strengthening/challenges

- The Public Health EOC at the MoH is under development and currently has no actual capacity to coordinate response actions. Despite the indicator score of 2, NCD staff have appropriate training in emergency management and can activate a response within 2 hours. However, they may have limited capacity for specific health issues of IHR concern and coordination with MoH departments is poor.
- As a requirement for IHR, the MoH Public Health EOC must be strengthened and its operations integrated with those of other players. The advantages of operating an EOC at MoH include promptness and efficiency in communicating and handling potential PHEIC.

R.2.2 Emergency Operations Centre operating procedures and plans

Score 1: Limited capacity. While the MoH Public Health EOC is not operational, this capacity is ensured by the NCD EOC whose capability is well established and could reach a higher score according to documentation provided and discussions held.

Strengths/best practices

- Benefits of the NCSCM could be significant. This new institution could coordinate all sectors for a more complete and integrated system of emergency preparedness and response. It should also formally request each relevant ministry to establish and operationalize a partner EOC.

Areas that need strengthening/challenges

- The Public Health EOC at the MoH must be activated, staffed and functional on a daily basis.
- All plans, work charts and SOPs should be finalized, endorsed and periodically tested.
- Forms, data collection and reporting templates, and mechanisms should be in place to manage, communicate and interact during PHEIC.

R.2.3 Emergency operations programme

Score 3: Developed capacity.

Strengths/best practices

- Functional exercises are conducted on a regular basis, particularly in concomitance with drills performed by either the NCD forces or RMS.

Areas that need strengthening/challenges

- It is important to make the Public Health EOC at the MoH fully operational, which will benefit the coordination and overall management of emergency operations, especially for IHR issues.

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R.2.4 Case management procedures are implemented for IHR relevant hazards

Score 5: Sustainable capacity.

Strengths/best practices

- Transportation of patients is correctly planned and carried out. This task falls mainly under the responsibility of the NCD, although in some cases, the transport facilities of the MoH or the Red Crescent may be involved. The transport of individuals with specific listed diseases (potentially highly infectious patients) is coordinated by MoH.

Areas that need strengthening/challenges

- The availability and distribution of better equipped ambulances would improve management and infection prevention control of highly infectious patients.

Relevant documentation

- Public Health Law.
- MoH Emergency Preparedness and Response Plan by Crisis Management Unit.
- A(H1N1) plan.
- Plans developed by the High Commission of Civil Defence.
- MoH Emergency Operations Centre Operations Plan (draft).
- WHO Eastern Mediterranean Regional Office Ebola Virus Disease Preparedness and Response Assessment Mission in Jordan.

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Linking public health and security authorities

Introduction

Public health emergencies pose special challenges for law enforcement, whether the threat is man-made (e.g. anthrax terrorist attacks) or naturally occurring (e.g. influenza pandemics). In a public health emergency, law enforcement will need to quickly coordinate its response with public health and medical officials in order to minimize loss of life or injury, and for optimal public safety and security.

Target

In the event of a biological, chemical or radiation event of suspected or confirmed deliberate origin, a country will be able to conduct a rapid, multisectoral response, including the capacity to link public health and law enforcement, and to provide and/or request effective and timely international assistance, including to investigate alleged use events.

Jordan level of capabilities

Jordan has faced multiple humanitarian crises, including mass movements of refugees, food and nutrition insecurity, attacks on health workers, and infectious disease outbreaks (e.g. MERS-CoV, measles, polio). These have necessitated a multisectoral response involving both national and international stakeholders. This substantial experience with emergencies and crises has led to strong institutions that have the statutory authority to engage public health and law enforcement in the response.

Jordan's Higher Council for Civil Defence is responsible for the management of national crises, and has the authority to ask for support from any sector. It has a strategic plan that outlines detailed roles and responsibilities to respond to different emergencies, including public health events. However some sectors are not aware of its existence. There have been jointly conducted trainings for the investigation and response to CBRN, and currently three teams at regional level respond to biological and chemical threats. The mandate of these teams will be expanded to include response to radiation events.

There is a call centre (911) for emergencies. Information coming from this call centre are sent to the HCCD for necessary action. The National Defence EOC works with the Royal Medical Services and the MoH.

SOPs to accelerate the coordination needed for a prompt and appropriate response are not in place, although event-specific SOPs are. Specific events include disease outbreaks and food contamination, which may require the support of the security sectors to implement public health measures. However, SOPs for joint investigations, joint risk assessments, coordinated control activities and law enforcement are not in place.

How a chemical or radiation event is identified depends on the event and place of occurrence. A mobile laboratory is in place for the diagnosis of CBRN. The Prince Haya Centre at JUST has the capacity for CBRN laboratory diagnosis. The forensic laboratory under the Ministry of Interior and the Poison Centre collaborate on laboratory diagnoses. In terms of linking public health with security, the biosafety and biosecurity strategy should not be limited to laboratories, but expanded to include the transportation of materials.

The new NCSCM includes an EOC and will likely take over the responsibilities of the HCCD. Currently, information from the call centre (911) is also shared with the National Security Centre. Membership of the Higher Council and National Security Centre is clearly defined; the groups meet regularly and on an ad hoc basis to share information and make decisions related to emergencies occurring in the country including

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public health events. The concerned sectors take the lead in the response to events in coordination with the other sectors.

A mapping of hazards has been conducted by the HCCD, including their most likely sources; however not all relevant sectors were involved in the mapping exercise. Drills are also regularly conducted for investigation and response to different emergencies, mainly chemical spills, to enhance the capacity of operations staff.

Recommendations for priority actions

- Designate one institution (e.g. NCSCM) as the lead to coordinate the response to national emergencies and crises among appropriate ministries.
- Ensure that relevant stakeholders of public health and security have access to all existing plans.
- Improve information-sharing related to the detection of public health events, investigations and response.
- Review and update SOPs for joint investigations and response to public health events.
- Develop a national biosecurity and biosafety plan.

Indicators and scores

R.3.1 Public health and security authorities (e.g. law enforcement, border control, customs) are linked during a suspect or confirmed biological event

Score 4: Demonstrated capacity. At least one public health emergency response or exercise within the previous year included information-sharing with security authorities using a formal memorandum of understanding or other agreement or protocol.

Strengths/best practices

- Within the government structure and as stated in the Public Health Law, the public and animal health systems at all levels are able to request the support and engagement of law enforcement agencies to assist with managing a health event or hazard under the leadership of Minster of Agriculture, Environment, and/or Health, depending on the type of event.
- The emergency call centre relays information received to the HCCD for action.
- The EOC in civil defence works with the RMS and MoH.
- Event-specific SOPs are in place for disease outbreaks and food contamination.

Areas that need strengthening/challenges

- Triggers for notification and information sharing between public health and security sectors are not identified, which may delay the timely sharing of information and response.
- Joint training between the different sectors including law enforcement and security, is not in place.
- The many existing coordination structures, e.g. HCCD and the National Security Centre, creates confusion when coordinating the necessary response.

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Medical countermeasures and personnel deployment

Introduction

Medical countermeasures (MCM) are vital to national security and protect nations from potentially catastrophic infectious disease threats. Investments in medical countermeasures create opportunities to improve overall public health. In addition, it is important to have trained personnel who can be deployed in the case of a public health emergency for response.

Target

A national framework for transferring (sending and receiving) medical countermeasures and public health and medical personnel among international partners during public health emergencies.

Jordan level of capabilities

Jordan is politically stable with financial and operational resources that put it in a good position to provide humanitarian assistance to other countries in the region. It is one of the main destinations of refugees. Jordan's RMS – the main organization that provides regional/international medical humanitarian assistance – has demonstrated good practices in the field of public health emergencies and disasters.

Recommendations for priority actions

- Review and update the national plan of MCM personnel deployment in public health emergencies. The plan should be led by the NCSCM and ensure the full involvement of all sectors including the military, MoH, nongovernmental organizations, and Red Crescent Society. The plan also should address communication and information-sharing among partners.
- The MCM plan should be tested and updated periodically through exercises.
- The MoH should maintain an actively revolving national stockpile of emergency drugs and medical supplies through a formal agreement with local manufacturers and suppliers.

Indicators and scores

R.4.1 System is in place for sending and receiving medical countermeasures during a public health emergency

Score 5: Sustainable capacity.

Strengths/best practices

- RMS has sent MCMs to several countries including Liberia and the West Bank and Gaza Strip.
- RMS has an action plan and is able to deploy two field hospitals in six hours to any location in the country. However, it takes about 48 hours to deploy a field hospital to another country in the region.
- The MoH participated in the Eager Lion exercise along with other sectors.

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Areas that need strengthening/challenges

- While the RMS collaborates with other sectors, these are not included in the RMS plan.
- The MoH has no active collaboration with the WHO Global Outbreak Alert and Response Network, although the latter has conducted some training courses in collaboration with EMPHNET.

R.4.2 System is in place for sending and receiving health personnel during a public health emergency

Score 5: Sustainable capacity.

Strengths/best practices

- RMS staff are well trained and skilled to be deployed to regional/international emergencies.
- MoH staff have participated in RMS regional missions, e.g. to Liberia.
- The MoH participated in the Eager Lion exercise along with other sectors.

Areas that need strengthening/challenges

- No training exists for MoH staff to work in regional/international public health emergencies.
- There is no roster of trained health staff that can be called by RMS, if required.

Relevant documentation

- Public Health Law.
- National Health Emergency Preparedness and Response Plan.
- Royal Medical Service Plan for Deployment of Field Hospitals.
- National Strategy of Security and Crises Management.
- Eight contingency plans developed by the National Centre for Security and Crises Management.

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Risk communication

Introduction

Risk communications should be a multi-level and multi-faceted process that aims to help stakeholders define risks, identify hazards, assess vulnerabilities and promote community resilience, thereby promoting the capacity to cope with an unfolding public health emergency. An essential part of risk communication is the dissemination of information to the public about health risks and events, such as outbreaks of diseases. For any communication about risks caused by a specific event to be effective, the social, religious, cultural, political and economic aspects associated with the event should be taken into account, as well as the voice of the affected population. Communications of this kind promote appropriate prevention and control actions through community-based interventions at individual, family and community levels. Disseminating the information through the appropriate channels is essential. Communication partners and stakeholders in the country need to be identified, and functional coordination and communication mechanisms should be established. In addition, the timely release of information, and transparency in decision-making, are essential to build trust between authorities, populations and partners. Emergency communication plans need to be tested and updated as needed.

Target

States Parties should have risk communication capacity which is multi-level and multi-faceted real time exchange of information, advice and opinion between experts and officials or people who face a threat or hazard to their survival, health or economic or social well-being so that they can take informed decisions to mitigate the effects of the threat or hazard and take protective and preventive action. It includes a mix of communication and engagement strategies like media and social media communication, mass awareness campaigns, health promotion, social mobilization, stakeholder engagement and community engagement.

Jordan level of capabilities

The main actors in risk communication on health threats are the Directorate of Health Communication and Awareness Media Centre in the MoH. There is a designated, trained media spokesperson in the Media Centre, although senior officials such as the Director of the Directorate for Communicable Diseases are also frequently used for issues falling within their area of expertise. The MoH has adopted a National Risk Communication Contingency Plan, and mechanisms are in place to ensure coordination between sectors and with stakeholders during an emergency (in particular via the MoH Emergency Committee, a cross-government Media Committee and, for emergencies of national importance, the HCCD). SOPs defining roles, responsibilities and clearance processes for risk communication have not yet been developed: these issues are currently decided on an event-by-event basis.

The Directorate of Health Communication and Awareness has around 20 staff based in Amman who work on all aspects of health communication and health promotion. The Directorate works with a network of health promoters based in Jordan's 12 governorates. A supervisor in each governorate manages the health promoters and sits on the local health committee. With this network, Jordan is able to conduct multi-channel, multi-target audience public communications on health issues, coordinate with stakeholders, and conduct some local level engagement. The network of health promoters provides feedback to the central team on audience reaction and concerns. It sometimes provides intelligence on rumours: examples were given of rumours in communities during an immunization campaign about the safety of the vaccine. These rumours had to be countered before people would allow their children to be vaccinated. Such engagement

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and feedback is currently ad hoc, although if it were routine and systematic, this would increase Jordan's capacity in the areas of community engagement, rumour management and dynamic listening. It was found that very few health communication staff in Jordan had specific training and expertise on risk communication.

Overall Jordan has a fairly good system of public communication on health risks. With relatively small further investment, this could be developed into a very good system.

Recommendations for priority actions

- Conduct risk communications training for key staff in the MoH, partner organizations (e.g. Ministry of Agriculture, JFDA) and the network of health promoters.
- Organize a workshop with the MoH and its network of health promoters on implementing a system of rumour management, active listening and community engagement in Jordan. The workshop would train and inform officials on the theory and international best practices, with a facilitated discussion to agree on how this can be applied and implemented in Jordan.
- Develop SOPs on risk communication.
- Conduct a simulation exercise on risk communication and/or include a component in a wider emergency response simulation exercise to test the risk communication SOPs.
- Set up a study visit to one or more best practice countries to compare SOPs and listening/rumour management/community engagement systems.

Indicators and scores

R.5.1 Risk communication systems (plans, mechanisms, etc.)

Score 2: Limited capacity. The MoH has adopted a National Risk Communication Contingency Plan, robust mechanisms are in place for multisector, multipartner engagement and coordination, and some key staff have undergone specialist training in risk communication. However, SOPs for risk communication have yet to be developed and the number of staff trained in risk communication is not yet sufficient to assure that the system can cope with a sustained emergency.

Strengths/best practices

- There is a high level of commitment in the MoH to risk communication as a response measure.
- The MoH has adopted a National Risk Communication Contingency Plan.
- Robust mechanisms are in place for multisector, multipartner engagement and coordination via the MoH Emergency Committee, the HCCD and the intragovernmental Media Committee.
- The network of health promoters in Jordan's governorates and their membership on local health committees allow the system to reach down to the local level.

Areas that need strengthening/challenges

- SOPs on risk communication should be developed and endorsed. These should define, in particular, roles and responsibilities in multisector emergencies (e.g. an emergency involving the Ministry of Agriculture, the JFDA, and the MoH). They should also codify how public communication on a health risk can be fast-tracked in an emergency situation.
- Only a few staff in the MoH and its partners have received specialist training in emergency risk communication. The number should be broadened by providing training to all key staff members in the MoH, its partner ministries and its network of health promoters.

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R.5.2 Internal and partner communication and coordination

Score 3: Developed capacity. Robust mechanisms are in place for communication coordination with government sector partners (MoH Emergency Committee, HCCD, Media Committee) and engagement with key stakeholders such as health-care workers, civil society organizations and the private sector. Coordination extends to local level as the Health Promotion Supervisor is a member of local health committee in governorates. The system has proved reasonably effective in recent emergencies such as outbreaks of MERS CoV. Nonetheless, coordination does not extend to all partners and stakeholders, and there is no programme to text coordination systematically.

Strengths/best practices

- The Director, Health Communication and Awareness Directorate sits on the MoH Emergency Committee.
- The Media Centre and Media Committee coordinate government communication.
- Engagement with stakeholders exists at both national and local level.

Areas that need strengthening/challenges

- Coordination should include all relevant partners, and SOPs for communication coordination should be developed.
- The SOPs should be tested regularly through a programme of simulation exercises.

R.5.3 Public communication

Score 3: Developed capacity. The Health Communication and Awareness Directorate and its health promotion network is able to conduct proactive public outreach on a mix of platforms (newspapers, social media, television, journalists, SMS) at national and local level. In order to achieve a capacity score of 4, engagement with audiences and media needs to be continuous, guided by risk communication best practice and to have comprehensive geographical coverage.

Strengths/best practices

- The development of audiovisual communications is cost-free in cooperation with the national TV station.
- The use of social media has proven effective for risk communication.
- Local level communication is assured through a network of health promoters.

Areas that need strengthening/challenges

- A system for feedback and engagement with audiences should be developed.
- Public communication capacity should be increased so that it becomes continuous.
- Risk communication expertise needs to be increased within the Health Communication and Awareness Directorate so that public communication can be guided by best practices.

R.5.4 Communication engagement with affected communities

Score 2: Limited capacity. Social mobilization, behaviour change communication and community engagement are an established part of the national health communication strategy. Information, education and communication materials are developed by the Directorate for Health Communication and Awareness and pretested with stakeholders. The network of health promoters and the local health committees involve key local stakeholders. Nonetheless, the health promotion system at the governorate level has no financial or human resource autonomy. It is therefore not a decentralized system as envisaged at score level 3.

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Strengths/best practices

- The Directorate for Health Communication and Awareness has capacity in the areas of social mobilization, behaviour change communication and community engagement.
- Community engagement is assured at the local level via health promoters in governorates and local health committees.
- Systematic pretesting of information, education, and communication materials occurs with stakeholders.

Areas that need strengthening/challenges

- Increased focus should be placed on listening to communities and understanding their issues, beliefs and concerns. A first step towards this could be to develop the listening and feedback role of health promoters at local level. In a second phase, systematic studies of communities' knowledge, attitudes and beliefs could be conducted, perhaps in partnership with a university.
- Health promotion teams at the level of governorates would need a significant degree of financial and human resource autonomy for Jordan to have a decentralized system of community engagement.

R.5.5 Dynamic listening and rumour management

Score 2: Limited capacity. Ad hoc detection of rumours and listening to communities takes place via the Directorate for Health Communication and Awareness in Amman (media monitoring) and the health promoters in the governorates. However, these activities are not systematic. The danger is that risk communication signals go wrong, are missed, or only spotted at a late stage. As seen in the Ebola epidemic in West Africa, failure to listen or to identify rumours early can result in the response strategy being ineffective.

Strengths/best practices

- Monitoring of social and mainstream media to detect rumours is in place.
- There is evidence of successful management of rumours at local level during vaccination campaigns.

Areas that need strengthening/challenges

- Systematic listening and rumour management needs to be developed and implemented. As a first step, make listening and rumour management part of the role of the health promoters. In the longer term, Jordan could involve a university partner in further elaborating its systems for dynamic listening and rumour management.

Relevant documentation

- Ministry of Health's National Risk Communication Contingency Plan.
- Hashemite Kingdom of Jordan IHR Self-Assessment, 2016.
- Jordan EVD Assessment Mission, Short Report, 2015.
- Mission of Joint WHO/MoH expert mission for the MERS CoV, Amman, Jordan, 20–22 September 2015.
- WHO IHR Assessment Mission to Jordan, 2014.

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OTHER

Points of entry

Introduction

All core capacities and potential hazards management apply to points of entry, which enforce health measures to prevent the spread of diseases. States Parties are required to maintain core capacities at designated international airports and ports (and where justified for public health reasons, designated ground crossings) which will implement specific public health measures required to manage a variety of public health risks.

Target

States Parties should designate and maintain the core capacities at the international airports and ports (and where justified for public health reasons, a State Party may designate ground crossings) which implement specific public health measures required to manage a variety of public health risks.

Jordan level of capabilities

Jordan has three airports, one sea port (Aqaba) and five ground crossings. It has designated Queen Alya international airport, Aqaba port and Al Omary ground crossing for IHR implementation. The public health and medical services are provided mainly by the MoH and by airport, ground crossing and port operators. The Ministry of Agriculture controls the import of animals and agricultural products at all points of entry (PoE). The MoH is the competent authority for all PoE. PoE have international communication links with those in other countries. Means of communication are available to share information on public health events/measures. Procedures are functional for communication between the pilot-in-command of aircraft, master-in-command of a ship carrying suspected cases on board, and competent authorities at airports and ports; however, these are neither documented nor maintained on a routine basis.

A clinic is available in the public area of the airport, port and the ground crossing, which provides services for ill travellers and those accompanying them. Personnel and ambulances are also available to transport ill travellers to nearby medical and diagnostic facilities unavailable in these clinics. Sufficient personnel are available to run the daily workload at the clinics. However, staff at PoE are not sufficiently trained to assess, treat and isolate ill travellers and affected animals. Public health programmes including safe food and water management at PoE are functioning. Safe environment for travellers also includes public washroom premises and catering facilities. Inspection programmes for imported goods are in place with online reporting to the concerned sectors/ministers. However data on these programmes are not regularly shared with the competent authority.

Vector surveillance and facilities around PoE are in place and part of national entomology surveillance. Vector control measures, implemented based on the results of vector surveillance, are managed by subcontractors.

A public health contingency plan for all hazards is in place in the airport only. The plan includes procedures to deal with ill travellers. An isolation area at the airport is easily reachable through an external or internal emergency passage. Arrangements with the Ministry of Agriculture are in place for assessment and quarantine of animals; however the quarantine services need enhancements. Aqaba port has the capacity to issue ship sanitation certificates, although the model used for these certificates was not shared with the JEE team.

UCDUSR0013549

Recommendations for priority actions

- Improve the animal quarantine services at the PoE.
- Enhance coordination between the different stakeholders at the PoE and the MoH through regular meetings and sharing of data related to the functioning of public health and inspection programmes.
- Develop a plan to train personnel providing health services at the PoE to recognize disease symptoms, and to be familiar with procedures for prompt assessment, care and reporting of ill travellers, and infection control techniques for their safe transfer, including the use of personal protective equipment.
- Develop a multi-hazard public health contingency plan for each PoE as an integral part of the emergency plan.
- Ensure the use of the IHR-recommended model of ship sanitation certificates at Aqaba port.

Indicators and scores

PoE.1 Routine capacities are established at PoE

Score 3: Developed capacity. The designated PoE has access to equipment and personnel for the transport of ill travellers to an appropriate medical facility. Inspection programmes to ensure a safe environment are functioning but not at all PoE. A functioning programme for vector surveillance and control at PoE and nearby facilities is in place.

Strengths/best practices

- Communication with other international PoE is in place.
- Public health and inspection programmes for imported goods are in place and functioning.
- Vector surveillance and control programme are functioning and maintained.
- Access to medical facilities at PoE and referral arrangements to other health facilities are in place.
- The IHR health parts of the Aircraft General Declaration and Maritime Declaration of Health are used.

Areas that need strengthening/challenges

- Quarantine services at the airport are used for birds only. Other imported animals are transported to the quarantine area in Amman city. Maintenance of safe transport of these animals is highly desirable to minimize the risk of transmission of infections.
- Turnover among personnel is high, and a training programme/plan is lacking to ensure the availability of trained personnel to carry out all public health functions on a continuous basis.
- A mechanism for information-sharing on public health and inspection programmes with the competent authority should be set up to facilitate the early detection and rapid response to public health events.
- Other ground crossings in the country are not designated for IHR implementation; however, effective public health surveillance and response at these crossings is necessary to minimize the risk of public health hazards spreading to and from neighbouring countries.

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PoE.2 Effective public health response at PoE

Score 1: No capacity. Public health contingency plans for all hazards for each point of entry are not in place except for Queen Alya international airport.

Strengths/best practices

- Queen Alya international airport has a public health contingency plan, developed in coordination with the different stakeholders at the airport.
- SOPs are in place in the other PoE to respond to specific events.
- A space to isolate ill passengers from others is designated at Queen Alya international airport.

Areas that need strengthening/challenges

- The public health contingency plan in Queen Alya international airport needs to be tested and updated accordingly.
- Other PoE need to develop public health contingency plans with the involvement of the different stakeholders.
- Existing SOPs can be included as annexes to the plan but generic SOPs need to be developed.

Relevant documentation

- Emergency plan for Queen Alya international airport.
- National Aviation Public Health Emergency Preparedness for Public Health Events for Queen Alya international airport.
- Aqaba Port Occupational Health and Safety Plan.

UCDUSR0013551

Chemical events

Introduction

State Parties should have surveillance and response capacity for chemical risk or events. It requires effective communication and collaboration among the sectors responsible for chemical safety, industries, transportation and safe disposal.

Target

States Parties should have surveillance and response capacity for chemical risk or events which requires effective communication and collaboration among the sectors responsible for chemical safety, industries, transportation and safe disposal.

Jordan level of capabilities

The growing chemical industry is an important aspect of Jordan's economy. Several laws exist for the safe use of chemicals from manufacturing, transport, sale, waste treatment and public health. Jordan has ratified international chemical conventions with the national focal points within the Ministry of Environment or MoH. Laws on the safe use and storage of hazardous chemicals have also been updated following incidents. Chemical hazards are not under the direct responsibility of the MoH; rather, multisectoral risks are managed by several governmental and nongovernmental agencies, with lead agencies assigned by legislation.

Safe chemical management

The National Profile for Chemicals of the Ministry of Environment is regularly updated and provides an overview of the management of chemical production, export, import and use. Directorates within the MoH play a key role in the safe management of chemicals. For example, the Directorate of Environmental Health drafted a national strategy and workplan on chemical safety, registering chemical poisoning by health directorate, and providing scientific information on chemicals. Gaps exist on preparedness and response to chemical accidents and poisoning control; however, good work has been undertaken to evaluate the impact of chemicals on health (e.g. blood and environmental lead levels). However, it is unclear whether the system for chemical classification, labelling and packaging is globally recognized in Jordan. In addition, the National Profile highlights problems with the safe management of chemicals, notably:

- insufficient accurate information on the quantity of chemicals imported, locally produced, or used;
- insufficient accurate information on chemical waste products due, for example, to poor coordination between competent authorities;
- environmental pollution in concentrated industrial processes for the manufacture and use of chemicals;
- occupational exposure to chemicals due to poor workplace practices and/or adequately trained staff.

A future edition of the National Profile could usefully reflect the requirements of IHR capabilities, and include poison control, surveillance, and emergency and other plans related to chemicals (e.g. those of HCCD).

UCDUSR0013552

Emergency preparedness and planning

In 1999, HCCD produced a comprehensive national plan to deal with disasters, including chemical emergencies (industrial and transport accidents). Efforts should ensure that all relevant stakeholders are aware of their roles and responsibilities described in the plan, which should also be updated to reflect IHR responsibilities and cross-referenced with the National Profile for the Management of Chemicals. The plan may describe chemical incidents that may constitute a PHEIC. This ensures that relevant stakeholders with a common mechanism to address , e.g. through public health risk assessments, surveillance, cross-sector reporting or alerting the IHR NFP. A list of toxic chemicals or other dangerous agents as is maintained by different ministries for the safe use, trade and management of chemicals.

Surveillance and reporting

Guidelines exist for toxicosurveillance, e.g. to detect intoxication from exposure to pesticides, which can lead to updated legislation, and health monitoring. Civil Defence is responsible for the management of chemical casualties from occurrence to hospital admission, and all events involving chemicals are recorded in a central database. Within hospitals, a deputy police presence notifies others in the case of poisoning or intoxication. Cases from mass intoxication from chlorine, for example, support collaboration between the receiving hospital and MoH. Engagement with local stakeholders, once SOPs have been developed for the sound management of chemical emergencies. Jordan lacks a comprehensive plan for chemical surveillance or alerts for risk assessment for chemical incidents. Training on chemical surveillance systems and risk assessments of chemical events may be helpful.

Poisons centre

The Poisons Centre manages an online website on poisonings and intoxications, although it is under-resourced and unable to maintain a 24/7 presence. A well-resourced poisons centre integrated in the national health system should be able to perform important tasks related not only to the treatment of poisoned individuals but also risk communication, reporting of exposures (e.g. pesticides) and public health activities (e.g. surveillance). As well as increased resources, the WHO Regional Consultation in 2014 identified a need for training and technical support on database management; strengthening poison/ toxicology information for emergency response, and facilitation of twinning between poison centres.

Response

Civil Defence plays a lead role in the response to CBRN incidents: five regional units provide a 24/7 service dealing with hazardous material incidents. Hazmat units are well trained and have an excellent mechanism to work with specialist chemical units of the Joint Armed Forces. Civil Defence and JAF receive funding from foreign governments to strengthen their response capacity. Civil Defence has information on specific chemical hazards to help manage events, although further capability may support mitigation of risks presented by chemicals.

Chemical workforce

Workforce development and retention of trained staff specialized in the management of chemicals and chemical emergencies (e.g. toxicologists) is important although budgetary restrictions may play require consideration.

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Recommendations for priority actions

While several laws govern the safe use of chemicals, including public health, these instruments require review to ensure that all IHR-related elements to chemicals are met.

- Develop a national strategic plan for chemical safety that prioritizes actions of chemical stakeholders (e.g. occupational health, environmental pollution, accurate lists of hazardous chemicals and risk mapping).
- Update the national intersectoral plan for chemical emergencies, which describes the roles and responsibilities of different stakeholders (e.g. surveillance, environmental monitoring, epidemiological studies, toxicology, laboratory analysis, crisis communication, EOC activation) for IHR requirements.
- Integrate the revised chemical emergency plan into the national strategic plan for health crises.
- Integrate further resources (e.g. 24/7) and chemical units as well as enhanced engagement with local stakeholders.

Indicators and scores

CE.1 Mechanisms are established and functioning for detecting and responding to chemical events or emergencies

Score 2: Limited capacity.

Strengths/best practices

- The Ministry of Interior (Civil Defence) is mandated as the lead authority for chemical accidents and carries out its functions effectively.
- A poisons centre is available within the Chemical Safety Department of the MoH.
- A comprehensive civil defence plan to deal with disasters and emergencies is also available.
- Information is available on the safe management of chemical incidents and poisonings.

Areas that need strengthening/challenges

- All relevant stakeholders should be made aware of their roles and responsibilities as described in the plan.
- Sharing the quick wins of the Civil Defence Plan with MoH, Poison Centre and Environment Ministry will help ensure these plans are reflected in the preparedness plans of others.
- Equipment and training for an efficient clinical response for chemicals may require further support.
- Good work on reporting chemical incidents and poisonings by several authorities' modification of these systems will ensure that effective alert, reporting and surveillance help meet IHR requirements.
- Jordan maintains a good but inadequately resourced poisons centre; it provides information, case management information and laboratory testing, but lacks investment in infrastructure.

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CE.2 Enabling environment is in place for management of chemical Events

Score 2: Limited capability.

Strengths/best practices

- Under the Ministry of Environment, Jordan operates an integrated programme for the management of chemicals. A National Profile of Management of Chemicals is available and regularly updated, in coordination with other governmental, nongovernmental stakeholders and relevant committees.
- Legislation is in place and Jordan has ratified important legislation on good management and governance of chemicals.
- While emergency response plans exist for civil defence, they have not been updated or made available to key stakeholders. There is therefore scope to demonstrate chemical capacity with regard to IHR.

Areas that need strengthening/challenges

- Updating national plans and procedures to incorporate IHR requirements with regard to chemicals is important to demonstrate effective cross sectoral work for PHEIC (e.g. food, water, air, soil, drug-borne contamination, chemical accidents, occupational exposures and deliberate release).
- Integration of chemical-specific emergency plans into strategic national plans for health emergencies requires that roles and responsibilities (e.g. surveillance, monitoring, epidemiology, toxicology, laboratory analysis, crisis communication) in chemical emergencies are well defined and tested through exercises.

Relevant documentation

- National Profile for the Management of Chemicals, 4th edition 2014, Ministry of Environment.
- Regional consultation on Strengthening national capacities of preparedness and response to chemical events as required under International Health Regulations 2005 (IHR).
- Assessment of the readiness of Jordan's radionuclear and chemical capacities for IHR implementation, WHO Workshop Report, 31 March 2014.
- Civil Defence Plan for Disasters and Emergencies, 1999, Higher Council of Civil Defence.
- Public Health Law No. 47, 2008.
- International Health Regulations (IHR) and chemical events, 2015, WHO. ISBN 9789241509589.

UCDUSR0013555

Radiation emergencies

Introduction

State Parties should have surveillance and response capacity for radio-nuclear hazards/events/emergencies. It requires effective communication and collaboration among the sectors responsible for radio-nuclear management.

Target

States Parties should have surveillance and response capacity for radio-nuclear hazards/events/emergencies. It requires effective communication and collaboration among the sectors responsible for radio-nuclear management.

Jordan level of capabilities

The National Committee for Radiological Emergencies, established by the Government in January 2014, drafted a National Radiological Emergency Plan detailing the roles and responsibilities of responding competent authorities. The Plan was approved in February 2016 by the Minister of Interior as Head of the Supreme Counsel of Civil Defence. However, the Plan will need to be integrated into the arrangements and strategy of the NCSCM. The Government also established by order of the Cabinet a National Nuclear Security Committee and has a published the National Policy on Nuclear Safety and National Register of Radiation Sources.

The Energy and Minerals Regulatory Commission as the competent regulatory authority has a range of legislation, systems of work, instructions and policies on the safe use and control of radiation across all relevant sectors.

Recommendations for priority actions

- Establish immediate coordination and communication between the focal points of IHR and IAEA.
- Conduct simulation exercises for the medical management of radiation casualties.
- Ensure access of the National Radiological Emergency Plan to all sectors including ground staff, and develop sectoral plans for the response to radiation emergencies.
- Establish a mechanism for information-sharing between radiation and public health sectors.

Indicators and scores

RE.1 Mechanisms are established and functioning for detecting and responding to radiological and nuclear emergencies

Score 3: Developed capacity. Technical guidelines or SOPs developed, evaluated and updated for the management of radiation emergencies (including risk assessment, reporting, event confirmation, notification, and investigation).

Strengths/best practices

- The Energy and Minerals Regulatory Commission has automated radiation screening at PoE for vehicles.
- Automated environmental monitoring stations are connected to the Energy and Minerals Regulatory Commission for gamma and gross alpha/beta counts.

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- The Energy and Minerals Regulatory Commission has two mobile environmental monitoring labs and has undertaken a countrywide environmental sampling programme.

Areas that need strengthening/challenges

- Provision for the protection of first responders and emergency workers against ionising radiation needs to be put in place. The Emergency Management System does not provide dosimeters, basic knowledge on radiation hazards, SOPs or personal protective equipment.
- Operational planning is needed across government sectors developing technical guidelines and SOPs for first responders and all those undertaking radiological environmental monitoring; data exchange arrangements should be created to inform a full public health risk assessment (e.g. environmental monitoring data between the Energy and Minerals Regulatory Commission and JFDA).
- Transport requires a permit from the Energy and Minerals Regulatory Commission.
- Samples are randomly taken and analysed from shipments.

RE.2 Enabling environment is in place for management of radiation emergencies

Score 3: Developed capacity. An operational radiation emergency response plan exists with intersectoral participation (could be part of national emergency response plan) and national policies, strategies or plans for national and international transport of radioactive material, samples and waste management including those from hospitals and medical services are established.

Strengths/best practices

- A National Radiological Emergency Plan has been approved by the Minister of Interior.

Areas that need strengthening/challenges

- Coordination and communication mechanisms need to be formalized between national authorities responsible for radiological and nuclear events and MoH and/or IHR NFP.
- Protection of first responders and emergency workers against ionising radiation needs to be established. The Emergency Management System does not provide dosimeters, basic knowledge on radiation hazards, standard procedures or personal protective equipment for this group.
- Transport requires a permit from the Energy and Minerals Regulatory Commission
- Operational planning must be put in place across government sectors developing technical guidelines and SOPs for first responders and all those undertaking radiological environmental monitoring; data exchange arrangements are needed to inform a full public health risk assessment (e.g. environmental monitoring data between the Energy and Minerals Regulatory Commission and JFDA).

Relevant documentation

- IAEA Emergency Preparedness and Response Information Management System Report on National Arrangement to Face Nuclear or Radiological Emergencies Member State: Jordan; 5 October 2016.
- National Radiological Emergency Plan, National Committee for Radiological Emergency (approved by Supreme Counsel of Civil Defence, February 2016).
- Overview of the National Regulatory Infrastructure; Majid I. Hawari; Energy and Minerals Regulatory Commission, February 2016.
- IAEA Mission Report on the Integrated Nuclear Infrastructure Review Mission Phase 2; 4–14 August 2014, Amman, Jordan.
- Energy and Minerals Regulatory Commission website, Legislation and Regulatory Documents (www.emrc.gov.jo).

UCDUSR0013557

Appendix: Joint external evaluation background

Mission place and dates

The mission took place in Amman, Jordan from 28 August to 1 September 2016. The team held multisectoral discussions and site visits in the capital city of Amman.

Mission team members

- Mika Salminen (Team co-lead), National Institute for Health and Welfare, Helsinki, Finland
- Dalia Samhouri (Team co-lead), WHO Eastern Mediterranean Regional Office, Cairo, Egypt
- Kashef Ijaz, Centers for Disease Control and Prevention, Atlanta, USA
- Dayle Edwards, Public Health England, London, United Kingdom
- Rob Orford, Public Health England, Cardiff, United Kingdom
- Markus Tibbo, FAO Regional Office for the Near East and North Africa, Cairo, Egypt
- Abdulla Asiri, Ministry of Health, Riyadh, Saudi Arabia
- Fatma Al Attar, Ministry of Health, Dubai, United Arab Emirates
- Ezzeddine Mohsni, Eastern Mediterranean Public Health Network, Amman, Jordan
- Ali Ardalan, Tehran University of Medical Sciences, Tehran, Iran
- Enrico Davoli, Consultant, Emergency Response Operations, Latina, Italy
- Ben Duncan, Freelance Risk Communication Expert, Edinburgh, United Kingdom
- Stéphane Saporito, Communication Officer, Journalist/Cameraman, Geneva, Switzerland
- Genevieve Howse, Principal Howse Fleming Legal, La Trobe University, Melbourne, Australia

Objectives

a) Assess implementation of IHR public health capacities for surveillance and response to public health events including at points of entry;

b) Review all related documents;

c) Develop a report describing the progress and gaps in implementing the IHR capacities; and

d) Recommend priority actions to update and finalize the national plan to achieve and maintain IHR capacities for global health security.

Limitations and assumptions

- The assessment lasted one week, which limited the amount and depth of information that could be managed.
- It is assumed that the results of this assessment will be made publicly available.
- The assessment is not an audit, and information provided by Jordan will not be independently verified. Information provided was discussed and an assessment rating was mutually agreed between the host country and the assessment team.

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Preparation and Implementation of the Mission

- Prior to the visit, several communications took place with assessment team members, and Jordan to review the agenda, responsibilities, and logistics.
- A national training was conducted between 7-8 August to provide national stakeholders with the information and resources necessary to successfully participate in JEE process; and provide guidance on self-reporting requirements and responsibilities for the JEE process.
- Background documents have been collected and shared with the JEE team along with the complete JEE tool for review
- The Mistry of Health of Jordan with the support of WHO Jordan Country Office put in place the necessary administrative and logistics arrangements to facilitate the deployment of the external experts to the country.
- One day orientation was conducted to the JEE external experts to orient them on the JEE process and tool, objectives and expected outcomes of the JEE and to discuss and finalize the agenda of the mission.
- Meetings with the relevant stakeholders and field visits were conducted to validate the collected information and to reach a consensus on the scores and priority actions.
- A debriefing meeting with senior officials and with national technical teams involved in the evaluation to present the outcomes of the JEE; best practices and priority actions took place on the last day of the mission.

Key host country participants and institutions

Please add

Supporting documentation provided by host country

- Self-reporting on JEE assessment tool, Jordan.
- Presentation on overview of the health system in Jordan).
- Technical area presentations on each of the 19 technical areas of the JEE tool.
- Online repository of supporting documents, notifications, data sources, previous assessments and web links for the 19 technical areas of the JEE tool.

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WHO/WHE/CPI/2017.01

UCDUSR0013560

From: predict-request@ucdavis.edu on behalf of "David J Wolking" <djwolking@ucdavis.edu>
Sent: 07/06/2017 8:05:18 AM (-07:00)
To: "William Karesh" <karesh@ecohealthalliance.org>; "Megan Doyle" <mmdoyle@ucdavis.edu>; "Prof. Woutrina Smith" <wasmith@ucdavis.edu>; "Tracey Goldstein" <tgoldstein@ucdavis.edu>; "Kevin Olival" <Olival@ecohealthalliance.org>; "Leilani Francisco" <francisco@ecohealthalliance.org>; "Damien Joly" <djoly@metabiota.com>
Cc: "Catherine Machalaba" <Machalaba@ecohealthalliance.org>; "predict@ucdavis.edu" <predict@ucdavis.edu>; "Christine Kreuder Johnson" <ckjohnson@ucdavis.edu>; "Peter Daszak" <daszak@ecohealthalliance.org>; "Elizabeth Leasure" <ealeasure@ucdavis.edu>; "Tammie O'Rourke" <torourke@metabiota.com>
Subject: [predict] Fwd: AORs/TAs ACTION REQUIRED Fwd: REQUEST FOR MATERIALS: GHSA Toolkit
Attachments: , image001.png, DGHP Annual Meeting_GHSA Toolkit One Pager_TWGs.pdf,

Hey there,

Any of your work seem to fit into this "toolkit" bin? CDC is requesting tools from partners for a GHSA repository. I'll plan to share our publicly available protocols and links (and anything else I can come up with) but these tools can be OH platform and policy oriented as well.

Billy and Catherine, some of the OH partnerships work you have been leading are probably a good fit here (maybe the OH case studies?) but not sure about others or if they are ready to share, perhaps JEE or World Bank stuff? Also, would we consider that OH and the environment briefing a "tool"?

Megan, anything from surveillance team you can think of fit this description?

Woutrina, any additional educational or training materials you can think of beyond e-book protocols that would be a good fit?

Tracey, should we consider including our viral family testing protocols?

Peter and Kevin, any M&A team "tools" that might meet the mark here? From the one-pager it looks like they don't want products, but materials or tools for implementation, education and training.

Leilani, I'll plan to include our behavioral risk guides but let me know if you can think of anything else to share.

Damien, no action required here I don't think, but including you in case you or Tammie have something I"m not thinking of.

Of course **it's a one day turnaround so I'll need to send in a package today COB :-)**

Any and all ideas are appreciated and thanks in advance!

David

---------- Forwarded message ----------
From: **Andrew Clements** <aclements@usaid.gov>
Date: Thu, Jul 6, 2017 at 1:46 AM
Subject: Fwd: AORs/TAs ACTION REQUIRED Fwd: REQUEST FOR MATERIALS: GHSA Toolkit
To: Jonna Mazet <jkmazet@ucdavis.edu>, David J Wolking <djwolking@ucdavis.edu>
Cc: Alisa Pereira <apereira@usaid.gov>, Shana Gillette <sgillette@usaid.gov>

Please let me know if you have anything that fits the description. Thanks.

Andrew P. Clements, Ph.D.
Senior Scientific Adviser
Emerging Threats Division/Office of Infectious Diseases/Bureau for Global Health
U.S. Agency for International Development
Mobile phone: 1-571-345-4253
Email: aclements@usaid.gov

Begin forwarded message:

From: Ricardo Echalar <rechalar@usaid.gov>
Date: July 5, 2017 at 10:03:46 PM GMT+2
To: Andrew Clements <aclements@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, PREDICTMGT <predictmgt@usaid.gov>
Cc: Dennis Carroll <dcarroll@usaid.gov>, Richard Greene <rgreene@usaid.gov>
Subject: Fwd: AORs/TAs ACTION REQUIRED Fwd: REQUEST FOR MATERIALS: GHSA Toolkit

Does PREDICT have anything?

– –

Ricardo Echalar, MPH
Senior Public Health Advisor
Office of Infectious Diseases, Emerging Threats Division
Bureau for Global Health
U.S. Agency for International Development (USAID)
1300 Pennsylvania Ave, NW, 3.6-53, 3rd Floor, RRB
Washington, DC 20523
(M) REDACTED | (W) +1.202.712.4003 | E-mail: rechalar@usaid.gov

---------- Forwarded message ----------
From: **Ricardo Echalar** <rechalar@usaid.gov>
Date: Thu, Jun 29, 2017 at 1:15 PM
Subject: AORs/TAs ACTION REQUIRED Fwd: REQUEST FOR MATERIALS: GHSA Toolkit
To: ghsdunitmaillistusaid@usaid.gov

Dear AORs/TAs,

Please review the request below and provide project specific resources/tools that we can include within the toolkit. We need your input by COB tomorrow.

Thank you,

Ricardo

– –

Ricardo Echalar, MPH
Senior Public Health Advisor
Office of Infectious Diseases, Emerging Threats Division
Bureau for Global Health
U.S. Agency for International Development (USAID)
1300 Pennsylvania Ave, NW, 3.6-53, 3rd Floor, RRB
Washington, DC 20523
(M) REDACTED | (W) +1.202.712.4003 | E-mail: rechalar@usaid.gov

---------- Forwarded message ----------
From: **Ricardo Echalar** <rechalar@usaid.gov>
Date: Wed, Jun 21, 2017 at 2:41 PM
Subject: Fwd: REQUEST FOR MATERIALS: GHSA Toolkit
To: ghsdunitmaillistusaid@usaid.gov

Hi, Team,

Please see request below. Let me know who can help me pull this info together.

Thanks,

Ricardo

– –

Ricardo Echalar, MPH
Senior Public Health Advisor
Office of Infectious Diseases, Emerging Threats Division
Bureau for Global Health
U.S. Agency for International Development (USAID)
1300 Pennsylvania Ave, NW, 3.6-53, 3rd Floor, RRB
Washington, DC 20523
(M) REDACTED | (W) +1.202.712.4003 | E-mail: rechalar@usaid.gov

---------- Forwarded message ----------
From: **Barton Behravesh, Casey (CDC/OID/NCEZID)** <dlx9@cdc.gov>
Date: Wed, Jun 21, 2017 at 2:38 PM
Subject: REQUEST FOR MATERIALS: GHSA Toolkit
To: "Ricardo Echalar (rechalar@usaid.gov)" <rechalar@usaid.gov>
Cc: "Goryoka, Grace (CDC/OID/NCEZID)" <lie0@cdc.gov>, "One Health (CDC)" <onehealth@cdc.gov>, Sarah Paige <spaige@usaid.gov>

Dear Ricardo,

CDC is creating a repository of tools and resources across GHSA countries and Action Packages. This repository will be accessible to CDC field missions, CDC headquarters, and in-country partners to support

program design, work plan development, monitoring and evaluation, and technical assistance. Please find the one-pager attached for more information.

Support for this repository has broadened following the call for tools and resources at the *Multicountry/Multisector Partner* plenary session at a recent CDC global health meeting (the DGHP Annual Meeting). We are reaching out to partners and countries for the tools and resources they use to implement GHSA activities. I wanted to specifically reach out to our One Health partners for information.

Understanding the importance of your subject matter expertise, we want to ensure we include tools and resources that CDC perceives as critical to GHSA. We invite you to share policies, standard operating procedures, M&E frameworks, and other tools and resources that you perceive as good examples for countries and partners to reference.

If there are materials you would like us to share with this repository (i.e. overview of the NOHPs), please send it to onehealth@cdc.gov no later than June 28th. We will turn in all materials we received to the repository. Also, as future materials become available, we can add to the repository to share One Health information widely. I thought it would be useful to share the NOHP summary overview as a resource in this tool kit as a way to provide CDC country staff with key information on the NOHPs. You are welcome to share additional materials that you think would be useful. Eventually, we can add the One Health interagency talking points.

Many thanks,

Casey

Casey Barton Behravesh MS, DVM, DrPH, DACVPM

Captain, U.S. Public Health Service

Director, One Health Office

National Center for Emerging and Zoonotic Infectious Diseases

Centers for Disease Control and Prevention

e-mail: CBartonBehravesh@cdc.gov

www.cdc.gov/onehealth

GHSA TECHNICAL TOOLKIT

Repository of Tools and Resources

EXAMPLES OF REQUESTED RESOURCES & TOOLS

- *Standard operating procedures, guidelines, manuals*
- *Monitoring & evaluation tools*
- *Standards or policies guiding program implementation & management*
- *Educational or training materials*

WHAT IS THE GHSA TECHNICAL TOOLKIT?

The GHSA Technical Toolkit will be a repository of GHSA tools and resources accessible to CDC field missions, CDC headquarters, and in-country partners.

WHERE WILL I FIND THE TOOLKIT?

The GHSA Technical Toolkit will be accessible through SharePoint. Instructions on how to access the SharePoint site will be circulated when the Toolkit is developed.

CDC headquarters and country office staff will be able to access the Toolkit through the GHS Connect SharePoint site.

WHAT WILL THE TOOLKIT CONTAIN?

Based largely on existing materials, the GHSA Technical Toolkit will contain tools and resources that CDC and partners can use for program design, work plan development, and technical assistance, among other purposes.

The Toolkit will also contain updated information on technical guidance, indicators and reporting requirements, and past reports (e.g., performance indicators, country capacity projections, interagency reporting).

WHAT SHOULD I CONTRIBUTE?

CDC staff and partners are invited to share tools, standard operating procedures, training materials, monitoring and evaluation materials, and other resources to support the resource and knowledge base for implementing GHSA Action Packages.

TO WHOM SHOULD I SEND THESE?

Please send your tools and resources to Erin Bernstein (ebernstein@deloitte.com) by **June 30, 2017**.

From: "Ricardo Echalar" <rechalar@usaid.gov>
Sent: 07/06/2017 2:29:23 PM (-07:00)
To: "David J Wolking" <djwolking@ucdavis.edu>; "Jonna Mazet" <jkmazet@ucdavis.edu>
Cc: "PREDICTMGT" <predictmgt@usaid.gov>; "Sarah Paige" <spaige@usaid.gov>; "Richard Greene" <rgreene@usaid.gov>; "Dennis Carroll" <dcarroll@usaid.gov>
Subject: Fwd: AORs/TAs ACTION REQUIRED Fwd: REQUEST FOR MATERIALS: GHSA Toolkit
Attachments: DGHP Annual Meeting_GHSA Toolkit One Pager_TWGs.pdf

Hi, David,

I got an out of office response from Jonna. Could you or someone else from the PREDICT team help with this request? Thanks,

Ricardo

– –

Ricardo Echalar, MPH
Senior Public Health Advisor
Office of Infectious Diseases, Emerging Threats Division
Bureau for Global Health
U.S. Agency for International Development (USAID)
1300 Pennsylvania Ave, NW, 3.6-53, 3rd Floor, RRB
Washington, DC 20523
(M) REDACTED | (W) +1.202.712.4003 | E-mail: rechalar@usaid.gov

---------- Forwarded message ----------
From: **Ricardo Echalar** <rechalar@usaid.gov>
Date: Thu, Jul 6, 2017 at 5:26 PM
Subject: Fwd: AORs/TAs ACTION REQUIRED Fwd: REQUEST FOR MATERIALS: GHSA Toolkit
To: Jonna Mazet <jkmazet@ucdavis.edu>
Cc: PREDICTMGT <predictmgt@usaid.gov>, Sarah Paige <spaige@usaid.gov>, Richard Greene <rgreene@usaid.gov>, Dennis Carroll <dcarroll@usaid.gov>

Hi, Jonna,

Can you and the PREDICT team help with this request from CDC? If you have tools/resources that you think would be appropriate to share, could you send them to me? I'd like to compile everything from the EPT-2 partners and send it as one e-mail.

Thanks,

Ricardo

– –

Ricardo Echalar, MPH
Senior Public Health Advisor
Office of Infectious Diseases, Emerging Threats Division
Bureau for Global Health
U.S. Agency for International Development (USAID)
1300 Pennsylvania Ave, NW, 3.6-53, 3rd Floor, RRB
Washington, DC 20523

(M) REDACTED | (W) +1.202.712.4003 | E-mail: rechalar@usaid.gov

---------- Forwarded message ----------
From: **Barton Behravesh, Casey (CDC/OID/NCEZID)** <dlx9@cdc.gov>
Date: Wed, Jun 21, 2017 at 2:38 PM
Subject: REQUEST FOR MATERIALS: GHSA Toolkit
To: "Ricardo Echalar (rechalar@usaid.gov)" <rechalar@usaid.gov>
Cc: "Goryoka, Grace (CDC/OID/NCEZID)" <lie0@cdc.gov>, "One Health (CDC)" <onehealth@cdc.gov>, Sarah Paige <spaige@usaid.gov>

Dear Ricardo,

CDC is creating a repository of tools and resources across GHSA countries and Action Packages. This repository will be accessible to CDC field missions, CDC headquarters, and in-country partners to support program design, work plan development, monitoring and evaluation, and technical assistance. Please find the one-pager attached for more information.

Support for this repository has broadened following the call for tools and resources at the *Multicountry/Multisector Partner* plenary session at a recent CDC global health meeting (the DGHP Annual Meeting). We are reaching out to partners and countries for the tools and resources they use to implement GHSA activities. I wanted to specifically reach out to our One Health partners for information.

Understanding the importance of your subject matter expertise, we want to ensure we include tools and resources that CDC perceives as critical to GHSA. We invite you to share policies, standard operating procedures, M&E frameworks, and other tools and resources that you perceive as good examples for countries and partners to reference.

If there are materials you would like us to share with this repository (i.e. overview of the NOHPs), please send it to onehealth@cdc.gov no later than June 28th. We will turn in all materials we received to the repository. Also, as future materials become available, we can add to the repository to share One Health information widely. I thought it would be useful to share the NOHP summary overview as a resource in this tool kit as a way to provide CDC country staff with key information on the NOHPs. You are welcome to share additional materials that you think would be useful. Eventually, we can add the One Health interagency talking points.

Many thanks,

Casey

Casey Barton Behravesh MS, DVM, DrPH, DACVPM

Captain, U.S. Public Health Service

Director, One Health Office

National Center for Emerging and Zoonotic Infectious Diseases

Centers for Disease Control and Prevention

e-mail: CBartonBehravesh@cdc.gov

www.cdc.gov/onehealth

Click on the icon to subscribe to One Health updates from CDC.

GHSA TECHNICAL TOOLKIT

Repository of Tools and Resources

EXAMPLES OF REQUESTED RESOURCES & TOOLS

- *Standard operating procedures, guidelines, manuals*
- *Monitoring & evaluation tools*
- *Standards or policies guiding program implementation & management*
- *Educational or training materials*

WHAT IS THE GHSA TECHNICAL TOOLKIT?

The GHSA Technical Toolkit will be a repository of GHSA tools and resources accessible to CDC field missions, CDC headquarters, and in-country partners.

WHERE WILL I FIND THE TOOLKIT?

The GHSA Technical Toolkit will be accessible through SharePoint. Instructions on how to access the SharePoint site will be circulated when the Toolkit is developed.

CDC headquarters and country office staff will be able to access the Toolkit through the GHS Connect SharePoint site.

WHAT WILL THE TOOLKIT CONTAIN?

Based largely on existing materials, the GHSA Technical Toolkit will contain tools and resources that CDC and partners can use for program design, work plan development, and technical assistance, among other purposes.

The Toolkit will also contain updated information on technical guidance, indicators and reporting requirements, and past reports (e.g., performance indicators, country capacity projections, interagency reporting).

WHAT SHOULD I CONTRIBUTE?

CDC staff and partners are invited to share tools, standard operating procedures, training materials, monitoring and evaluation materials, and other resources to support the resource and knowledge base for implementing GHSA Action Packages.

TO WHOM SHOULD I SEND THESE?

Please send your tools and resources to Erin Bernstein (ebernstein@deloitte.com) by **June 30, 2017**.

From:	Andrew Clements <aclements@usaid.gov>
To:	Katherine Leasure <kaleasure@ucdavis.edu>
CC:	PREDICTMGT <predictmgt@usaid.gov>;predict@ucdavis.edu <predict@ucdavis.edu>;Jonna Mazet <jkmazet@ucdavis.edu>
Sent:	7/28/2017 12:46:50 AM
Subject:	Re: PREDICT International Travel Requests

Islam travel approved.

Other travel approved subject to mission concurrence.

On Thu, Jul 27, 2017 at 10:08 PM, Katherine Leasure <kaleasure@ucdavis.edu> wrote:

Please find below international travel requests for your review and approval. Please let me know if you have any questions. Thanks!!

1. Epstein (Bangladesh, India): $1400 airfare/$290 (Dhaka), $400 (Delhi) max daily per diems
2. Latinne (Indonesia): $2200 airfare/$146 (North Sulawesi) max daily per diem
3. Islam (Latvia): $1600 airfare/$344 (Riga) max daily per diem

Travel Requests –

1. EcoHealth Alliance would like to request travel approval for Dr. Jon Epstein to travel from Kuala Lumpur, Malaysia to Dhaka, Bangladesh from August 19-22, 2017, and Delhi, India from August 22-24, 2017 to meet with Country Coordinators, government officials and the USAID local missions for workplanning meetings.

Trip purpose: Bangladesh - Dr. Epstein will meet with government officials in Dhaka, and the area's PREDICT Country Coordinator. Dr. Epstein will also meet with the mission to discuss future workplanning with FAO in attendance. India – Dr. Epstein plans to fly from Dhaka to Delhi on August 22 to meet with the India mission, Country Coordinator, and Senior Management team from PREDICT-2 India.

2. EcoHealth Alliance would like to request travel approval for Dr. Alice Latinne to travel from New York, NY, USA to North Sulawesi, Indonesia from August 19, 2017 to September 2, 2017 for field work with in-country partners.

Trip purpose: In North Sulawesi, Dr. Alice Latinne will assist the PREDICT Indonesia team in field sampling (rodents and bats), and ensure correct implementation of new rodent sampling protocols.

3. EcoHealth Alliance would like to request travel approval for Ariful Islam to travel from Dhaka, Bangladesh to Riga, Latvia from September 9-15, 2017 for the ESWI 2017 Influenza Conference Meeting.

Trip purpose: The European Scientific Working group on Influenza is hosting the ESWI Influenza Conference 2017; the group and the conference aim to enhance public health protection against influenza and is the largest European scientific conference entirely dedicated to influenza. During this year, PREDICT Bangladesh participated in multiple disease outbreaks relating to influenza. Ariful Islam will represent PREDICT Bangladesh at this conference and through the presentation of three posters from the PREDICT Bangladesh team that have been accepted at the ESWI 2017 conference featuring data from the outbreaks and public health emergency response to outbreaks. This is a forum to engage the influenza community and participate is scientific policy discussions beneficial to PREDICT Bangladesh and PREDICT globally.

Katherine Leasure

HR/Payroll/Financial Assistant

One Health Institute

University of California, Davis

530-752-7526

530-752-3318 FAX

kaleasure@ucdavis.edu

predictmgt+unsubscribe@usaid.gov
predictmgt@usaid.gov
https://groups.google.com/a/usaid.gov/d/msgid/predictmgt/010601d30714%2417665880%2446330980%24%40ucdavis.edu

--

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

From: "Aleksei Chmura" <chmura@ecohealthalliance.org>
Sent: 09/20/2017 4:17:48 AM (-07:00)
To: "Dr. Karesh Billy" <karesh@ecohealthalliance.org>
Cc: "Dr. Jon Epstein" <epstein@ecohealthalliance.org>; "Ehab Abu-Basha" <abubasha@just.edu.jo>; "Dr. Suzan Murray" <murrays@si.edu>; "David Wolking" <djwolking@ucdavis.edu>; "李泓萤" <li@ecohealthalliance.org>; "Zimmerman, Dawn" <Zimmermand@si.edu>; "Patrick Dawson" <dawson@ecohealthalliance.org>; "Dr. Peter Daszak" <daszak@ecohealthalliance.org>; "Dr. Simon Anthony" <anthony@ecohealthalliance.org>; "Tracey Goldstein" <tgoldstein@ucdavis.edu>; "Prof. Woutrina Smith" <wasmith@ucdavis.edu>; "mohamed ali" REDACTED ; "Amanda Andre" <amanda.andre@ecohealthalliance.org>; "Kirsten Gilardi" <kvgilardi@ucdavis.edu>; "Dr. Kevin Olival" <olival@ecohealthalliance.org>; "Ghazi Kayali" <ghazi@human-link.org>; "Dr. Jonna Mazet" <jkmazet@ucdavis.edu>; "Predict inbox" <predict@ucdavis.edu>
Subject: Re: High Priority - need MERS related info for WHO/FAO meeting

Dear Billy,

In China, some bat samples assayed for Coronaviruses have been identified as positive for MERS related Coronaviruses.

Cheers,

-Aleksei

Aleksei Chmura
Chief of Staff

EcoHealth Alliance
460 West 34th Street – 17th floor
New York, NY 10001

+1.212.380.4473 (direct)
REDACTED (mobile)
Aleksei MacDurian (Skype)

www.ecohealthalliance.org

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> On Sep 19, 2017, at 09:04, William B. Karesh <karesh@ecohealthalliance.org> wrote:
>
> Dr. Ali has 15 minutes, so I would suggest:
>
> 1) Country
> 2) Taxon sample targets
> 3) numbers of individuals sampled
> 4) relevant results (I'm not sure what we say about "MERS-like CoV's, but please include if something interesting to share).
>
> I know that for Jordan and Egypt we are doing integrated surv. around MERS with FAO, but I'm not sure how best to describe Ethiopia, Kenya, Uganda and Tanzania. Or the Asian countries.

Thanks everyone.

BK

William B. Karesh, D.V.M
Executive Vice President for Health and Policy

EcoHealth Alliance
460 West 34th Street - 17th Floor
New York, NY 10001 USA

+1.212.380.4463 (direct)
+1.212.380.4465 (fax)
www.ecohealthalliance.org

President, OIE Working Group on Wildlife

Co-chair, IUCN Species Survival Commission - Wildlife Health Specialist Group

EPT Partners Liaison, USAID Emerging Pandemic Threats - PREDICT-2 Program

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On Sep 19, 2017, at 8:50 AM, Jon Epstein <epstein@ecohealthalliance.org> wrote:

Billy,
How much detail do you want? Sample numbers, or more general info about where and what we're testing?

-Jon

Jonathan Epstein DVM, MPH, PhD

Vice President for Science and Outreach

EcoHealth Alliance
New York

(e) epstein@ecohealthalliance.org
(o) 212.380.4467
(m) REDACTED
@epsteinjon

On Sep 19, 2017 8:38 AM, "William B. Karesh" <karesh@ecohealthalliance.org> wrote:

Hi Everyone,

WHO asked Dr. Ali, our PREDICT Country Coordinator for Egypt, to give a presentation on PREDICT's MERS-CoV work in camels. I let WHO know that we are looking at MERS along with MERS-like CoV's in humans, wildlife and camels.

This will be the only PREDICT presentation at the meeting.

In the next day or two, could you please share with Dr. Ali (and Patrick can help compile) what you doing or our findings with camels, humans, wildlife in:

Uganda
Tanzania
Kenya
Ethiopia
Egypt
Jordan
Bangladesh
Thailand

Is there anything to add from China??
Other countries??

Thanks,

Billy

William B. Karesh, D.V.M
Executive Vice President for Health and Policy

EcoHealth Alliance
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New York, NY 10001 USA

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From: predict-request@ucdavis.edu on behalf of "Molly Turner" <turner@ecohealthalliance.org>
Sent: 11/29/2017 6:06:37 AM (-08:00)
To: "David J Wolking" <djwolking@ucdavis.edu>
Cc: "Evelyn Luciano" <luciano@ecohealthalliance.org>; "Ava Sullivan" <sullivan@ecohealthalliance.org>; "William Karesh" <karesh@ecohealthalliance.org>; "Peter Daszak" <daszak@ecohealthalliance.org>; "Alison Andre" <andre@ecohealthalliance.org>; "Amanda Andre" <amanda.andre@ecohealthalliance.org>; "Matt Blake" <mblake@ucdavis.edu>; "predict@ucdavis.edu" <predict@ucdavis.edu>
Subject: [predict] Re: Urgent: PREDICT ceiling increase questions from USAID
Attachments: Liberia field disposables.xlsx

My apologies, attached is the correct Liberia field disposables sheet.

On Wed, Nov 29, 2017 at 9:00 AM, Molly Turner <turner@ecohealthalliance.org> wrote:

Hi David,

Please see below.

Molly

8. No detail is provided for the large $52,473.00 lump sum cost for “field disposables” under the EHA subagreement “supplies” line item. Please provide a description of items to be purchased, number, and unit cost. In addition, there is an inconsistency between the figure stated in the budget ($52,473) and the figure in the budget narratives ($152,473). Please confirm the correct figure and adjust either the budget or narratives as appropriate.

This is referring to "field disposables" for Liberia. We made an error the narrative where we state "...field disposables (for 2,500 animals/year) $152,473" so apparently an extra "1" was added to the $52,473 that is actually in the budget. If you can get us some breakdown of this $52,473 and how it relates to the 2,500 animals that would be super!

As we discussed yesterday, we actually budgeted for 10,000 animals per year in the narrative and budget we submitted, for a total of $195,831 in Year 4. I checked again this morning and it says this on page 80 of the narrative that Liz returned to us as what was submitted to USAID (attached). I don't see $52,473 anywhere. Are you sure this is what we should provide?

As we agreed I have justified $52,473 for 2,500 animals in the attached excel spreadsheet. I am working on the narrative, which I plan to model on the India portion of what Liz returned to us (page 53). Would be great if you could confirm that this is what you need as soon as you can.

9. EHA proposed a 35.4% indirect cost rate. Please provide a copy of the most current NICRA so that the rate and bases of application may be verified.

Can you just share your latest PDF of the NICRA? Liz says it was in the original packet from 7/24/17 but we should just attach it again (and I don't have it on hand) for quick reference.

Attached is the NICRA we provided.

10. Please provide a justification for NPHIL’s 60% indirect cost rate. Please provide audited financials, a current NICRA or other appropriate justification.

This has to be an error (unless NPHIL has a NICRA or other documentation for that high rate). In our Y4 budget for Liberia (the recently approved one) it's listed as 10% (deminimus rate for a foreign sub without a NICRA per the uniform guidance), so we just need a confirmation here.

We agreed on yesterday's call that this 60% was probably drawn from CU's rate, for which they can provide you with documentation upon request. NPHIL is only budgeted for a 10% de minimus rate.

11. No fringe is proposed for NPHIL Liberia staff. Please confirm that this is in accordance with local law or adjust your budget accordingly.

Did you build the fringe or benefits rates into their salaries (Lab technicians 1-4 at $6,800, $7000, $7200, and $7,400)? Any insight here appreciated.

Liberian law only requires that we provide salary.

12. EHA proposed a total of $325,000.00 for Dr. Desmond, a consultant who will serve as Country Coordinator for their Liberia program (lump sum amounts: $125,000 Year 3, $125,000 Year 4, and $62,500 Year 5). Please provide Dr. Desmond's proposed daily rate, number of days EHA proposes him to work per program year, and information regarding whether he is an expatriate or local hire.

In the budget narrative we have Jim at a $125,000 rate for Y3 and 4 and then $62,500 in Y5. This breaks down to about $520/day at a 20 day per month rate (what UCD uses for consultants). That would be 1,120 days/year. He's a US citizen correct so expat? How do we explain the Y5 reduction in LOE and that rate? Any insight here appreciated as well in addition to corrections to my crude calculations above :-)

Jim's rate is actually hourly ($65/hour) and is competitive for a field veterinarian of his experience, especially since this rate needs to cover salary, benefits, and some supplies and local travel. $520/day would be correct, but I calculate that this comes to 240 (8-hour) days/year. He is an expatriate.

We did not actually decrease him in Year 5, but this could be reasonable since field work will be reduced or completed at that point, so less of his time will be required.

On Tue, Nov 28, 2017 at 4:32 PM, David J Wolking <djwolking@ucdavis.edu> wrote:
Thank you!!!

On Tue, Nov 28, 2017 at 1:27 PM, Molly Turner <turner@ecohealthalliance.org> wrote:
Hey David,

Received, we'll have for you by OOB tomorrow, and will give you a call if we have any questions.

Molly

On Tue, Nov 28, 2017 at 4:05 PM, David J Wolking <djwolking@ucdavis.edu> wrote:

Hey Molly, Evelyn, and team,

We finally received feedback from USAID's AO today about the ceiling increase. The bad news is they asked for a one day turnaround on their questions. Jonna, Matt, and I are pulling together all that we can to prepare for a call tomorrow afternoon.

There are a few questions related to EHA and your subs that we need feedback on ASAP, by OOB tomorrow (west coast) at the latest. Hopefully these are not that difficult and please just call me on my cell (REDACTED) if you have any questions.

Apologies for the tight turnaround but considering how long it has taken to get this far, we think it's in our best interest to work with them while they are focused on our award.

Thanks for understanding,

David

EHA-related feedback from the AO (David's comments in blue):

8. No detail is provided for the large $52,473.00 lump sum cost for “field disposables” under the EHA subagreement “supplies” line item. Please provide a description of items to be purchased, number, and unit cost. In addition, there is an inconsistency between the figure stated in the budget ($52,473) and the figure in the budget narratives ($152,473). Please confirm the correct figure and adjust either the budget or narratives as appropriate.

This is referring to "field disposables" for Liberia. We made an error the narrative where we state "...field disposables (for 2,500 animals/year) $152,473" so apparently an extra "1" was added to the $52,473 that is actually in the budget. If you can get us some breakdown of this $52,473 and how it relates to the 2,500 animals that would be super!

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Can you just share your latest PDF of the NICRA? Liz says it was in the original packet from 7/24/17 but we should just attach it again (and I don't have it on hand) for quick reference.

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This has to be an error (unless NPHIL has a NICRA or other documentation for that high rate). In our Y4 budget for Liberia (the recently approved one) it's listed as 10% (deminimus rate for a foreign sub without a NICRA per the uniform guidance), so we just need a confirmation here.

11. No fringe is proposed for NPHIL Liberia staff. Please confirm that this is in accordance with local law or adjust your budget accordingly.

Did you build the fringe or benefits rates into their salaries (Lab technicians 1-4 at $6,800, $7000, $7200, and $7,400)? Any insight here appreciated.

12. EHA proposed a total of $325,000.00 for Dr. Desmond, a consultant who will serve as Country Coordinator for their Liberia program (lump sum amounts: $125,000 Year 3, $125,000 Year 4, and $62,500 Year 5). Please provide Dr. Desmond's proposed daily rate, number of days EHA proposes him to work per program year, and information regarding whether he is an expatriate or local hire.

In the budget narrative we have Jim at a $125,000 rate for Y3 and 4 and then $62,500 in Y5. This breaks down to about $520/day at a 20 day per month rate (what UCD uses for consultants). That would be 1,120 days/year. He's a US citizen correct so expat? How do we explain the Y5 reduction in LOE and that rate? Any insight here appreciated as well in addition to corrections to my crude calculations above :-)

--
Molly Turner
Federal Grants Coordinator

EcoHealth Alliance
460 West 34th Street – 17th floor
New York, NY 10001

1.212.380.4461 (direct)
REDACTED (cell)
www.ecohealthalliance.org

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--
Molly Turner
Federal Grants Coordinator

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Molly Turner
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From:	Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
To:	Andrew Clements <aclements@usaid.gov>;Jonna Mazet <jkmazet@ucdavis.edu>;David John Wolking <djwolking@ucdavis.edu>
CC:	Alisa Pereira <apereira@usaid.gov>
Sent:	1/11/2018 9:20:12 AM
Subject:	Re: For planning purposes....

Thanks, Andrew!

Get Outlook for iOS

From: Andrew Clements
Sent: Thursday, January 11, 2018 6:13:34 PM
To: Jonna Mazet; Elizabeth Leasure; David John Wolking
Cc: Alisa Pereira
Subject: For planning purposes....

FYI

A request was submitted within USAID to prepare the following for obligation to Predict:

- $13,197,500 from GH-C-AI/17/18 (core)
- $200,000 of ES-OCO-278 (Jordan buy-in).

Andrew P. 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
Email: aclements@usaid.gov

From: predict-request@ucdavis.edu on behalf of "David J Wolking" <djwolking@ucdavis.edu>
Sent: 02/08/2018 10:20:15 AM (-08:00)
To: "Tracey Goldstein" <tgoldstein@ucdavis.edu>; "Kirsten Gilardi" <kvgilardi@ucdavis.edu>
Cc: "predict@ucdavis.edu" <predict@ucdavis.edu>; "Eddy Kambale" [redacted] "James Ayukekbong" <jayukekbong@metabiota.com>; "Karen Saylors" <ksaylors@metabiota.com>
Subject: [predict] Fwd: REMINDER and TIME CHANGE request - DRC IP Monthly Coordination Call

Hi there,

Just calling out this Feb 15th DRC call and Lisa's special agenda around the "eastern DRC lab discussion". Copying Eddy and the MB team here too for awareness...

Let me know if you need anything from me or the global team.

David

---------- Forwarded message ----------
From: **Lisa Kramer** <lkramer@usaid.gov>
Date: Thu, Feb 8, 2018 at 6:13 AM
Subject: Re: REMINDER and TIME CHANGE request - DRC IP Monthly Coordination Call
To: Eddy Kambale [redacted], Charles Kumakamba <ckumakamba@metabiota.com>, "Kone, Philippe (FAOCD)" [redacted], Jean-Felly Numbi <jnumbi@usaid.gov>, "Saila-Ngita, Diafuka" <Diafuka.Saila_Ngita@tufts.edu>, Placide Mbala <pmbala@metabiota.com>, David J Wolking <djwolking@ucdavis.edu>, Mike Cranfield [redacted] Izetta Simmons <isimmons@usaid.gov>, Jessica Pettit <jpettit@usaid.gov>, Ngona Idi Abdullah [redacted], gasp [redacted] Malangu Doyen [redacted] Prince Kimpanga [redacted], "Amuguni, Janetrix Hellen M." <Janetrix.Amuguni@tufts.edu>, Karen Saylors <ksaylors@metabiota.com>, Sylvia Wanzala <wanza003@umn.edu>
Cc: Sarah Paige <spaige@usaid.gov>, Bethany Haberer <bhaberer@usaid.gov>, Marilyn Crane <mcrane@usaid.gov>, Lindsay Parish <lparish@usaid.gov>, Andrew Clements <aclements@usaid.gov>, Mike Cranfield [redacted], irwego <irwego@umn.edu>, Andrea Long-Wagar <alongwagar@usaid.gov>, Predict inbox <predict@ucdavis.edu>

Dear Colleagues,

This has been a confusing week for the scheduled conference calls and apologies for the inconvenience to those who tried to call in to the DRC call today. Our call will take place next Thursday, 15 February.

The USAID calendar system was updated last week and that may also be contributing to the confusion.

Looking forward to having everyone on the call next week and to the Eastern DRC Lab discussion.

Best,
Lisa

Lisa Kramer

Regional Emerging Pandemic Threats Advisor
USAID/Kenya and East Africa
REDACTED (Office)
REDACTED (Mobile)

On Thu, Feb 8, 2018 at 4:45 PM, K.Syaluha Eddy REDACTED wrote:

> Thanks Lisa and sorry, I did not read this email and now I have it. So
> the meeting is next Thusday15, 2018.
> Regards
>
> On 2/7/18, Lisa Kramer <lkramer@usaid.gov> wrote:
> > Hello Everyone,
> >
> > Thank you all for being flexible about the date and time for the DRC
> > coordination call. It looks like we have agreement to shift the call to
> > Thursday, 15 February and going forward we will hold the call on the *third
> > Thursday of every month*.
> >
> > For the time, let's hold the call at 9am US eastern / 3pm Kin / 4pm Goma &
> > Kigali / 5pm Nairobi / 6am US West Coast, as Sarah has suggested. For
> > future calls, it will work better for me and I expect also better for the
> > PREDICT staff on the US West Coast, if we could hold the call one hour
> > later. We can discuss on the call on Thursday the 15th.
> >
> > Sarah, you set up the calendar invitation, so I think you need to make the
> > change. If I make the change, I think it will only update my calendar.
> > Thanks.
> >
> > Best,
> > Lisa
> >
> >
> > *Lisa Kramer*
> > Regional Emerging Pandemic Threats Advisor
> > USAID/Kenya and East Africa
> > REDACTED (Office)
> > REDACTED (Mobile)
> >
> >
> > On Wed, Feb 7, 2018 at 11:13 AM, Kone, Philippe (FAOCD) <
> > REDACTED> wrote:
> >
> >> Hi Sarah,
> >>
> >> Ok for me Too
> >>
> >> Philippe
> >>
> >>
> >>
> >> *From:* Jean-Felly Numbi [mailto:jnumbi@usaid.gov]

>> *Sent:* mercredi 7 février 2018 07:37
>> *To:* Sarah Paige <spaige@usaid.gov>
>> *Cc:* Bethany Haberer <bhaberer@usaid.gov>; Saila-Ngita, Diafuka <
>> Diafuka.Saila_Ngita@tufts.edu>; Lisa Kramer <lkramer@usaid.gov>; Izetta
>> Simmons <isimmons@usaid.gov>; Jessica Pettit <jpettit@usaid.gov>; Predict
>> inbox <predict@ucdavis.edu>; Ngona Idi Abdullah [redacted]
>> Marilyn Crane <mcrane@usaid.gov>; Eddy Kambale <
>> [redacted] Placide Mbala <pmbala@metabiota.com>;
>> Lindsay Parish <lparish@usaid.gov>; Andrew Clements
>> <aclements@usaid.gov>;
>> Kone, Philippe (FAOCD) [redacted] gasp [redacted]
>> Malangu Doyen [redacted]; Mike Cranfield <
>> [redacted]; Kambale Syaluha Eddy <
>> [redacted]; Dr Prime Mulembakani
>> <pmulembakani@metabiota.com>;
>> Prince Kimpanga <[redacted]>; Mike Cranfield <
>> [redacted] David J Wolking <djwolking@ucdavis.edu>;
>> Amuguni, Janetrix Hellen M. <Janetrix.Amuguni@tufts.edu>; irwego <
>> irwego@umn.edu>; Sylvia Wanzala <wanza003@umn.edu>; Andrea Long-Wagar <
>> alongwagar@usaid.gov>
>> *Subject:* Re: REMINDER and TIME CHANGE request - DRC IP Monthly
>> Coordination Call
>>
>>
>>
>> Hi Sarah,
>>
>>
>>
>> It is fine for me.
>>
>>
>>
>> On Tue, Feb 6, 2018 at 4:31 PM, Sarah Paige <spaige@usaid.gov> wrote:
>>
>> Hi Lisa,
>>
>>
>>
>> Does a coordination call for DRC on Feb 15 at 9am eastern/3pm Kin/5pm
>> Nairobi work for you? I realize it lands right at the end of your day.
>>
>>
>>
>> Best
>>
>> Sarah
>>
>>
>> Sarah Paige, PhD, MPH
>> Senior Infectious Disease Advisor
>> USAID Africa Bureau/Health Division

>> Desk: +1-202-712-1814 <(202)%20712-1814>
>>
>> Mobile: [redacted]
>> E-mail: spaige@usaid.gov
>>
>>
>>
>> On Tue, Feb 6, 2018 at 10:27 AM, Bethany Haberer <bhaberer@usaid.gov>
>> wrote:
>>
>> Hi Lisa,
>>
>>
>>
>> Thursday Feb 15 works better for me too.
>>
>>
>>
>> Thanks,
>>
>> Bethany
>>
>>
>> *Bethany A. Haberer*
>> *Deputy Health Office Director* | *US**AID**/**République démocratique du
>> Congo*
>> *office* [redacted] *mobile* [redacted]
>> bhaberer@usaid.gov
>>
>>
>> [image: Image removed by sender. U.S. Agency for International
>> Development]
>> *We partner to end extreme poverty and promote resilient, democratic
>> societies while advancing our security and prosperity. *
>>
>> https://www.usaid.gov/
>>
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>>
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>>
>> On Mon, Feb 5, 2018 at 6:25 PM, Sarah Paige <spaige@usaid.gov> wrote:
>>
>> Dear Lisa
>>
>>
>>
>> I have a conflict during the suggested schedule change. We can consider
>> pushing back a week, to Thursday Feb 15?
>>

>>
>>
>> Thank you
>>
>> Sarah
>>
>>
>> Sarah Paige, PhD, MPH
>> Senior Infectious Disease Advisor
>> USAID Africa Bureau/Health Division
>> Desk: REDACTED
>>
>> Mobile: REDACTED
>> E-mail: spaige@usaid.gov
>>
>>
>>
>> On Mon, Feb 5, 2018 at 6:57 AM, Saila-Ngita, Diafuka <
>> Diafuka.Saila_Ngita@tufts.edu> wrote:
>>
>> Thank you for the email. I am on leave until February 9, 2018.
>>
>>
>>
>> *Diafuka Saila-Ngita,* DVM, MSc., Ph.D.
>> Research Associate Professor, Cummings School of Veterinary Medicine
>> Department of Infectious Diseases and Global Health
>> Tufts University,
>> North Grafton, MA 01536 - USA
>> USAID Grantee| Emerging Pandemic Threats (EPT2)
>> One Health Workforce - Africa
>> Tel.: REDACTED (Mobile)
>> REDACTED (Mobile)
>> Skype: sailangita
>> Twitter: @sailangita
>> ----------
>>
>> *From:* Lisa Kramer [lkramer@usaid.gov]
>> *Sent:* Monday, February 05, 2018 4:18 AM
>> *To:* Sarah Paige; Izetta Simmons; Jean-Felly Numbi; Jessica Pettit;
>> Bethany Haberer; Saila-Ngita, Diafuka; Predict inbox; Ngona Idi Abdullah;
>> Marilyn Crane; Eddy Kambale; Placide Mbala; Lindsay Parish; Andrew
>> Clements; Kone, Philippe (FAOCD); gasp; Malangu Doyen; Mike Cranfield;
>> Kambale Syaluha Eddy; Dr Prime Mulembakani; Prince Kimpanga; Mike
>> Cranfield; David J Wolking; Amuguni, Janetrix Hellen M.; irwego; Sylvia
>> Wanzala; Andrea Long-Wagar
>> *Subject:* REMINDER and TIME CHANGE request - DRC IP Monthly Coordination
>> Call
>>
>> Dear Colleagues,
>>
>>

>>
>> I hope this message finds you all well.
>>
>>
>>
>> We have our monthly DRC EPT2/GHSA coordination call scheduled for this
>> Thursday, 8 February. However, a few of us have a conflict with our usual
>> time of 14:00 Kinshasa. I request that we change the time to *15:00
>> Kinshasa time (10:00 DC and 17:00 East Africa)*. Please confirm whether
>> your office/project can be sufficiently represented at the revised time.
>> Thank you.
>>
>>
>>
>> Best,
>>
>> Lisa
>>
>>
>>
>>
>> *Lisa Kramer*
>>
>> Regional Emerging Pandemic Threats Advisor
>>
>> USAID/Kenya and East Africa
>>
>> REDACTED (Office)
>>
>> REDACTED (Mobile)
>>
>>
>>
>>
>>
>> On Thu, Jan 11, 2018 at 10:40 PM, Sarah Paige <spaige@usaid.gov> wrote:
>>
>> Greetings Team DRC
>>
>>
>>
>> Thank you to OHW/OHCEA for joining the call today, and thank you to those
>> folks who let me know they were unable to join. And thank you to
>> Philippe
>> for sharing this FAO update.
>>
>> Here is a link to the google document with IP updates. P2, please add
>> your updates to this document. https://docs.google.com/document/d/
>> 1v61o7gdTDBQajoCQz_I_M321A8cCW4LlqPNdoByOdTk/edit?usp=sharing
>>
>>
>>

>> In the mean time, I'd like to know of P2 (Gorilla Doctors) and FAO were
>> able to meet at the end of November to discuss the Vet Lab rehab work
>> that
>> was being considered for Eastern DRC. Is there a read-out from that
>> meeting?
>>
>>
>>
>> Thank you very much!
>>
>>
>>
>> Best
>>
>> Sarah
>>
>>
>> Sarah Paige, PhD, MPH
>> Senior Infectious Disease Advisor
>> USAID Africa Bureau/Health Division
>> Desk: REDACTED
>>
>> Mobile: REDACTED

>> E-mail: spaige@usaid.gov
>>
>>
>>
>> On Tue, Jan 9, 2018 at 4:25 PM, <spaige@usaid.gov> wrote:
>>
>> Hi All
>>
>> Happy 2018! I hope everyone is well. I'd like to be sure we connect this
>> week. I need to get up to speed with IP plans and accomplishments. I'l
>> lbe
>> sending around an agenda tomorrow.
>>
>> thank you!
>> DRC IP Monthly Coordination Calls
>>
>> Dear Teams
>> Thank you for joining our monthly coordination call. The purpose of the
>> call is to provide greater support from USAID/Washington to the mission
>> and
>> partners through improved communication.
>>
>> The standing agenda is:
>>
>> 1) USAID updates (5 minutes)
>> 2) Partner updates (accomplishments from past month, plans for current
>> month- 10 minutes each)
>> 3) Issues or Action items

>> 4) AOB
>>
>> (U.S. and Canada): REDACTED
>> International dial-in number: REDACTED
>> Conference code: REDACTED
>> Host: REDACTED
>>
>> When
>>
>> Thu Jan 11, 2018 9am – 10am Eastern Time
>>
>> Where
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>> (U.S. and Canada) REDACTED International dial-in number: REDACTED
>> REDACTED Conference code: REDACTED (map
>> <https://maps.google.com/maps?q=%28U.S.+and+Canada%29:+%28866%29+203-0920+International+dial-in+number:+%28206%29+445-0056+Conference+code:+4475601841%23&hl=en>
>>)
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>> Who
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>> spaige@usaid.gov - organizer
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>> jnumbi@usaid.gov
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>> pmulembakani@metabiota.com
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>> lparish@usaid.gov
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>> Prince Kimpanga
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>> REDACTED

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>> isimmons@usaid.gov
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>> bhaberer@usaid.gov
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>> Kambale Syaluha Eddy
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>> lkramer@usaid.gov
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>> predict@ucdavis.edu
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>> mcrane@usaid.gov
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>> jpettit@usaid.gov
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>> diafuka.saila_ngita@tufts.edu

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>> --
>>
>> Jean Felly Numbi
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>> USAID-DRC TB& Infectious Disease Advisor
>>
>> Office Phone #: REDACTED
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>> Cellular Phone #: REDACTED
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>

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Eddy Kambale Syaluha, DVM,
Head Veterinarian/Gorilla Doctors
PREDICT-EPT2 Country Coordinator/Eastern DRC
T: + REDACTED & + REDACTED
Skype: REDACTED
www.gorilladoctors.org

From: REDACTED
Sent: 05/09/2018 12:27:29 PM (-07:00)
To: "Dennis Carroll" <dcarroll@usaid.gov>; "Cara Chrisman" <cchrisman@usaid.gov>
Cc: "Rie Yamaki" <ryamaki@usaid.gov>; "Latoya Armstrong" <laarmstrong@usaid.gov>; "Jonna Mazet" <jkmazet@ucdavis.edu>; "Cassandra Louis Duthil" <clouisduthil@usaid.gov>
Subject: A few questions on Japan outreach

Hi Dennis and Cara,

This message is regarding Dennis's GVP outreach seminar in Tokyo. It will be held at the US embassy as part of a USAID seminar series on June 28. I have a few questions to facilitate planning.

- Dr. Chieko Ikeda (MoHLW) mentioned at PMAC that GVP support from academia would be essential for government involvement in Japan. If that is the case, do we plan to reach out to ministries and OIE colleagues at all, or solely focus on academia?

- What are Dennis's tentative travel dates in Japan? (Will Dennis be traveling from Saskatoon-Korea-Japan?)

- Will Dennis stay in Tokyo the entire time, or able to fly to other cities? Rie, LaToya and I have been researching relevant research institutions, and have identified Hokkaido University zoonoses center and Nagasaki University Faculty of Tropical Medicine (both 90-120min flights from Tokyo). We do not have direct contacts in Nagasaki, but Jonna has worked with Dr. Hiroshi Kida (director of zoonoses center & Japanese equivalent to Dr. Suwit), who may be worth a visit if we can arrange it. If not, a video conference?

Any information would be much appreciated!

Many thanks,

REDACTED

REDACTED
Fellow
One Health Institute
School of Veterinary Medicine
University of California, Davis

From: "Dennis Carroll" <dcarroll@usaid.gov>
Sent: 11/28/2018 4:19:01 PM (-08:00)
To: "Dean Jamison" <djamison@uw.edu>
Cc: "Jonna Mazet" <jkmazet@ucdavis.edu>; "Nita Madhav" <nmadhav@metabiota.com>; "Ben Oppenheim" <boppenheim@metabiota.com>
Subject: Re: Briefing in Washington on status of GVP BCA?

Dean, apologies for the tardy reply. I greatly appreciate the opportunity for scheduling the update. I can accommodate whichever dates work best for you in either DC or SF. Thanks 🙏

Dr Dennis Carroll
Director
Emerging Threats
Global Health
USAID
301-646-6235

On Nov 28, 2018, at 7:00 PM, Dean Jamison <djamison@uw.edu> wrote:

> March 13 slightly better for me but either the 13th or 24th works fine.
>
> Dean
>
> Sent from my iPhone
>
> On Nov 28, 2018, at 11:51 AM, Jonna Mazet <jkmazet@ucdavis.edu> wrote:
>
> > I could do March 13th or 14th DC.
> > Jonna
> >
> > On Wed, Nov 28, 2018 at 11:40 AM Dean Jamison <djamison@uw.edu> wrote:
> > Dear Jonna, Dennis
> >
> > Thanks for getting back on this.
> >
> > I unfortunately have personal commitments during the 4th week of March.
> >
> > I could make March 13 or 14 or 18 in DC. Alternatively I could make any day during the first week of April in SF if that works better.
> >
> > Best
> >
> > Dean
> >
> > Sent from my iPhone

From: "Tegegne Shiferaw" <tegegnes@jhuccpeth.org>
Sent: 03/06/2019 3:39:19 AM (-08:00)
To: "Faith Bartz Tarr" <fbartz@usaid.gov>; "Lisa Kramer" <lkramer@usaid.gov>; "Woutrina A Smith" <wasmith@ucdavis.edu>; "hellen Amuguni" <Janetrix.Amuguni@tufts.edu>; "Innocent Rwego" [redacted] "Diafuka Saila-Ngita" <diafuka.saila_ngita@tufts.edu>; "David Mutonga" <david.mutonga@thepalladiumgroup.com>; "Katey Pelican" <pelicank@umn.edu>; "Nigatu kebede" [redacted] "Lindsay Parish" <lparish@usaid.gov>; "Andrea Long-Wagar" <alongwagar@usaid.gov>; "Alisa Pereira" <apereira@usaid.gov>; "Ashna Kibria" <akibria@usaid.gov>; "Andrew Clements" <aclements@usaid.gov>; "Jonna Mazet" <jkmazet@ucdavis.edu>; "Tzipori, Saul" <saul.tzipori@tufts.edu>; "Makonnen, Yilma (FAORNE)" [redacted] "Marilyn Crane" <mcrane@usaid.gov>; "Innocent Rwego" <irwego@umn.edu>; "Andrew Kitua" [redacted] "Ricardo Echalar" <rechalar@usaid.gov>; "Jeff Bender" <bende002@umn.edu>; "Susan Scribner" [redacted] "Amanda Paust" <apaust@usaid.gov>; "Yirgalem Gebremeskel" <ygebremeskel@usaid.gov>; "Woldtsadique, Feleseta (FAOET)" [redacted] "Awoke, Wondwosen (FAOET)" [redacted] "VantKlooster, Gijs (FAOET)" [redacted] "Jennifer K Lane" <jklane@ucdavis.edu>; "Simon Heliso" <Simonh@jhuccpeth.org>; "Guda Alemayehu" <galemayehu@usaid.gov>; "Anton Schneider" <aschneider@usaid.gov>; "Khadijah Alibhai" <kalibhai@brynmawr.edu>; "Darsema Gulima" [redacted] "Darsema Gulima Huluka" <dhuluka@hrh2030program.org>; [redacted] "filimonab@crdaethiopia.org" <filimonab@crdaethiopia.org>; "Legesse Bezabih" [redacted] "Muluken Alemu" [redacted] "Mohan Joshi" <mjoshi@msh.org>; "Mekonnen,Negussu" <nmekonnen@msh.org>; "Johnson, Denise" <Denise.Johnson@icf.com>; "Benita Izere" <Benita.Izere@icf.com>; "Asnakew Yeshiwondim" <ayeshiwondim@path.org>; "Maria Busquets" <mbusquets@usaid.gov>
Cc: "Betemariam Alemu" <betemariama@jhuccpeth.org>; "Stephanie Clayton" <sclayton@jhu.edu>; "Lindsey Leslie" <lindseyleslie@jhu.edu>
Subject: RE: Ethiopia GHSA biweekly update, Jan. 25
Attachments: GHSA_Ethiopia_BiWeekly_Updates March 6,2019.docx

Hi Faith
Please find JHU CCP GHSA ZD risk communication project bi weekly update.
Regards,

Tegegne

From: Faith Bartz Tarr [mailto:fbartz@usaid.gov]
Sent: Monday, March 4, 2019 8:30 AM
To: Lisa Kramer <lkramer@usaid.gov>; Woutrina A Smith <wasmith@ucdavis.edu>; hellen Amuguni <Janetrix.Amuguni@tufts.edu>; Innocent Rwego <[redacted] Diafuka Saila-Ngita <diafuka.saila_ngita@tufts.edu>; David Mutonga <david.mutonga@thepalladiumgroup.com>; Katey Pelican <pelicank@umn.edu>; Nigatu kebede <[redacted]>; Lindsay Parish <lparish@usaid.gov>; Andrea Long-Wagar <alongwagar@usaid.gov>; Alisa Pereira <apereira@usaid.gov>; Ashna Kibria <akibria@usaid.gov>; Andrew Clements <aclements@usaid.gov>; Jonna Mazet <jkmazet@ucdavis.edu>; Tzipori, Saul <saul.tzipori@tufts.edu>; Makonnen, Yilma (FAORNE) <[redacted]>; Marilyn Crane <mcrane@usaid.gov>; Innocent Rwego <irwego@umn.edu>; Andrew Kitua [redacted]; Ricardo Echalar <rechalar@usaid.gov>; Jeff Bender <bende002@umn.edu>; Susan Scribner <[redacted]>; Amanda Paust <apaust@usaid.gov>; Yirgalem Gebremeskel <ygebremeskel@usaid.gov>; Woldtsadique, Feleseta (FAOET) [redacted] Awoke, Wondwosen (FAOET) [redacted] VantKlooster, Gijs (FAOET) <[redacted] Jennifer K Lane <jklane@ucdavis.edu>; Simon Heliso <Simonh@jhuccpeth.org>; Guda Alemayehu <galemayehu@usaid.gov>; Anton Schneider <aschneider@usaid.gov>; Tegegne Shiferaw <tegegnes@jhuccpeth.org>; Khadijah Alibhai <kalibhai@brynmawr.edu>; Darsema Gulima [redacted] Darsema Gulima Huluka <dhuluka@hrh2030program.org>; [redacted]; filimonab@crdaethiopia.org; Legesse Bezabih [redacted]; Muluken Alemu [redacted] Mohan Joshi <mjoshi@msh.org>; Mekonnen,Negussu <nmekonnen@msh.org>; Johnson, Denise <Denise.Johnson@icf.com>; Benita Izere

<Benita.Izere@icf.com>; Asnakew Yeshiwondim <ayeshiwondim@path.org>; Maria Busquets <mbusquets@usaid.gov>
Subject: Re: Ethiopia GHSA biweekly update, Jan. 25

Dear GHSA Ethiopia colleagues,

It's time for the biweekly update on GHSA activities in Ethiopia. This should cover activities from Feb. 23 - March 8, 2019. Please use the attached template, and send by COB Wed. March 6.

Thank you all as always, and wishing you well.
Regards,

Faith Bartz Tarr, Ph.D.

USAID Ethiopia

Acting Global Health Security Advisor
AAAS Science and Technology Policy Fellow & Agriculture Officer
Office of Economic Growth and Transformation

email fbartz@usaid.gov
phone +
mobile + REDACTED
U.S. alternate phone number: 1-301-985-8857 extension 6007

Find us online at:
USAID.gov/ethiopia
Facebook: https://www.facebook.com/usaidethiopia
Twitter: @USAIDEthiopia

Ethiopia GHSA Implementation Bi-Weekly Updates

USAID Implementing Partners

Date Submitted	6th March, 2019
Project	GHSA, ZD risk communication, JHU CCP

I. **Highlighted Updates: Please list (maximum five) major updates on activity implementation in Ethiopia.**
FORMAT: Insert 1 sentence summary of update (bold). Insert 1-3 sentences of additional information.

- **R.5.2 Internal and partner coordination for emergency risk communication**

JHU CCP through its USAID supported GHSA project provided technical and financial support to Emergency and Pandemic Threats (EPT) TWG established under the NOHSC. The purpose of the workshop was to finalization of the Preparedness and Response Plan (HPAI PRP) of Ethiopia. The workshop was three days long (February 21-23/2019) where ten members of the TWG and senior experts/subject matter specialists selected from relevant authorities of line ministries and development partners gathered together and worked on the action plan and budget for each activities in Bushoftu town.

In addition to the support provided to ETP TWG JHU CCP in collaboration with FAO ECTAD proved financial and technical support to the Brucellosis Prevention and Control strategy approach discussion workshop organized by CDC in collaboration with the ministry of agriculture and EPHI from its GHSA project. This workshop was conducted from 27-28th Februay 2019 at Bishoftu town. The workshop was so interactive and JHU CCP shared its experience in community level activities and got lots of inputs from the presentation and discussion that can be utilized on message development.

- **R.5.3 Public communication for emergencies**

Based on the test result and feedback collected from the training of frontline workers at Omorate JHU CCP technical staff members are working refinement and finalization the training guide. Senior expert from JHU CCP HQ is currently providing technical assistance in the finalization process.

- **Field visit**

Since March 5th 2019 JHU CCP staff members (Simon, Stephanie , and Tegegne), and senior health advisor (Maria Busquets) from USAID Ethiopia mission office conducting visit to Amhara region to understand the human –animal interface and make discussion with the regional One health taskforce. March 5, 2019 the team has made discussion with JHU CCP Amhara region office team on how the project team integrated GHSA activities in to the communication for health project. The following day (March 6th, 2019) the team went to the country side, made discussion and observation with rural family households, human health and animal health experts. All the team members have got a lot of insight that can be used as an inputs for message development.

II. **Coordination: Please describe any activities in Ethiopia that may benefit from coordination with other GHSA implementing partners or USG agencies (e.g. CDC, USDA, DTRA, etc.) and how.**

UCDUSR0013596

III. **<u>Challenges</u>: Please describe any significant challenges related to planning or implementation of GHSA activities in Ethiopia.**

- Current unsettled political condition to facilitate the establishment of zonal taskforce at Central Gonder zone.

IV. **<u>Upcoming GHSA related TDYs</u>: Please provide the information requested below on all GHSA-related TDYs to Ethiopia for the next six weeks. Insert additional rows as necessary.**

Traveler(s)	**Location (areas to be visited)**	**Dates**	**Trip Objectives**	**Trip Impact (including deliverables)** *This should also specify if/how this TDY will build host nation capacity and contributes to overarching GHS objectives*

V. **<u>Upcoming major GHSA related meetings/trainings/events</u> for the next six weeks (if information is not captured in TDY table above)**

Meeting/Training/ Event Topic	**Location**	**Dates**	**Objectives**	**Number and type of participants**

UCDUSR0013597

From: "Elizabeth Leasure" <ealeasure@UCDAVIS.EDU>
Sent: 08/20/2019 1:05:59 PM (-07:00)
To: "Andrew Clements" <aclements@usaid.gov>
Cc: "predictmgt@usaid.gov" <predictmgt@usaid.gov>; "Jonna Mazet" <jkmazet@ucdavis.edu>; "David John Wolking" <djwolking@ucdavis.edu>; "predict Sympa List" <predict@ucdavis.edu>; "Kevin N Gonzalez" <kngonzalez@ucdavis.edu>; "Hannah R Chale" <hrchale@UCDAVIS.EDU>
Subject: PREDICT Year 5 Equipment Purchase Request #7
Attachments: PREDICT-Equipment Request_Year 5_No.7_8.20.19.pdf

Hi Andrew. Please find attached a request for authorization to purchase an ultra-low freezer for UC Davis to store samples collected in Guinea. Please let me know if you have any questions or require any additional information to proceed.

Thanks!
Liz

Elizabeth Leasure
One Health Institute
University of California, Davis
530-754-9034 (office)
REDACTED (cell)

August 20, 2019
Award No. and Title: AID-OAA-A-14-00102, PREDICT-2
University of California, Davis
PREDICT-2 Equipment Request

PREDICT-2 requests authorization to purchase the following equipment item to enable in-country work for the project. This item was not originally included in the approved proposal budget and requires approval. Per Attachment A – Schedule of the PREDICT-2 cooperative agreement, budget revisions shall be administered in accordance with 2 CFR 200 (as of Mod. 4 dated 9/30/15), which stipulates that the inclusion of costs that require prior approval in accordance with the applicable cost principles must have prior approval from USAID. The applicable cost principles indicate that equipment with an acquisition cost of $5,000 or more and a useful life of more than one year require prior approval from the awarding agency to be allowable.

Country: U.S. on behalf of Guinea
Partner/Subaward: University of California, Davis
Item: TSX ultra-low upright freezer
Vendor: Thermo Fisher Scientific
Geographic Code: Source is within authorized geographic code 935 for procurement of services and commodities.
Estimated Cost: Unit Price: $14,425.93; Qty 1
Solicitation and Selection: Although all features are similar between the quoted models of freezer, the TSX ultra-low temperature upright freezer from Thermo Fisher Scientific is the most cost effective option.
Justification: PREDICT-2 is focused on the detection of potentially zoonotic viruses at the human-animal interface. During the course of this project, thousands of samples have been collected and stored in freezers housed by our in-country partner in Guinea. Now that the end of the project is in sight, the Government of Guinea has requested that all samples collected by the project be shipped to UC Davis for biosafe and secure storage and archival.
Budget Impact: Funds for this purchase will come from the diagnostic portion of the approved Year 5 PREDICT-2 budget for UC Davis.

Sales Quotation

*Quote Nbr	Creation Date	Due Date	Page
9221-0553-45	08/09/2019		1 of 1

Payment Terms	Delivery Terms
NET 30 DAYS	DEST
Valid To	Prepared By
12/07/2019	FINNERTY, WILLIAM
Customer Reference	Sales Representative
FISHER QUOTE/ BRETT TSX FREEZER	TROY MEARS

To place an order	Ph: 800-772-6733	Fx: 800-772-7702

Submitted To:	Customer Account: 114744-001
BRETT SMITH WILL.FINNERTY@THERMOFISHER.COM 530-999-	UNIV OF CAL @ DAVIS ONE SHIELDS AVENUE BLDG & RM DAVIS CA 95616-5270 ATTN: BRETT SMITH

Selected quote

Fisher Scientific
Part of Thermo Fisher Scientific

FISHER SAFETY
4500 TURNBERRY DRIVE
HANOVER PARK IL 60133-5491

Review and Place Order

Please note: This link initiates order review / placement through fishersci.com

***Please reference this Quote Number on all correspondence.**

Don't have a profile? Register on fishersci.com

For complete Terms and Conditions, please click here.

Nbr	Qty	UN	Catalog Number	Description	Unit Price	Extended Price
1	1	EA	09 313 870	ULT, PKG, TSX60086A+RACKS	14,425.81	14,425.81

Vendor Catalog # TSX60086ARAK
Hazardous Material
This item is being sold as 1 per each
Original Catalog Number TSX60086ARAK

2	12	EA	1950520	SIDE RACK 25-2 BX 4 DOOR	.01	.12

Storage Rack, Side Access; Thermo Scientific;For Forma 88000 and TSU Series; Adjustable; Holds 25 (2 in.); boxes
Vendor Catalog # 1950520
This item is being sold as 1 per each

MERCHANDISE TOTAL	14,425.93
Estimated Sales Tax	1,190.14
TOTAL	15,616.07

NOTES:
We now offer highly competitive financing with low monthly payments. Please contact your local sales representative for more information.

Tell us about your recent customer service experience by completing a short survey. This should take no longer than three minutes. Enter the link into your browser and enter the passcode: USA-PGH-CS2
http://survey.medallia.com/fishersci

PRODUCT AVAILABILITY: Did you know you can view a product's availability right on the product page? Simply enter the quantity you want to purchase and the current availability will appear below the item.

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Thermo Scientific

TSE Series Upright ULT Freezers

Email This Page | Print Page

★★★★★

DESCRIPTION

Thermo Scientific* TSE Series provides uncompromised sample protection for -50°C to -86°C applications. Designed for daily sample protection and dependability. Thermo Scientific TSE Series upright ULT freezers deliver a range of features including:

- Microprocessor Controls: Centralized, eye level information center, including microprocessor control and monitoring system ensures all controls and displays are easy to reach and read
- State-of-the-art, refrigeration system: improves temperature control and increases reserve BTUH capacity, resulting in a more stable temperature sample
- 5 in. (127mm) foamed-in-place, polyurethane insulation: reduces power consumption, maintains temperature setpoint and combined with triple-point door gasket, provides longer holding time in the event of a door opening
- Rugged, heavy gauge, cold-rolled steel cabinets: with a powder coat paint finish for a uniform exterior that resists chipping and rust
- 1 in. (25mm) access ports: allow for the use of inexpedient probes or instrumentation.
- Secure inner doors: Four inner doors reduce cold air loss and improve temperature recovery after door

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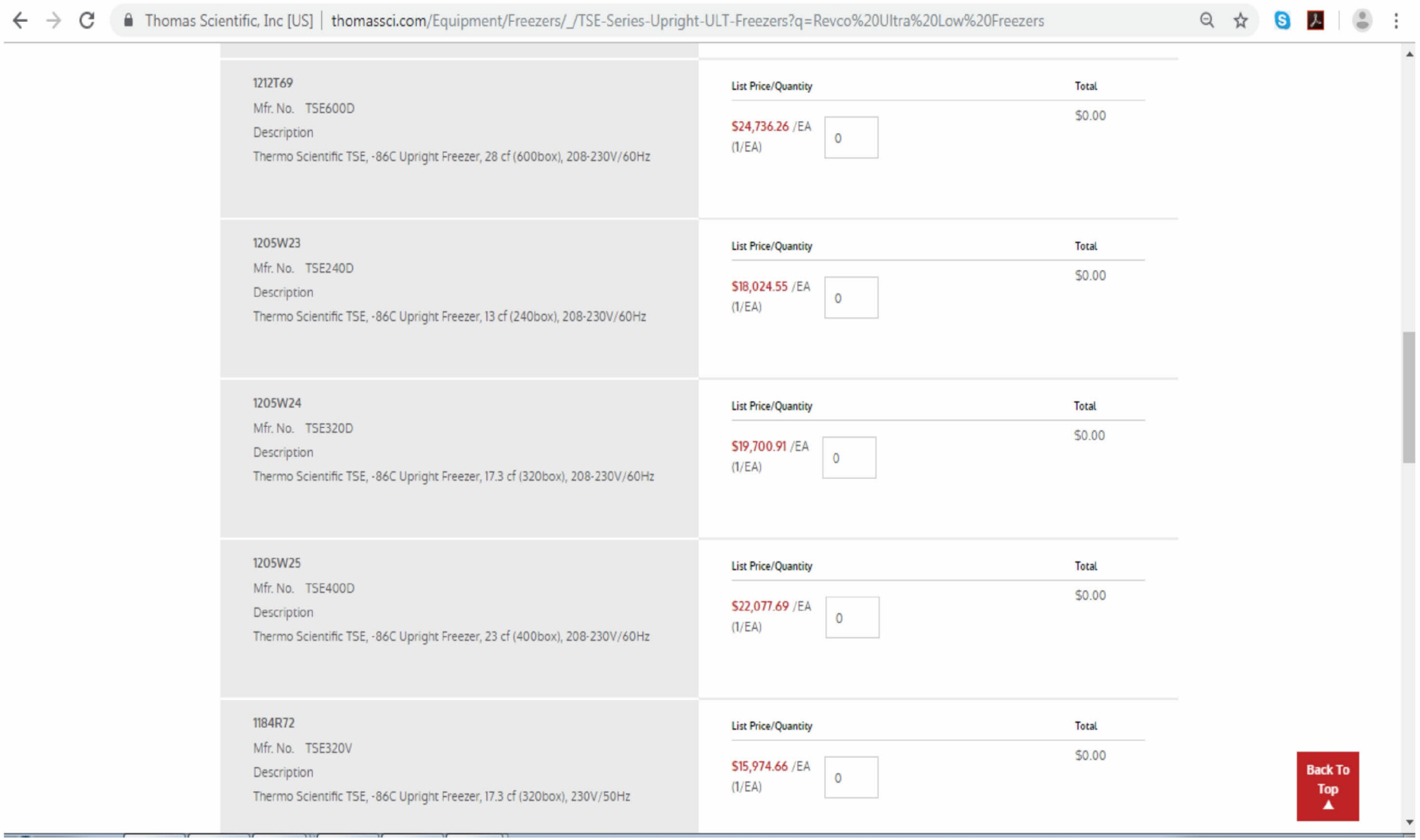
Thomas Scientific, Inc [US] | thomassci.com/Equipment/Freezers/_/TSE-Series-Upright-ULT-Freezers?q=Revco%20Ultra%20Low%20Freezers
1212T69
Mfr. No. TSE600D
Description
Thermo Scientific TSE, -86C Upright Freezer, 28 cf (600box), 208-230V/60Hz
List Price/Quantity
$24,736.26 /EA
(1/EA)
0
Total
$0.00
1205W23
Mfr. No. TSE240D
Description
Thermo Scientific TSE, -86C Upright Freezer, 13 cf (240box), 208-230V/60Hz
List Price/Quantity
$18,024.55 /EA
(1/EA)
0
Total
$0.00
1205W24
Mfr. No. TSE320D
Description
Thermo Scientific TSE, -86C Upright Freezer, 17.3 cf (320box), 208-230V/60Hz
List Price/Quantity
$19,700.91 /EA
(1/EA)
0
Total
$0.00
1205W25
Mfr. No. TSE400D
Description
Thermo Scientific TSE, -86C Upright Freezer, 23 cf (400box), 208-230V/60Hz
List Price/Quantity
$22,077.69 /EA
(1/EA)
0
Total
$0.00
1184R72
Mfr. No. TSE320V
Description
Thermo Scientific TSE, -86C Upright Freezer, 17.3 cf (320box), 230V/50Hz
List Price/Quantity
$15,974.66 /EA
(1/EA)
0
Total
$0.00
Back To Top

us.vwr.com/store/catalog/product.jsp?catalog_number=76318-768#stiboGrid

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VWR® –86 °C Ultra Low Temperature Freezers with Racks

Supplier: VWR International

Dependable –80 °C storage, powered by H-drive for operational savings and sustainability.

- Low energy usage
- Low peak temperature variation
- Fast door opening recovery
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Designed to keep your samples safe. Limit environmental impact and lower HVAC costs. User friendly and quiet.

Warranty: Two-year limited parts and labor warranty. Five-year warranty on compressor parts.

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Ultra Low Temperature Freezers	28.8 cu.ft. (Interior)	43.5W×38.4D×78.0" H	34.4W×28.3D×51.2" H	2 shelves or racks and boxes	NEMA 5-20	820 lbs.	76318-768	Each	$17,227.20	0
Ultra Low Temperature Freezers	28.8 cu.ft. (Interior)	43.5W×38.4D×78.0" H	34.4W×28.3D×51.2" H	2 shelves of racks and boxes for 2" vials plus LN2 backup system	NEMA 5-20	820 lbs.	76318-770	Each	$19,097.60	0
Ultra Low Temperature Freezers	28.8 cu.ft. (Interior)	43.5W×38.4D×78.0" H	34.4W×28.3D×51.2" H	2 shelves of racks and boxes for 2" vials plus CO_2 backup system	NEMA 5-20	820 lbs.	76318-772	Each	$19,097.60	0
Ultra Low Temperature Freezers	28.8 cu.ft. (Interior)	43.5W×38.4D×78.0" H	34.4W×28.3D×51.2" H	2 shelves of racks and boxes for 2" vials	NEMA 5-20	820 lbs.	76318-774	Each	$18,589.40	0

From: "Jonna Mazet" <jkmazet@ucdavis.edu>
Sent: 08/21/2019 1:58:45 PM (-07:00)
To: "Jon Epstein" <epstein@ecohealthalliance.org>
Cc: "Peter Daszak" <daszak@ecohealthalliance.org>; "Molly Turner" <turner@ecohealthalliance.org>; "Evelyn Luciano" <luciano@ecohealthalliance.org>; "Elizabeth Leasure" <ealeasure@ucdavis.edu>; "David J Wolking" <djwolking@ucdavis.edu>; "Anthony, Simon J." <sja2127@cumc.columbia.edu>; "Tracey Goldstein" <tgoldstein@ucdavis.edu>; "Christine Kreuder Johnson" <ckjohnson@ucdavis.edu>
Subject: Re: Bangladesh numbers

Thanks,
J

On Wed, Aug 21, 2019 at 10:48 AM Jon Epstein <epstein@ecohealthalliance.org> wrote:

> Thank you - that's very helpful. Did you see that Andrew emailed the mission with the same message?
> I'll let you know if the call happens, and also will prep Arif prior to his in-person tomorrow.
> -Jon
>
> On Wed, Aug 21, 2019 at 1:37 PM Jonna Mazet <jkmazet@ucdavis.edu> wrote:
>
> > The guidance below is pre-discussion with USAID front office on Bangladesh funding, but I wanted you to have it in case you have a call with the Mission with or without Andrew. As he says, he needs to either get us the money or give us approval to remove by-country spending limits.
> > Let me know if you have any of these calls & how they go,
> > Jonna
> >
> > ---------- Forwarded message ---------
> > From: **Andrew Clements** <aclements@usaid.gov>
> > Date: Wed, Aug 21, 2019 at 9:40 AM
> > Subject: Re: Bangladesh numbers
> > To: Elizabeth Leasure <ealeasure@ucdavis.edu>
> > Cc: Amalhin Shek <ashek@usaid.gov>, Alisa Pereira <apereira@usaid.gov>, Jonna Mazet <jkmazet@ucdavis.edu>, David John Wolking <djwolking@ucdavis.edu>, predict Sympa List <predict@ucdavis.edu>, Cara Chrisman <cchrisman@usaid.gov>
> >
> > Hi Liz,
> >
> > Thanks for this update. Based on this information, please stop all activities in Bangladesh until we get resolution on whether we can move funds from other countries or obligate the rest of the year 5 funds. UCD should not put itself at further risk by incurring additional costs for the approved, but unfunded activities.
> >
> > Andrew
> >
> > 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 Wed, Aug 21, 2019 at 6:05 PM Elizabeth Leasure <ealeasure@ucdavis.edu> wrote:

Hi Amalhin.

One EHA's June invoice hits, the Bangladesh pipeline is **-$130,675.**

With current commitments, projected expenses through the end of the project is $980,853, leaving us **in the hole by $1,111,528** come October 1st if we don't receive the remainder of the obligation for Bangladesh. It's hard to say how those costs will be split across the remaining months, so an even distribution is fine. If you have any questions, please let me know.

Thanks,

Liz

Elizabeth Leasure

Financial Operations Manager

One Health Institute

REDACTED *(cell)*

530-754-9034 (office)

Skype: ealeasure

--

Jonathan H. Epstein DVM, MPH, PhD

Vice President for Science and Outreach

EcoHealth Alliance
460 West 34th Street, Ste. 1701

New York, NY 10001

1.212.380.4467 (direct)
REDACTED (mobile)

web: ecohealthalliance.org

Twitter: @epsteinjon

EcoHealth Alliance leads cutting-edge scientific 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: "Elizabeth Leasure" <ealeasure@UCDAVIS.EDU>
Sent: 08/22/2019 9:53:17 AM (-07:00)
To: "Andrew Clements" <aclements@usaid.gov>
Cc: "Amalhin Shek" <ashek@usaid.gov>; "Alisa Pereira" <apereira@usaid.gov>; "Jonna Mazet" <jkmazet@ucdavis.edu>; "David John Wolking" <djwolking@ucdavis.edu>; "predict Sympa List" <predict@ucdavis.edu>; "Cara Chrisman" <cchrisman@usaid.gov>
Subject: RE: Bangladesh numbers

Understood. Thanks, Andrew.

Elizabeth Leasure
Financial Operations Manager
One Health Institute
REDACTED *(cell)*
530-754-9034 (office)
Skype: ealeasure

From: Andrew Clements <aclements@usaid.gov>
Sent: Wednesday, August 21, 2019 9:40 AM
To: Elizabeth Leasure <ealeasure@UCDAVIS.EDU>
Cc: Amalhin Shek <ashek@usaid.gov>; Alisa Pereira <apereira@usaid.gov>; Jonna Mazet <jkmazet@ucdavis.edu>; David John Wolking <djwolking@ucdavis.edu>; predict Sympa List <predict@ucdavis.edu>; Cara Chrisman <cchrisman@usaid.gov>
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Andrew

Andrew Clements, Ph.D.
Senior Scientific Advisor
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U.S. Agency for International Development
Mobile phone: 1-571-345-4253
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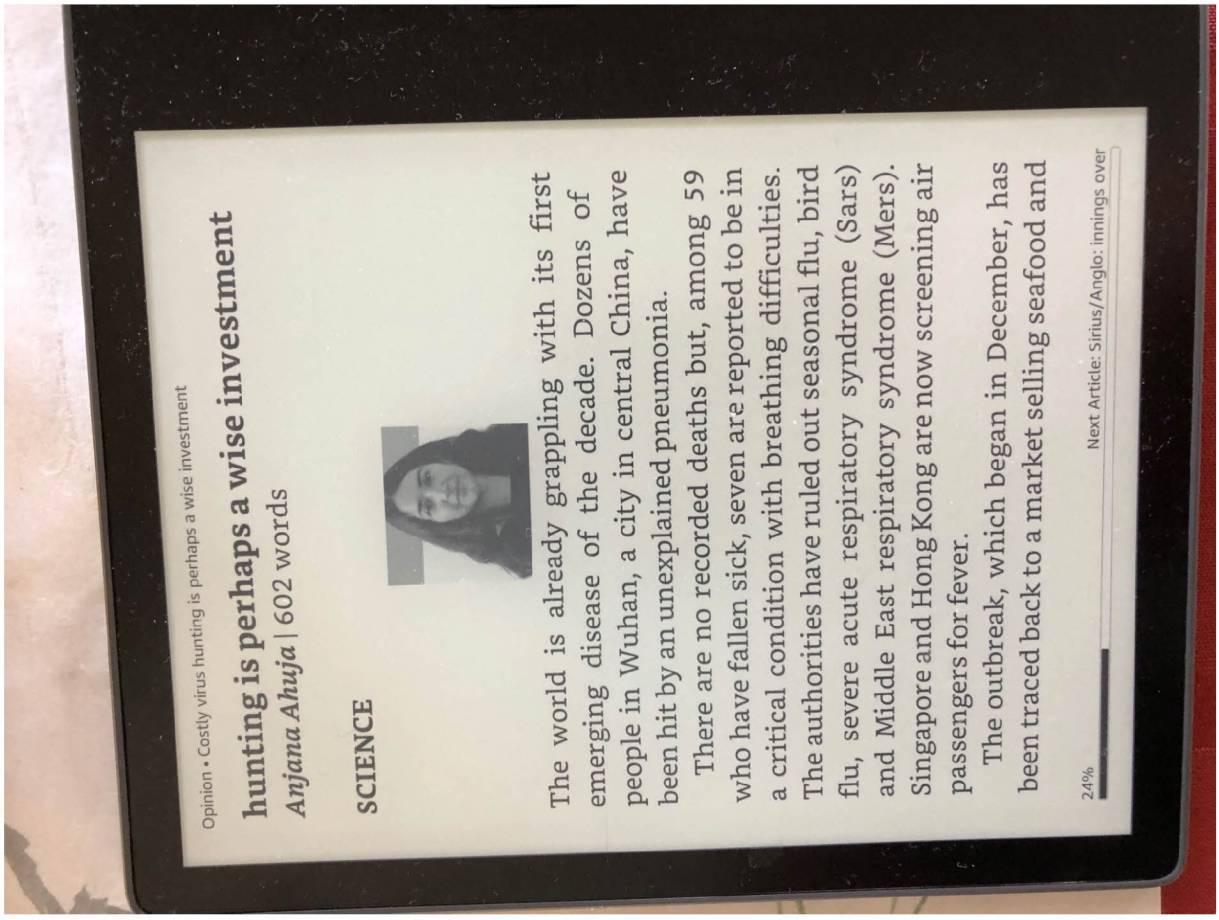
Liz

Elizabeth Leasure
Financial Operations Manager
One Health Institute
REDACTED *(cell)*
530-754-9034 (office)
Skype: ealeasure

From: "Dean Jamison" <meteor17@mac.com>
Sent: 01/09/2020 10:39:31 AM (-08:00)
To: "Nita Madhav" <nmadhav@metabiota.com>; boppenheim@metabiota.com; nstephenson@metabiota.com; paola.gadsden@cisidat.org.mx; "Dr. Stefano Bertozzi" <sbertozzi@berkeley.edu>; jguerrero@metabiota.com; Colin.Boyle@ucsf.edu; REDACTED jkmazet@ucdavis.edu; erubin@metabiota.com; REDACTED
Subject: GVP in today's FT
Attachments: IMG_9357.jpg, ATT00002.txt, IMG_9358.jpg, ATT00004.txt, IMG_9359.jpg, ATT00006.txt, IMG_9360.jpg, ATT00008.txt, IMG_9361.jpg, ATT00010.txt

FT's science writer, Anjana Ahuja, claps for the GVP with one hand.

Dean



Opinion • Costly virus hunting is perhaps a wise investment

hunting is perhaps a wise investment

Anjana Ahuja | 602 words

SCIENCE

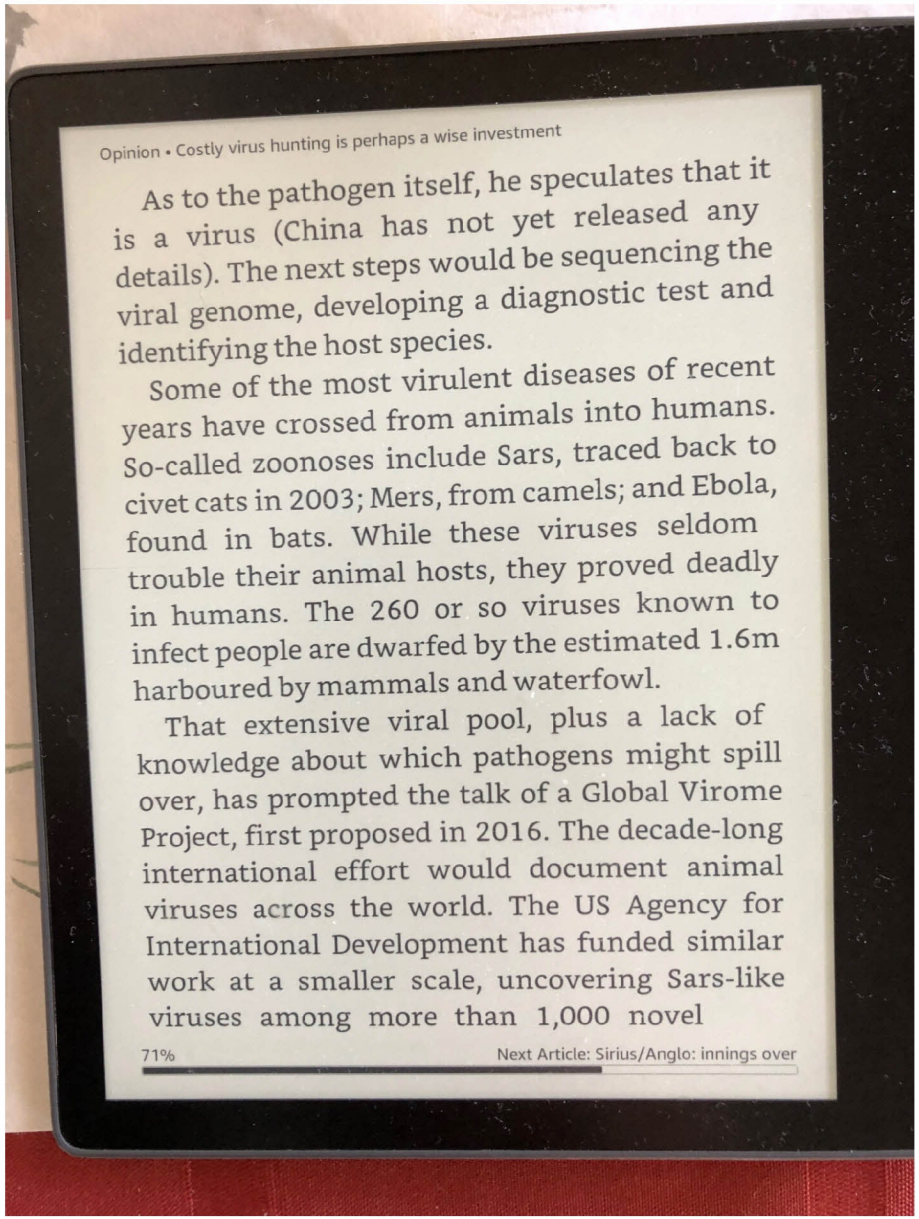
The world is already grappling with its first emerging disease of the decade. Dozens of people in Wuhan, a city in central China, have been hit by an unexplained pneumonia.

There are no recorded deaths but, among 59 who have fallen sick, seven are reported to be in a critical condition with breathing difficulties. The authorities have ruled out seasonal flu, bird flu, severe acute respiratory syndrome (Sars) and Middle East respiratory syndrome (Mers). Singapore and Hong Kong are now screening air passengers for fever.

The outbreak, which began in December, has been traced back to a market selling seafood and

24%

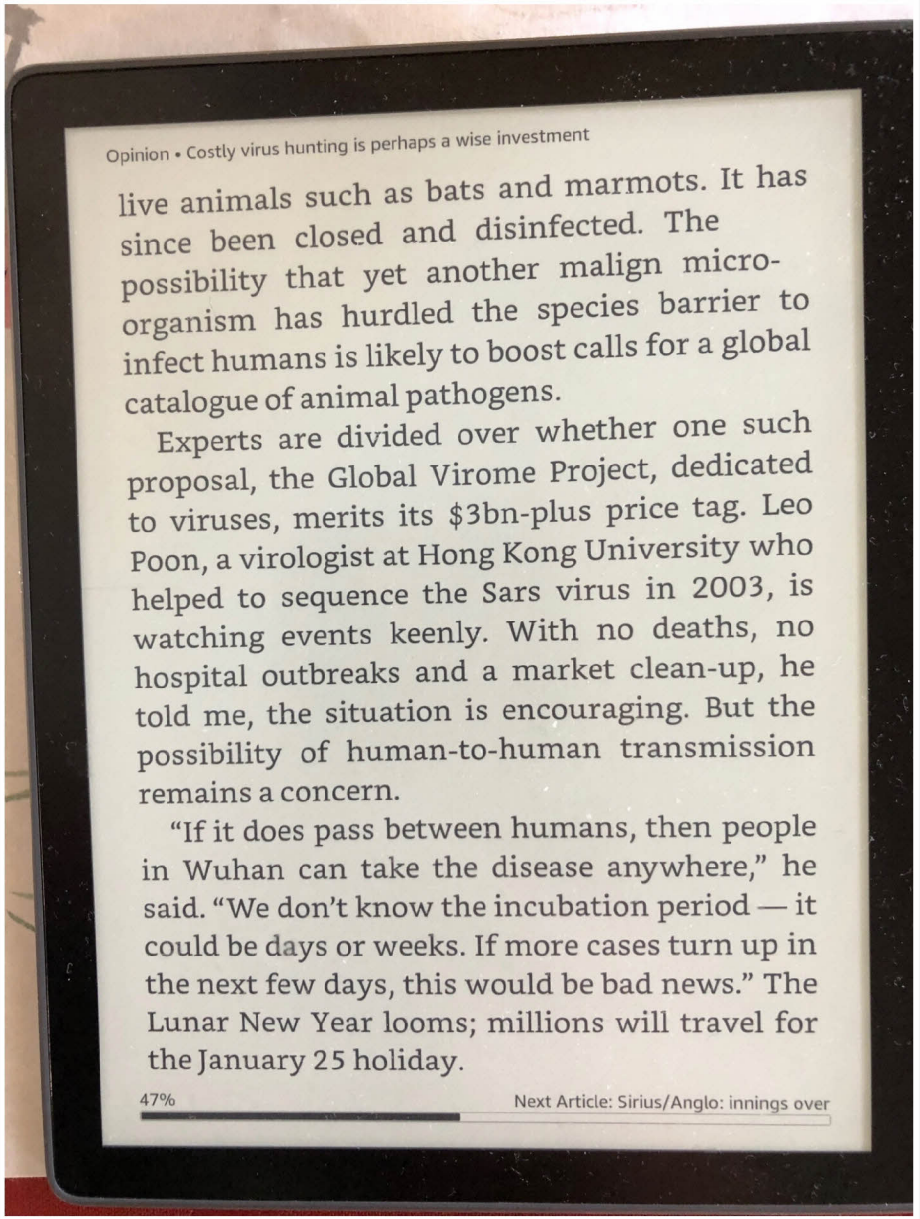
Next Article: Sirius/Anglo: innings over



As to the pathogen itself, he speculates that it is a virus (China has not yet released any details). The next steps would be sequencing the viral genome, developing a diagnostic test and identifying the host species.

Some of the most virulent diseases of recent years have crossed from animals into humans. So-called zoonoses include Sars, traced back to civet cats in 2003; Mers, from camels; and Ebola, found in bats. While these viruses seldom trouble their animal hosts, they proved deadly in humans. The 260 or so viruses known to infect people are dwarfed by the estimated 1.6m harboured by mammals and waterfowl.

That extensive viral pool, plus a lack of knowledge about which pathogens might spill over, has prompted the talk of a Global Virome Project, first proposed in 2016. The decade-long international effort would document animal viruses across the world. The US Agency for International Development has funded similar work at a smaller scale, uncovering Sars-like viruses among more than 1,000 novel

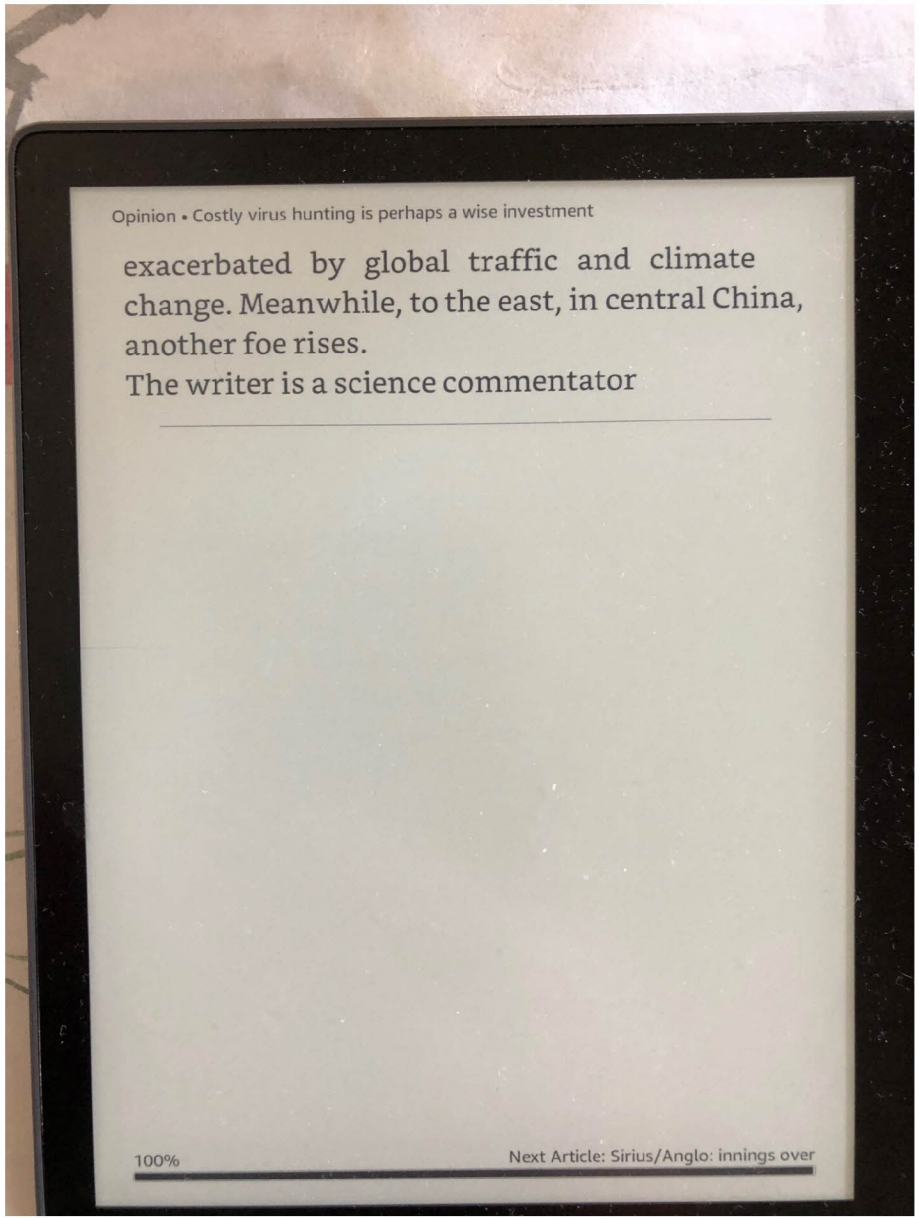


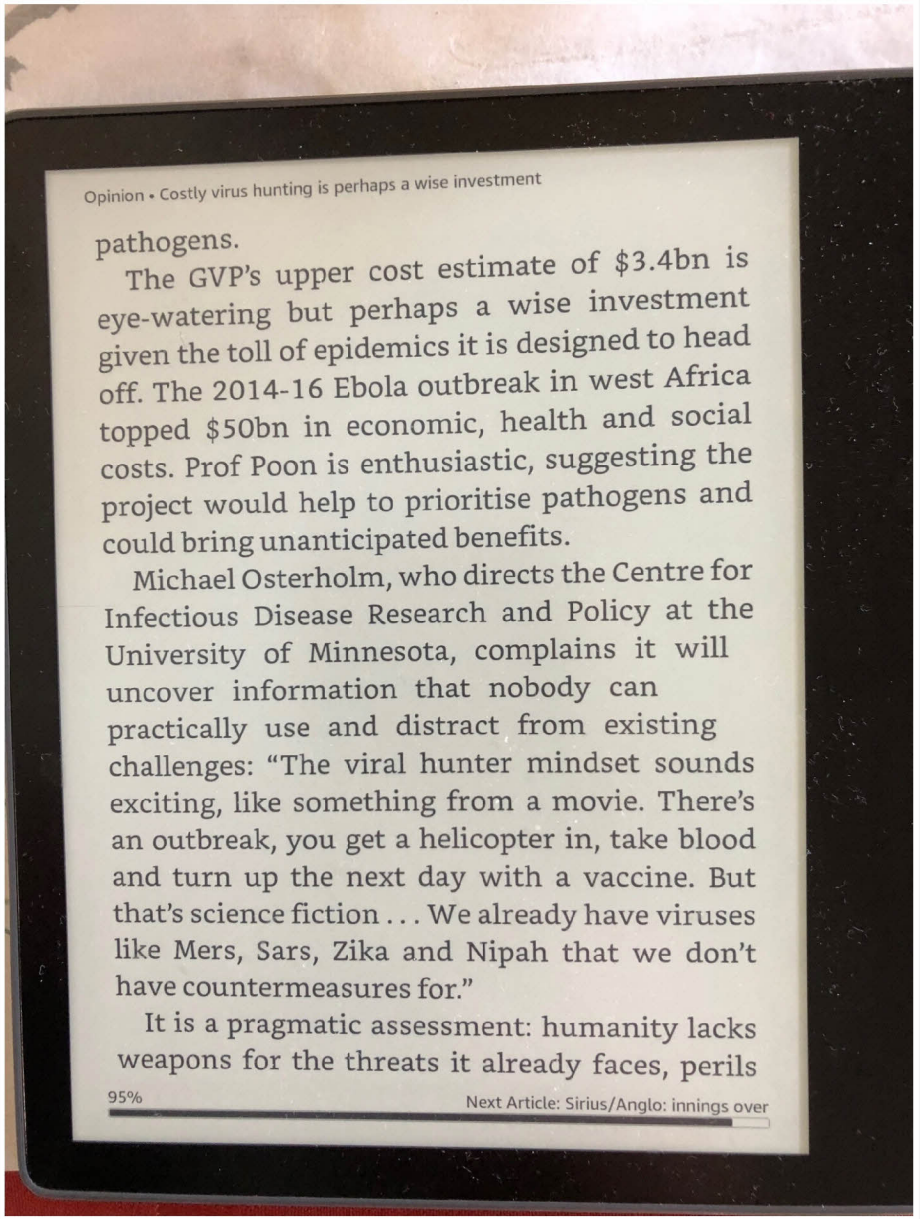
live animals such as bats and marmots. It has since been closed and disinfected. The possibility that yet another malign micro-organism has hurdled the species barrier to infect humans is likely to boost calls for a global catalogue of animal pathogens.

Experts are divided over whether one such proposal, the Global Virome Project, dedicated to viruses, merits its $3bn-plus price tag. Leo Poon, a virologist at Hong Kong University who helped to sequence the Sars virus in 2003, is watching events keenly. With no deaths, no hospital outbreaks and a market clean-up, he told me, the situation is encouraging. But the possibility of human-to-human transmission remains a concern.

"If it does pass between humans, then people in Wuhan can take the disease anywhere," he said. "We don't know the incubation period — it could be days or weeks. If more cases turn up in the next few days, this would be bad news." The Lunar New Year looms; millions will travel for the January 25 holiday.

UCDUSR0013611





UCDUSR0013612

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UCDUSR0013613

As to the pathogen itself, he speculates that it is a virus (China has not yet released any details). The next steps would be sequencing the viral genome, developing a diagnostic test and identifying the host species.

Some of the most virulent diseases of recent years have crossed from animals into humans. So-called zoonoses include Sars, traced back to civet cats in 2003; Mers, from camels; and Ebola, found in bats. While these viruses seldom trouble their animal hosts, they proved deadly in humans. The 260 or so viruses known to infect people are dwarfed by the estimated 1.6m harboured by mammals and waterfowl.

That extensive viral pool, plus a lack of knowledge about which pathogens might spill over, has prompted the talk of a Global Virome Project, first proposed in 2016. The decade-long international effort would document animal viruses across the world. The US Agency for International Development has funded similar work at a smaller scale, uncovering Sars-like viruses among more than 1,000 novel

UCDUSR0013614

exacerbated by global traffic and climate change. Meanwhile, to the east, in central China, another foe rises.

The writer is a science commentator

UCDUSR0013615

pathogens.

The GVP's upper cost estimate of $3.4bn is eye-watering but perhaps a wise investment given the toll of epidemics it is designed to head off. The 2014-16 Ebola outbreak in west Africa topped $50bn in economic, health and social costs. Prof Poon is enthusiastic, suggesting the project would help to prioritise pathogens and could bring unanticipated benefits.

Michael Osterholm, who directs the Centre for Infectious Disease Research and Policy at the University of Minnesota, complains it will uncover information that nobody can practically use and distract from existing challenges: "The viral hunter mindset sounds exciting, like something from a movie. There's an outbreak, you get a helicopter in, take blood and turn up the next day with a vaccine. But that's science fiction . . . We already have viruses like Mers, Sars, Zika and Nipah that we don't have countermeasures for."

It is a pragmatic assessment: humanity lacks weapons for the threats it already faces, perils

UCDUSR0013616

hunting is perhaps a wise investment

Anjana Ahuja | 602 words

SCIENCE

The world is already grappling with its first emerging disease of the decade. Dozens of people in Wuhan, a city in central China, have been hit by an unexplained pneumonia.

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The outbreak, which began in December, has been traced back to a market selling seafood and

UCDUSR0013617

From:	Andrew Clements <aclements@usaid.gov>
To:	William Karesh <Karesh@ecohealthalliance.org>;Tracey Goldstein <tgoldstein@ucdavis.edu>;D. Phil Simon Anthony <anthony@ecohealthalliance.org>;Kevin Olival PhD <olival@ecohealthalliance.org>;Christine Kreuder Johnson <ckjohnson@ucdavis.edu>;Jonna Mazet <jkmazet@ucdavis.edu>;Peter Daszak <daszak@ecohealthalliance.org>
Sent:	1/23/2020 12:18:56 AM
Subject:	Homologous recombination within the spike glycoprotein of the newly identified coronavirus may boost cross-species transmission from snake to human

FYI

Subject: Homologous recombination within the spike glycoprotein of the newly identified coronavirus may boost cross-species transmission from snake to human

https://onlinelibrary.wiley.com/doi/abs/10.1002/jmv.25682

Homologous recombination within the spike glycoprotein of the newly identified coronavirus may boost cross-species transmission from snake to human

Wei Ji Wei Wang Xiaofang Zhao Junjie Zai Xingguang Li

22 January 2020 **https://doi.org/10.1002/jmv.25682**

This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1002/jmv.25682

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Abstract

The current outbreak of viral pneumonia in the city of Wuhan, China, was caused by a novel coronavirus designated 2019-nCoV by the World Health Organization, as determined by sequencing the viral RNA genome. Many patients were potentially exposed to wildlife animals at the Huanan seafood wholesale market, where poultry, snake, bats, and other farm animals were also sold. To determine the possible virus reservoir, we have carried out comprehensive sequence analysis and comparison in conjunction with relative synonymous codon usage (RSCU) bias among different animal species based on existing sequences of the newly identified coronavirus 2019-nCoV. Results obtained from our analyses suggest that the 2019-nCoV appears to be a recombinant virus between the bat coronavirus and an origin-unknown coronavirus. The recombination occurred within the viral spike glycoprotein, which recognizes cell surface receptor. Additionally, our findings suggest that snake is the most probable wildlife animal reservoir for the 2019-nCoV based on its RSCU bias resembling snake compared to other animals. Taken together, our results suggest that homologous recombination within the spike glycoprotein may contribute to cross-species transmission from snake to humans.

From: "Oyewale Tomori" [redacted]
Sent: 02/27/2020 9:47:33 AM (-08:00)
To: "Samtha Maher" <maher@ecohealthalliance.org>
Cc: "Cara Chrisman" <cchrisman@usaid.gov>; "Eddy Rubin" <erubin@metabiota.com>; "Peter Daszak" <daszak@ecohealthalliance.org>; "Cheryl Bennett" <cheryl@gisaid.org>; "Aleksei Chmura" <chmura@ecohealthalliance.org>; "Jonna Mazet" <jkmazet@ucdavis.edu>; cbrechot@gvn.org; "Peter Bogner" <peter@gisaid.org>; "Dennis Carroll" [redacted]; "Dr. Suzan Murray" <murrays@si.edu>; "Natalia Mercer" <nmercer@gvn.org>; graca@usf.edu; "Alison Andre" <andre@ecohealthalliance.org>; "Jennifer Gardy" [redacted]
Subject: Re: Invitation: GVP Board of Directors Monthly Call @ Monthly from 7pm to 8pm on the fourth Thursday (WAT) [redacted]

Dear Alison
Greetings is there another means of participating apart from the [redacted] number.....like webex zoom etc
i am unable to get tru to the number

regards

oyeweale
Oyewale TOMORI
[redacted]

On Thu, Feb 20, 2020 at 9:33 PM <maher@ecohealthalliance.org> wrote:

You have been invited to the following event.

GVP Board of Directors Monthly Call

When: Monthly from 7pm to 8pm on the fourth Thursday West Africa Standard Time - Lagos

Calendar: [redacted]

Who:
- maher@ecohealthalliance.org - organizer
- Cara Chrisman
- Eddy Rubin
- Peter Daszak
- Cheryl Bennett
- [redacted]
- Aleksei Chmura
- Jonna Mazet
- cbrechot@gvn.org
- peter@gisaid.org
- Dennis Carroll
- Dr. Suzan Murray
- nmercer@gvn.org
- graca@usf.edu
- Alison Andre
- [redacted]

more details »

EcoHealth Alliance International Conference Line:

Number: +
Passcode: REDACTED

Going REDACTED All events in this series: **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

You are receiving this email at the account REDACTED because you are subscribed for invitations on calendar REDACTED

To stop receiving these emails, please log in to https://www.google.com/calendar/ and change your notification settings for this calendar.

Forwarding this invitation could allow any recipient to send a response to the organizer and be added to the guest list, or invite others regardless of their own invitation status, or to modify your RSVP. Learn More.

From: alexandra zuber <alexandrazuber@atahealthstrategies.com>
To: [redacted] "wasmith@ucdavis.edu" <wasmith@ucdavis.edu>, [redacted] "mcrane@usaid.gov" <mcrane@usaid.gov>, "margaritamartins@berkeley.edu" <margaritamartins@berkeley.edu>, "f.castillo@berkeley.edu" <f.castillo@berkeley.edu>, "oromero@haas.berkeley.edu" <oromero@haas.berkeley.edu>, Elizabeth Leasure <ealeasure@ucdavis.edu>, "apereira@usaid.gov" <apereira@usaid.gov>, Kevin Olival <olival@ecohealthalliance.org>, [redacted] Matthew Blake <mblake@ucdavis.edu>, Peter Daszak <daszak@ecohealthalliance.org>, "tgoldstein@ucdavis.edu" <tgoldstein@ucdavis.edu>, "clouisduthil@usaid.gov" <clouisduthil@usaid.gov>, "jkmazet@ucdavis.edu" <jkmazet@ucdavis.edu>, "sfh9@georgetown.edu" <sfh9@georgetown.edu>, "karesh@ecohealthalliance.org" <karesh@ecohealthalliance.org>
Subject: Re: Invitation: SEAOHUN Virtual Workshop: OCA @ Thu May 14, 2020 9pm - 11pm (EDT) (alexandrazuber@atahealthstrategies.com)
Sent: Fri, 15 May 2020 03:08:49 +0000
SEAOHUN rated OCA Tool submitted 2020-05-13.pdf

Hi all,
Great call today. Here is the actual OCA tool where SEAOHUN rated themselves. Their comments and highlighting is very helpful.

Looking forward to further discussions.

Thanks,

Alexandra Zuber, MPP, DrPH
Founder and CEO, Ata Health Strategies, LLC
Email: alexandrazuber@atahealthstrategies.com
Phone: +1 (617) 680-3950
LinkedIn: alexandrazuber/
Website: www.atahealthstrategies.com
Twitter: @alexandrazuber

From: [redacted]
Sent: Wednesday, May 6, 2020 10:37 AM
To: [redacted] wasmith@ucdavis.edu <wasmith@ucdavis.edu>; [redacted] mcrane@usaid.gov <mcrane@usaid.gov>; margaritamartins@berkeley.edu <margaritamartins@berkeley.edu>; f.castillo@berkeley.edu <f.castillo@berkeley.edu>; oromero@haas.berkeley.edu <oromero@haas.berkeley.edu>; Elizabeth Leasure <ealeasure@ucdavis.edu>; apereira@usaid.gov <apereira@usaid.gov>; Kevin Olival <olival@ecohealthalliance.org>; [redacted] alexandra zuber <alexandrazuber@atahealthstrategies.com>; Matthew Blake <mblake@ucdavis.edu>; Peter Daszak <daszak@ecohealthalliance.org>; tgoldstein@ucdavis.edu <tgoldstein@ucdavis.edu>; clouisduthil@usaid.gov <clouisduthil@usaid.gov>; jkmazet@ucdavis.edu <jkmazet@ucdavis.edu>; sfh9@georgetown.edu <sfh9@georgetown.edu>; karesh@ecohealthalliance.org <karesh@ecohealthalliance.org>
Subject: Invitation: SEAOHUN Virtual Workshop: OCA @ Thu May 14, 2020 9pm - 11pm (EDT) (alexandrazuber@atahealthstrategies.com)
When: Thursday, May 14, 2020 9:00 PM-11:00 PM.
Where: [redacted]

You have been invited to the following event.

SEAOHUN Virtual Workshop: OCA

When Thu May 14, 2020 9pm – 11pm Eastern Time - New York

Where [redacted] (map)

Calendar alexandrazuber@atahealthstrategies.com

Who

- REDACTED - organizer
- wasmith@ucdavis.edu
- REDACTED
- mcrane@usaid.gov
- margaritamartins@berkeley.edu
- f.castillo@berkeley.edu
- oromero@haas.berkeley.edu
- Elizabeth Leasure
- apereira@usaid.gov
- Kevin Olival
- REDACTED
- alexandrazuber@atahealthstrategies.com
- Matthew Blake
- Peter Daszak
- tgoldstein@ucdavis.edu
- clouisduthil@usaid.gov
- jkmazet@ucdavis.edu
- sfh9@georgetown.edu
- karesh@ecohealthalliance.org

more details »

Dear all,
We are delighted to invite you to the OHW-NG Objective 3 virtual workshop regarding the USAID Organizational Capacity Assessment (OCA) Tool. This is the first in a series of workshops we will be holding with the SEAOHUN Secretariat in May.

This tool is designed to help organizations benchmark their organizational capacity across multiple domains, and identify priorities for improving organizational performance. While traditionally used for organizations that already receive direct USAID funding, we believe conducting a baseline and understanding the needs and priorities now in Year 1 will set the scene for improved capacity-building over the full five years of the OHW-NG initiative.

SEAOHUN will send an agenda and slides in advance of our meeting to review. The objectives of our workshop together are:

- Provide a forum for SEAOHUN to share its self assessment of strengths and weaknesses on key organizational capability domains and establish a baseline of organizational capacity
- Facilitate dialogue between global team and SEAOHUN on areas of improvement in organizational capacity
- Identify priority areas for capacity-building in the short and medium terms under OHW-NG

We are looking very forward to it.

Sincerely,
Alexandra, Omar, Federico, and Margarita
Alexandra Zuber is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting
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US (Chicago)

Dial by your location
REDACTED (Germantown)
(Chicago)
(New York)
(Tacoma)
(Houston)
(San Jose)
Meeting ID: REDACTED
Password: REDACTED
Find your local number: REDACTED
Going (alexandrazuber@atahealthstrategies.com)? **Yes** - **Maybe** - **No** more options »

Invitation from Google Calendar

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To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at https://www.google.com/calendar/ and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to send a response to the organizer and be added to the guest list, or invite others regardless of their own invitation status, or to modify your RSVP. Learn More.

Organizational Capacity Assessment Tool: Participant's Copy

For Organizations Funded by USAID

New Partners Technical Assistance Initiative (NuPITA) Project

December 2012

UCDUSR0013624

The New Partners Initiative Technical Assistance (NuPITA) project is funded by the United States Agency for International Development (USAID) through Contract No: GHS-I-00-07-00002-00. The Technical Assistance Project to New Partners Initiative (TA-NPI) project is funded by the United States Department of Health and Human Services—Centers for Disease Control and Prevention through Contract No: 200-2004-05316/Task Order 002. Both projects are implemented by John Snow, Inc. in collaboration with Initiatives Inc.

This document is made possible by the generous support of the American people through USAID and Department of Health and Human Services—Centers for Disease Control and Prevention (CDC). The contents are the responsibility of John Snow, Inc., and do not necessarily reflect the views of USAID, CDC, or the United States Government.

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NuPITA
John Snow, Inc.
44 Farnsworth Street
Boston, MA 02210-1211
Phone: 617.482.9485
www.jsi.com

Organizational Capacity Assessment Tool

Goal:
The goal of this tool is to assist organizations in assessing the critical elements for effective organizational management, and identifying those areas that need strengthening or further development.

Purpose:
The OCA tool was designed to enable organizations to define a capacity-building improvement plan, based on self-assessed need. This Organizational Capacity Assessment (OCA) was initially designed to measure overall capacity of organizations funded by President's Emergency Plan for AIDS Relief (PEPFAR) under the New Partners Initiative (NPI). This OCA tool provides organizations with a set of criteria to assess their current management capacity to implement quality health programs, to identify key areas that need strengthening. Although many capacity assessments exist, the structure and process of this tool distinguishes it from others. Multi-level and multi-department involvement fosters team building and organizational learning. Inclusion of management, compliance, and program components ensure a holistic understanding of the organization's strengths and challenges and the guided self-assessment by skilled facilitators instills ownership on the part of the organization for its improvement plan.

The OCA tool assesses technical capacity in seven domains, and each domain has a number of sub-areas.

OCA Domains
1. Governance
2. Administration
3. Human Resources
4. Financial Management
5. Organizational Management
6. Program Management
7. Project Performance Management

Using This Tool
This Organizational Capacity Assessment tool is designed to enable organizational learning, foster team sharing, and encourage reflective self-assessment within organizations.

Recognizing that organizational development is a process, the use of the OCA tool results in concrete action plans to provide organizations with a clear organizational development road map. The OCA can be repeated on an annual basis to monitor the effectiveness of previous actions, evaluate progress in capacity improvement, and identify new areas in need of strengthening.

The OCA is an interactive self-assessment process that should bring together staff from all departments at implementing organizations, both at headquarters and in the field, for the two- to three-day assessment. Not intended to be a scientific method, the value of the OCA is in its collaborative, self-assessment process. The framework offers organizations a chance to reflect on their current status against recognized best practices. Lively discussions are also an opportunity for management, administration, and program staff to learn how each functions, strengthening the team and reinforcing the inter-relatedness of the seven OCA components.

Each page of this tool examines one area. A range of examples of services available is provided along a continuum, from 1-4.

The methodology is a guided self-assessment that encourages active participation. The facilitator and participants meet and discuss each area to determine where the organization sits along the continuum of implementation. Facilitators ask open-ended, probing questions to encourage group discussion, and take notes on participant responses. These notes are later used for the action planning.

Sample questions which might help the facilitator to probe further into the content areas are presented on each page.

The scores that are arrived at are designed to set priorities for the actions and are not used to judge performance. Facilitators use the information from the scoring and rationale sheets to define the issues and actions. The organization reviews or adjusts the problem statement and builds on the suggested actions to define action steps, responsibilities, timeframe, and possible technical assistance needs.

The ability to identify areas to be addressed will strengthen the organization and in subsequent years, enable it to view improvement and note where progress is still needed.

Table of Contents

Governance

Objective: To assess the organization's motivation and stability by reviewing its guiding principles, structure and oversight.

Vision/Mission

Subsection Objective: To review the organization's vision and/or mission statements, learn what drives the organization, how the statements reflect what it does and how they are communicated and understood by staff.

Resources: vision and/or mission statements, anonymous staff and board questionnaires (see Facilitator's Guide)

Vision/Mission ●		2.5	Mission is clearer
1	**2**	**3**	**4**
The vision and/or mission is • Not a clearly stated description of what the organization aspires to achieve or become	The vision and/or mission is • A moderately clear or specific understanding of what the organization aspires to become or achieve • Not widely held • Rarely used to direct actions or to set priorities	The vision and/or mission is • A clear, specific statement of what the organization aspires to become or achieve • Well-known to most but not all staff • Sometimes used to direct actions and to set priorities	The vision and/or mission is • A clear, specific and forceful understanding of what the organization aspires to become or to achieve • Well-communicated and broadly held within the organization • Consistently used to direct actions and to set priorities

UCDUSR0013629

Organizational Structure

Subsection Objective: To determine if the organization's structure—most often depicted in an organogram but also perhaps in a narrative—is in line with its mission, goals and programs and if systems exist to ensure strong coordination among departments or functions.

Resources: organizational diagram, organogram or narrative

Organizational Structure ● 2.5			
1	**2**	**3**	**4**
The organization has • No formal structure • An unclear description of its departments and their functions	The organization has • A basic structure, but it is incomplete and/or undocumented • A structure that is not aligned with its mission/goals and programs • Unclear definitions of department functions • Somewhat clear lines of responsibility and communication among departments	The organization has • A well-designed structure (e.g., organogram) relevant to its mission/goals and programs • Identified the functions and responsibilities of departments • Clearly defined and appropriate lines of responsibility and communication among departments	The organization has • A well-defined structure relevant to its mission/goals and programs • Clearly defined and appropriate functions and responsibilities of departments • Clear, appropriate lines of communication and coordination among departments • A narrative description of the structure if appropriate

UCDUSR0013630

Board Composition and Responsibilities

Subsection Objective: To assess the board's composition, terms of reference (TOR), procedures and oversight to ensure that the board is capable of providing adequate guidance to the organization.

Resources: board membership, board TOR, board meeting minutes, anonymous board questionnaire

Board Composition and Responsibility ● 2.5			
1	**2**	**3**	**4**
The board • Is drawn from a narrow spectrum; members have little or no relevant experience • Has term limits that are not defined or are unreasonably long or short • Has no process for electing officers • Has infrequent or poorly attended and undocumented meetings • Does not have TOR or a clear understanding of its key functions	The board • Is drawn from a somewhat broad spectrum; some members have relevant experience • Has term limits that are not defined or are unreasonable • Has no process for electing officers • Has well-planned meetings at regular intervals, but attendance and/or documentation is irregular • Has TOR, but they are incomplete and/or do not provide appropriate separation of roles from the executive management team • Has some understanding of its functions as defined in the TOR, but they are inconsistently carried out • Is rarely or not at all involved in strategic planning/policy formulation	The board • Is drawn from a broad spectrum; all members have relevant experience • Has term limits that are defined and reasonable • Informally elects officers • Has well-planned, documented meetings held at regular intervals with good attendance • Has clear TOR reflecting appropriate separation of roles from the executive management team • Has a good understanding of its functions as defined in the TOR and mostly carries them out • Is involved in strategic planning/policy formulation, but participation is not always consistent	The board • Is drawn from a broad spectrum; all members have relevant experience • Has term limits that are defined and reasonable • Has officers elected/appointed according to board procedures • Has regular, well-planned, documented meetings with good attendance • Has clear TOR and a good understanding of its functions, all of which are consistently carried out with appropriate separation from the executive management team • Displays willingness and a proven track record to learn about the organization, to participate in strategic planning/policy formulation and to address organizational issues

Define but not adhere to.

UCDUSR0013631

Legal Status

Subsection Objective: To assess the organization's legal standing—and therefore sustainability—by checking legal registration and compliance with local tax and labor laws.

Resources: registration, where possible and feasible, local tax laws, local labor laws

Legal Status ●			4
1	**2**	**3**	**4**
The organization is • Not legally registered, registration has expired, or the organization does not know its legal status and local labor laws • Not aware of its tax status and/or is not paying taxes • Not aware of statutory audit and reporting requirements	The organization is • Not currently a legally recognized entity in the country in which it operates but has applied for legal status • Aware of its tax status and local labor laws but is not fully compliant • Aware of statutory audit and reporting requirements but is not fully compliant	The organization is • Legally registered and aware of its tax status • Not always compliant with tax obligations and/or labor laws • Not always compliant with statutory audit and reporting requirements	The organization is • Legally registered and aware of its tax status • Fully complies with tax obligations and labor laws • Fully complies with statutory audit and reporting requirements

UCDUSR0013632

Succession Planning

Subsection Objective: To assess the organization's ability to continue smooth operations and to manage programs in the event of an absence of, or shift in, leadership.

Resources: job descriptions of senior management, succession plan, organizational chart

Succession Planning ● 1.5			
1	**2**	**3**	**4**
The organization • Is highly dependent on the chief executive officer (CEO)/executive director (ED) • Would cease to exist or function without the CEO/ED • Has no plan for how it would continue if the CEO/ED left	The organization • Is dependent on the CEO/ED • Would continue to exist without the CEO/ED but most likely in a very different form, or with significantly less capability and reduced program quality • Has a very basic succession plan describing how the organization will continue if the CEO/ED leaves	The organization • Has limited dependence on CEO/ED; s/he does not have sole control of, for example, finances and planning • Would continue in a similar way without the CEO/ED, but fundraising and/or program quality would suffer significantly • Has a documented plan for how it would continue should the CEO/ED leave, but no member of management could take on the CEO/ED role	The organization • Is reliant but not dependent on the CEO/ED • Has a clear, documented succession plan • Has the potential for a smooth transition to a new leader; fundraising and program quality would not be major problems • Would handle transition by having a senior management team fill in or one or more members of the management team would take on the CEO/ED role

UCDUSR0013633

Administration

Objective: To assess the organization's capacity to develop and apply policies and procedures, the existence and quality of its administrative systems and its staff knowledge of the systems.

Operational Policies, Procedures, and Systems

Subsection Objective: To assess the availability of and adherence to operational policies.

Resources: policy and procedures manual, anonymous staff questionnaires, related payment vouchers

Operational Policies, Procedures, and Systems ●			
1	**2**	3	**4**
The organization has • No documented operational policies and procedures	The organization has • Documented some operational policies and procedures, but they are incomplete or not compliant with national and donor regulations • Policies and procedures that are not consistently adhered to • Not oriented or trained staff in the policies and procedures	The organization has • Documented most or all operational policies and procedures and they are compliant with national and donor regulations • Policies and procedures that are known but not consistently adhered to • Oriented or trained staff in the policies and procedures • No process for regularly reviewing and updating operational policies and procedures	The organization has • Complete and appropriate operational policies and procedures • Policies and procedures that are known and understood by staff • Policies and procedures that are consistently adhered to, reviewed and updated

□manuals are a□ailable and effecti□e in □□□□including Staff Manual□Financial Management Manual□and □rocurement Manual.

Travel Policies and Procedures

Subsection Objective: To assess the availability of and adherence to travel policies and procedures, especially compliance with donor rules and regulations.

Resources: travel manual, staff questionnaires, related payment vouchers

Travel Policies and Procedures ★			
1	**2**	**3** 3.5	**4**
The organization has • No documented travel procedures (i.e., per diem levels, forms, approval procedures)	The organization has • Documented some travel policies and procedures, but they are incomplete or noncompliant with donor requirements • Policies and procedures that are not well-known or understood by staff and not consistently adhered to	The organization has • Documented most or all travel policies and procedures, and they comply with donor requirements • Policies and procedures that are generally known and understood by staff but not consistently adhered to	The organization has • Complete and appropriate travel policies and procedures that comply with donor requirements • Policies and procedures that are known and understood by staff • Policies and procedures that are consistently adhered to, reviewed and updated

□□ste□s of tra□el requests at Secretariat office□

□□Tra□el request for international tra□els a□□ro□ed by USAID/ □rime □SEAOHUN staff and in□ited □artici□ants□

□□Tra□el request for Secretariat staff a□□ro□ed by E□ecuti□e Director □both domestice and international tra□els□

Procurement

Subsection Objective: To assess the availability of and adherence to procurement policies and procedures.

Resources: procurement policies, procurement files, related payment vouchers, procurement plan

Procurement ★			
1	**2**	**3**	**4**
The organization has • No documented procurement procedures • No documented procurement plan	The organization has • Documented some procurement policies and procedures, but they are incomplete or inappropriate • Policies and procedures that are not well-known or understood by staff and inconsistently adhered to • No documented procurement plan, but is aware of procurement regulations	The organization has • Documented most or all procurement policies and procedures, and they are appropriate • Policies and procedures that are generally known and understood by staff but inconsistently adhered to • A documented procurement plan	The organization has • Complete and appropriate procurement policies and procedures that incorporate donor-specific policies as required • Policies and procedures that are known and understood by staff • Policies and procedures that are consistently adhered to, reviewed and updated • A documented procurement plan that is annually revised/updated

Fixed-Asset Control

Subsection Objective: To assess the availability of and adherence to policies and systems for managing fixed assets.

Resources: fixed-asset policies, fixed-asset register, physical inventory reports

Fixed-Asset Control ★			
1	**2**	**3** 3.5	**4**
The organization has • No documented fixed-asset procedures (i.e., inventory of assets and systems for stock control) • No fixed-asset register	The organization has • Documented some fixed-asset policies and procedures, but they are incomplete or inappropriate • Policies and procedures that are not well-known or understood by staff and not consistently adhered to • A fixed-asset register that is not complete	The organization has • Documented most or all fixed-asset policies and procedures, and they are appropriate • Policies and procedures that are known and understood by staff but inconsistently adhered to • A fixed-asset register that is complete but not regularly updated	The organization has • Complete and appropriate fixed-asset policies and procedures that incorporate donor policies as required • Policies and procedures that are known and understood by staff • Policies and procedures that are consistently adhered to, reviewed and updated • A fixed-asset register that is regularly updated and confirmed through a physical inventory at least every two years

Update every year and use for the annual audit

Information Systems

Subsection Objective: To assess the functionality of the organization's information systems and its documentation of information system policies and procedures.

Resources: information system policies and procedures, staff interviews

Information Systems ●			
1	2	3	4
The organization has • No documented information system policies and procedures • An insufficient information system to manage operations and/or programs • No one designated to manage the information system	The organization has • Documented some information system policies and procedures, but they are incomplete or inappropriate • An information system that supports operations and programs at basic levels of functionality • No one designated to manage the information system	The organization has • Documented most or all information system policies and procedures • An information system that adequately supports operations and programs at a good level of functionality without major inputs • A staff member (or outside provider) designated to manage the information system	The organization has • Complete and appropriate information system policies and procedures • An information system that effectively and efficiently supports operations and programs at a high level of functionality and maintenance • A staff member (or outside provider) designated to manage the information system

Human Resources Management

Objective: To assess the organization's ability to maintain a satisfied and skilled workforce, to manage operations and staff time and to implement quality programs.

Job Descriptions

Subsection Objective: To review the systems for developing, disseminating, following and updating job descriptions (JDs) to ensure that staff roles and responsibilities are clearly defined and understood and that they are relevant to the needs of the organization.

Resources: sample job descriptions for each position or level (depending on size of organization)

Job responsibilities are well explained in TOR

Job descriptions ●			
1	**2**	**3**	**4**
The organization has • No JDs for staff, volunteers or interns	The organization has • JDs for each staff member, but not all key sections are covered • Staff, volunteers and interns who are not aware of or do not have copies of their JDs	The organization has • Clear JDs for each staff member that include all sections • Staff, volunteers and interns with copies or access to copies of their JDs • JDs that are not respected/adhered to, reviewed or regularly updated	The organization has • JDs for each staff member that cover all sections • Staff, volunteers and interns with copies of or access to their JDs • JDs that are respected/adhered to, reviewed and updated

Recruitment

Subsection Objective: To assess the organization's systems for recruiting staff and consultants including confirming and documenting professional and salary history.

Resources: recruitment manual/guidelines or policy, recruitment guidelines, documentation of employment history, personnel manual

Recruitment ●			
1	**2**	**3**	**4**
The organization has • Neither guidelines nor a consistent approach to recruiting staff • No system for verifying employment history for staff or consultants	The organization has • Basic guidelines for recruitment, but they are not consistently applied or reviewed • No process for verifying staff or consultants' employment history • Not oriented or trained HR staff in applying the guidelines • Not provided opportunities for career advancement	The organization has • Clear, transparent recruitment guidelines, but they are neither consistently applied nor regularly reviewed • Has a process for verifying employment history but does not file or update the information • Not consistently oriented or trained HR staff in applying the guidelines • Not provided opportunities for career advancement	The organization has • Clear, transparent recruitment guidelines that are consistently applied and reviewed • A process for verifying, updating and filing employment history • Consistently oriented and regularly trained/updated HR staff in applying the guidelines • Provided opportunities for career advancement

Only Executive Director and Operations Manager are taking care the recruitment

Staffing Levels

Subsection Objective: To assess the organization's management of staffing—positions available, positions filled, vacancies—for the program and for the organization as a whole and the means for ensuring staffing levels are and remain adequate.

Resources: staffing plan and/or organizational diagram, vacancy and turnover data, attendance information, retention policy

Staffing Levels ●			
1	2	3	4
The organization has • No formal staffing plan • Positions/vacancies that are not documented • Many key management and technical positions open or filled by staff without the right qualifications or skills • No system to ensure that positions are filled quickly • High turnover and severe problems with staff attendance affecting program implementation • No retention procedures	The organization has • A formal staffing plan • Documented positions and vacancy data • Some key positions filled with qualified and skilled staff • No system to ensure that positions are filled quickly • High turnover rate or staff attendance problems affecting program implementation • Not conducted or documented exit interviews	The organization has • A formal staffing plan • Documented and available vacancy data • Qualified and skilled staff in all key positions (technical, administrative, finance) • A system to ensure that positions are filled quickly • Moderate turnover or minor attendance problems • Conducted and documented exit interviews	The organization has • A formal staffing plan • Documented positions and vacancy data • Qualified and skilled staff in all positions • Active recruitment to fill gaps • A system for rapidly filling new positions where staff turnover is high • Minimal turnover and no attendance problems • Conducted and documented exit interviews and used the information

organogram

With the location and work condition, we may not attract qualified and skilled staff, especially for program/ technical staff

Personnel Policies

Subsection Objective: To ensure that personnel policies document and verify staff time and that best practices in managing personnel are adhered to.

Resources: personnel manual, staff time records, work schedule policies, 2–3 personnel files, payment vouchers

Personnel Policies ★			
1	2	3	4
The organization has • No personnel policy manual	The organization has • Basic personnel policies that include either a drug-free workplace policy, nondiscrimination policies (for US organizations), or timekeeping policy • Inconsistently applied the polices • Not disseminated the policies to all staff and/or required signature statements • No process for updating personnel policies, manuals or staff time records	The organization has • Comprehensive and donor compliant personnel policies including a drug-free workplace policy, discrimination policies (for US organizations), and timekeeping policy, at a minimum • Polices that are adhered to and aligned with HR practices • Not disseminated the policies to all staff or required signature statements • Not updated personnel policies and manuals or time records	The organization has • Comprehensive and donor compliant personnel policies • Policies that are adhered to and correspond to HR practices • Disseminated policies to all staff and required and filed signature statements • Regularly reviewed and updated policies, manuals and staff time records

Only include smoke-free policy

Timesheet is used for SEAOHUN staff time records. All staff must sign and submit to the office at the end of the month.

Tracking by biodata sheet

Staff Salaries and Benefits

Subsection Objective: To review the organization's systems for setting and managing salaries and benefits.

Resources: salary grades and ranges, 2–3 personnel files from different levels

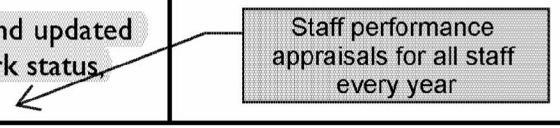
Staff Salaries and Benefits ★			
1	**2**	3	Salary scale is approved by SEAOHUN Board in Oct'17
The organization has • No clear rationale/structure for staff salaries such as pay grades and ranges or salary history • Not clearly documented benefits in a policy manual • Salaries and benefits that are not equitably applied and/or do not conform to national labor requirements	The organization has • A clear rationale/structure for staff salaries, such as pay grades and ranges and salary history • A process for documenting salary history • Not consistently applied the rationale or reviewed or updated it • Clearly documented benefits in a policy manual • Benefits of which staff are aware, but they are neither equitably applied nor conform to national labor requirements	The organization has • A clear rationale/structure for staff salaries such as pay grades and ranges and salary history • A process for documenting salary history • Consistently applied the rationale to all staff, but does not review or update salaries regularly • Benefits that are clearly documented in a policy manual • Benefits of which staff are aware, that are equitably applied and conform with national labor requirements	The organization has • A clear rationale/structure for staff salaries such as pay grades and ranges and salary history • A process for documenting salary history • A rationale for salaries that is consistently applied to all staff, reviewed and updated annually • Pay increases that follow the salary framework and/or policy • Benefits that are clearly documented in a policy manual, equitably applied and conform to national labor laws • Pay increases coordinated with performance reviews

Staff Performance Management

Subsection Objective: To review the organization's systems for managing staff performance including performance appraisals.

Resources: samples of completed performance appraisals or a blank form

Staff Performance Management ●			
1	**2**	**3**	**4**
The organization has • No process for regularly assessing staff performance • No probationary period or review process for new staff • Not updated or filed changes in staff work status, salary and benefits	The organization has • A process for assessing staff performance, but it does not include setting objectives, listing responsibilities/tasks, supervision or professional development • A three-month probationary period for new staff but no formal review • A process that is not participatory and follows an auditing rather than a supportive approach • Inconsistently filed or updated changes in staff work status, salary and benefits	The organization has • A process for assessing staff performance that includes setting objectives, listing responsibilities/ tasks, assessing performance on past activities, supervision and professional development • A performance review process for new staff that is not timely or consistently done • A participatory process regularly used for performance appraisals • Conducted appraisals for some, but not all, staff • Consistently filed and updated changes in staff work status, salary and benefits	The organization has • A process for assessing staff performance that includes setting objectives, listing responsibilities/ tasks, assessing performance on past activities, supervision and professional development • Regularly conducted appraisals for all staff at least once a year • Regularly reviews new staff performance after the probationary period • Consistently filed, updated and made changes in staff work status, salary and benefits



Volunteers and Interns N/A

Subsection Objective: To review the organization's systems for managing field and office volunteers and interns.

Resources: volunteer/intern policy, samples of completed performance appraisals

Volunteers/Interns ●			
1	**2**	**3**	**4**
The organization has • No policy for selecting or managing volunteers/interns • No training program for volunteers or interns • No job descriptions • No performance standards or feedback process • No supervisory guidance to support volunteers/interns	The organization has • A basic volunteer/intern policy that includes guidance on selection, supervision and support • Job descriptions • Orientation and/or training for volunteers that is not consistent • No performance standards or regular review of performance • Inconsistent or irregular supervision • High volunteer turnover that affects program implementation	The organization has • A comprehensive volunteer/intern policy that includes guidance on selection, supervision and support • Job descriptions • Volunteers/interns appropriately trained for their tasks • Performance standards but no performance review • Provided regular, consistent supervision and feedback • Moderate turnover	The organization has • A comprehensive volunteer/intern policy that includes guidance on selection, supervision and support • Volunteers/interns who are appropriately and consistently trained for their tasks • Performance standards and regular performance reviews • Provided regular, consistent supervision and feedback • Minimal turnover

Financial Management

Objective: To assess the quality of the organization's financial system and policies and procedures and the staff's knowledge of the system.

Financial Systems

Subsection Objective: To assess the existence and use of the financial system, especially its ability to respond to management needs and donor requirements.

Resources: financial manual, accounting journals, chart of accounts, payment vouchers, staff training plan/curricula, staff interviews

Using QuickBook software

Financial Systems ★			
1	2	3	4
The organization has • No formal financial system • Transactions that are either not recorded or are recorded on an ad hoc basis • A filing system that maintains only invoices/receipts for all expenditures and incoming funds	The organization has • A basic financial system, but it is incomplete and/or not compliant with accounting standards • Systems that are not consistently adhered to • Not oriented or trained financial staff on systems	The organization has • A good financial system with most or all required components • A computerized accounting system that is not fully operational • Systems that are consistently adhered to • Oriented or trained financial staff on systems • No process for reviewing and updating the financial system • Not included a narrative description of its financial system in its financial manual	The organization has • A complete and appropriate financial system • A fully operational, computerized accounting system • Systems that are consistently adhered to, reviewed and updated • Systems known and understood by trained staff • A narrative description of its financial system in its financial manual

Financial Policies and Procedures

Subsection Objective: To assess the existence and use of financial policies and procedures and their ability to respond to management needs and donor requirements.

Resources: financial manual, accounting journals, chart of accounts, staff interviews, payment vouchers, staff training plan/curricula

Financial Policies and Procedures ★			
1	**2**	3	**4**
The organization has • No documented financial policies and procedures	The organization has • Some documented financial policies and procedures, but they are incomplete and/or do not comply with donor requirements • Policies and procedures that are inconsistently adhered to • Not oriented or trained staff in the policies and procedures	The organization has • Documented most or all financial policies and procedures and they are compliant • Policies and procedures that are consistently adhered to • Oriented or trained staff in the policies and procedures • No process for regularly reviewing and updating financial policies and procedures	The organization has • Complete and appropriate financial policies and procedures • Policies and procedures that are known and understood by staff • Policies and procedures that are consistently adhered to, reviewed and updated

Internal Controls

Subsection Objective: To assess if internal controls adequately safeguard the organization's assets, manage internal risk and ensure the accuracy and reliability of accounting data.

Resources: financial manual, signatory policy/authority matrix, payment vouchers, staff interviews, audit reports on internal controls, insurance policies

Internal Controls ★			
1	**2**	3	**4**
The organization has • No documented internal controls • Improper segregation of duties and checks and balances (1–2 people are responsible for all steps in financing or procurement)	The organization has • Some documented internal controls, but they are incomplete and inappropriate • Procedures not well-known and understood by staff and not consistently adhered to • Inadequate segregation of duties	The organization has • Most or all documented appropriate internal controls • Procedures that are generally known by staff but not consistently adhered to • Adequate segregation of duties • No process for reviewing and updating internal controls or for assessing financial risk	The organization has • Complete and appropriately documented financial controls • Procedures known and understood by trained staff • Internal controls that are consistently adhered to, reviewed and updated • A process for assessing financial risk

Financial Documentation

Subsection Objective: To assess if record keeping is adequate and if financial files are audit ready.

Resources: financial files, finance manual, staff interviews

Financial Documentation ★			
1	**2**	**3**	**4**
The organization has • No written financial documentation procedures • No filing system, and financial files are not readily available • No one designated to manage the financial files	The organization has • Some written financial documentation procedures, but they are incomplete and/or inappropriate • Procedures that are not consistently adhered to and/or are not known to staff • A basic filing system, but financial files are not complete • No one designated to manage the financial files	The organization has • Financial documentation procedures that are mostly or completely documented in writing and appropriate • Procedures that are generally adhered to, known and understood by staff • Financial documentation files that are not regularly updated or secure • A staff member designated to manage the financial files	The organization has • Complete and appropriate financial documentation procedures • Procedures that are known and understood by staff • Procedures that are consistently adhered to, reviewed and updated • Up-to-date financial files in a secure location • A staff member designated to manage the financial files

Budgeting

Subsection Objective: To assess the organization's financial planning and if there is a system for monitoring budgets and determining additional funding requirements.

Resources: organization's budget, project budgets, budget worksheet, chart of accounts, budget tracking worksheet

More aligned with annual work plan

Budgeting ●			
1	**2**	**3**	**4**
The organization has • No formal master budget • No core-cost budget • Project budgets, but they are not clear and/or not aligned with project needs • Not included core costs in its project budgets	The organization has • A basic master budgeting process, but it is incomplete • A core-cost budget, but it is not aligned with the strategic plan and/or is not regularly reviewed to address shortfalls • Project budgets, but they are not always clear and not consistently aligned with project needs • An inconsistent methodology for including core costs in its project budgets	The organization has • A good master budgeting process that includes most or all required components • A core-cost budget that is generally aligned with the strategic plan, but is not regularly reviewed to address shortfalls • Project budgets that are clear, but not reviewed regularly nor consistently aligned with project needs • A consistent methodology for including core costs in project budgets, but the methodology is not documented and does not ensure full cost recovery	The organization has • A complete and appropriate master budget • A core-cost budget that is aligned with the strategic plan and regularly reviewed; any shortfalls are addressed • Clear project budgets that are reviewed regularly by senior management and adapted to align with project needs and donor requirements • A consistent methodology for including core costs in project budgets that is documented and ensures full cost recovery

Financial Reporting

Subsection Objective: To assess whether the organization's routine financial reporting system allows it to meet statutory and donor requirements and stakeholders' needs for information.

Resources: annual financial statements, financial reports to donors, donor grant agreements, management reports, senior management meeting minutes, board meeting minutes

Financial Reporting ★			
1	2	3	4
The organization has • No routine system for financial reporting • No recent financial statements • Not yet submitted a financial report to a donor and/or other stakeholders • No one designated to prepare or approve reports or financial statements	The organization has • A basic system for financial reporting, but reporting requirements and deadlines are not adhered to • Designated staff to prepare and approve reports and financial statements • Inconsistently delivered financial reports to stakeholders (donor, budget holders, senior management, board members) • Irregular reviews of financial reports by senior staff .	The organization has • A good financial reporting system; reporting requirements and deadlines are generally adhered to • Regularly delivered financial reports to stakeholders (donors, budget holders, senior management, board members), but they are not always accurate and/or complete • Sporadic reviews of financial reports by senior staff • Some documented financial reporting procedures	The organization has • A complete and appropriate financial reporting system; reporting requirements and deadlines are consistently adhered to • Regularly delivered accurate and complete financial reports to stakeholders (donors, budget holders, senior management, board members) • A system for senior staff to review financial reports at least every three months and to use the reports to make decisions • Complete and appropriately documented financial reporting procedures regularly reviewed and updated

Audits

Subsection Objective: To assess whether the organization undergoes routine audits that meet statutory and donor requirements and has a system for addressing audit findings.

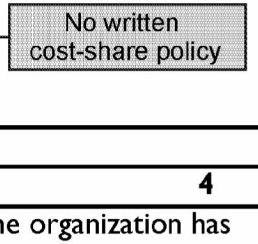
Resources: financial audit reports, post-audit management plans, financial manual staff interviews

Audits ★			3.5
1	**2**	**3**	**4**
The organization has • No internal or external auditing system • Not complied with statutory and/or donor auditing requirements	The organization has • A basic audit/review system, but auditing requirements and deadlines are not adhered to • Completed a recent statutory and/or donor audit, but the scope of the audit does not meet requirements • Not implemented previous audit report recommendations • Not shared audit reports with board members and other stakeholders	The organization has • A good system for managing audits; audit findings and recommendations are generally addressed • Consistently complied with its statutory and donor audit requirements in a timely manner • No internal audit function that regularly assesses risk or reviews and updates financial management systems to reflect the changing environment • Not shared audit reports with board members and other stakeholders	The organization has • A complete and appropriate system for managing audits; audit findings and recommendations are systematically addressed • A written narrative of its audit systems in the finance manual • Consistently complied with its statutory and donor audit requirements in a timely manner • An internal audit function that assesses risk and updates financial management systems as needed • Consistently shared audit reports with board members and other stakeholders

Cost Share

Subsection Objective: To assess whether the organization has systems to track, report, and document cost share in compliance with donor regulations.

Resources: approved grant agreements/budgets, cost-sharing plan and procedures, cost-share vouchers



Cost Share ★			
1	2	3	4
The organization has • No documented cost-sharing procedures • No cost-share plan	The organization has • Documented some cost-share procedures • Procedures that are incomplete and/or inappropriate • An inconsistent accounting system for entering and reporting on cost share • No cost-share plan	The organization has • Documented most or all cost-share procedures, and they are appropriate • Procedures that are not known to staff • Procedures that are inconsistently adhered to • An inconsistent accounting system for entering and reporting on cost share • A cost-share plan	The organization has • Complete and appropriately documented cost-share procedures • Procedures known and understood by staff • Procedures consistently adhered to, reviewed and updated • A consistent accounting system for entering and reporting on cost share • A cost-share plan

Financial Sustainability

Subsection Objective: To assess the organization's finance strategy and its ability to secure a diversified revenue base, to generate reserves and to sustain its operations without donor funds.

Resources: organization's budget, annual financial statements, strategic plan, finance strategy (business plan)

Financial Sustainability ●			
1	**2**	**3**	**4**
The organization has • Full dependence on one external donor • No unrestricted funds • Not enough liquidity to pay all outstanding financial obligations • No documented finance strategy	The organization has • Almost full dependence on external donor funds (more than one donor) • Limited unrestricted funds • Not enough liquidity to pay all outstanding financial obligations • A finance strategy that is not fully documented	The organization has • A somewhat diversified funding base, but is too reliant on restricted income • Limited reserves to operate without donor grants • Enough liquidity to pay all outstanding financial obligations • A documented finance strategy that is not fully in line with the strategic plan and is not reviewed regularly	The organization has • A diversified funding base with strong stakeholder relationships • Income-generating activities and/or unrestricted sources of income • Enough liquidity to pay all outstanding financial obligations • Enough reserves to run for a few months without any donor funding • A written policy for building/maintaining reserves • A documented finance strategy in line with the strategic plan and reviewed regularly

Organizational Management

Objective: To assess the organization's planning, management of external relations and information and means of identifying and capitalizing on new opportunities.

Strategic Planning

Subsection Objective: To assess the organization's ability to realize its mission and goals by reviewing its strategic plan.

Resources: strategic plan

Strategic Planning ●		3	
1	**2**	**3**	**4**
The organization has • No strategic plan	The organization has • A basic strategic plan that does not reflect its vision, mission and values • A plan that is not based on an analysis of strengths and weaknesses, the external environment and clients' needs • A plan that does not include priorities, measurable objectives or clear strategies • Not used the plan for management decisions or operational planning • No process for regularly reviewing the plan • Not defined its resource needs	The organization has • A comprehensive, written strategic plan that reflects its mission, vision and values • Based the plan on a review of strengths and weaknesses, the external environment and clients' needs • Included priorities, measurable objectives and clear strategies • Not used the plan for management decisions or operational planning • No process for regular reviews • Not defined resource needs or does not have a corresponding budget	The organization has • A comprehensive, written strategic plan that reflects its mission, vision and values • Based the plan on a review of strengths and weaknesses, the external environment and clients' needs • Included priorities and measurable objectives • Referred to the plan for management decisions and operational planning • Regularly reviewed the plan • Clear resource needs and a corresponding budget

Resource Mobilization

Subsection Objective: To assess the organization's ability to identify and capitalize on new business opportunities through grants and partnerships.

Resources: business development plan, resource development plan, funding strategy

Resource Mobilization ●			
1	2	3	4
The organization has • No business plan or funding strategy • Not estimated its future resource needs • Taken no steps to identify additional local, national or international resources or opportunities to support its programs and activities, either directly or through partnerships • Not created a communication strategy for resource mobilization	The organization has • A business plan and has taken preliminary steps to estimate future resource needs based on an analysis of its programs and/or its strategic plan • Identified additional resource providers or opportunities and their interests and potential for support • Not created a communication strategy to attract resources	The organization has • A business plan based on an analysis of its programs and resource needs and the activities in its strategic plan • Identified resource providers • Created a communication strategy for resource mobilization • Received support from at least one source or has a clear plan for fundraising or proposal writing • Insufficient funds to support its activities	The organization has • A business plan based on an analysis of its programs and resource needs and the activities in its strategic plan • Identified resource providers • Created a communication strategy for resource mobilization • Successfully bid for resources from one or more sources • Sufficient funds to support its activities

Operational Plan Development

Subsection Objective: To assess the contents, approval and reviews of the annual operational plan.

Resources: operational plan

Operational Plan ●	For OHW-NG, but not for SEAOHUN Foundation		
1	2	3	4
The organization has • No operational plan	The organization has • An annual operational plan • Included goals, measurable objectives and strategies, but no timelines, responsibilities or indicators • Not linked the operational plan to project or program workplans and budgets • Not developed the operational plan with staff participation • Not set dates for quarterly reviews • Not submitted the plan on time to HQ or donors (if required)	The organization has • An annual operational plan • Included goals, measurable objectives, strategies, timelines, responsibilities and indicators • Linked the plan to proj[illegible] and budgets • Not developed the operational plan with staff participation • No dates for quarterly reviews • Not submitted the plan on time to HQ or donors (if required)	The organization has • An annual operational plan • Included goals, measurable objectives, strategies, timelines, responsibilities and indicators • Linked the plan to program/project workplans and budget • Developed the plan with staff participation • Set dates for quarterly reviews • Submitted the plan on time to HQ or donors (if required)

w/ relevant staff

Communication Strategy

Subsection Objective: To assess the comprehensive, completeness and effectiveness of the organization's communication strategy.

Resources: communication strategy, sample USAID-funded and non-USAID-funded publications

Communication Strategy ●	Unsure of completness	3	4
I			
The organization has • No strategy for identifying audiences, channels, materials, and dissemination for promotion of technical/best practice innovation and overall achievements • No one assigned responsibility for developing/overseeing communication strategy and products (written, oral and/or online) • No process/tools for testing the materials/messages • No branding/marking policies or procedures for documents or equipment	The organization has • An incomplete strategy, lacking objectives, responsibility, timelines and dissemination mechanisms • Assigned responsibility for communication strategy development • No process/tools for testing materials/messages • Developed branding/marking policies for projects as required by USAID but does not have an organizational branding/marking policy	The organization has • A complete communication strategy, • Tasked staff member(s) with communication strategy management including documentation oversight • A process for testing materials/messages and revising based on test results • Developed its own branding policy (including appropriate USAID branding/marking requirements) and oriented staff, but it is inconsistently adhered to • Created templates for documents and a style guide	The organization has • A comprehensive communication strategy • Tasked staff member(s) with communication strategy management, including documentation development and oversight • A process for testing and revising materials/messages based on test results • Developed its own branding policy (including appropriate USAID branding/marking requirements), oriented staff, and instituted a system to monitor compliance • Created templates and a style guide and trained staff on their use

Change Management

Subsection Objective: To assess the organization's sustainability and relevance by reviewing its systems and processes for responding to internal or external emerging situations, reviewing programs and analyzing needs.

Resources: policy review plan or timeline

Change Management ●			
1	**2**	**3**	**4**
The organization has • No process for responding to internal changes (staffing, leadership and budget issues) • No process for planning for or responding to external changes (government policies or donor priorities/funding)	The organization has • Basic processes for reviewing internal changes, such as policy reviews or the funding environment • No process for planning for or responding to external changes, such as regular reviews of the operational plan and budget monitoring • Inconsistently involved staff in reviewing the effectiveness of new/revised management systems and policies • Significant delays or problems encountered in response to change	The organization has • Established processes for reviewing internal change • Processes for planning for and responding to external change • Consistently involved staff in reviewing the effectiveness of new/revised management systems and policies, processes, programs • Few delays or major problems encountered in response to change	The organization has • Established effective and consistent routines for planning and reviewing and responding to internal and external change • Consistently involved staff in reviewing the effectiveness of new/revised management systems and policies • Systems for monitoring whether changes are implemented and lead to improvements • Ways to gauge staff comfort with the way change is introduced and addressed

2.5

Discussion among mgmt

Knowledge Management

Subsection Objective: To assess the organization's ability to link with other organizations (government, national, international, community, technical, academic) and its system for sharing knowledge, experiences, technical expertise and best practices with staff.

Resources: listing of association memberships and linkages with external organizations, staff reports on meetings attended, organizational newsletters

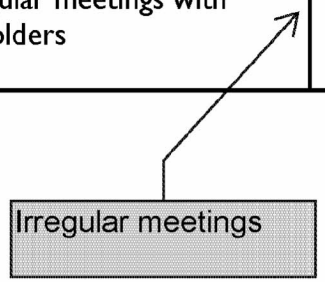
Knowledge Management ●			
1	**2**	3	**4**
The organization has • No technical linkages with other organizations to share best practices or program experiences • No process for ensuring staff are continuously updated on best practices	The organization has • Basic technical linkages with other organizations to share best practices or program experiences • Staff who are updated on best practices, but not regularly • No process for ensuring learning is applied to the program or shared with stakeholders	The organization has • Essential and appropriate links with other organizations to share best practices or program experiences • A process for routine staff sharing of best practices and lessons learned • Not applied new knowledge or best practices to ongoing programs or shared them with stakeholders • Has no process for reviewing/integrating new/current knowledge and best practices in annual planning	The organization has • Active links with appropriate organizations to share best practices or program experiences • A process for routinely sharing technical expertise and experiences with staff and stakeholders • Applied best practices to its program and shares information with stakeholders and appropriate staff • Annual planning that includes reviews and integration of new/current knowledge and best practices

Stakeholder Involvement

Subsection Objective: To assess the organization's ability to coordinate programs and to involve stakeholders.

Resources: list of key stakeholders, stakeholder report

Stakeholder Involvement ●			
1	**2**	3	**4**
The organization has • No information about key stakeholders and service providers in the same geographic and/or technical areas in which it operates	The organization has • Some information about stakeholders and service providers in the same geographic and/or technical areas in which it operates • Information that is incomplete and out of date	The organization has • Current information about stakeholders working in the same geographic and technical areas • Identified where stakeholders are, what they do, their expectations and how/if they can collaborate • No regular meetings with stakeholders	The organization has • Complete and up-to-date information about all stakeholders working in the same geographic and technical areas and, if appropriate, collaborative agreements with them • Regular (at least annually) meetings with stakeholders to review relevant activities and their impact on the organization's area of operations



Internal Communication

Subsection Objective: To review the organization's approach to internal communication.

Resources: staff questionnaires (Facilitator's Guide)

Internal Communication ●			
1	**2**	**3**	**4**
The organization has • Limited communication between and among management and staff • Few structured opportunities to exchange ideas or to discuss management, program or technical issues • Not encouraged staff ideas or input • Staff who feel uncomfortable raising issues	The organization has • Limited communication between and among management and staff • Opportunities for discussions between and among management and staff, but they are rarely used • Sometimes encouraged staff ideas and input • Staff who feel uncomfortable raising issues	The organization has • Open communication between and among management and staff • Regular opportunities for discussing management, program or technical areas • Encouraged staff ideas and input • Staff who are comfortable raising issues but find it more difficult to raise challenging ones	The organization has • Open communication between and among management and staff • Regular opportunities for exchanging ideas or discussing management, program or technical issues • Consistently encouraged and incorporated staff ideas and input • Staff who feel comfortable initiating discussions, contributing ideas and raising issues

Decision Making

Subsection Objective: To assess how the organization makes decisions, who is involved, and how decisions are communicated.

Resources: staff questionnaires (Facilitator's Guide)

Decision Making ●			
1	**2**	**3**	**4**
The organization has • Not included staff in the decision-making process • Not communicated or explained decisions that affect the organization • Staff who feel excluded	The organization has • An unclear process for seeking and including staff ideas in the decision-making process • Inconsistently communicated or explained decisions to staff • Staff who feel they play a minor role in making decisions	The organization has • Encouraged staff ideas but seldom incorporated them into decisions • Communicated and explained decisions to staff • Not fully included staff participation in making decisions	The organization has • Sought, respected and incorporated staff ideas into decision-making • Communicated and explained decisions to staff • Staff who feel a sense of responsibility, accountability and ownership of decision-making

2.5

not many ideas emerged; All good ideas proposed were incorporated to the extent possible

Program Management

Objective: To assess the organization's ability to implement comprehensive programs that respond to local needs and priorities by reviewing compliance with donor requirements, management of sub-grants with partners, technical reporting and whether its comprehensive health services meet the needs of specific target populations.

Donor Compliance

Objective: To assess the organization's capability to respond to USG donor requirements; thereby ensuring the effective implementation of its USG-funded programs.

Resources: copy of the USAID A-122 Cost Principles, staff interviews (Facilitator's Guide)

Donor Compliance ★			
1	**2**	**3**	**4**
The organization • Is not familiar with the terms of the cooperative agreement, A-122 Cost Principles (i.e., reasonable, allocable, and allowable) or Standard Provisions • Has not listed and assigned responsibility for all donor requirements	The organization • Is knowledgeable of the terms of the cooperative agreement, A-122 Cost Principles and Standard Provisions • Is aware of donor requirements, has assigned responsibility, but does not have systems in place to ensure compliance	The organization • Is knowledgeable of the terms of the cooperative agreement, A-122 Cost Principles and Standard Provisions • Has systems in place to ensure compliance with donor requirements • Does not comply consistently	The organization • Is knowledgeable of the terms of the cooperative agreement, A-122 Cost Principles, and Standard Provisions • Has systems in place to ensure compliance with donor requirements • Complies consistently

1.5

Sub-grant Management

Subsection Objective: To assess the organization's ability to subcontract with other organizations, and monitor technical implementation and financial management of sub-grants.

Resources: sub-grants management and monitoring manual or written procedures, partner agreements, staff interviews, USAID approval documentation, technical reports from grantees, supervisory trip reports, financial reports from grantees, financial tracking of grantees

Sub-grant Management ★			
1	**2**	**3**	**4**
The organization has • No policies and procedures to guide sub-grant management and support • No formal sub-grants with partner organizations	The organization has • Some documented sub-grant management policies and procedures, but these are incomplete or non-compliant • Formal sub-grants with some partners, but they have not been oriented to their responsibilities • Sub-grantees who do not submit regular financial and technical reports in accordance with their agreements • Basic policies and guidance for supervising and supporting sub-grantees • No regularly scheduled supervisory visits	The organization has • Most or all documented and compliant sub-grant management policies and procedures • Formal sub-grants with all partners; some sub-grantees are oriented to their responsibilities • Sub-grantees who do not consistently submit financial and technical reports • Policies and guidance for supervising and supporting sub-grantees, but not all staff are aware of or utilize the guidance • Conducted infrequent supervisory visits	The organization has • Complete and appropriate sub-grant management policies and procedures • Formal sub-grants with all partners, and they are oriented to their responsibilities • Sub-grantees who submit all required reports in a timely manner • Solid policies and guidance for providing regularly scheduled supervision and support • Regular supervisory visits to assess inventory and financial records and implementation; feedback is shared with partners and used for follow-up visits.

Technical Reporting

Subsection Objective: To review the organization's ability to document technical activities and results for donors, program planning and program development.

Resources: most recent technical report, workplan

Technical Reporting ★		3	
1	**2**	**3**	**4**
The organization • Does not document quantitative or qualitative progress on its workplan or its objectives and strategies, facilitating factors or barriers • Does not identify lessons learned and/or best practices • Does not report on donor, government or other program indicators • Does not use information to review/revise its strategy with staff and stakeholders	The organization • Documents qualitative progress on its workplan, including objectives and strategies, facilitating factors and barriers • Does not identify lessons learned or best practices • Does not report on government, donor or other program indicators • Does not use information to review/revise strategies with staff or stakeholders	The organization • Documents both qualitative and quantitative workplan progress and reviews objectives and strategies, facilitating factors and barriers • Documents lessons learned and best practices • Reports on donor, government or other program indicators • Does not use information to review/revise strategies with staff and stakeholders	The organization • Documents both quantitative and qualitative workplan progress, and reviews objectives and strategies, facilitating factors and barriers • Documents lessons learned and best practices • Reports on donor, government and other program indicators • Uses information to review/revise strategies with staff and stakeholders

Some but not all

Report to Thai government as required by law; report to donor as required, but not on other program indicators

e.g., received feedback from hosts/fellows and made some revisions

Referral N/A

Subsection Objective: To assess the organization's systems and processes for directing clients to other providers, ensuring those providers offer quality services and monitoring clients' access to services.

Resources: referral plan, memoranda of understanding with referral sites, referral reports or data

Referral ●			
1	**2**	**3**	**4**
The organization has • Not mapped referral sites • Not established links for referring clients for HIV and AIDS treatment or other health/support services	The organization has • Mapped referral sites • No agreements with government, private or NGO health or social service providers to ensure that clients requiring HIV and AIDS treatment or other health or support services have access to them	The organization has • A clear referral process with government, private or NGO health or social service providers to ensure that clients requiring HIV and AIDS treatment or other health or support services have access to them • A process for following clients and monitoring quality of care • Clients who are not always appropriately referred or who encounter problems at referral sites	The organization has • A clear referral process system and strong linkages with government, private or NGO health or social service providers to ensure that clients requiring HIV and AIDS treatment or other health or support services have access to them • A process for following clients and monitoring quality of care • Clients who are consistently referred to appropriate locations and who do not encounter problems at referral sites

Community Involvement N/A

Subsection Objective: To ensure the organization's programs respond to and address community needs by reviewing how they involve community members in planning and decision-making.

Resources: community participation and/ or mobilization plan; if not documented, discuss approach with appropriate staff

Community Involvement ●			
1	**2**	**3**	**4**
The organization • Orients communities on its programs, but does not actively include them • Does not involve affected families and communities in planning and decision-making	The organization • Orients communities on its program and discusses its approach with community leaders • Inconsistently involves affected families and communities in planning and decision-making	The organization • Orients communities and leaders on its program and actively engages them in the activities • Involves affected families and communities in planning and decision-making and sometimes integrates their ideas into program design and revision	The organization • Orients communities and leaders on its program and actively engages them in activities and service provision • Involves affected families and communities in planning and decision-making and consistently integrates their views into program design and revision

Culture and Gender

Subsection Objective: To evaluate the organization's systems for assessing culture and gender issues among the populations it serves and for integrating cultural and gender concerns into its programs.

Resources: community or client assessments, program plans

Culture and Gender ●			
1	**2**	**3**	**4**
The organization does • Not consider local cultural or gender issues in programming • Not have tools for assessing local cultural or gender issues • Not discuss the role of local culture and gender norms in program design with staff	The organization does • Consider local cultural or gender issues in its programming • Not have tools for assessing local cultural or gender issues relevant to programs • Discuss the role of local culture and gender norms in program design with staff	The organization does • Consider local cultural or gender concerns in its programming • Have tools for assessing cultural and gender issues • Have guidelines for culturally relevant and gender based approaches and programming • Not train staff on how to use the tools or findings	The organization does • Consider local culture or gender concerns in its programming • View culture and gender as integral to program success • Have tools for assessing cultural and gender issues • Have guidelines for culturally relevant and gender-based approaches and programming • Train staff on the tools, interpreting findings and incorporating elements of culture and gender in program design

Project Performance Management

Objective: To assess the organization's systems for overseeing field activities, setting standards and monitoring actual performance against them, and setting indicators and monitoring progress toward achieving outcomes.

Field Oversight Activities

Provide rating in the context of OHW in Cambodia. Only country with SEAOHUN officer in the past.

Subsection Objective: To assess the organization's systems for overseeing field activities.

Resources: field oversight policies and procedures, trip reports, management meeting minutes

Field Oversight ●			
1	**2**	**3**	**4**
The organization • Has no formal procedures and processes for overseeing field administrative and programmatic operations	The organization • Has some documented field oversight policies, but they are incomplete • Reviews annual workplans and progress reports, but irregularly • Monitors compliance with program and donor requirements	The organization • Has most or all documented oversight policies and procedures • Approves annual workplans on a regular basis • Monitors compliance with program and donor requirements • Reviews and approves field-level HR and finance manuals • Reviews quarterly project M&E data and progress reports • Provides technical and administrative guidance • Makes irregular supervision visits	The organization • Has documented and comprehensive field oversight policies and procedures • Approves workplans and provides feedback • Reviews data and progress reports and provides feedback • Monitors compliance with program and donor requirements • Reviews and approves field-level HR and finance manuals • Provides technical and administrative guidance • Makes at least semi-annual supervisory visits, and results are discussed with management and technical staff

No field-level HR and finance manuals

Standards N/A

Subsection Objective: To assess the organization's application of recognized standards in service delivery.

Resources: standards/guidelines used, monitoring reports

Standards ●			
1	**2**	**3**	**4**
The organization has • No standards for service delivery	The organization has • Minimal standards for service delivery • Not made staff aware of the standards • Not applied the standards appropriately	The organization has • A good system for using standards for service delivery • Made staff aware of the standards • Appropriately trained staff to apply and monitor the standards • A process for monitoring standards, but it is not applied comprehensively	The organization has • Solid standards for service delivery • Made staff aware of the standards and has trained staff to apply them • A process for monitoring adherence to standards that is consistently adhered to • A process for improving adherence to standards

Quality Assurance

Subsection Objective: To assess the organization's ability to identify and address gaps in meeting performance standards.

Resources: quality monitoring tools (could be part of M&E tools)

Quality Assurance ●			
1	**2**	**3**	**4**
The organization has • Unclear performance expectations • No process for monitoring the quality of services it provides, either through program evaluations, quality monitoring or supervision	The organization has • Performance expectations, but no process to assess performance against standards	The organization has • Performance expectations and a process that assesses performance against standards • Taken client satisfaction into consideration • Included an analysis of gaps or weaknesses • Not developed an improvement plan Self-assessment	The organization has • Performance expectations and a system that assesses performance against standards • Taken client satisfaction into consideration • Analyzed gaps or weaknesses to identify root causes • Identified a plan to address root causes • An improvement plan to address gaps or weaknesses • Studied and incorporated the results into the program

Supervision

Subsection Objective: To assess the organization's systems for supportive review of and feedback on staff performance and program activities.

Resources: supervision plan or guidelines, supervisors' reports

Supervision ●			
1	**2**	**3**	**4**
The organization has • Not developed a supervision plan or approach • Not clarified supervisory responsibilities • Not trained supervisors or provided tools • No process for carrying out supervision	The organization has • A supervision plan but no approach • Detailed supervisory responsibilities, but they are not followed • Not trained supervisors or provided tools • An unclear process for supervision • No process for reviewing findings with staff and management	The organization has: • A clear supervision plan with a supportive approach • Detailed supervisory responsibilities that are followed • Trained supervisors and provided them with tools • Logistical and program barriers to providing regular supervision • No process for documenting or discussing findings with staff and management	The organization has • A detailed supervision plan with a supportive approach • Detailed supervisory responsibilities that are followed • Trained supervisors and provided them with tools • A mechanism for carrying out visits according to the timeline • A process for documenting and discussing findings with staff and management • A process for following and addressing issues

Rating 1 if go by description
Ratining 2 performed by talks/dicussion among team

Monitoring and Evaluation (M&E)

Subsection Objective: To assess how the organization collects and uses data to plan, monitor and evaluate its programs.

Resources: M&E plan, M&E tools, M&E reports

Monitoring and Evaluation ★			
1	**2**	**3**	**4**
The organization has • No M&E plan • No process for monitoring program implementation • Not identified indicators to monitor • No system for data processing: tools, trained data collectors, data quality review or a plan for analyzing and using information	The organization has • A basic M&E plan • Identified outcome indicators • Developed data collection tools • Trained staff in M&E • No system for regularly collecting, analyzing or reporting data • No review of data quality • No process for reporting progress against targets	The organization has • A well-defined M&E plan • Process and outcome indicators • Trained staff to collect data, and data collection is consistently done • A process for consistently using data/findings for follow-up monitoring, support or planning and reporting against targets • No process for sharing results with field and stakeholders	The organization has • A well-defined M&E plan • Process and outcome indicators • A process for using data for follow-up monitoring, program adjustments, planning and determining progress towards achieving targets • A process for data quality review • A strategy for reporting on progress against targets and involving staff and data collectors in reviewing and using findings • A strategy for regularly sharing information with stakeholders, including the community

Rating 1 if go by SEAOHUN Foundaiton as an organization
Rating 4 if go by a project (the only project) like OHW-NG