From:	Singaravelu, Shalini <SSingaravelu@nas.edu>
To:	Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Sloane, Margaret (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=db86d85f76a644eaa3b9a21ccef6a901-Sloane, Mar <Margaret.Sloane@hhs.gov>; 'harvey.fineberg@moore.org' <harvey.fineberg@moore.org>; 'carrie.hultberg@moore.org' <carrie.hultberg@moore.org>; Andreadis, Joanne (CDC/DDPHSIS/CPR/OD) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2f7e7f8dcdf740329bbb1fd1a2c184fe-Andreadis, <jsa9@cdc.gov>; (b)(6) (b)(6) (b)(6) (b)(6) 'antoinette_baric@med.unc.edu' <antoinette_baric@med.unc.edu>; 'mary.bassett@health.ny.gov' <mary.bassett@health.ny.gov>; 'georges.benjamin@apha.org' <georges.benjamin@apha.org>; 'asma.shethwalayu@apha.org' <asma.shethwalayu@apha.org>; (b)(6) (b)(6) 'pdubie@ihi.org' <pdubie@ihi.org>; 'rbesser@rwjf.org' <rbesser@rwjf.org>; 'nferris@rwjf.org' <nferris@rwjf.org>; 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; 'Gigi Gronvall' <ggronvall@jhu.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'stephanie.scappini@kingcounty.gov' <stephanie.scappini@kingcounty.gov>; 'bgroves@georgetown.edu' <bgroves@georgetown.edu>; 'Motrya.Calafiura@georgetown.edu' <Motrya.Calafiura@georgetown.edu>; 'eembrey@stratitia.com' <eembrey@stratitia.com>; 'peggy@hbfam.net' <peggy@hbfam.net>; 'baruch@cmu.edu' <baruch@cmu.edu>; 'dgriffi6@jhu.edu' <dgriffi6@jhu.edu>; (b)(6) (b)(6) 'Navish, Maureen' <mnavish@iqt.org>; hick.john /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user7b974f4e (b)(6) 'pmeadows@kresge.org' <pmeadows@kresge.org>; 'KAHoffman@kresge.org' <KAHoffman@kresge.org>; 'kkester@iavi.org' <kkester@iavi.org>; 'totoole@iqt.org' <totoole@iqt.org>; (b)(6) (b)(6) 'alexandra.phelan@georgetown.edu' <alexandra.phelan@georgetown.edu>; 'Nicole Lurie' (b)(6) 'relman@stanford.edu' <relman@stanford.edu>; 'jkmazet@ucdavis.edu' <jkmazet@ucdavis.edu>; 'dmagallanes@ucdavis.edu' <dmagallanes@ucdavis.edu>; (b)(6) (b)(6) 'dwalt@bwh.harvard.edu' <dwalt@bwh.harvard.edu>
Subject:	HOLD - June 2022 Virtual Meeting of the Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats
Date:	2022/04/04 12:58:48
Start Date:	2022/06/17 12:00:00
End Date:	2022/06/17 17:00:00
Due Date:	2022/04/03 20:00:00
Priority:	Normal
Type:	Schedule.Meeting.Request
Location:	TBD
Attendees:	Hassell, David (Chris) (OS/ASPR/IO); Sloane, Margaret (OS/ASPR/IO); 'harvey.fineberg@moore.org'; 'carrie.hultberg@moore.org'; Andreadis, Joanne (CDC/DDPHSIS/CPR/OD); 'kga1978@gmail.com';

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Dear all,

Please hold this time for the June 2022 meeting of the Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats.
An agenda with connection details and briefing materials will be shared closer to the meeting date.

Many thanks,
Shalini

Shalini Singaravelu, MSc
Associate Program Officer
Board on Health Sciences Policy
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Sent Date:	2022/04/04 12:58:30
Delivered Date:	2022/04/04 12:58:48

Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats

Expert Meeting on Monoclonal Antibody Therapies

Read Ahead Materials

1. **Announcements from the FDA**

   EUA issued on Nov 10, 2020 for bamlanivimab: https://www.fda.gov/media/143602/download
   Press announcement from the FDA: https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-authorizes-monoclonal-antibody-treatment-covid-19

   - Therapeutic description: A neutralizing, IgG1-class monoclonal antibody that binds to the receptor-binding domain of the SARS-CoV-2 spike protein; use to prevent progression of mild/moderate disease to severe disease
   - Authorized use: Adults and pediatric patients > 12 years old and > 40 kg (c. 88 lb), positive SARS-CoV-2 test result, with mild-to-moderate COVID-19, within 10 days of symptom onset, and at risk for developing severe disease or requiring hospitalization
   - NOT for use: Patients who are hospitalized, on oxygen therapy, or require elevated baseline oxygen from chronic oxygen therapy for non-COVID-19 underlying conditions
   - Administration method and requirements: Single IV infusion over at least 60 min, plus an additional 60 min observation after infusion is complete

2. **Background information on monoclonal antibody therapeutic for COVID-19**

   The Washington Post: https://www.washingtonpost.com/health/2020/09/30/monoclonal-antibodies-to-treat-covid-19/

   IDSA (Infectious Diseases Society of America) background on COVID-19 monoclonal antibodies: https://www.idsociety.org/covid-19-real-time-learning-network/therapeutics-and-interventions/monoclonal-antibodies/

   - Summary of monoclonal antibodies use for treating infectious diseases, current development of monoclonal antibodies for COVID-19, and topline readout from clinical trials that are still in progress with publication links

3. **Current federal and state plans for therapeutics distribution**

   Proposed distribution plan from Operation Warp Speed: https://essentialhospitals.org/wp-content/uploads/2020/11/OWS-Tx-Stakeholder-Call_11.4.20.pdf

   - Detailed current plan for allocation from the federal government

   Considerations for state government allocation plan:
   https://www.nga.org/memos/monoclonal-antibody-therapies-covid-19/

- Good background explanation of antibody use and administration method
- Eight points of action to take or resolve in developing an allocation plan

4. **Summary of news coverage and expert interviews on allocation, major issues summarized below.**

National Public Radio: https://www.npr.org/sections/health-shots/2020/11/10/933444237/fda-oks-eli-lilly-covid-19-drug-but-supplies-will-be-limited
The Washington Post: https://www.washingtonpost.com/health/2020/11/10/covid-antibody-drug/ and https://www.washingtonpost.com/business/new-covid-treatments-are-here-but-who-gets-them/2020/11/10/16ea9d8e-2372-11eb-9c4a-0dc6242c4814_story.html

- Supply vs demand:
  - Demand will vastly outstrip supply in the beginning of roll-out, questionable whether supply will be sufficient in long-term (dependent on transmission control)
  - Eli Lilly projected supply of 1 million doses worldwide, the US federal government has negotiated a contract for 300,000 doses through December, and option for additional 650,000 through June
  - The US is currently recording >100,000 cases each day
  - From currently available data, NPR estimates that if given to 100 people, the treatment could prevent seven hospitalizations
- Cost (individual/patient level):
  - Therapeutic (currently covered by federal government as part of allocation)
  - IV infusion co-pay (not covered)
  - Disparity in insurance coverage may exacerbate inequities in treatment access in the same communities
  - Payer roles and downstream cost to individuals
- Cost (institutional/structural level):
  - Required access to outpatient facilities with IV infusion capacity
  - Impact on existing patient groups that rely on infusion facilities (e.g., immunocompromised patients on chemotherapy)
  - Cost to erect specialized, additional infusion facilities and/or to install protective measures necessary to treat COVID-positive patients
- Prioritization plan for allocation:
  - Need for a centralized allocation plan (HHS allocation plan and allocation dashboard); note that current plan will distribute to hospital and hospital-affiliated health care facilities, with expansion to additional outpatient facilities at a later date
  - Need to identify priority target groups, e.g., healthcare workers and first responders, communities of color, or individuals at high risk
  - Data collection and data systems: Testing capacity, access, and reporting are closely tied to data-guided allocation decisions; the additional need from treatment allocation may further tax the diagnostic testing system
- Supply chain management:



- Availability of distribution cold chain and storage capabilities
- Potential competition with vaccines that also require cold chain

5. **Issues experienced with Veklury (remdesivir) distribution and concerns for bamlanivimab, summarized below:** https://jamanetwork.com/journals/jama/fullarticle/2773057
    - EUA issuance and start of rapid distribution before primary clinical data was publicly available led hospitals to make individual allocation with limited knowledge to guide risk/benefit decisions and clinical application
    - A lack of standard, systematic registry to record distribution demographics, safety events, and clinical outcomes was a missed opportunity to expand knowledge of the therapeutic and track equity
    - Distribution of an outpatient treatment (e.g., monoclonal antibody) will have to be tied to close monitoring and anticipation of community case load
    - Payer and cost structure of outpatient-billed treatment may exacerbate health inequities when insurance coverage disparity and disease burden or severity coincide, such as in communities of color

6. **Considerations and proposed frameworks for fair access and allocation**

    WHO Concept for fair access and equitable allocation of COVID-19 health products, final working version as of Sep 9, 2020: https://www.who.int/publications/m/item/fair-allocation-mechanism-for-covid-19-vaccines-through-the-covax-facility

    - There is a detailed framework for allocation of vaccines that may have applications for therapeutics, including identification of target groups, proposal for proportional allocation, proposal for allocation based on risk assessment, and considerations/scenarios that would support the use of each (p. 18)

    From the Wellcome Trust and IAVI, Expanding access to monoclonal antibody-based products – A global call to action: https://wellcome.org/sites/default/files/expanding-access-to-monoclonal-antibody-based-products.pdf

    - Examines general access and affordability limitations for monoclonal antibody therapeutics on the global scale
    - Identifies two major categories of impediments to accessing monoclonal antibody therapeutics in low- and middle-income countries: Availability (regulatory approval, health system that fosters awareness and diagnosis to direct use, lack of biosimilars) and Affordability (treatment price tag, little incentive to pursue cost-lowering strategies)
    - Proposes mechanisms to lower costs, e.g., manufacturing advances and alternative methods

    From the Duke Margolis Center for Health Policy (Aug 2020), COVID manufacturing for monoclonal antibodies**:**

    - Projects a lower bound demand for neutralizing monoclonal antibodies for non-hospitalized and prophylactic use to be >25 million doses, as of Aug 2020



- Primer on monoclonal antibody manufacturing and identifies potential for increasing capacity
- Draw policy attention to maximize production capacity by coordinating between manufacturers, and to expand total manufacturing capacity by reviving facilities that are currently off-line

From:	Tom Inglesby <tinglesby@jhu.edu>
To:	Pope, Andrew <APope@nas.edu>
CC:	Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd. Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Watson, Ian D. EOP/OSTP <(b)(6)
Subject:	RE: Thanks and News about the letter
Date:	2020/02/08 10:26:09
Priority:	Normal
Type:	Note

Ok thanks Andy
Good to know
All the beset
Tom

From: Pope, Andrew <APope@nas.edu>
Sent: Saturday, February 08, 2020 10:22 AM
To: Tom Inglesby <tinglesby@jhu.edu>
Cc: Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Watson, Ian D. EOP/OSTP (b)(6)
Subject: Re: Thanks and News about the letter

Hi Tom
This group's work is done with the letter being sent. Not sure if/when we might be asked to do any kind of follow up but we will definitely let you know. We appreciate your participation very much, as I hope you know, and I will look forward to working with you again.

Have a great weekend!

Andy
Sent from my "smart" phone...

On Feb 8, 2020, at 10:01 AM, Tom Inglesby <tinglesby@jhu.edu> wrote:

Andy, Chris, Ian,
Thanks for the invitation to participate in the process. The resulting letters were well done.
Is there a next step for this committee? Or is the work of this group concluded now?
Best
Tom

From: Pope, Andrew <APope@nas.edu>
Sent: Friday, February 07, 2020 8:25 PM
To: Chakravarti, Aravinda <Aravinda.Chakravarti@nyulangone.org>; andersen@scripps.edu; (b)((b)((b)(6) (b)(6) trevor@bedford.io; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Gigi Gronvall <ggronvall@jhu.edu>;

Inglesby <tinglesby@jhu.edu>; Stanley Perlman (stanley-perlman@uiowa.edu) <stanley-perlman@uiowa.edu>
Cc: Diane Griffin <dgriffi6@jhmi.edu>; Chao, Samantha <SChao@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Kearney, William <WKearney@nas.edu>; Symmes, Gregory <GSymmes@nas.edu>; Behney, Clyde <CBehney@nas.edu>; Shern, Lauren <LShern@nas.edu>
Subject: Thanks and News about the letter

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Please see our news posting at the following link, and let us know if you have any questions or concerns.

http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=272020&_ga=2.118407884.416011462.1581027163-581770746.1511913188

Thanks again and have a great weekend!

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Delivered Date:	2020/02/08 10:26:09

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To:	Tom Inglesby <tinglesby@jhu.edu>
CC:	Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd. Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Watson, Ian D. EOP/OSTP <Ian.D.Watson@ostp.eop.gov>
Subject:	Re: Thanks and News about the letter
Date:	2020/02/08 10:23:47
Priority:	Normal
Type:	Note

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Cc: Diane Griffin <dgriffi6@jhmi.edu>; Chao, Samantha <SChao@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Kearney, (b)(6) <WKearney@nas.edu>; Symmes, (b)(6) <GSymmes@nas.edu>; Behney, Clyde <CBehney@nas.edu>; Shern, (b)(6) <LShern@nas.edu>
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Delivered Date:	2020/02/08 10:23:47

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Subject:	Updated: Expert Meeting on the Impact of Globalization on Future Health Crises
Date:	2020/09/17 08:48:20
Start Date:	2020/09/18 15:30:00
End Date:	2020/09/18 17:30:00
Priority:	Normal
Type:	Schedule.Meeting.Request
Location:	https://nasem.zoom.us/j/96069123196?pwd=cWNjWHlRb3VlWVhRMkpqT3ZSVWYvUT09
Attendees:	'Alexandra Phelan (alp81@georgetown.edu)'; (b)(A Relman (relman@stanford.edu)'; (b)(Walt (dwalt@bwh.harvard.edu)'; 'Embrey, Ellen (eembrey@stratitia.com)'; 'Georges Benjamin (georges.benjamin@apha.org)'; 'Harvey V. Fineberg (b)(6) hick.john; 'Jonna Mazet (jkmazet@ucdavis.edu)'; 'Kent Kester (Kent.Kester@sanofi.com)'; 'Kristian G. Andersen (b)(6) (b) Smolinski (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)'; 'Patricia King (b)(6) 'Peggy Hamburg (peggy@hbfam.net)'; 'Peter Daszak (daszak@ecohealthalliance.org)'; 'Phyllis D. Meadows (PDMeadows@kresge.org)'; (b)(6) Besser (rbesser@rwjf.org)'; 'Tara O'Toole (totoole@iqt.org)'; 'Trevor Bedford (trevor@bedford.io)'; (b)(6) 'Donald Berwick'; 'alta.charo@wisc.edu'; 'Jeff.Duchin@kingcounty.gov'; 'Baruch Fischhoff'; Pope, Andrew; Pavlin, Julie; Shore, Carolyn; Wollek, Scott; Downey, Autumn; Fine, Emma; Kahn, Benjamin; Attal-Juncqua, Aurelia; Hassell, (b)((Chris) (OS/ASPR/IO); KATHRYBR; (b)(6) Ann Kurth; 'Baker, Kelly'; Michele Barry; Malick Diara; Kanter, Andrew S.; Scott Ratzan MD; Tishkoff, Sarah; Gostin; Moerder, Claire; Koss, Michelle; Alisha Medina; Al-Amin, Ameena; 'Anderson, Kevin'; Cassetti, Cristina (NIH/NIAID) [E]; (b) Harris'; 'Roselle, Gary, VHACIN'; 'RASANATHAN, Kumanan'; Zahn, (b)(6) 'Rafael Obregon'; Khabbaz, Rima (CDC/DDID/NCEZID/OD); 'miller.769@osu.edu'; Houchens, (b)(6) (OS/ASPR/BARDA); Liao, Julie; Minicucci, Charles; (b) Kathleen, VHACIN; 'lolmedo@unicef.org'; Grant, Celeste (CDC/DDID/NCEZID/OD) (b)(gostin@georgetown.edu; Bernard Okech; 'Waterman Paige E. EOP/OSTP'; Watson, Ian (OS/ASPR/SPPR); Sarah Cleaveland; Garcia,A. Isabel; 'Koenen, Karestan'; 'Orin Levine'; Maureen Litchveld; Olugbenga.Ogedegbe@nyumc.org; Del Rio, Carlos; 'Tennenberg, MD,

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2019-nCoV	Infectious dose – how much agent will make a normal individual ill?	Transmissibility – How does it spread from one host to another? How easily is it spread?	Host range – how many species does it infect? Can it transfer from species to species?	Incubation period – how long after infection do symptoms appear? Are people infectious during this time?

What do we know?	• The human infectious dose for novel Wuhan coronavirus (2019-nCoV) is currently unknown via all exposure routes. SARS and MERS coronaviruses are used as surrogates.
	• The infectious dose for SARS in mice is estimated to be between 67-540 PFU (average 240 PFU, intranasal route)[33-34]
	• Transgenic mice exposed intranasally to doses of MERS virus between 100 and 500,000 PFU show signs of infection, with higher doses exhibiting more severe syndromes.[3, 27, 49, 85]
		• 2019-nCoV has been declared a Public Health Emergency of International Concern by the World Health Organization (WHO).[80]
		• 2019-nCoV is spreading rapidly in major Chinese cities.[47] Human transmissibility estimates range from seasonal influenza (R_0 ~1.4) to that of SARS (R_0 ~2.9):
		  • WHO: 1.4 – 2.5[79]
		  • Majumder: 2.0-3.1[53]
		  • Leung: 2.13 (1.92-2.31)[47]
		  • Althaus: 2.2 (1.4 – 3.8)[59]
		  • Ferguson: 2.6 (1.5 – 3.5)[40]
		  • Liu: 2.92 (2.28 – 3.67)[51]
		  • Read: 3.11 (2.39 – 4.13)[58]
		  • Zhao: 3.3 (2.73 – 3.96)[86]
		• 2019-nCoV is believed to spread between humans via the respiratory route, including droplet transmission[17]. SARS is capable of droplet and airborne transmission,[9, 84] though this has not been confirmed for 2019-nCoV
		• Transmission via fomites (contaminated surfaces) has not been confirmed for 2019-nCoV, but contributed to the large number of nosocomial cases in prior SARS[25, 82] and MERS[44] outbreaks
		• 2019-nCoV-infected travelers from China have been found in 18 countries.[12, 64, 78]
		• Human-to-human transmission via direct contact has occurred outside of China (Germany, Japan, Taiwan, Vietnam, US)[24,63]
		• The likelihood of 2019-nCoV super-spreading events is uncertain, but appears lower than that of SARS and MERS[8, 67,59]
		This information will change as the situation progresses
			• Early genomic analysis indicates similarity to SARS,[88] with a suggested bat origin[5,88]
			• Analysis of 2019-nCoV genomes suggests that a non-bat intermediate species is responsible for the beginning of the outbreak.[60] The identity of the intermediate species is currently unknown.
			• Preliminary studies suggest that nCoV-2019 utilizes the same receptor as SARS, but further research is required[35,45]
			• Positive samples from the South China Seafood Market strongly suggests a wildlife source,[19] though it is possible that the virus was circulating in humans before the disease was associated with the seafood market[7, 28]
			This information will change as the situation progresses
				• Based on 34 travel-related cases, the incubation time for 2019-nCoV is estimated to be 5.8 days (95% CI 4.6-7.9 days), with a range from 1.3 to 11.3 days[5]
				• Using data from 10 confirmed cases, researchers found the mean incubation period to be 5.2 days (95% CI 4.1 – 7.0 days) with an upper bound of 9.2-18 days.[50]
				• Data from several individual case reports suggest incubation times for 2019-nCoV range from ~5-8 days[43, 64]
				• CDC estimates that the incubation period is between 2 and 14 days [13, 18]
				• Asymptomatic infection has been documented, where individuals do not present with clinical symptoms but are found positive via diagnostic assay.[21]
				• It has been reported that individuals are infectious before they begin to show symptoms[64, 72], but this has not been confirmed by the CDC
				• Infectious period is unknown, but possibly up to 10-14 days [2, 64]
				• On average, there are 7.5 days (95% CI, 5.3 – 19 days) between symptom onset in successive cases of a single transmission chain (i.e., the serial interval).[50]
				• The time for individuals to first seek medical care decreased from 5.8 days after symptom onset (95% CI, 4.3 - 7.5 days) to 4.6 days (95% CI, 4.1 - 5.1 days) before and after January 1st, 2020, respectively, indicating an increase in seeking care behavior.[50] On average, it takes 12.5 days (95% CI, 10.3 – 14.8 days) between symptom onset and hospitalization[50] (as of January 11th, 2020)

2019-nCoV	Infectious dose – how much agent will make a normal individual ill?	Transmissibility – How does it spread from one host to another? How easily is it spread?	Host range – how many species does it infect? Can it transfer from species to species?	Incubation period – how long after infection do symptoms appear? Are people infectious during this time?
What do we need to know?	• Human infectious dose by aerosol route • Route of respiratory transmission (e.g., aerosol or droplet contact transmission) • Human infectious dose by other routes	• Capability of 2019-nCoV to be transmitted by contact with fomites (doorknobs, surfaces, clothing, etc.) – see also Experimental Stability • Superspreading capacity needs to be refined • Updated person to person transmission rates (e.g., R_0) as control measures take effect • Tendency for ill individuals to seek medical care due to symptoms (reporting rate) • Transmission rate with specific regard to healthcare workers (HCW) or in a hospital setting • What is the underreporting rate? [41] • Proper procedures for reducing spread in medical facilities / transmission rate in medical settings • How many infections have occurred in the hospital? • How many confirmed cases are severe? Mild to moderate?	• What is the intermediate host(s)? • Ability of 2019-nCoV to bind to human ACE2 receptor (initial reporting mixed) • Mutations in 2019-nCoV required for human infection and transmission.	• How early does asymptomatic transmission begin? • Are afebrile patients infectious? • What is the average infectious period during which individuals can transmit the disease? • Can recovered or convalescent individuals transmit 2019-nCoV?
Who is doing experiments/has capabilities in this area?	*Capable of performing work* - DHS National Biodefense Analysis and Countermeasures Center (NBACC)	*Performing work:* - Christian Althaus (Bern) - Neil Ferguson (MRC) - Gabriel Leung, Joseph Wu (University of Hong Kong)	*Capable of performing work:* - Vincent Munster (Rocky Mountain National Laboratory) - Matthew Frieman (University of Maryland Baltimore) - Ralph Baric (University of North Carolina) - Stanley Perlman (University of Iowa) - Susan Baker (Loyola University Chicago) - Mark Denison (Vanderbilt University) - Vineet Menachery (University of Texas Medical Branch) *Starting animal work soon:* - David O'Conner (U. Wisconsin, Madison)	*Performing work:* - Chaolin Huang (Jin Yin-tan Hospital, Wuhan, China)

AGENT (DISEASE)	Clinical presentation – what are the signs and symptoms of an infected person?	Clinical diagnosis – are there tools to diagnose infected individuals? When during infection are they effective?	Medical treatment – are there effective treatments? Vaccines?	Environmental stability – how long does the agent live in the environment?

What do we know?	• Initial symptoms:[18, 23, 38]
	  • Fever
	  • Cough
	  • Fatigue
	  • Shortness of Breath
	  • Pneumonia
	  • Dyspnea
	  • Reduction in leukocyte count
	  • Reduction in lymphocyte count
	• Complications include:[38]
	  • Acute respiratory distress (ARDS)
	  • RNAaemia (presence of viral RNA in the blood)
	  • Acute cardiac injury
	  • Secondary infection
	  • Kidney failure
	• "Compared to non-ICU patients, ICU patients had higher plasma levels of IL2, IL7, IL10, GSCF, IP10, MCP1, MIP1A, and TNFα."[38]
	• Headache and diarrhea are uncommon,[38] though some patients present with gastrointestinal symptoms[50]
	• The reported mortality rate is relatively low; as of 1/30/2020, 213 individuals out of a reported 9,692 cases (~2.2%).[42] This rate is highly sensitive to the rate of underreporting of both cases and deaths
	• The hospitalized case fatality rate is estimated to be 14% (95% CI from 3.9% - 32%).[81]
	• There is a long delay between time of hospitalization and time of death in fatal cases,[81] indicating a potential lag in the reporting of 2019-nCoV deaths
	• There is currently a delay in reported recoveries,[42] which could indicate an increase in reported fatalities in the near future.
		• In US, diagnostic testing can currently only be performed at CDC[14]
		• CDC has developed a rapid test kit and plans to release to domestic and international partners via their International Reagent Resource[17]
		• WHO interim guidelines suggest PCR,[77] and several RT-PCR assays have been developed to detect 2019-nCoV in humans[1, 30, 77]
		• Real-Time PCR diagnostic protocol and reaction details are published. [74]
		• PAHO advises that molecular diagnosis take place in a BSL-2 laboratory.[54]
		• Wuhan Institute of Virology has reportedly developed a test strip for 2019-nCoV diagnosis[32]
			• Treatment for 2019-nCoV infection is primarily supportive care, no specific treatment regimens exist[16]
			• WHO guidance indicates oxygen therapy for patients with severe acute respiratory infection (SARI), and antimicrobials if sepsis is identified[73]
			• Supportive care such as intubation may lead to increased nosocomial transmission[69]
			• Reports that remdesivir (GS-5734), chloroquine, and ritonavir are undergoing clinical trials.[32]
			• A recent paper indicated that remdesivir was broadly effective at treating coronavirus infections in mice, sometimes in combination with interferon β;[66] efficacy against 2019-nCoV infection has not yet been demonstrated
			• NIH/NIAID is reportedly developing vaccine for 2019-nCoV,[37, 48] and CEPI has funded vaccine work through three different awards
			• Researchers in Australia have successfully cultured 2019-nCoV from isolates of an infected patient;[6] this live virus can be used to develop therapeutics
			• Similarity in the spike proteins of 2019-nCoV and SARS-CoV[35, 46, 88] might offer target for therapeutics.[29] Vaccines derived from spike proteins are effective at inhibiting MERS symptoms in mice[27]
			
			It is anticipated that this information will change as the situation progresses
				• No information yet exists regarding the environmental stability of 2019-nCoV; SARS and MERS coronaviruses are used as surrogates instead.
				
				On surfaces:
				• SARS remains infectious for up to 3 days on hard, nonporous surfaces like plastic [36] and stainless steel,[75] but survives for less time (24-36 hours) on porous surfaces like cloth, wood, and plaster walls[75]
				• Coronavirus survival tends to be higher at lower temperatures and lower relative humidity (RH),[11, 22, 56, 70] though infectious virus can persist on surfaces for several days in typical office or hospital conditions[70]
				
				In the air:
				• One hour after aerosolization (via Collison nebulizer), approximately 63% of airborne MERS virus remained viable in a simulated office environment (25°C, 75% RH)
				• The aerosol survival of another human coronavirus (229E) was relatively high, with a half-life of ~67 hours at 20°C and 50% RH, indicating ~20% infectious virus at 6 days.[39] Both higher and lower RH reduced viral survival, while lower temperatures improved survival.[39]
				
				SMEs don't anticipate specific 2019-nCoV guidance to be published in the near-term due to the focus on epidemiology, therapies, and host determining factor research. SARS and MERS data are likely the best near-term surrogates for environmental stability.

AGENT (DISEASE)	Clinical presentation – what are the signs and symptoms of an infected person?	Clinical diagnosis – are there tools to diagnose infected individuals? When during infection are they effective?	Medical treatment – are there effective treatments? Vaccines?	Environmental stability – how long does the agent live in the environment?
What do we need to know?	• Differences in symptoms as infection progresses • Variability in symptoms among subpopulations (elderly, children, immunocompromised); clinical outcomes in SARS patients were worse for those over 60 yo[26] • How long do patients remain hospitalized? • How long does it take for infected individuals to recover outside of a healthcare setting?	• False positive/negative rates for tests • Eclipse phase of infection (time between infection and detectable disease)	• Is GS-5734 (remdesivir) effective (already used in clinical trials under Emergency Use Authorization)?[65] • Is the GLS-5000 MERS vaccine[83] cross-reactive against 2019-nCoV? • Efficacy of antibody treatments developed for SARS[31, 68] and MERS[20] • What is the efficacy of various MERS and SARS Phase I/II vaccines and other therapeutics?	• Stability of 2019-nCoV in aerosol, droplets, and other matrices (mucus/sputum, feces) • "Hang time' of the virus in air (Aerosol decay rate) • Particle size distribution (e.g., droplet, large droplet and true aerosol distribution) • Duration of infectivity via fomites and surface (contact hazard)? • Stability of 2019-nCoV on PPE (e.g., tyvec, nitrile, etc.)
Who is doing experiments/has capabilities in this area?	- Jin Yin-tan Hospital, Wuhan, China - China-Japan Friendship Hospital, Beijing, China - Peking Union Medical College, Beijing, China - Capital Medical University, Beijing, China - Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China - Huazhong University of Science and Technology, Wuhan, China - The Central Hospital of Wuhan, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China - Tsinghua University School of Medicine, Beijing, China - Zhongnan Hospital of Wuhan University, Wuhan, China - Peking University First Hospital, Beijing, China - Peking University People's Hospital, Beijing, China - Tsinghua University-Peking University Joint Center for Life Sciences, Beijing, China	*Performing work:* - CDC - Wuhan Institute of Virology - Public Health Agency of Canada - Doherty Institute of Australia	*Performing work:* - Peter Doherty Institute for Infection and Immunity - Academy of Military Medical Sciences, Beijing, China *Capable of performing work:* - Ralph Baric (University of North Carolina) - Matthew Frieman (University of Maryland Baltimore) *Funded work:* CEPI ($12 million to three groups): - Moderna and NIAID for mRNA platform vaccine - Inovio preparing DNA vaccine - University of Queensland, Australia, producing viral protein from cell culture	*Capable of performing work*: - DHS National Biodefense Analysis and Countermeasures Center (NBACC) - Defence Science and Technology Laboratory (Dstl) - Public Health Agency of Canada

AGENT (DISEASE)	Decontamination – what are effective methods to kill the agent in the environment?	PPE – what PPE is effective, and who should be using it?	Forensics – natural vs intentional use? Tests to be used for attribution.	Genomics – how does the disease agent compare to previous strains?
What do we know?	• Chlorine-based solutions recommended [77] • "The virus [2019-nCoV] has relatively weak viability in vitro, and can be inactivated at 56 ° C for 30 minutes. Chlorine-containing disinfectants and 75% ethanol can effectively inactivate the virus."[87] • Heat treatment at 56°C is sufficient to kill coronaviruses,[56, 87] though effectiveness depends in part on amount of protein in contaminated media[56] • 70% ethanol, 50% isopropanol, sodium hypochlorite [bleach, 200 ppm], and UV radiation are effective at inactivating several coronaviruses (MHV and CCV)[61]	• "Healthcare personnel entering the room [of 2019-nCoV patients] should use standard precautions, contact precautions, airborne precautions, and use eye protection (e.g., goggles or a face shield)"[15] • WHO indicates healthcare workers should wear clean, non-sterile, long-sleeve gowns as well as gloves.[76] • Nosocomial infections with SARS-CoV were more likely during intratracheal intubation, manipulation of oxygen masks, suction before intubation, and non-invasive ventilation[69] • Respirators (NIOSH-certified N95, EUFFP2 or equivalent) are recommended for those dealing with possible aerosols[77] • Additional protection, such as a Powered Air Purifying Respirator (PAPR) with a full hood, should be considered for high-risk procedures (i.e., intubation, ventilation)[10] • Healthcare worker illnesses indicate potential for human-to-human transmission despite isolation, PPE, and infection control[62]	• Genomic analysis places 2019-nCoV into the beta-coronavirus clade, with close relationship to bat viruses. The 2019-nCoV virus is distinct from SARS and MERS viruses.[35] • Genomic analysis suggest that 2019-nCoV is a natural variant, and is therefore unlikely to be human-derived or otherwise created by "recombination" with other circulating strains of coronavirus.[88]	• There have been no known outbreaks of 2019-nCoV prior to December 2019 • Preliminary genomic analyses, however, suggest that the first human cases of 2019-nCoV emerged between 10/19/2019 – 12/17/2019.[4, 7, 57] • The mutation rate of 2019-nCoV is estimated to be similar to other RNA viruses (e.g., SARS, Ebola, Zika), and is currently calculated to be between $3.29 \times 10^{-4} – 2.03 \times 10^{-3}$ substitutions per site per year (median 1.07×10^{-3}),[4] though this estimate may change as more genomes are sequenced. • Preliminary phylogenetic analysis identified a very close genetic similarity between 2019-nCoV and a Bat coronavirus (RaTG13) isolated from Yunnan Province, China; highly suggesting that 2019-nCoV originated from bats.[55] • The Spike protein of 2019-nCoV, which mediates entry into host cells and is the major determinant of host range, is very similar to the Spike protein of SARS-CoV.[52] The rest of the genome is more closely related to two separate bat coronaviruses.[52] • Genetic evidence and preliminary laboratory studies[45] suggest that 2019-nCoV binds to the human ACE2 receptor[71], the same cellular entry receptor used by SARS.
What do we need to know?	• Are hand sanitizing solutions effective? What is the minimal contact time? • Are antiseptic wipes effective for cleaning hard, non-porous surfaces? • What antiseptic/disinfection methods are effective? • Does contamination with human fluids/waste alter disinfectant efficacy profiles?	• Evidence of spread among patients within hospitals, like SARS? • Mode of aerosol transmission? • Is virus detectable in aerosol samples from patient rooms? • How effective are barriers such as N95 respirators as well as surgical masks?	• What tests for attribution exist for coronavirus emergence?	• Are there similar genomic differences in the progression of coronavirus strains from bat to intermediate species to human?

Who is doing experiments/has capabilities in this area?	*Capable of performing work*: - DHS National Biodefense Analysis and Countermeasures Center (NBACC)	*Generating recommendations:* - WHO - CDC - Pan-American Health Organization	*Capable of performing work:* - Pacific Northwest National Laboratory - DHS National Biodefense Analysis and Countermeasures Center (NBACC)	*Performing work:* - Trevor Bedford (Fred Hutchinson Cancer Research Center) - National Institute for Viral Disease Control and Prevention, Chinese Center for Disease Control and Prevention - Shandong First Medical University and Shandong Academy of Medical Sciences - Hubei Provincial Center for Disease Control and Prevention - Chinese Academy of Sciences - BGI PathoGenesis Pharmaceutical Technology, Shenzhen, China - People's Liberation Army General Hospital, Wuhan, China - Wenzhou Medical University, Wenzhou, China - University of Sydney, Sydney, NSW, Australia - The First Affiliated Hospital of Shandong First Medical University (Shandong Provincial Qianfoshan Hospital), Jinan, China

Table 1. Definitions of commonly-used acronyms

Acronym/Term	Definition	Description
PFU	Plaque forming unit	Infectious virus particle
HCW	Healthcare worker	Doctors, nurses, technicians dealing with patients or samples
SARS	Severe Acute Respiratory Syndrome	Coronavirus with over 8,000 cases in global 2002-2003 outbreak
MERS	Middle-East Respiratory Syndrome	Coronavirus with over 2,000 cases in regional outbreak since 2012
CoV	Coronavirus	Virus typified by crown-like structures when viewed under electron microscope
R_0	Basic reproduction number	A measure of transmissibility. Specifically, the average number of new infections caused by a typical infectious individual in a wholly susceptible population.
MHV	Mouse hepatitis virus	Coronavirus surrogate
CCV	Canine coronavirus	Canine coronavirus
Fomite	Inanimate vector of disease	Surfaces such as hospital beds, doorknobs, healthcare worker gowns, faucets, etc.
Droplet transmission	Sneezing, coughing	Transmission via droplets requires relatively close contact (e.g., within 6 feet)
Airborne transmission	Aerosolization of infectious particles	Aerosolized particles can spread for long distances (e.g., between hospital rooms via HVAC systems)
Transgenic	Genetically modified	In this case, animal models modified to be more susceptible to MERS and/or SARS by adding proteins or receptors necessary for infection
Intranasal	Agent deposited into external nares of subject	Simulates inhalation exposure by depositing liquid solution of pathogen/virus into the nose of a test animal, where it is then taken up by the respiratory system.

Incubation period	Time between infection and symptom onset	Time between infection and onset of symptoms typically establishes guidelines for isolating patients before transmission is possible
Infectious period	Length of time an individual can transmit infection to others	Reducing the infectious period is a key method of reducing overall transmission; hospitalization, isolation, and quarantine are all effective methods
Serial interval	Length of time between symptom onset of successive cases in a transmission chain	The serial interval can be used to estimate R_0, and is useful for estimating the rate of outbreak spread
Superspreading	One individual responsible for an abnormally large number of secondary infections	Superspreading can be caused by high variance in the distribution of secondary cases caused by a single individual; most individuals infect very few people, while some infect a large number, even with the same average number of secondary infections
Nosocomial	Healthcare- or hospital-associated infections	Characteristic of SARS and MERS outbreaks, lead to refinement of infection control procedures
ACE2	Angiotensin-converting enzyme 2	Acts as a receptor for SARS-CoV, allowing entry into human cells
ARDS	Acute respiratory distress syndrome	Leakage of fluid into the lungs which inhibits respiration and leads to death

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For inquires related to this document please contact: U.S. Department of Homeland Security, Science & Technology Directorate, Hazard Awareness & Characterization Technology Center, [redacted]

From:	Singaravelu, Shalini <SSingaravelu@nas.edu>
To:	Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da (b)(6) Sloane, Margaret (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=db86d85f76a644eaa3b9a21ccef6a901-Sloane, Mar <Margaret.Sloane@hhs.gov>; 'harvey.fineberg@moore.org' <harvey.fineberg@moore.org>; 'carrie.hultberg@moore.org' <carrie.hultberg@moore.org>; (b)(6) (b)(6) (b)(6) (b)(6) 'antoinette_baric@med.unc.edu' <antoinette_baric@med.unc.edu>; 'mary.bassett@health.ny.gov' <mary.bassett@health.ny.gov>; 'georges.benjamin@apha.org' <georges.benjamin@apha.org>; 'asma.shethwalayu@apha.org' <asma.shethwalayu@apha.org>; (b)(6) (b)(6) 'pdubie@ihi.org' <pdubie@ihi.org>; 'rbesser@rwjf.org' <rbesser@rwjf.org>; 'nferris@rwjf.org' <nferris@rwjf.org>; 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; 'Gigi Gronvall' <ggronvall@jhu.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'stephanie.scappini@kingcounty.gov' <stephanie.scappini@kingcounty.gov>; 'bgroves@georgetown.edu' <bgroves@georgetown.edu>; 'Motrya.Calafiura@georgetown.edu' <Motrya.Calafiura@georgetown.edu>; 'eembrey@stratitia.com' <eembrey@stratitia.com>; 'peggy@hbfam.net' <peggy@hbfam.net>; 'baruch@cmu.edu' <baruch@cmu.edu>; 'dgriffi6@jhu.edu' <dgriffi6@jhu.edu>; (b)(6) (b)(6) 'Navish, Maureen' <mnavish@iqt.org>; hick.john /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user7b974f4e (b)(6) 'KAHoffman@kresge.org' <KAHoffman@kresge.org>; 'kkester@iavi.org' <kkester@iavi.org>; 'totoole@iqt.org' <totoole@iqt.org>; (b)(6) (b)(6) 'alexandra.phelan@georgetown.edu' <alexandra.phelan@georgetown.edu>; 'Nicole Lurie' (b)(6) 'relman@stanford.edu' <relman@stanford.edu>; 'jkmazet@ucdavis.edu' <jkmazet@ucdavis.edu>; 'dmagallanes@ucdavis.edu' <dmagallanes@ucdavis.edu>; (b)(6) (b)(6) 'dwalt@bwh.harvard.edu' <dwalt@bwh.harvard.edu>; 'Phyllis D. Meadows' <PDMeadows@kresge.org>; Brown, (b) <LBrown@nas.edu>; McCarthy, Margaret <MMcCarthy@nas.edu>; Masiello, (b)(6) <MMasiello@nas.edu>; Pope, Andrew <APope@nas.edu>
CC:	<baruch@andrew.cmu.edu>; Diane Griffin <dgriffi6@jhmi.edu>
Subject:	June 2022 Virtual Meeting of the Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats
Date:	2022/06/10 15:34:17
Start Date:	2022/06/17 12:00:00
End Date:	2022/06/17 15:00:00
Due Date:	2022/06/12 20:00:00
Priority:	Normal
Type:	Schedule.Meeting.Request

Location:	https://nasem.zoom.us/j/92914027352
Attendees:	Hassell, David (Chris) (OS/ASPR/IO); Sloane, Margaret (OS/ASPR/IO); 'harvey.fineberg@moore.org'; 'carrie.hultberg@moore.org'; 'kga1978@gmail.com'; (b)(6) 'antoinette_baric@med.unc.edu'; 'mary.bassett@health.ny.gov'; 'georges.benjamin@apha.org'; 'asma.shethwalayu@apha.org'; (b)(6) 'pdubie@ihi.org'; 'rbesser@rwjf.org'; 'nferris@rwjf.org'; 'alta.charo@wisc.edu'; 'daszak@ecohealthalliance.org'; 'andre@ecohealthalliance.org'; 'Gigi Gronvall'; 'Jeff.Duchin@kingcounty.gov'; 'stephanie.scappini@kingcounty.gov'; 'bgroves@georgetown.edu'; 'Motrya.Calafiura@georgetown.edu'; 'eembrey@stratitia.com'; 'peggy@hbfam.net'; 'baruch@cmu.edu'; 'dgriffi6@jhu.edu'; (b)(6) 'Navish, Maureen'; hick.john; 'KAHoffman@kresge.org'; 'kkester@iavi.org'; 'totoole@iqt.org'; (b)(6) 'alexandra.phelan@georgetown.edu'; 'Nicole Lurie'; 'relman@stanford.edu'; 'jkmazet@ucdavis.edu'; 'dmagallanes@ucdavis.edu'; (b)(6) 'dwalt@bwh.harvard.edu'; 'Phyllis D. Meadows'; Brown, Lisa; McCarthy, Margaret; Masiello, Matthew; Pope, Andrew; baruch@andrew.cmu.edu; Diane Griffin

Dear all,

Please find attached a draft agenda with Zoom information and briefing materials.

Topic: June 2022 Meeting of the Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats
Time: June 17, 2021 12:00 PM – 3:00 PM ET
Join from PC, Mac, Linux, iOS or Android: (b)(6)
Or iPhone one-tap (b)(6)

Many thanks,
Shalini

Shalini Singaravelu, MSc
Associate Program Officer
Board on Health Sciences Policy
Health and Medicine Division
The National Academies of Sciences, Engineering, and Medicine
500 Fifth Street, NW, Washington, DC 20001
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Academies logo-Jan 2017_email ONLY.png

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Recipient:	Hassell, (b)(6) (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da (b)(6) Sloane, Margaret (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=db86d85f76a644eaa3b9a21ccef6a901-Sloane, Mar

	<Margaret.Sloane@hhs.gov>; 'harvey.fineberg@moore.org' <harvey.fineberg@moore.org>; 'carrie.hultberg@moore.org' <carrie.hultberg@moore.org>; (b)(6) (b)(6) (b)(6) (b)(6) 'antoinette_baric@med.unc.edu' <antoinette_baric@med.unc.edu>; 'mary.bassett@health.ny.gov' <mary.bassett@health.ny.gov>; 'georges.benjamin@apha.org' <georges.benjamin@apha.org>; 'asma.shethwalayu@apha.org' <asma.shethwalayu@apha.org>; (b)(6) (b)(6) 'pdubie@ihi.org' <pdubie@ihi.org>; 'rbesser@rwjf.org' <rbesser@rwjf.org>; 'nferris@rwjf.org' <nferris@rwjf.org>; 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'daszak@ecohealthalliance.org' <daszak@ecohealthalliance.org>; 'andre@ecohealthalliance.org' <andre@ecohealthalliance.org>; 'Gigi Gronvall' <ggronvall@jhu.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'stephanie.scappini@kingcounty.gov' <stephanie.scappini@kingcounty.gov>; 'bgroves@georgetown.edu' <bgroves@georgetown.edu>; 'Motrya.Calafiura@georgetown.edu' <Motrya.Calafiura@georgetown.edu>; 'eembrey@stratitia.com' <eembrey@stratitia.com>; 'peggy@hbfam.net' <peggy@hbfam.net>; 'baruch@cmu.edu' <baruch@cmu.edu>; 'dgriffi6@jhu.edu' <dgriffi6@jhu.edu>; (b)(6) (b)(6) 'Navish, Maureen' <mnavish@iqt.org>; hick.john /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user7b974f4e (b)(6) 'KAHoffman@kresge.org' <KAHoffman@kresge.org>; 'kkester@iavi.org' <kkester@iavi.org>; 'totoole@iqt.org' <totoole@iqt.org>; (b)(6) (b)(6) 'alexandra.phelan@georgetown.edu' <alexandra.phelan@georgetown.edu>; 'Nicole Lurie' (b)(6) 'relman@stanford.edu' <relman@stanford.edu>; 'jkmazet@ucdavis.edu' <jkmazet@ucdavis.edu>; 'dmagallanes@ucdavis.edu' <dmagallanes@ucdavis.edu>; (b)(6) (b)(6) 'dwalt@bwh.harvard.edu' <dwalt@bwh.harvard.edu>; 'Phyllis D. Meadows' <PDMeadows@kresge.org>; Brown, (b) <LBrown@nas.edu>; McCarthy, Margaret <MMcCarthy@nas.edu>; Masiello, (b)(6) <MMasiello@nas.edu>; Pope, Andrew <APope@nas.edu>; <baruch@andrew.cmu.edu>; Diane Griffin <dgriffi6@jhmi.edu>
Sent Date:	2022/06/10 15:30:59
Delivered Date:	2022/06/10 15:34:17

From:	Stuart Harrison <stuartharrison2014@yahoo.com>
To:	<daszak@ecohealthalliance.org>; Fauci, Anthony (NIH/NIAID) [E] /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=826965b24a314ffca7eddcb6e8229aa7-anthony.fau <afauci@niaid.nih.gov>
CC:	<jmhughe@emory.edu>; <chmura@ecohealthalliance.org>; <rcolwell@umd.edu>; <saif.2@osu.edu>; Kadlec, Robert (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, (b) <Robert.Kadlec@hhs.gov>; <trevor@bedford.io>; <tinglesby@jhu.edu>; Barasch, Kimberly (NIH/NIAID) [E] /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=efc199caf0ae49039e810a8fdae070dc-kimberly.ba <kimberly.barasch@nih.gov>; <DKorsen@nas.edu>; <andersen@scripps.edu>; (b)(6) <APope@nas.edu>; <aszak@ecohealthalliance.org>; <Aravinda.Chakravarti@nyulangone.org>
Subject:	Fw: Grant for research evaluation
Date:	2021/03/04 12:00:55
Priority:	Normal
Type:	Note

Hello COVID/HIV Researchers,

You may want to take a look at this email as so far after numerous attempts to find who may have an interest in Nobel Prize potential research involving retroviruses, I will go it without any of you as I do have a secondary plan for this work and based on the level of interest from what should be the appropriate persons of interest, secondary plan is likely best.

You all are going to look rather silly when this research comes to light as the emails will show you all as having passed on this opportunity.

Will gladly provide creditable references, (like chairman of University of Southern Mississippi's Biological Sciences Department...here call and just ask Dr. Bob Middlebrooks about Dr. Richard E. Harrison, then call Jorg Ichberg first person to ever infect a chimp with HIV/SIV at SW Biomedical Foundation and ask him about Dr. Richard E. Harrison in regard to whether this email is credible) .don't have Ichberg's contact info other than it can be obtained from SW Biomedical Foundation, that you may contact regarding the credibility contained herein.

With kindest regards, I am,

Sincerely yours,

Stuart Harrison, JD
(305)509-9780

----- Forwarded Message -----
From: Stuart Harrison (b)(6) @yahoo.com>
To: covid19nhlbi@nih.gov <covid19nhlbi@nih.gov>
Sent: Tuesday, January 5, 2021, 09:29:10 AM CST
Subject: Grant for research evaluation

Last chance before is goes to antivaxxers and robert kennedy.

Feel free to forward this to any and all applicable persons/entities.

----- Forwarded Message -----
From: Stuart Harrison (b)(6) @yahoo.com>
To: COVID19NHLBI@nih.gov <covid19nhlbi@nih.gov>
Cc: John Harrison (b)(6) @yahoo.com>
Sent: Tuesday, August 11, 2020, 10:32:36 AM CDT
Subject: Grant for research evaluation

Hello NIH,

You may know about this researcher,Dr. Ricky Harrison.

Thanks,

Stuart Harrison, JD

----- Forwarded Message -----
From: Stuart Harrison (b)(6) @yahoo.com>
To: fund@fastgrants.org <fund@fastgrants.org>
Sent: Tuesday, August 11, 2020, 9:36:21 AM CDT
Subject: Grant for research evaluation

Hello Fast Grants,

I understand you have paused grant funding. I have research that according to the HIV Molecular Biologist who read it, Dr. Ronald Kennedy stated that had the subject print out contained a conclusion, it would have won a Nobel Prize. Kennedy never viewed or had the opportunity to read the hand written lab notes that I have which may well contain a conclusion.

Either way the research needs evaluation as its application will likely advance COVID vaccine research. I think it is very kin to the mRNA research Moderna is conducting.

Both places who looked at this research turned into commercial giants after viewing the research.

See my relative, Dr. Harrison, the author, was poisoned after making a discovery he stated would change all of modern medicine. He had prior discoveries, discovering in his Master's thesis that Porpoises have sickle cell anemia. He did a postdoctoral stint under Jorg Ichberg, the first person to infect a Chimp with HIV/SIV ever and at the time had the most infected Chimps at SW Biomedical Foundation in San Antonio.

What he discovered was pertinent to Mitochondrial RNA replication/amplification...I will not elaborate at this time.

I have watched many companies successfully spring up appearing to use a close variation of his research.

My relative was well known by NIH scientists, such a William Hasletine and Flossie Wong Stal. Hasletine offered my relative a job at Harvard while at the AIDS Amsterdam conference. You may verify this with Hasletine my relative's name was Dr. Richard Edward Harrison. Dr. Harrison died after being poisoned at Sandoz in Austria not long after informally announcing that his research confirmed his discovery as expected.

I am requesting $50,000.00 in order to drop my life's duties, so as to have this research evaluated.

I will do it with or without the funding. Without funding it just may be weeks or months before I can put my life on pause and pursue evaluation of this vital discovery. I need the funding asap...as COVID will not wait.

For more information, you may contact me and I can provide references for confirmation of this matter such as his Biological Science department chair at the university where he attended, fellow researchers at SW Biomedical, *et al.*

With kindest regards, I am,

Sincerely yours,

STUART HARRISON, JD

Sender:	Stuart Harrison <stuartharrison2014@yahoo.com>
Recipient:	<daszak@ecohealthalliance.org>; Fauci, Anthony (NIH/NIAID) [E] /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=826965b24a314ffca7eddcb6e8229aa7-anthony.fau <afauci@niaid.nih.gov>; <jmhughe@emory.edu>; <chmura@ecohealthalliance.org>; <rcolwell@umd.edu>;

	<saif.2@osu.edu>; Kadlec, Robert (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, (b) <Robert.Kadlec@hhs.gov>; <trevor@bedford.io>; <tinglesby@jhu.edu>; Barasch, Kimberly (NIH/NIAID) [E] /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=efc199caf0ae49039e810a8fdae070dc-kimberly.ba <kimberly.barasch@nih.gov>; <DKorsen@nas.edu>; <andersen@scripps.edu>; (b)(6) <APope@nas.edu>; <aszak@ecohealthalliance.org>; <Aravinda.Chakravarti@nyulangone.org>
Sent Date:	2021/03/04 11:59:52
Delivered Date:	2021/03/04 12:00:55
Message Flags:	Unread

Standing Committee on Emerging Infectious Diseases and 21st Century Health Threats

Expert Meeting on Monoclonal Antibody Therapies

Agenda
Sunday, November 15, 2020 11:00 a.m. – 1:00 p.m. ET
Virtual Zoom Meeting

Meeting Objectives

- Identify key considerations to achieve equitable allocation of monoclonal antibody therapies, taking account of limited data about the degree to which different populations benefit.
- Discuss other key issues related to access, including potential barriers for those populations at highest risk of serious outcomes from COVID-19, administration capacity, cost, and data collection and reporting.
- Explore and scope next steps for the standing committee related to this issue.

SUNAY, NOVEMBER 15, 2020

CLOSED SESSION

11:00 a.m. **Welcoming Remarks**

Harvey Fineberg, *Standing Committee Chair*
President
Gordon and Betty Moore Foundation

Victor Dzau
President
National Academy of Medicine

11:10 a.m. **Sponsor Remarks**

Robert Kadlec
The Assistant Secretary for Preparedness and Response
U.S. Department of Health and Human Services

11:15 a.m. **Discussion on the Equitable Allocation of Monoclonal Antibodies**

12:15 p.m. **Discussion on Other Key Issues Related to Monoclonal Antibodies**

12:45 p.m. **Discussion of Next Steps with the Sponsors**

Harvey Fineberg, *Committee Chair*
President
Gordon and Betty Moore Foundation

1:00 p.m. ***ADJOURN***

From:	Caneva, Duane <duane.caneva@hq.dhs.gov>
To:	Tracey (b)(6) (b)(6) Dr. (b) (b) (b)(6) (b)((b)(6) (b)(6)
CC:	Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.(FYDIBOHF23SPDLT)/cn=Recipients/cn=a104469df5184cc38bf02034af7eca04-Hunt, Richa (b)(6) Brian Benson (b)(6) Hamel, Joseph (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=96d2c1602dfa45e5a5e21452a098b96d-Hamel, Jose <Joseph.Hamel@hhs.gov>; (b) (b)(6) MD (b)(6) Dr. (b) (b) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b)(6) (b) (b)(6) (b)((b) (b)(6) (b)(6) (b)((VA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(V (b)(6) (b)((b)(W (b)(6) (b)(6) (b) <DHanfling@iqt.org>; (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)((b)(6) <LBorio@iqt.org>; (b)((b)(S (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=20f0e9a3ebeb4ef99d30a96386fb2627-Guest_945f5 (b)(6) (b)((b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d48a91c6dc5f401a80e245c518874f15-MartinGJ.os (b)(6) Walters, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c23f0d7c1d634508918e1c87cf50c48c-Dodgen, (b <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d2cce28859884c1c835a9404885d6534-DeBord, Kri <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6ce8134846423cb83b5b28464edb60-Phillips, S <Sally.Phillips@hhs.gov>; (b)(6) CIV USARMY (USA) (b)(6) (b) (b)((b)(6) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f2fb845c2e154d8e967ec3fdabecfbd6-Herbert.Wol (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6cb05aaaff4f9fb1ee44181880376c-Guest_37b50 (b)(6) (b)(6) (b)(6) (b)(6)

	(b)(6) Johnson, Robert (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0851e89240324306b78740a4a60745e2-Johnson, Ro <Robert.Johnson@hhs.gov>; Yeskey, Kevin (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev <Kevin.Yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0fd5845defda4dc0bb45f8fac629cf09-Disbrow, Ga <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ba3fed4ee8646ec849a5a87136a24f6-Redd, John <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da (b)(6) (b)((b)((b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2b8ce179913e4ec6a251a91616b1bc4a-Guest_de2e9 (b)(6) KAUSHIK, SANGEETA (b)(6) Lee, Scott (OS/ASPR/EMMO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=userf6879348 (b)(6) Larry G (b)(6) (b) (b)(6 (b)(6) (b)((b)(6)) (b)(6) Adams, (b)(6 (HHS/OASH) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=184fe51f7350400b8a99dabd65ac0db5-Adams, Jero (b)(6) (b)(6) (b)(6) (b)(6) Fantinato, Jessica (USDA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4a03b6317c3840afb4ee617008e821a6-Jessica.Fan <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)((b)(6 (b)((b)(6) (b)(6) (b) (b)(6) Ignacio, Joselito (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=908f39d0872d44b1b2c5e3ba11f04968-Joselito.Ig <joselito.ignacio@fema.dhs.gov>; (b) (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)((b) (b)(6) <llogan@cvm.tamu.edu>; LLogandakar (b)(6) (b)(6) (b)((b)(6) Ronny Jackson (b)(6) (b) (b)(6) MD (b)(6) (b) (b)(6) (b)(6) Jim (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(Kellermann (b)(6) Taylor, Justin (b)((b)(6)
Subject:	RE: Red Dawn Responding, Start 16 March
Date:	2020/03/18 13:53:36
Priority:	Normal
Type:	Note

DHS Science and Technology Master Question List most recent version attached and available here: https://www.dhs.gov/publication/st-master-question-list-covid-19

For questions you would like added, contact: (b)(6)

From: (b)(6) (b)(6) (b)(6)
Sent: Wednesday, March 18, 2020 1:21 PM
To: Subject: RE: Red Dawn Responding, Start 16 March

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

SPECIES SUSCEPTIBILITY

Colleagues from the European Association of Zoo and Wildlife Veterinarians' Infectious Disease Committee have put together a science-based fact sheet on what is known about SARS-COV-2. (as of today).
https://cdn.ymaws.com/www.aazv.org/resource/resmgr/protocols/covid19_faq_17march_2020.eaz.pdf

This is an excellent document that summarizes what is known from experimental trials. It alos let's us know who is doing what. If you scroll down to the table, you will see that cats are listed as LIKELY to be infected.

If you want a little microcosm of the human-animal interface, zoos would be a great place to run long-term studies of keepers and the species they work with. Zoos are a goldmine of data. I set up a nationwide network of zoos in the USA for WNV surveillance in 2002 and could do it again if there is interest.

Tracey

From: Dr. (b) (b) (b)(6)
Sent: Wednesday, March 18, 2020 10:09 AM
To: (b)(6) (b)(6) (b)(6)
Cc: Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) Brian Benson (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Tracey (b)(6) (b)(6) (b) (b)(6) MD (b)(6) Dr. (b) (b) (b)(6) (b)(6) Caneva, Duane (DHS.GOV) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)((b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (VA.GOV) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) ((b)(6) W (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(S (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR)

<Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) CIV USARMY (USA) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)((OS/ASPR/IO) (b)(6) Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)((Chris) (OS/ASPR/IO) (b)(6) (b)(6 (b)((b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b) Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>; Larry G (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH) (b)(6) (b)(6) (b)(6) (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b) (b)(6) Ignacio, Joselito (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6 (b)((b)(6) LLogandakar (b)(6) (b)(6) (b)(6) (b)(6) Ronny Jackson (b)(6) (b)((b)(6) MD (b)(6) (b)((b)(6) (b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6)

Subject: RE: Red Dawn Responding, Start 16 March

Please protect the VA population seriously. I have finished the hospital analysis and bed/hospital resources are best used along with NPI implementation. I assume NPI is in good shape now. So we focus on the beds. Some of the covid-19 patients will need pretty long hospital stay. I still maintain it is very important to protect the healthcare providers and separate very carefully covid-19 patients and other ICU/ED hospitalized patients of other illnesses. We cannot cross-infected. The damage to the lungs is very serious and the virus attacks the weak point in the immune system. In that matter, anyone with underlying conditions will be vulnerable. We have so many people with coexisting chronic diseases in the US, they don't have to be necessarily 80 years-old. (b)(6) you should rapidly screen+test VA patients if needed. Please do.

(b)(6)
https://newton.isye.gatech.edu/DrLee/
mobile: (b)(6)

Sent with ProtonMail Secure Email.

------- Original Message -------
On Wednesday, March 18, 2020 12:50 PM, Dr. (b) (b) (b)(6) wrote:

I guess it is 400,000 test kits distributed based on places with >50 infected cases (from the WH briefinfs now).

I jjust talked to doctors who have treated these patients in Hong Kong. They said by (b) 10 of hospitalization, even if there is no coughing, the lung is seriously damaged and when patients recover (at all), the lung's damage remains.

(b)(6)
https://newton.isye.gatech.edu/DrLee/
mobile: (b)(6)

Sent with ProtonMail Secure Email.

------- Original Message -------
On Wednesday, March 18, 2020 12:42 PM, Dr. (b) (6) (b)(6) wrote:

Some update on screening and testing -
1. Stockpile said that 14,000 test kits have been sent to 37 sites. I do not know where but some of your locations should have them. I don't know who to ask for the exact distribution.

2. Attached is update on rapid risk-assessment screening and diagnostic testing. CDC asked that I included their website for references on the terms etc. Local public health can add other features as they see fit. I also add a combined screening + testing. That could work out very efficiently. I will be happy to optimize each local site's capabity.

Will have hospital resource analysis in my next email.

Best, (b)

(b)(6)
https://newton.isye.gatech.edu/DrLee/
mobile: (b)(6)

Sent with ProtonMail Secure Email.

------- Original Message -------
On Wednesday, March 18, 2020 12:12 PM, (b)(6) (b)(6) (b)(6) wrote:

Agree Rick. Also think we need to move from NPIs and testing (current focus of leaders) to other challenges in anticipation of where we need to skate to including PPE and reducing background demand on the healthcare system, as much as is possible. We should exhaust everything we can do before crisis standards of care.

I am also watching flu surveillance (ILI in particular). Outpatient clinics ought to be pivoting immediately to virtual care (telephone care/IM/facetime) to care for patients. No patient with ILI ought to be now presenting to an outpatient clinic. Either they are mildly ill and can be managed at home with telephone care (home isolation and home quarantine of other household members) or they are sick enough to require ER care and hospitalization (so don't need an outpatient visit). ILI should go to 0. If it doesn't then we have failed in messaging. That is what I was concerned about when monitoring ILI in Washington state, Seattle, NYC, and Chicago, where ILI rose. That will be the best monitor of how well we are pivoting outpatient care to respond to this fight.

I would think that CDC would broadcast this message thru the ILINet network of providers. I will watch the raw numbers that CDC reports. Need to doublecheck with CDC if telephone visits count in ILINet data. Does anyone know? I am pushing to shut it all down in VA except just a small amount of outpatient care for only those things that require F2F care (and only doing that to keep it out of the ER). The new ILI data comes out Friday. States monitor this daily so they should have an idea if total visits to ILINet sentinel providers are declining. Realize that the most recent data is only thru week 10 (week ending March 7). We have lots of HHS addresses, could someone from HHS check on ILINet about telephone visits—are they included in ILI numbers?

PERCENTAGE OF VISITS FOR INFLUENZA-LIKE-ILLNESS REPO										
YEAR	WEEK	AGE 0-4	AGE 5-24	AGE 25-49	AGE 25-64	AGE 50-64	AGE 65	ILITOTAL	TOTAL PATIENTS	NUM. OF PROVIDERS
2019	40	6,240	7,679	4,824	X	1,772	1,443	21,958	1,459,648	2,907
2019	41	6,573	7,672	5,152	X	2,021	1,601	23,019	1,438,128	2,938
2019	42	7,304	8,325	5,557	X	2,115	1,646	24,947	1,432,289	2,962
2019	43	7,894	9,400	6,076	X	2,310	1,793	27,473	1,474,953	2,992
2019	44	8,678	10,091	6,140	X	2,283	1,758	28,950	1,437,349	3,003
2019	45	10,560	12,535	7,160	X	2,464	1,839	34,558	1,464,287	3,018
2019	46	11,424	13,565	7,853	X	2,743	1,965	37,550	1,428,086	2,986
2019	47	12,659	16,901	9,064	X	3,103	2,135	43,862	1,486,041	2,981
2019	48	14,363	14,680	9,117	X	3,206	2,358	43,724	1,276,965	2,990
2019	49	13,795	16,270	11,857	X	3,940	2,774	48,636	1,474,436	2,986
2019	50	14,666	21,780	12,772	X	4,134	2,898	56,250	1,456,396	2,947
2019	51	17,984	29,085	16,217	X	4,845	3,348	71,479	1,421,322	2,917
2019	52	24,048	33,932	24,578	X	7,659	5,398	95,615	1,338,315	2,906
2020	1	21,576	23,388	27,619	X	9,227	6,862	88,672	1,423,566	2,949
2020	2	15,496	22,634	23,518	X	8,186	5,437	75,271	1,481,576	2,976
2020	3	16,468	29,466	21,311	X	7,364	4,714	79,323	1,476,265	2,967
2020	4	18,452	35,078	23,482	X	7,928	4,623	89,563	1,486,176	2,966
2020	5	20,133	43,742	28,605	X	9,461	5,406	107,347	1,556,326	2,956
2020	6	20,047	45,059	29,602	X	9,979	5,617	110,304	1,553,647	2,960
2020	7	17,158	36,481	26,168	X	9,158	5,366	94,331	1,514,910	2,916
2020	8	15,096	28,011	22,872	X	8,243	5,093	79,315	1,408,851	2,914
2020	9	13,430	24,663	21,632	X	8,076	4,923	72,724	1,419,047	2,826
2020	10	13,139	24,478	23,069	X	8,522	5,420	74,628	1,393,951	2,625

Sent from Mail for Windows 10

From: Hunt, (b)(6) (OS/ASPR/EMMO)
Sent: Wednesday, March 18, 2020 11:27 AM
To: (b)(6) (b)(6) Brian Benson; Hamel, Joseph (OS/ASPR/IO)
Cc: Tracey (b)(6) Dr. (b) (b) (b)(6) MD; Dr. (b) (b) (b)(6) Caneva, Duane (DHS.GOV); eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6 (b)(6) (b)((b)(6) (b)(6 (VA.GOV); (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6 V; (b)(6 ((b)(6 W; (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b)((b)(S; WILKINSON, THOMAS; (b)(6) (b)(6 (b)(6) Martin, Greg (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV); (b)(6) (b)(6), (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)((OS/ASPR/IO); Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); (b)(6 (b)(6 (b)(6) KAUSHIK, SANGEETA; (b) Scott (OS/ASPR/EMMO); Larry G; (b)((b)(6) (b)(6) (b)(6)); Adams, (b)(6) (HHS/OASH); (b)(6) (b)(6) (Fantinato, Jessica (USDA.GOV); DC; (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b) (Ignacio, Joselito (b)(6) (b) (b)(6) (b)((b)(6) (b)(6 (b)((LLogandakar; (b)(6) (b)(6) Ronny Jackson; (b)((b)(6) MD; (b)((b)(6) Jim (b)(6) (b)(6) (b)(6) (b)((b)(6)
Subject: RE: Red Dawn Responding, Start 16 March

"Skate to where the puck ~~is going~~ has already gone. "

Crisis care, crisis care, crisis care.

For a couple decades. many have recoiled against, been in denial of need, and said no to crisis standards of care.

So we're left w/ clinicians being confronted w/ Sophie's choice decisions - crisis care.

Hoping all (government by the people, for the people) can get behind clinicians making decisions on behalf of the greater good.

From: (b)(6) (b)(6) (b)(6)
Sent: Tuesday, March 17, 2020 7:42 PM
To: Brian Benson (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>
Cc: Tracey (b)(6) (b)(6) Dr. (b) (b) (b)(6) (b) (b)(6) MD (b)(6) Dr. (b) (b) (b)(6) (b)(6) Caneva, Duane (DHS.GOV) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)((b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (VA.GOV) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) ((b)(6) W (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) <CHRISALLEN (b)(6) (b)(6) (b)(6 (b)(6) (b)(6) (b)((b)(S (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) J CIV USARMY (USA) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV) (b)(6) (b)(6) (b)(6) MARIEFRED (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)((OS/ASPR/IO) (b)(6) Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)((Chris) (OS/ASPR/IO) (b)(6) (b)(6 (b)((b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b) Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>; Larry G (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH) (b)(6) (b)(6) (b)(6) ((b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b ((b)(6) Ignacio, Joselito (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6 (b)(((b)(6) LLogandakar (b)(6) (b)(6) (b)(6) (b)(6) Ronny Jackson (b)(6) (b)((b)(6) MD (b)(6) (b)((b)(6) (b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6)
Subject: RE: Red Dawn Responding, Start 16 March

March 17

Date of 1st Case	24-Jan		1-Feb		30-Jan		
Date of 1st Death	15-Feb		4-Mar		21-Feb		
	France (65M)		Spain (47M)		Italy (60M)		
	Cum Cases	Cum Deaths	Cum Cases	Cum Deaths	Cum Cases	Cum Deaths	Cum Cases
20-Feb	12	1	2		3	0	15
21-Feb	12	1	2		20	1	35
22-Feb	12	1	2		63	2	35
23-Feb	12	1	2		155	3	35
24-Feb	12	1	3		229	7	53
25-Feb	14	1	7		322	11	57
26-Feb	18	2	13		453	12	60
27-Feb	38	2	23		655	17	60
28-Feb	57	2	32		889	21	63
29-Feb	100	2	45		1,128	29	68
1-Mar	130	2	84		1,694	34	73
2-Mar	191	3	120		2,036	52	99
3-Mar	212	4	151		2,502	79	103
4-Mar	285	4	202		3,089	107	154
5-Mar	423	7	248	1	3,858	148	197
6-Mar	613	9	517	10	4,636	197	309
7-Mar	949	16	613	17	5,833	233	434
8-Mar	1,126	19	848	25	7,375	366	544
9-Mar	1,412	30	1,231	30	9,172	463	728
10-Mar	1,784	33	1,646	35	10,149	631	1,010
11-Mar	2,281	49	2,277	55	12,462	827	1,311
12-Mar	2,876	61	3,059	86	15,113	1,016	1,701
13-Mar	3,661	79	4,209	120	17,660	1,266	2,110
14-Mar	4,499	91	5,841	191	21,157	1,441	2,952
15-Mar	5,423	127	7,753	288	24,747	1,809	3,774
16-Mar	6,633	148	9,942	342	27,980	2,158	4,661
17-Mar	7,730	175	11,316	510	31,506	2,503	*6,244*

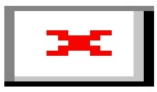
Sent from Mail for Windows 10

From: Brian Benson
Sent: Tuesday, March 17, 2020 3:10 PM
To: Hamel, Joseph (OS/ASPR/IO)
Cc: Tracey (b)(6); Dr. (b) (b)(6) MD; (b)(6) (b)(6) Dr. (b) (b)(6); Caneva, Duane (DHS.GOV); eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (VA.GOV); (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V; (b)(6) (b)(6) W; (b)(6) (b)((b)(6); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(S; Hunt, (b)(6) (OS/ASPR/EMMO); WILKINSON, THOMAS; (b)(6); (b)(6) (b)(6) Martin, Greg (b)(6); Walters, (b)(6) (b)(6); (b)(6) (b)(6); Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV); (b)(6); (b)(6) (b)(6) (b)(6); Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)((OS/ASPR/IO); Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); (b)(6) (b)(6) (b)(6); KAUSHIK, SANGEETA; (b) Scott (OS/ASPR/EMMO); Larry G; (b)((b)(6) (b)(6) (b)(6)); Adams, (b)(6) (HHS/OASH); (b)(6) (b)(6) (Fantinato, Jessica (USDA.GOV); DC; (b)(6); (b)(6) (b)(6) (b)(6) (b)(6) (b) (Ignacio, Joselito (b)(6); (b) (b)(6) (b)((b)(6); (b)(6) (b)((LLogandakar; Venkayya, (b)(6) Ronny Jackson; (b)((b)(6) MD; (b)((b)(6) Jim (b)(6) (b)(6) (b)(6) (b)((b)(6)
Subject: Re: Red Dawn Responding, Start 16 March

Germano (Italian ICU doc) just updated me.....things still bad. He sent CT a week ago, with lung images being worse than clinical picture, in young patients. In my urgent care, Pt comes in and if concerns for COVID, I send to car for team to flu and RSV (that's what we've got POC). As an aside I was reading I think IL-2 and 4 higher early in viral infections and procalcitonin higher in bacterial....can we get the folks at i-STAT to get other inflammatory markers up ASAP and go door to door for other forms of testingPRN.

Anyway after flu and RSV negative, I bring in back door for Xchest v/s and exam. If all ok, send out with albuterol and Doxy (if chronic medical conditions, 2/2 anti inflammatory properties and MRSA efficacy) and isolation instructions. I still don't have results from when I started testing for COVID last Thursday. Thoughts please?

See Germano article he sent below.



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HOME >> **CHINA**,**SPECIAL-COVERAGE**

Autopsies offer key clues for early stage COVID-19 patients

By Leng Shumei and Zhao Yusha Source:Global Times Published: 2020/2/29 0:33:48

369



Doctors check the CT image of a patient's lungs at Leishenshan (Thunder God Mountain) Hospital in Wuhan, capital of central China's Hubei Province on February 9, 2020. Photo: Xinhua

Autopsies show severe damage to COVID-19 patients' lungs and immune system, according to a doctor in Wuhan reached by the Global Times, who called for measures to prevent fibrosis of the lungs at an early stage of the disease.

"The influence of COVID-19 on the human body is like a combination of SARS and AIDS as it damages both the lungs and immune systems," Peng Zhiyong, director of the intensive care unit of the Zhongnan Hospital of Wuhan University in Wuhan, told the Global Times on Friday

On Mar 17, 2020, at 1:27 PM, Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov> wrote:

Or have the critical care staff to support the patient… That's currently being overlooked.

Strategic Innovation and Emerging Technology Manager

Assistant Secretary for Preparedness and Response

Office: (b)(6)

Cell: (b)(6)

From: Tracey (b)(6) (b)(6)
Sent: Tuesday, March 17, 2020 1:41 PM
To: Dr. (b) (b) (b)(6) (b) (b)(6) MD (b)(6)
Cc: Brian Benson (b)(6) (b)(6) (b)(6) <cmecher@charter.net>; Dr. (b) (b) (b)(6) (b)(6) Caneva, Duane (DHS.GOV) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)((b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (VA.GOV) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) ((b)(6) W (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) <CHRISALLEN (b)(6) (b)(6) (b)(6 (b)(6) <LBorio@iqt.org>; (b)((b)(S (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) CIV USARMY (USA) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)((OS/ASPR/IO) (b)(6) Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)((Chris) (OS/ASPR/IO) (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b)(6 (b)((b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b) Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>; Larry G (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) Adams, Jerome (HHS/OASH) <Jerome.Adams@hhs.gov>; (b)(6) (b)(6) ((b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b) ((b)(6) gnacio, Joselito (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6 (b)(((b)(6) LLogandakar (b)(6) (b)(6) (b)(6) (b)(6) Ronny Jackson (b)(6) (b)((b)(6) MD (b)(6) (b)((b)(6) (b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6)
Subject: Re: Red Dawn Responding, Start 16 March

I would be careful with the number of ventilators. Numbers are one thing, wether they work, have been tested, is another thing altogether.

Tracey

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From: (b)((b)(6) MD (b)(6)
Sent: Tuesday, March 17, 2020 10:21:53 AM
To: Dr. (b)(((b) (b)(6)
Cc: Brian Benson (b)(6) Tracey (b)(6)
(b)(6) (b)(6) (b)(6) (b)(6) Dr. (b)((b)
(b)(6) (b)(6) <1974usna@gmail.com>; Caneva,
Duane (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>;
(b)(6) (b)((b)(6) (b)(6) (b)((b)(6)
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(b)(6) W (b)(6) (b)(6) (b)((b)(6) (b)(6)
(DSHS) <David.Gruber@dshs.texas.gov>; (b)(6) (b)(6)
<CHRISALLEN_ (b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) <LBorio@iqt.org>; (b)(6 (b)(6 S (b)(6) Hunt, (b)(6)
(OS/ASPR/EMMO) (b)(6) WILKINSON, THOMAS
(b)(6) M.D. (b)(6) (b)(6)
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((b)(6) Walters, (b)(6) (b)(6) (b)(6)
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Dodgen,tDanielt(OS/ASPR/SPPR) <daniel.dodgen@hhs.gov>; DeBord,Kristin
(OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR)
<Sally.Phillips@hhs.gov>; (b)(6) (CIV USARMY (USA)
(b)(6) (b)((b)(6) (b)(6) (b)(6)
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(b)(6) Eastman, (b)(6) (b)(6)
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(b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>;
Yeskey, (b)(6) (b)(6) Disbrow, Gary (OS/ASPR/BARDA)
<Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell,
(b)(6) (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO)
<Joseph.Hamel@hhs.gov>; (b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A
(b)(6) KAUSHIK, SANGEETA (b)(6)
(b)(Scott (OS/ASPR/EMMO) (b)(6) Larry G (b)(6) (b)(6
(b)(6) (b)(6) (b)(6) (b)(6)) (b)(6)

Adams, Jerome (HHS/OASH) (b)(6) (b)(6) (b)(6) (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Ignacio, Joselito (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) LLogandakar (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Ronny Jackson (b)(6) (b)(6) (b)(6) MD (b)(6) (b)(6) (b)(6) (b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
Subject: Re: Red Dawn Responding, Start 16 March

Adding a few colleagues.

(b)(6) (b)(6) **MD, FACEP, FFSEM**
Founder, Chief Medical Officer
Patronus Medical
San Diego / Washington DC / Los Angeles

Office: 866.870.1577
Fax: 703.738.7605
Mobile: (b)(6)

https://protect2.fireeye.com/url?k=56851be7-0ad01237-56852ad8-0cc47a6a52de-55316850a020ccdb&u=https://protect2.fireeye.com/url?k=bb1df19b-e748f888-bb1dc0a4-0cc47adb5650-e7e5a3a6fc182949&u=https://protect2.fireeye.com/url?k=d1ed9cb6-8db985ca-d1edad89-0cc47adc5fa2-d2905c2d6444c751&u=http://www.patronusmedical.com/
(b)(6)
https://protect2.fireeye.com/url?k=3bb8ce63-67edc7b3-3bb8ff5c-0cc47a6a52de-51916e54c5064158&u=https://protect2.fireeye.com/url?k=e4e30baa-b8b602b9-e4e33a95-0cc47adb5650-a852491b127cbe73&u=https://protect2.fireeye.com/url?k=17778e33-4b23974f-1777bf0c-0cc47adc5fa2-6b8ef5753e83490b&u=http://www.linkedin.com/in/robertgdarling/

On Tue, Mar 17, 2020 at 12:55 PM Dr. (b)(6) (b)(6) wrote:

> We must optimize strategically the federal resources,s because it is not about just on state, there are at least 3 big fire now, if not more. So every step we are going to take on resource allocation is going to be very critical. As mentioned NYP took out all medical students from their care team now. That could be an excellent reserve when they need them. Elective procedures are being canceled already so that care is more focused on covid-19 cases. We (b)(6)

see more of these as it mushrooms out to multiple communities. And at some point, yes federal resources have to come in. Medical tents remain an important options for those big cluster locations. We need to optimize what is needed to set them up and who will mend the tents etc. I will talk to Stockpile today. We had a discussion last September and they had concerns at that time regarding not sufficient ventilators (750K at that time that they have). I want to calculate some of the few items to get a sense where we are now.

(b)(6) I have no doubt community transmission began ealier, and I won't wait for the first death, since CFR is only 3-14%, first death took us back at least 14 days priot, and earlier still there must be some non-death ones already.

(b)(6)

https://newton.isye.gatech.edu/DrLee/

mobile: (b)(6)

Sent with ProtonMail Secure Email.

------- Original Message -------

On Tuesday, March 17, 2020 12:42 PM, Brian Benson (b)(6) wrote:

> Group, is it wise to stop all Non-essential medical personnel from reporting to work. Including outpatient clinics urgent cares, etc. In Wuhan, as healthcare workers got sick, they mobilized providers from other regions. In the US, where is that other region? It may need to be from outpatient staff that can take the place of hospital folks as they get sick. Any thoughts?
>
> On Mar 17, 2020, at 11:34 AM, Tracey (b)(6) (b)(6) wrote:
>
> When do we call in the cavalry? The governor of NY has asked for help from the Army Corps of Engineers. Why aren't other governors doing the same?

What is the capacity of DoD to help in this crisis??? If ever therewas a time to bring all assets to the table, this is it.

Tracey

Get Outlook for Android

From: Dr. (b)(6)
Sent: Tuesday, March 17, 2020 7:03:58 AM
To: (b)(6) <cmecher@charter.net>
Cc: (b)(6) (b)(6) Caneva, Duane (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; (b)(6) (b)(6) (b)(6) (b)(6) MD <rdarling@patronusmedical.com>; (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) (b) (b)(6) W (b)(6) (b)(6) (b)((b)(6) (b)(6) (DSHS) (b)(6) (b)(6) (b)(6) <CHRISALLEN (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) <LBorio@iqt.org>; Tracey (b)(6) <tmcNamara@westernu.edu>; (b)(6 (b)(6 S (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) WILKINSON, THOMAS (b)(6) M.D. (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) ; (b)(6) (b)(6) (b)(6) Dodgen,tDanielt(OS/ASPR/SPPR) <daniel.dodgen@hhs.gov>; DeBord,Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) CIV USARMY (USA) (b)(6) (b)((b)(6) <lkoonin1@gmail.com>; (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) jwleduc@utmb.edu (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>;

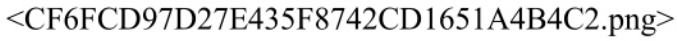
Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(Scott (OS/ASPR/EMMO) (b)(6) Larry G (b)(6) (b)(6 (b)(6) (b)(6) (b)(6) (b)(6))
(b)(6) Adams, (b)(6) (HHS/OASH)
(b)(6) (b)(6) (b)(6) (b (b)(6))(6)
Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6)
(b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b) (
<jschnitzer@mitre.org>; Ignacio, Joselito (b)(6)
(b)((b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) ((b)(6)
LLogandakar (b)(6) (b)(6) (b)(6)
(b)(6) Ronny Jackson
(b)(6) Brian Benson (b)(6)
Dr. (b)(((b) (b)(6)
Subject: Re: Red Dawn Responding, Start 16 March

(b)(6) this truly frightens me. one case is one too many, **I hope political leaders can act and act quickly.** TWe must do so or else we can't help these other cities that are escalated so rapidly. And globally, every country has to tighten, because we are running out of resources to do proper quarantine. We are already running out of healthcare resources, NYP has already canceled all elective procedures March 16. And many other hospitals who need care for covid-19 are facing the same issue. The medical tents appendices are needed and must be planned. I don't know what medical reserve we have and we have multiple fires burning simultaneously!

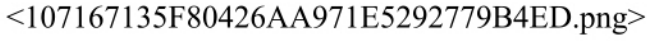
On Tue, Mar 17, 2020 at 9:53 AM (b)(6) (b)(6) (b)(6) wrote:

(b)((b)(6) said on GMA this morning that like 1918, this will be a tale of many cities. What happens in the cities impacted the earliest in the US including Seattle, San Francisco, and NYC (b) likely be very different from what we see in other cities (just like 1918, timing of implementing TLC in individual cities in their individual epi curves will matter). The hardest message to convey to political leaders, public health leaders, and the public was the need to take action before the storm arrived and when the sun was shining.

Interesting to look at the regional variation in Italy.



It is looking just like what we observed in Hubei (including Wuhan) vs. Wuhan.



It will be important to look a little more closely inside the US—the aggregate numbers miss the real story. The storyline of the articles written about the variation in outcomes in US cities in 1918, is now unfolding and writing itself in real time before our very eyes.

Sent from Mail for Windows 10

From: Dr. (b) (b)

Sent: Tuesday, March 17, 2020 9:09 AM

To: (b)(6) (b)(6)

Cc: (b)(6) Caneva, Duane; McDonald, Eric; (b)(6) (b)(6 (b)((b)(6) MD; (b)(6) (b)(6 (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V; (b)(6) (b (b)(6) W; (b)(6) (b)((b)(6) (DSHS); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Tracey (b)(6) (b)(6 (b)(6) S; Hunt, (b)(6) (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; (b)(6) (b)(6) (b)(6) (Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen,tDanielt(OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (CIV USARMY (USA); (b)((b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6)

(b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); (b)(6) (b)(6) TARANTINO, (b)(6) A; KAUSHIK, SANGEETA; (b), Scott (OS/ASPR/EMMO); Larry G; (b)(6) (b)(6) (b)(6) (b)(6)); Adams, (b)(6) (HHS/OASH); (b)(6) (b)(6) (b Fantinato, Jessica (USDA.GOV); DC; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(Ignacio, Joselito; (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (LLogandakar; (b)(6) (b)(6) Ronny Jackson; Brian Benson; Dr. (b)(((b)

Subject: Re: Red Dawn Responding, Start 16 March

Containing covid-19 -- direct info from news -- See how Europe+US affecting the covid-19 counts - from 100 to 157 -

https://www.reuters.com/article/us-health-coronavirus-hongkong-lam/hong-kong-to-quarantine-all-visitors-to-preserve-success-of-coronavirus-efforts-idUSKBN2140A4

"If we don't adopt some strict measures ... I'm afraid all precaution efforts done in the past two months would be wasted. It will affect the public health of Hong Kong."

Four of the 157 confirmed coronavirus patients in Hong Kong have died. **Fifty of the latest 57 cases** were people with recent travel history, Lam said.

Hong Kong had previously designated three public housing blocs for quarantine, but those will be reserved for the high-risk cases.

The lower-risk cases will be asked to stay under home quarantine or be placed under surveillance, which can include electronic wristbands with movement trackers, irregular landline phone calls and other means.

(b)(6)

https://newton.isye.gatech.edu/DrLee/

mobile: (b)(6)

Sent with ProtonMail Secure Email.

On Tue, Mar 17, 2020 at 8:28 AM (b)(6) (b)(6) (b)(6) wrote:

Worth the read.

https://osf.io/fd4rh/?view_only=c2f00dfe3677493faa421fc2ea38e295

Sent from Mail for Windows 10

From: (b)(6)

Sent: Monday, March 16, 2020 11:58 PM

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Subject: RE: Red Dawn Responding, Start 16 March

Looks like my attachments did not make it through for some reason

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DHS SCIENCE AND TECHNOLOGY

Master Question List for COVID-19 (caused by SARS-CoV-2)

Weekly Report

12 March 2020

For comments or questions related to the contents of this document, please contact the DHS S&T Hazard Awareness & Characterization Technology Center at (b)(6)

Homeland Security

Science and Technology

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FOREWORD

The Department of Homeland Security (DHS) is paying close attention to the evolving Coronavirus Infectious Disease (COVID-19) situation in order to protect our nation. DHS is working very closely with the Centers for Disease Control and Prevention (CDC), other federal agencies, and public health officials to implement public health control measures related to travelers and materials crossing our borders from the affected regions.

Based on the response to a similar product generated in 2014 in response to the Ebolavirus outbreak in West Africa, the DHS Science and Technology Directorate (DHS S&T) developed the following "master question list" that quickly summarizes what is known, what additional information is needed, and who may be working to address such fundamental questions as, "What is the infectious dose?" and "How long does the virus persist in the environment?" The Master Question List (MQL) is intended to quickly present the current state of available information to government decision makers in the operational response to COVID-19 and allow structured and scientifically guided discussions across the federal government without burdening them with the need to review scientific reports, and to prevent duplication of efforts by highlighting and coordinating research.

The information contained in the following table has been assembled from publicly available sources to include reports and articles found in scientific and technical journals, selected sources on the internet, and various media reports. It is intended to serve as a "quick reference" tool and should not be regarded as comprehensive source of information, nor as necessarily representing the official policies, either expressed or implied, of the DHS or the U.S. Government. DHS does not endorse any products or commercial services mentioned in this document. All sources of the information provided are cited so that individual users of this document may independently evaluate the source of that information and its suitability for any particular use. This document is a "living document" that will be updated as needed when new information becomes available.

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SARS-CoV-2 (COVID-19)	Infectious dose – how much agent will make a normal individual ill?	Transmissibility – How does it spread from one host to another? How easily is it spread?	Host range – how many species does it infect? Can it transfer from species to species?	Incubation period – how long after infection do symptoms appear? Are people infectious during this time?
What do we know?	• The human infectious dose for novel Wuhan coronavirus (SARS-CoV-2), which causes coronavirus disease 19 (COVID-19) is currently unknown via all exposure routes. Severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) coronaviruses (CoV) are used as surrogates. • The infectious dose for SARS in mice is estimated to be between 67-540 PFU (average 240 PFU, intranasal route).[49-50] • Genetically modified mice exposed intranasally to doses of MERS virus between 100 and 500,000 PFU show signs of infection. Infection with higher doses result in severe syndromes.[6, 40, 76, 137] • Initial experiments suggest that SARS-CoV-2 can infect genetically modified mice containing the human ACE2 cell entry receptor. Infection via the intranasal route (dose: 10^5 $TCID_{50}$) causes light infection, however no virus was isolated from infected animals, and PCR primers used in the study do not align well with SARS-CoV-2, casting doubt on this study.[12]	• The WHO considers COVID-19 a pandemic, with 124,564 cases and 4,589 deaths[67] in at least 114 countries (as of 3/11/2020).[23, 103, 122] • High-quality estimates of human transmissibility (R_0) range from 2.2 to 3.1[84, 91, 97, 128, 136] • There are 1,110 SARS-CoV-2 cases across 39 US states, with 30 deaths. (as of 3/11/2020)[67]; there is sustained community transmission of COVID-19 in the US.[15] • SARS-CoV-2 transmission has occurred in hospitals inside[117] and outside of China,[57] including the US.[18] • Pre-symptomatic[138] or asymptomatic[11] patients in China can transmit SARS-CoV-2 • SARS-CoV-2 is believed to spread through close contact and droplet transmission.[28] • SARS-CoV-2 replicates in the upper respiratory tract (e.g., throat), and infectious virus is detectable in throat and lung tissue for at least 8 days.[124] • Viable SARS-CoV-2 has been isolated from human feces;[79] fecal-oral transmission is possible.[85, 132, 135] • Transmission via fomites has not been confirmed for SARS-CoV-2, but occurred in prior SARS[39, 129] and MERS[73] outbreaks • SARS-CoV-2 is consistently present in infected patient saliva[112] • Infants have been diagnosed with COVID-19, but no evidence exists for vertical transmission via intrauterine infection or through breastmilk.[37, 118] • China reports no evidence of super-spreading events (SSEs) within hospital patients or staff.[109]	• Early genomic analysis indicates similarity to SARS,[141] with a suggested bat origin.[5,41, 141] • Analysis of SARS-CoV-2 genomes suggests that a non-bat intermediate species is responsible for the beginning of the outbreak.[98] Although the identity of the intermediate species remains unconfirmed, pangolins may be a natural host of related viruses possibly including SARS-CoV-2.[80-81] • Positive samples from the South China Seafood Market strongly suggests a wildlife source,[30] though it is possible that the virus was circulating in humans before the disease was associated with the seafood market.[16, 42, 130, 134] • Experiments suggest that SARS-CoV-2 Spike (S) receptor-binding domain binds the human cell receptor (ACE2) stronger than SARS,[127] potentially explaining its high transmissibility; the same work suggests that differences between SARS-CoV-2 and SARS-CoV Spike proteins may limit the therapeutic ability of SARS antibody treatments.[127] • Modeling between SARS-CoV-2 Spike and ACE2 proteins suggests that SARS-CoV-2 can bind and infect human, bat, civet, monkey and swine cells.[116]	• The best current estimate of the COVID-19 incubation period is 5.1 days, with 99% of individuals exhibiting symptoms within 14 days of exposure.[72] Fewer than 2.5% of infected individuals show symptoms sooner than 2 days after exposure.[72] • The reported range of incubation periods is wide, with high-end estimates of 24,[56] 11.3,[10] and 18 days.[78] • Individuals can test positive for COVID-19 despite lacking clinical symptoms.[11, 32, 56, 109, 138] • Individuals can be infectious while asymptomatic,[28, 99, 109, 138] and asymptomatic individuals can have similar amounts of virus in their nose and throat as symptomatic individuals.[142] • Infectious period is unknown, but possibly up to 10-14 days [4, 103] • On average, there are 7.5 days between symptom onset in successive cases of a single transmission chain (i.e., the serial interval).[78] • Most individuals are admitted to the hospital within 8-14 days of symptom onset.[140] • Patients are positive for COVID-19 via PCR for 8-37 days after symptom onset.[140] • Individuals may test positive via PCR for 5-13 days after symptom recovery and hospital discharge,[70] despite the absence of clinical symptoms. The ability of these "test-positive" individuals to infect others is unknown. • According to the WHO, there is no evidence of re-infection with SARS-CoV-2 after recovery.[71]

SARS-CoV-2 (COVID-19)	**Infectious dose – how much agent will make a normal individual ill?**	**Transmissibility – How does it spread from one host to another? How easily is it spread?**	**Host range – how many species does it infect? Can it transfer from species to species?**	**Incubation period – how long after infection do symptoms appear? Are people infectious during this time?**
What do we need to know?	• Human infectious dose by aerosol route • Human infectious dose by surface contact (fomite) • Human infectious dose by fecal-oral route	• Capability of SARS-CoV-2 to be transmitted by contact with fomites (doorknobs, surfaces, clothing, etc.) – see also Experimental Stability • Superspreading capacity needs to be refined • What is the extent of asymptomatic transmission? • Updated person to person transmission rates (e.g., R_0) as control measures take effect • What is the underreporting rate?[66] • Can individuals become re-infected with SARS-CoV-2? • What is the difference in transmissibility among countries? • Is the R0 estimate higher in healthcare or long-term care facilities? • How effective are social distancing measures at reducing spread?	• What is the intermediate host(s)? • What are the mutations in SARS-CoV-2 that allowed human infection and transmission? • What animals can SARS-CoV-2 infect (e.g., pet dogs, potential wildlife reservoirs)?	• How early does asymptomatic transmission begin? • What is the average infectious period during which individuals can transmit the disease? • Are individuals infectious after hospital discharge and clinical recovery, or are positive PCR tests only detecting non-infectious virus? • Can individuals become re-infected after recovery? If so, how long after?
Who is doing experiments/has capabilities in this area?	*Capable of performing work* - DHS National Biodefense Analysis and Countermeasures Center (NBACC)	*Performing work:* - Christian Althaus (Bern) - Neil Ferguson (MRC) - Gabriel Leung, Joseph Wu (University of Hong Kong) - Sara Del Valle (Los Alamos) - Maimuna Majumder (Boston Children's Hospital) - Trevor Bedford (Fred Hutchinson Cancer Center) - Sang Woo Park (Princeton)	*Capable of performing work:* - Vincent Munster (Rocky Mountain National Laboratory) - Matthew Frieman (University of Maryland Baltimore) - Ralph Baric (University of North Carolina) - Stanley Perlman (University of Iowa) - Susan Baker (Loyola University Chicago) - Mark Denison (Vanderbilt University) - Vineet Menachery (University of Texas Medical Branch) - Jason McLellan, Daniel Wrapp, Nianshuang Wang (University of Texas) - David O'Conner (U. Wisconsin, Madison)	*Performing work:* - Chaolin Huang (Jin Yin-tan Hospital, Wuhan, China) - The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team

SARS-CoV-2 (COVID-19)	Clinical presentation – what are the signs and symptoms of an infected person?	Clinical diagnosis – are there tools to diagnose infected individuals? When during infection are they effective?	Medical treatment – are there effective treatments? Vaccines?	Environmental stability – how long does the agent live in the environment?
What do we know?	• The majority of COVID-19 cases are mild (81%, N = 44,000 cases)[109] • Initial COVID-19 symptoms include fever (87.9% overall, but only 43.8% present with fever initially[56]), cough (67.7%[56]), fatigue, shortness of breath, headache, reduction in lymphocyte count.[29, 35, 63] Headache[34] and diarrhea are uncommon[63, 77] • Complications include acute respiratory distress (ARDS) observed in 17-29% of hospitalized patients,[38, 62] which leads to death in 4-15% of cases.[38, 63, 117] • Other complications include pneumonia,[89] cardiac injury, secondary infection, kidney failure, arrhythmia, sepsis, and shock.[56,63,117, 140] • Most deaths are caused by respiratory failure or respiratory failure combined with myocardial (heart) damage.[100] • Approximately 15% of hospitalized patients were classified as severe,[56, 109] and approximately 5% of patients were admitted to the ICU.[56, 109] • Between 23-32% of cases that include pneumonia required intensive respiratory support.[63, 117] • The case fatality rate (CFR) depends on patient comorbidities; cardiovascular disease, hypertension, diabetes, and respiratory conditions all increase the CFR.[109, 140] • The CFR increases with age; individuals older than 60 are at higher risk of death,[109, 140] and >60% of confirmed fatalities have been male.[109] • Approximately 1% of hospitalizations occur in children < 19 years old.[56, 109] • Children appear susceptible to SARS-CoV-2, but show milder clinical symptoms than adults.[36] • Recovery occurs in ~22 days, while death occurs in ~18 days.[140]	• Updated tests from the US CDC are available to states.[22, 28] • The FDA released an Emergency Use Authorization enabling laboratories to develop and use tests in-house for patient diagnosis.[55] • US CDC has expanded patient testing criteria to include symptomatic patients at clinician discretion.[14] • SARS-CoV-2 is consistently present in infected patient saliva, suggesting that saliva may be an effective diagnostic specimen.[112] • Several RT-PCR assays have been developed to detect SARS-CoV-2 in humans.[1, 45, 121, 123] • PCR protocols and primers have been widely shared among international researchers.[22, 46, 78, 106, 119, 123] • Several rapid or real-time test kits have been produced by universities and industry, including the Wuhan Institute of Virology,[48] BGI,[17] and Cepheid.[115] • RT-PCR tests are able to identify asymptomatic cases; SARS-CoV-2 infection was identified in 2/114 individuals previously cleared by clinical assessment.[61] • A combination of pharyngeal (throat) RT-PCR and chest tomography are the most effective diagnostic criteria (correctly diagnosing 91.9% of infections).[96] Single throat swabs alone detect 78.2% of true infections, while duplicate tests identify 86.2% of infections.[96] • The US CDC is developing serological tests to determine what proportion of the population has been exposed to SARS-CoV-2.[68] • Machine learning tools are being developed to predict severe and fatal COVID-19 cases based on CT scans.[107]	• The efficacy of antivirals (lopinavir, ritonavir, ribavirin, oseltamivir) is unknown[9]; however several therapeutics [Remdesivir[105] and chloroquine] inhibit SARS-CoV-2 infection in human cells *in vitro*[37] and are undergoing clinical trials in China[48] and the US.[2-3, 87] • Multiple entities are working to produce a SARS-CoV-2 vaccine, including NIH/NIAID,[59, 75] Moderna Therapeutics and Gilead Sciences,[2-3, 87] and Sanofi with HHS.[19] • The hospitalized case-fatality rate in China has decreased from 14.4% to 0.8% as of between December, 2019 and February, 2020,[109] suggesting improved treatment or capacity. • Approximately 38% of COVID-19 patients in China received oxygen therapy, 6.1% received mechanical ventilation, 57.5% received IV antibiotics, and 35.8% received the antiviral oseltamivir.[56] • A clinical report (one patient) suggested that corticosteroids should be considered for severe patients to prevent ARDS,[131] and corticosteroids are given to approximately 30% of COVID-19 patients.[140] However, US CDC recommends avoiding steroid use due to an increase in viral replication in MERS patients.[25] • Similarity in the spike proteins of SARS-CoV-2 and SARS-CoV might offer target for therapeutics,[43, 51, 74, 127, 141] as vaccines derived from spike proteins are effective at inhibiting MERS symptoms in mice.[40] • Takeda Pharma (Japan) is working to create antibody treatments based on infected patient plasma.[58] • Over 80 clinical trials are set to run on various treatments in China.[86]	*SARS-CoV-2 Data* • SARS-CoV-2 can persist on plastic and stainless steel surfaces for up to 3 days (at 21-23°C, 40% RH), with a half-life of 13-16 hours.[113] • SARS-CoV-2 has an aerosol half-life of 2.7 hours (particles <5 µm, tested at 21-23°C and 65% RH).[113] *Surrogate Coronavirus data*: • Studies suggest that other coronaviruses can survive on non-porous surfaces up to 9-10 days (MHV, SARS-CoV)[21, 33], and porous surfaces for up to 3-5 days (SARS-CoV)[53] in air conditioned environments (20-25°C, 40-50% RH) • Coronavirus survival tends to be higher at lower temperatures and lower relative humidity (RH),[21, 33, 94, 114] though infectious virus can persist on surfaces for several days in typical office or hospital conditions[114] • SARS can persist with trace infectivity for up to 28 days at refrigerated temperatures (4°C) on surfaces.[21] • Beta-coronaviruses (e.g., SARS-CoV) may be more stable than alpha-coronaviruses (HCoV-229E).[94] • No strong evidence for reduction in transmission with seasonal increase in temperature and humidity.[83] • One hour after aerosolization approximately 63% of airborne MERS virus remained viable in a simulated office environment (25°C, 75% RH)[92] • The aerosol survival of related human coronavirus (229E) was relatively high, (half-life of ~67 hours at 20°C and 50% RH), indicating ~20% of infectious virus remained after 6 days.[65] Both higher and lower RH reduced HCoV-229E survival; lower temperatures improved survival.[65]

SARS-CoV-2 (COVID-19)	Clinical presentation – what are the signs and symptoms of an infected person?	Clinical diagnosis – are there tools to diagnose infected individuals? When during infection are they effective?	Medical treatment – are there effective treatments? Vaccines?	Environmental stability – how long does the agent live in the environment?
What do we need to know?	• How long does it take for infected individuals to recover outside of a healthcare setting? • How does the CFR vary between countries? • Is the reduction in CFR through time an indication of better treatment, less overcrowding, or both?	• False positive/negative rates for tests • Eclipse phase of infection (time between infection and detectable disease) in an individual	• Is GS-5734 (remdesivir) effective in vivo (already used in clinical trials under Emergency Use Authorization)?[104] • Is the GLS-5000 MERS vaccine[133] cross-reactive against SARS-CoV-2? • Efficacy of antibody treatments developed for SARS[47, 108] and MERS[31] • What is the efficacy of various MERS and SARS Phase I/II vaccines and other therapeutics? • Are viral replicase inhibitors such as beta-D-N4-hydroxycytidine effective against SARS-CoV-2?[13]	• Stability of SARS-CoV-2 in aerosol, droplets, and other matrices (mucus/sputum, feces) • Particle size distribution (e.g., droplet, large droplet and true aerosol distribution) • Duration of SARS-CoV-2 infectivity via fomites and surface (contact hazard)? • Stability of SARS-CoV-2 on PPE (e.g., Tyvek, nitrile, etc.)
Who is doing experiments/has capabilities in this area?	- Jin Yin-tan Hospital, Wuhan, China - China-Japan Friendship Hospital, Beijing, China - Peking Union Medical College, Beijing, China - Capital Medical University, Beijing, China - Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China - Huazhong University of Science and Technology, Wuhan, China - The Central Hospital of Wuhan, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China - Tsinghua University School of Medicine, Beijing, China - Zhongnan Hospital of Wuhan University, Wuhan, China - Peking University First Hospital, Beijing, China - Peking University People's Hospital, Beijing, China - Tsinghua University-Peking University Joint Center for Life Sciences, Beijing, China - The Fifth Medical Center of PLA General Hospital, Beijing, China	*Performing work:* - CDC - Wuhan Institute of Virology - Public Health Agency of Canada - Doherty Institute of Australia - Cepheid - BGI - Fudan University	*Performing work:* - Peter Doherty Institute for Infection and Immunity - Academy of Military Medical Sciences, Beijing, China - Tim Sheahan (University of North Carolina) - Takeda Pharma. (Japan) *Capable of performing work:* - Ralph Baric (University of North Carolina) - Matthew Frieman (University of Maryland Baltimore) - Sanofi, with BARDA - Janssen Pharma and BARDA[60] *Funded work:* CEPI ($12 million to three groups): - Moderna and NIAID for mRNA platform vaccine - Inovio preparing DNA vaccine (for MERS) - University of Queensland, Australia NIAID/NIH: - Moderna and Kaiser Permanente for mRNA vaccine Phase I trial.[3] - University of Nebraska Medical Center Trial (multiple therapeutics including Gilead's Remdesivir).[2]	*Capable of performing work*: - Mark Sobsey (University of North Carolina) - DHS National Biodefense Analysis and Countermeasures Center (NBACC) - Defence Science and Technology Laboratory (Dstl) - Public Health Agency of Canada - CDC - EPA - NIH

SARS-CoV-2 (COVID-19)	Decontamination – what are effective methods to kill the agent in the environment?	PPE – what PPE is effective, and who should be using it?	Forensics – natural vs intentional use? Tests to be used for attribution.	Genomics – how does the disease agent compare to previous strains?
What do we know?	• No decontamination data for SARS-CoV-2 have been identified. SARS-CoV provides a plausible surrogate, as it is a close genetic relative of SARS-CoV-2 in the beta-coronavirus clade. • EPA has released a list of SARS-CoV-2 disinfectants, but solutions were not tested on live virus.[5] • Chlorine-based[121] and ethanol-based[44] solutions recommended, and the European CDC has released disinfectant guidelines for non-healthcare facilities.[54] • Heat treatment at 56°C is sufficient to kill coronaviruses,[94, 139] though effectiveness depends in part on amount of protein in contaminated media[94] • 70% ethanol, 50% isopropanol, sodium hypochlorite [bleach, 200 ppm], and UV radiation are effective at inactivating several coronaviruses (MHV and CCV)[101] • Ethanol-based biocides are effective disinfectants against coronaviruses dried on surfaces, including ethanol containing gels similar to hand sanitizer.[64, 125] • Surface spray disinfectants such as Mikrobac, Dismozon, and Korsolex are effective at reducing infectivity of the closely related SARS-CoV after 30 minutes of contact.[93] • Coronaviruses may be resistant to thermal inactivation for up to 7 days when stabilized in stool.[110-111] • Additionally, coronaviruses are more stable in matrixes such as respiratory sputum.[52] • Twice-daily cleaning with sodium dichloroisocyanurate decontaminated surfaces in COVID-19 patient hospital rooms.[88]	• PPE effectiveness for SARS-CoV-2 is currently unknown; SARS is used as a surrogate. • US CDC does not recommend the use of facemasks for healthy people. Facemasks should be used by people showing symptoms to reduce the risk of others getting infected. The use of facemasks is crucial for health workers and people in close contact with infected patients (at home or in a health care facility).[24] • "Healthcare personnel entering the room [of SARS-CoV-2 patients] should use standard precautions, contact precautions, airborne precautions, and use eye protection (e.g., goggles or a face shield)"[27] • WHO indicates healthcare workers should wear clean, non-sterile, long-sleeve gowns as well as gloves.[120] • Respirators (NIOSH-certified N95, EUFFP2 or equivalent) are recommended for those dealing with possible aerosols[121] • Additional protection, such as a Powered Air Purifying Respirator (PAPR) with a full hood, should be considered for high-risk procedures (i.e., intubation, ventilation)[20] • Healthcare worker illnesses (over 1,000[109]) demonstrates human-to-human transmission despite isolation, PPE, and infection control.[102] • Porous hospital materials, including paper and cotton cloth, maintain infectious SARS-CoV for a shorter time than non-porous material.[69] • CDC recommends facemasks for individuals attempting to prevent spread of SARS-CoV-2 in the home.[26] • Despite extensive environmental contamination, air sampling in patient rooms did not detect SARS-CoV-2.[88]	• Genomic analysis places SARS-CoV-2 into the beta-coronavirus clade, with close relationship to bat viruses. The SARS-CoV-2 virus is distinct from SARS and MERS viruses.[51] • Genomic analysis suggests that SARS-CoV-2 is a natural variant, and is therefore unlikely to be human-derived or otherwise created by "recombination" with other circulating strains of coronavirus.[7, 141] • Some genomic evidence indicates a close relationship with pangolin coronaviruses[126]; data suggests that pangolins may be a natural host for beta-coronaviruses [80-81]. Additional research is needed. • Genomic data support at least two plausible origins of SARS-CoV-2: "(i) natural selection in a non-human animal host prior to zoonotic transfer, and (ii) natural selection in humans following zoonotic transfer."[7] Either scenario is consistent the observed genetic changes found in all known SARS-CoV-2 isolates. • Additionally, "[…] SARS-CoV-2 is not derived from any previously used virus backbone," reducing the likelihood of laboratory origination,[7] and "[…] genomic evidence does not support the idea that SARS-CoV-2 is a laboratory construct, [though] it is currently impossible to prove or disprove the other theories of its origin."[7]	• There have been no documented cases of SARS-CoV-2 prior to December 2019 • Preliminary genomic analyses, however, suggest that the first human cases of SARS-CoV-2 emerged between 10/19/2019 – 12/17/2019.[8, 16, 95] • The mutation rate of SARS-CoV-2 is estimated to be similar to other RNA viruses (e.g., SARS, Ebola, Zika), and is currently calculated to be between 3.29×10^{-4} – 2.03×10^{-3} substitutions per site per year (median 1.07×10^{-3}),[8] though this estimate may change as more genomes are sequenced. • Preliminary phylogenetic analysis identified a very close genetic similarity between SARS-CoV-2 and a Bat coronavirus (RaTG13) isolated from Yunnan Province, China; suggesting that SARS-CoV-2 originated from bats.[90] • Pangolin coronaviruses are closely related to both SARS-CoV-2 and the closely related Bat coronavirus (RaTG13); phylogenetic analysis suggested that SARS-CoV-2 is of bat origin, but is closely related to pangolin coronavirus.[80-81] • The Spike protein of SARS-CoV-2, which mediates entry into host cells and is the major determinant of host range, is very similar to the Spike protein of SARS-CoV.[82] The rest of the genome is more closely related to two separate bat [82] and pangolin[81] coronavirus. • Protein modeling and preliminary laboratory studies suggest that SARS-CoV-2 binds to the human ACE2 receptor,[116, 127] the same cellular entry receptor used by SARS and other beta-coronaviruses.

SARS-CoV-2 (COVID-19)	**Decontamination – what are effective methods to kill the agent in the environment?**	**PPE – what PPE is effective, and who should be using it?**	**Forensics – natural vs intentional use? Tests to be used for attribution.**	**Genomics – how does the disease agent compare to previous strains?**
What do we need to know?	• What is the minimal contact time for disinfectants? • Are antiseptic wipes effective for cleaning hard, non-porous surfaces? • Does contamination with human fluids/waste alter disinfectant efficacy profiles? • How effective is air filtration at reducing transmission in healthcare, airplanes and public spaces?	• Mode of aerosol transmission? Effective distance of spread via droplet or aerosol? • How effective are barriers such as N95 respirators or surgical masks? • What is the appropriate PPE for first responders? Airport screeners? • Proper procedures for reducing spread in medical facilities / transmission rate in medical settings	• What tests for attribution exist for coronavirus emergence? • What is the identity of the intermediate species? • Are there closely related circulating coronaviruses in bats or other animals with the novel PRRA cleavage site found in SARS-CoV-2?	• Are there similar genomic differences in the progression of coronavirus strains from bat to intermediate species to human? • Are there different strains or clades of circulating virus? If so, do they differ in virulence?
Who is doing experiments/has capabilities in this area?	*Capable of performing work*: - DHS National Biodefense Analysis and Countermeasures Center (NBACC)	*Generating recommendations:* - WHO - CDC - Pan-American Health Organization	*Performing genomic investigations:* - Kristian Andersen, Andrew Rambaut, Ian Lipkin, Edward Holmes, Robert Garry (Scripps, University of Edinburgh, Columbia University, University of Sydney, Tulane, Zalgen Labs [Germantown, MD]) *Capable of performing work:* - Pacific Northwest National Laboratory - DHS National Biodefense Analysis and Countermeasures Center (NBACC)	*Performing work:* - Trevor Bedford (Fred Hutchinson Cancer Research Center) - Ralph Baric, UNC - National Institute for Viral Disease Control and Prevention, Chinese Center for Disease Control and Prevention - Shandong First Medical University and Shandong Academy of Medical Sciences - Hubei Provincial Center for Disease Control and Prevention - Chinese Academy of Sciences - BGI PathoGenesis Pharmaceutical Technology, Shenzhen, China - People's Liberation Army General Hospital, Wuhan, China - Wenzhou Medical University, Wenzhou, China - University of Sydney, Sydney, NSW, Australia - The First Affiliated Hospital of Shandong First Medical University (Shandong Provincial Qianfoshan Hospital), Jinan, China

Table 1. Definitions of commonly-used acronyms

Acronym/Term	Definition	Description
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2	Official name for the virus previously known as 2019-nCoV.
COVID-19	Coronavirus disease 19	Official name for the disease caused by the SARS-CoV-2 virus.
CFR	Case Fatality Rate	Number of deaths divided by confirmed patients
PFU	Plaque forming unit	Measurement of the number of infectious virus particles as determined by plaque forming assay. A measurement of sample infectivity.
$TCID_{50}$	50% Tissue Culture Infectious Dose	The number of infectious units which will infect 50% of tissue culture monolayers. A measurement of sample infectivity.
HCW	Healthcare worker	Doctors, nurses, technicians dealing with patients or samples
SARS	Severe Acute Respiratory Syndrome	Coronavirus with over 8,000 cases in global 2002-2003 outbreak
MERS	Middle-East Respiratory Syndrome	Coronavirus with over 2,000 cases in regional outbreak since 2012
CoV	Coronavirus	Virus typified by crown-like structures when viewed under electron microscope
R_0	Basic reproduction number	A measure of transmissibility. Specifically, the average number of new infections caused by a typical infectious individual in a wholly susceptible population.
MHV	Mouse hepatitis virus	Coronavirus surrogate
CCV	Canine coronavirus	Canine coronavirus
Fomite	Inanimate vector of disease	Surfaces such as hospital beds, doorknobs, healthcare worker gowns, faucets, etc.

Droplet transmission	Sneezing, coughing	Transmission via droplets requires relatively close contact (e.g., within 6 feet)
Airborne transmission	Aerosolization of infectious particles	Aerosolized particles can spread for long distances (e.g., between hospital rooms via HVAC systems)
Transgenic	Genetically modified	In this case, animal models modified to be more susceptible to MERS and/or SARS by adding proteins or receptors necessary for infection
Intranasal	Agent deposited into external nares of subject	Simulates inhalation exposure by depositing liquid solution of pathogen/virus into the nose of a test animal, where it is then taken up by the respiratory system.
Incubation period	Time between infection and symptom onset	Time between infection and onset of symptoms typically establishes guidelines for isolating patients before transmission is possible
Infectious period	Length of time an individual can transmit infection to others	Reducing the infectious period is a key method of reducing overall transmission; hospitalization, isolation, and quarantine are all effective methods
Serial interval	Length of time between symptom onset of successive cases in a transmission chain	The serial interval can be used to estimate R_0, and is useful for estimating the rate of outbreak spread
Superspreading	One individual responsible for an abnormally large number of secondary infections	Superspreading can be caused by high variance in the distribution of secondary cases caused by a single individual; most individuals infect very few people, while some infect a large number, even with the same average number of secondary infections
Nosocomial	Healthcare- or hospital-associated infections	Characteristic of SARS and MERS outbreaks, lead to refinement of infection control procedures
ACE2	Angiotensin-converting enzyme 2	Acts as a receptor for SARS-CoV, allowing entry into human cells

ARDS	Acute respiratory distress syndrome	Leakage of fluid into the lungs which inhibits respiration and leads to death
PPE	Personal protective equipment	Gowns, masks, gloves, and any other measures used to prevent spread between individuals
PCR	Polymerase chain reaction	PCR (or real-time [RT] or quantitative [Q] PCR) is a method of increasing the amount of genetic material in a sample, which is then used for diagnostic testing to confirm the presence of SARS-CoV-2

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SARS-CoV-2	Infectious dose – how much agent will make a normal individual ill?	Transmissibility – How does it spread from one host to another? How easily is it spread?	Host range – how many species does it infect? Can it transfer from species to species?	Incubation period – how long after infection do symptoms appear? Are people infectious during this time?
What do we know?	• The human infectious dose for novel Wuhan coronavirus (SARS-CoV-2) is currently unknown via all exposure routes. Severe Acute Respiratory Syndrome and Middle East Respiratory Syndrome coronaviruses are used as surrogates. • The infectious dose for SARS in mice is estimated to be between 67-540 PFU (average 240 PFU, intranasal route)[39-40] • Transgenic mice exposed intranasally to doses of MERS virus between 100 and 500,000 PFU show signs of infection, with higher doses exhibiting more severe syndromes.[3, 31, 60, 113] • An initial report suggests that SARS-CoV-2 is able to infect transgenic mice modified to contain the human ACE2 cell entry receptor via the intranasal route at a dose of 10^5 $TCID_{50}$;[8] however no virus was isolated from infected animals, and PCR primers used in the study do not align well with SARS-CoV-2, casting doubt on this study.	• SARS-CoV-2 has been declared a Public Health Emergency of International Concern by the WHO[102] with 75,280 cases and 2,014 deaths[53] in 27 countries.[16, 82, 100] • SARS-CoV-2 is spreading rapidly in major Chinese cities,[58] with localized outbreaks outside of China.[80] • Human transmissibility (R_0) estimates were critically assessed; high-confidence estimates range from 2.2 to 3.1[65, 70, 76, 106, 112] • Reports of asymptomatic transmission from Germany were erroneous[78,54]; the degree of asymptomatic transmission is still unknown. • SARS-CoV-2 is believed to spread between humans via the respiratory route, including droplet transmission.[21] • Additionally, SARS-CoV-2 has been shed in feces, raising the possibility of fecal-oral transmission[66] • Transmission via fomites has not been confirmed for SARS-CoV-2, but contributed to the large number of nosocomial cases in prior SARS[30, 107] and MERS[56] outbreaks • SARS-CoV-2 is consistently present in infected patient saliva.[89] • Infants have been diagnosed with COVID-19, but no evidence exists for vertical transmission via intrauterine infection or through breastmilk.[29, 95] • SARS-CoV-2 transmission has occurred in hospitals both inside[94] and outside of China.[46] • China reports no evidence of super-spreading events (SSEs) within hospital patients or staff.[86]	• Early genomic analysis indicates similarity to SARS,[115] with a suggested bat origin.[5,32, 115] • Analysis of SARS-CoV-2 genomes suggests that a non-bat intermediate species is responsible for the beginning of the outbreak.[77] The identity of the intermediate species remains unconfirmed. • Positive samples from the South China Seafood Market strongly suggests a wildlife source,[23] though it is possible that the virus was circulating in humans before the disease was associated with the seafood market[10, 33, 108] • Preliminary studies suggest that nCoV-2019 utilizes the same receptor as SARS, but further research is required.[41,57, 109] • Biophysical binding and structural evaluation of the SARS-CoV-2 Spike (S) receptor-binding domain suggest a higher affinity for human cell receptor ACE2 than SARS[105]; the same work suggests low cross-reactivity between anti-SARS antibodies and SARS-CoV-2, potentially limiting the therapeutic ability of SARS antibody treatments.[105]	• A recent study of 1,099 COVID-19 patients found a median incubation period of 3 days, with a range from 0 to 24 days.[45] • Earlier estimates of the incubation period from confirmed cases were higher; 5.8 days (95% CI 4.6-7.9 days), with a range from 1.3 to 11.3 days[7] and 5.2 days (95% CI 4.1 – 7.0 days) with an upper bound of 9.2-18 days.[62] • CDC estimates that the incubation period is between 2 and 14 days [18, 22] • Individuals may be infectious while asymptomatic,[21, 78] though this needs to be confirmed • Asymptomatic infection has been documented, where individuals do not present with clinical symptoms but are found positive via diagnostic assay.[25, 45, 86] • Infectious period is unknown, but possibly up to 10-14 days [2, 82] • On average, there are 7.5 days (95% CI, 5.3 – 19 days) between symptom onset in successive cases of a single transmission chain (i.e., the serial interval).[62] • The time for individuals to first seek medical care decreased from 5.8 days after symptom onset (95% CI, 4.3 - 7.5 days) to 4.6 days (95% CI, 4.1 - 5.1 days) before and after January 1st, 2020, respectively, indicating an increase in seeking care behavior.[62] On average, it takes 12.5 days (95% CI, 10.3 – 14.8 days) between symptom onset and hospitalization[62] (as of January 11th, 2020)

SARS-CoV-2	Infectious dose – how much agent will make a normal individual ill?	Transmissibility – How does it spread from one host to another? How easily is it spread?	Host range – how many species does it infect? Can it transfer from species to species?	Incubation period – how long after infection do symptoms appear? Are people infectious during this time?
What do we need to know?	• Human infectious dose by aerosol route • Human infectious dose by surface contact (fomite) • Human infectious dose by fecal-oral route • Where does SARS-CoV-2 replicate in the respiratory tract?	• Capability of SARS-CoV-2 to be transmitted by contact with fomites (doorknobs, surfaces, clothing, etc.) – see also Experimental Stability • Superspreading capacity needs to be refined • Updated person to person transmission rates (e.g., R_0) as control measures take effect • Tendency for ill individuals to seek medical care due to symptoms • What is the underreporting rate?[52] • Proper procedures for reducing spread in medical facilities / transmission rate in medical settings • Can individuals become reinfected with SARS-CoV-2?	• What is the intermediate host(s)? • Ability of SARS-CoV-2 to bind to human ACE2 receptor (need live virus confirmation in addition to genetic similarity) • What are the mutations in SARS-CoV-2 that allowed human infection and transmission?	• How early does asymptomatic transmission begin? • What is the average infectious period during which individuals can transmit the disease? • Can recovered or convalescent individuals transmit SARS-CoV-2? • How long do patients continue to shed infectious virus after physical recovery?
Who is doing experiments/has capabilities in this area?	*Capable of performing work* - DHS National Biodefense Analysis and Countermeasures Center (NBACC)	*Performing work:* - Christian Althaus (Bern) - Neil Ferguson (MRC) - Gabriel Leung, Joseph Wu (University of Hong Kong) - Sara Del Valle (Los Alamos) - Maimuna Majumder (Boston Children's Hospital) - Trevor Bedford (Fred Hutchinson Cancer Center) - Sang Woo Park (Princeton)	*Capable of performing work:* - Vincent Munster (Rocky Mountain National Laboratory) - Matthew Frieman (University of Maryland Baltimore) - Ralph Baric (University of North Carolina) - Stanley Perlman (University of Iowa) - Susan Baker (Loyola University Chicago) - Mark Denison (Vanderbilt University) - Vineet Menachery (University of Texas Medical Branch) - Jason McLellan, Daniel Wrapp, Nianshuang Wang (University of Texas) *Starting animal work soon:* - [redacted] O'Conner (U. Wisconsin, Madison)	*Performing work:* - Chaolin Huang (Jin Yin-tan Hospital, Wuhan, China) - The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team

SARS-CoV-2	Clinical presentation – what are the signs and symptoms of an infected person?	Clinical diagnosis – are there tools to diagnose infected individuals? When during infection are they effective?	Medical treatment – are there effective treatments? Vaccines?	Environmental stability – how long does the agent live in the environment?
What do we know?	• The majority of COVID-19 cases are mild (81%, N = 44,000 cases)[86] • Initial COVID-19 symptoms include fever (87.9% of patients develop during hospitalization, but only 43.8% present with fever initially[45]), cough (67.7%[45]), fatigue, shortness of breath, headache, reduction in lymphocyte count.[22, 28, 49] Headache[27] and diarrhea are uncommon[49, 61] • Complications include acute respiratory distress (ARDS), pneumonia (characteristic ground glass opacities[68]), acute cardiac injury, secondary infection, kidney failure, arrhythmia, and shock.[45,49,94] • Pathological evidence from a single patient indicates severe immune injury instigated by overactive T cells, specifically an increase of Th17 cells and high cytotoxicity of CD8 T cells.[110] • Approximately 15% of hospitalized patients were classified as severe,[45, 86] and severe cases were older and more likely to have underlying disorders[45, 94]; approximately 5% of patients were admitted to the ICU.[45, 86] • Approximately 1% of hospitalizations occur in children < 19 years old.[45, 86] • The case fatality rate (CFR) depends on patient comorbidities; no comorbidities = 0.9%, cardiovascular disease = 10.5%, diabetes = 7.3%, chronic respiratory disease = 6.3%, hypertension = 6.0%, cancer = 5.6%.[86] • The CFR is age-dependent; ≥80 years old = 14.8%, 70-79 = 8.0%, 60-69 = 3.6%, 50-59 = 1.3%, 40-49 = 0.4%, 10-39 = 0.2%, 0-9 = 0%.[86] • 63.8% of confirmed fatalities have been male.[86] • Patients (N = 21) were hospitalized for a mean of 17 days (range = 11 – 26).[68]	• CDC has developed a rapid test kit and is shipping to domestic and international partners via their International Reagent Resource;[15, 21] issues with inconclusive results have been reported using the CDC test kit.[44] • WHO interim guidelines suggest PCR,[99] and several RT-PCR assays have been developed to detect SARS-CoV-2 in humans[1, 35, 99, 101] • Real-Time PCR diagnostic protocol and reaction details are published.[97] • PAHO advises that molecular diagnosis take place in a BSL-2 laboratory.[67] • Wuhan Institute of Virology has reportedly developed a test strip for SARS-CoV-2 diagnosis[38] • Multiple institutions (Hong Kong University, China CDC, U.S. CDC, National Institute of Infectious Disease Japan, the Ministry of Public Health Thailand, Charité) have developed and shared PCR protocols and primers with international researchers.[15, 36, 62, 101] • BGI has developed real-time detection kits: fluorescent RT-PCR and metagenomic sequencing detection kit (probe-anchor synthesis sequencing methods).[11] • Cepheid developing automated molecular test for use in its GeneXpert System.[92] • SARS-CoV-2 is consistently present in infected patient saliva, suggesting that saliva may be an effective diagnostic specimen.[89] • RT-PCR tests positively identified SARS-CoV-2 in 2/114 individuals who had been cleared by clinical assessment.[48]	• Treatment for SARS-CoV-2 infection is primarily supportive care,[20] though China has released a treatment plan[6] • WHO guidance indicates oxygen therapy for patients with severe acute respiratory infection (SARI), and antimicrobials if sepsis is identified[96] • Efficacy for other treatments being administered to patients in China (lopinavir, ritonavir, chloroquine, ribavirin, oseltamivir) is unknown.[6] • The hospitalized case-fatality rate has decreased from 14.4% to 0.8% as of between December, 2019 and February, 2020[86] • Of 1,099 hospitalized COVID-19 patients in China, 38% received oxygen therapy, 6.1% received mechanical ventilation (more prevalent in severe cases), 57.5% received IV antibiotics, and 35.8% received the antiviral oseltamivir.[45] • Presence of pulmonary edema and hyaline membrane formation suggests early use of corticosteroids and mechanical ventilation in severe ARDS patients.[110] • Remdesivir (GS-5734)[84] and chloroquine inhibit SARS-CoV-2 infection in human cells *in vitro*[29] and are undergoing clinical trials.[38] • NIH/NIAID is developing a vaccine for SARS-CoV-2,[47, 59] CEPI has funded vaccine work through an award to Moderna, and Sanofi will work with HHS to develop coronavirus vaccine.[12] • Increased access to live virus should facilitate therapeutic testing.[75] • Similarity in the spike proteins of SARS-CoV-2 and SARS-CoV might offer target for therapeutics.[34, 41, 57, 105, 115] Vaccines derived from spike proteins are effective at inhibiting MERS symptoms in mice[31]	• No information yet exists regarding the environmental stability of SARS-CoV-2; SARS and MERS coronaviruses are used as surrogates instead. • Studies suggest that coronavirus can survive on non-porous surfaces up to 9-10 days (MHV, SARS-CoV)[14, 26], and porous surfaces for up to 3-5 days (SARS-CoV)[43] in air conditioned environments (20-25°C, 40-50% RH) • Coronavirus survival tends to be higher at lower temperatures and lower relative humidity (RH),[14, 26, 73, 91] though infectious virus can persist on surfaces for several days in typical office or hospital conditions[91] • SARS can persist with trace infectivity for up to 28 days at refrigerated temperatures (4°C)[14] • Beta-coronaviruses (e.g., SARS-CoV) may be more stable than alpha-coronaviruses (HCoV-229E).[73] • No strong evidence for reduction in transmission with seasonal increase in temperature and humidity.[64] • Survival of SARS-CoV-2 specifically is unknown, and surrogate coronavirus data need to be used at this time. • One hour after aerosolization (via Collison nebulizer), approximately 63% of airborne MERS virus remained viable in a simulated office environment (25°C, 75% RH)[71] • The aerosol survival of another human coronavirus (229E) was relatively high, with a half-life of ~67 hours at 20°C and 50% RH, indicating ~20% infectious virus at 6 days.[51] Both higher and lower RH reduced viral survival, while lower temperatures improved survival.[51]

SARS-CoV-2	Clinical presentation – what are the signs and symptoms of an infected person?	Clinical diagnosis – are there tools to diagnose infected individuals? When during infection are they effective?	Medical treatment – are there effective treatments? Vaccines?	Environmental stability – how long does the agent live in the environment?
What do we need to know?	• How long does it take for infected individuals to recover outside of a healthcare setting?	• False positive/negative rates for tests • Eclipse phase of infection (time between infection and detectable disease) in an individual	• Is GS-5734 (remdesivir) effective in vivo (already used in clinical trials under Emergency Use Authorization)?[83] • Is the GLS-5000 MERS vaccine[111] cross-reactive against SARS-CoV-2? • Efficacy of antibody treatments developed for SARS[37, 85] and MERS[24] • What is the efficacy of various MERS and SARS Phase I/II vaccines and other therapeutics? • Are viral replicase inhibitors such as beta-D-N4-hydroxycytidine effective against SARS-CoV-2?[9]	• Stability of SARS-CoV-2 in aerosol, droplets, and other matrices (mucus/sputum, feces) • "Hang time' of the virus in air (Aerosol decay rate) • Particle size distribution (e.g., droplet, large droplet and true aerosol distribution) • Duration of SARS-CoV-2 infectivity via fomites and surface (contact hazard)? • Stability of SARS-CoV-2 on PPE (e.g., Tyvek, nitrile, etc.)
Who is doing experiments/has capabilities in this area?	- Jin Yin-tan Hospital, Wuhan, China - China-Japan Friendship Hospital, Beijing, China - Peking Union Medical College, Beijing, China - Capital Medical University, Beijing, China - Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China - Huazhong University of Science and Technology, Wuhan, China - The Central Hospital of Wuhan, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China - Tsinghua University School of Medicine, Beijing, China - Zhongnan Hospital of Wuhan University, Wuhan, China - Peking University First Hospital, Beijing, China - Peking University People's Hospital, Beijing, China - Tsinghua University-Peking University Joint Center for Life Sciences, Beijing, China - The Fifth Medical Center of PLA General Hospital, Beijing, China	*Performing work:* - CDC - Wuhan Institute of Virology - Public Health Agency of Canada - Doherty Institute of Australia - Cepheid - BGI	*Performing work:* - Peter Doherty Institute for Infection and Immunity - Academy of Military Medical Sciences, Beijing, China - Tim Sheahan (University of North Carolina) *Capable of performing work:* - Ralph Baric (University of North Carolina) - Matthew Frieman (University of Maryland Baltimore) - Sanofi, with BARDA (using their recombinant DNA platform) *Funded work:* CEPI ($12 million to three groups): - Moderna and NIAID for mRNA platform vaccine - Inovio preparing DNA vaccine (for MERS) - University of Queensland, Australia, producing viral protein from cell culture	*Capable of performing work*: - Mark Sobsey (University of North Carolina) - DHS National Biodefense Analysis and Countermeasures Center (NBACC) - Defence Science and Technology Laboratory (Dstl) - Public Health Agency of Canada - CDC - EPA - NIH

SARS-CoV-2	Decontamination – what are effective methods to kill the agent in the environment?	PPE – what PPE is effective, and who should be using it?	Forensics – natural vs intentional use? Tests to be used for attribution.	Genomics – how does the disease agent compare to previous strains?
What do we know?	• No decontamination data for SARS-CoV-2 have been identified. SARS-CoV provides a plausible surrogate, as it is a close genetic relative of SARS-CoV-2 in the beta-coronavirus clade. • Chlorine-based solutions recommended [99] • "The virus [SARS-CoV-2] has relatively weak viability *in vitro* and can be inactivated at 56 ° C for 30 minutes. Chlorine-containing disinfectants and 75% ethanol can effectively inactivate the virus."[114] • Heat treatment at 56°C is sufficient to kill coronaviruses,[73, 114] though effectiveness depends in part on amount of protein in contaminated media[73] • 70% ethanol, 50% isopropanol, sodium hypochlorite [bleach, 200 ppm], and UV radiation are effective at inactivating several coronaviruses (MHV and CCV)[79] • Ethanol-based biocides (including ethanol-containing gels) are effective disinfectants against coronaviruses dried on surfaces, including ethanol containing gels similar to hand sanitizer.[50, 103] • Surface spray disinfectants such as Mikrobac, Dismozon, and Korsolex are effective at reducing infectivity of the closely related SARS-CoV after 30 minutes of contact.[72] • Coronaviruses may be resistant to thermal inactivation for up to 7 days when stabilized in stool.[87-88] Additionally, coronaviruses are more stable in matrixes such as respiratory sputum.[42]	• PPE effectiveness for SARS-CoV-2 is currently unknown; SARS is used as a surrogate • "Healthcare personnel entering the room [of SARS-CoV-2 patients] should use standard precautions, contact precautions, airborne precautions, and use eye protection (e.g., goggles or a face shield)"[19] • WHO indicates healthcare workers should wear clean, non-sterile, long-sleeve gowns as well as gloves.[98] • Nosocomial infections with SARS-CoV were more likely during intratracheal intubation, manipulation of oxygen masks, suction before intubation, and non-invasive ventilation[90] • Respirators (NIOSH-certified N95, EUFFP2 or equivalent) are recommended for those dealing with possible aerosols[99] • Additional protection, such as a Powered Air Purifying Respirator (PAPR) with a full hood, should be considered for high-risk procedures (i.e., intubation, ventilation)[13] • Healthcare worker illnesses (over 1,000[86]) indicate potential for human-to-human transmission despite isolation, PPE, and infection control[81] • Porous hospital materials, including paper and cotton cloth, maintain infectious SARS-CoV for a shorter time than non-porous material.[55] • CDC recommends facemasks for individuals attempting to prevent spread of SARS-CoV-2 in the home[17]	• Genomic analysis places SARS-CoV-2 into the beta-coronavirus clade, with close relationship to bat viruses. The SARS-CoV-2 virus is distinct from SARS and MERS viruses.[41] • Genomic analysis suggest that SARS-CoV-2 is a natural variant, and is therefore unlikely to be human-derived or otherwise created by "recombination" with other circulating strains of coronavirus.[115] • Some genomic evidence indicates a potential recombination with a pangolin coronavirus[104]; additional research is needed. • Genomic data support at least two plausible origins of SARS-CoV-2: "(i) natural selection in a non-human animal host prior to zoonotic transfer, and (ii) natural selection in humans following zoonotic transfer."[4] Either scenario is consistent with the development of a high-ACE2 receptor binding domain and novel polybasic furin cleavage site found in all known SARS-CoV-2 isolates. • "[…] SARS-CoV-2 is not derived from any previously used virus backbone," reducing the likelihood of laboratory origination.[4]	• There have been no documented cases of SARS-CoV-2 prior to December 2019 • Preliminary genomic analyses, however, suggest that the first human cases of SARS-CoV-2 emerged between 10/19/2019 – 12/17/2019.[5, 10, 74] • The mutation rate of SARS-CoV-2 is estimated to be similar to other RNA viruses (e.g., SARS, Ebola, Zika), and is currently calculated to be between $3.29 \times 10^{-4} – 2.03 \times 10^{-3}$ substitutions per site per year (median 1.07×10^{-3}),[5] though this estimate may change as more genomes are sequenced. • Preliminary phylogenetic analysis identified a very close genetic similarity between SARS-CoV-2 and a Bat coronavirus (RaTG13) isolated from Yunnan Province, China; highly suggesting that SARS-CoV-2 originated from bats.[69] • The Spike protein of SARS-CoV-2, which mediates entry into host cells and is the major determinant of host range, is very similar to the Spike protein of SARS-CoV.[63] The rest of the genome is more closely related to two separate bat coronaviruses.[63] • Genetic evidence and preliminary laboratory studies suggest that SARS-CoV-2 binds to the human ACE2 receptor,[93] the same cellular entry receptor used by SARS.
What do we need to know?	• What is the minimal contact time for disinfectants?	• Evidence of spread among patients within hospitals, like SARS?	• What tests for attribution exist for coronavirus emergence?	• Are there similar genomic differences in the progression of coronavirus

	• Are antiseptic wipes effective for cleaning hard, non-porous surfaces? • Does contamination with human fluids/waste alter disinfectant efficacy profiles?	• Mode of aerosol transmission? • Is virus detectable in aerosol samples from patient rooms? • How effective are barriers such as N95 respirators as well as surgical masks?	• What is the identity of the intermediate species? • Are there closely related circulating coronaviruses in bats or other animals with the novel PRRA cleavage site found in SARS-CoV-2?	strains from bat to intermediate species to human?
Who is doing experiments/has capabilities in this area?	*Capable of performing work*: - DHS National Biodefense Analysis and Countermeasures Center (NBACC)	*Generating recommendations:* - WHO - CDC - Pan-American Health Organization	*Performing genomic investigations:* - Kristian Andersen, Andrew Rambaut, Ian Lipkin, Edward Holmes, Robert Garry (Scripps, University of Edinburgh, Columbia University, University of Sydney, Tulane, Zalgen Labs [Germantown, MD]) *Capable of performing work:* - Pacific Northwest National Laboratory - DHS National Biodefense Analysis and Countermeasures Center (NBACC)	*Performing work:* - Trevor Bedford (Fred Hutchinson Cancer Research Center) - Ralph Baric, UNC - National Institute for Viral Disease Control and Prevention, Chinese Center for Disease Control and Prevention - Shandong First Medical University and Shandong Academy of Medical Sciences - Hubei Provincial Center for Disease Control and Prevention - Chinese Academy of Sciences - BGI PathoGenesis Pharmaceutical Technology, Shenzhen, China - People's Liberation Army General Hospital, Wuhan, China - Wenzhou Medical University, Wenzhou, China - University of Sydney, Sydney, NSW, Australia - The First Affiliated Hospital of Shandong First Medical University (Shandong Provincial Qianfoshan Hospital), Jinan, China

Table 1. Definitions of commonly-used acronyms

Acronym/Term	Definition	Description
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2	Official name for the virus previously known as 2019-nCoV.
COVID-19	Coronavirus disease 19	Official name for the disease caused by the SARS-CoV-2 virus.
CFR	Case Fatality Rate	Number of deaths divided by confirmed patients
PFU	Plaque forming unit	Measurement of the number of infectious virus particles as determined by plaque forming assay. A measurement of sample infectivity.
$TCID_{50}$	50% Tissue Culture Infectious Dose	The number of infectious units which will infect 50% of tissue culture monolayers. A measurement of sample infectivity.
HCW	Healthcare worker	Doctors, nurses, technicians dealing with patients or samples
SARS	Severe Acute Respiratory Syndrome	Coronavirus with over 8,000 cases in global 2002-2003 outbreak
MERS	Middle-East Respiratory Syndrome	Coronavirus with over 2,000 cases in regional outbreak since 2012
CoV	Coronavirus	Virus typified by crown-like structures when viewed under electron microscope
R_0	Basic reproduction number	A measure of transmissibility. Specifically, the average number of new infections caused by a typical infectious individual in a wholly susceptible population.
MHV	Mouse hepatitis virus	Coronavirus surrogate
CCV	Canine coronavirus	Canine coronavirus
Fomite	Inanimate vector of disease	Surfaces such as hospital beds, doorknobs, healthcare worker gowns, faucets, etc.

Droplet transmission	Sneezing, coughing	Transmission via droplets requires relatively close contact (e.g., within 6 feet)
Airborne transmission	Aerosolization of infectious particles	Aerosolized particles can spread for long distances (e.g., between hospital rooms via HVAC systems)
Transgenic	Genetically modified	In this case, animal models modified to be more susceptible to MERS and/or SARS by adding proteins or receptors necessary for infection
Intranasal	Agent deposited into external nares of subject	Simulates inhalation exposure by depositing liquid solution of pathogen/virus into the nose of a test animal, where it is then taken up by the respiratory system.
Incubation period	Time between infection and symptom onset	Time between infection and onset of symptoms typically establishes guidelines for isolating patients before transmission is possible
Infectious period	Length of time an individual can transmit infection to others	Reducing the infectious period is a key method of reducing overall transmission; hospitalization, isolation, and quarantine are all effective methods
Serial interval	Length of time between symptom onset of successive cases in a transmission chain	The serial interval can be used to estimate R_0, and is useful for estimating the rate of outbreak spread
Superspreading	One individual responsible for an abnormally large number of secondary infections	Superspreading can be caused by high variance in the distribution of secondary cases caused by a single individual; most individuals infect very few people, while some infect a large number, even with the same average number of secondary infections
Nosocomial	Healthcare- or hospital-associated infections	Characteristic of SARS and MERS outbreaks, lead to refinement of infection control procedures
ACE2	Angiotensin-converting enzyme 2	Acts as a receptor for SARS-CoV, allowing entry into human cells

ARDS	Acute respiratory distress syndrome	Leakage of fluid into the lungs which inhibits respiration and leads to death
PPE	Personal protective equipment	Gowns, masks, gloves, and any other measures used to prevent spread between individuals

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Date:	2020/09/15 08:15:18
Start Date:	2020/09/18 15:30:00
End Date:	2020/09/18 17:30:00
Priority:	Normal
Type:	Appointment
Location:	https://nasem.zoom.us/j/96069123196?pwd=cWNjWHlRb3VlWVhRMkpqT3ZSVWYvUT09
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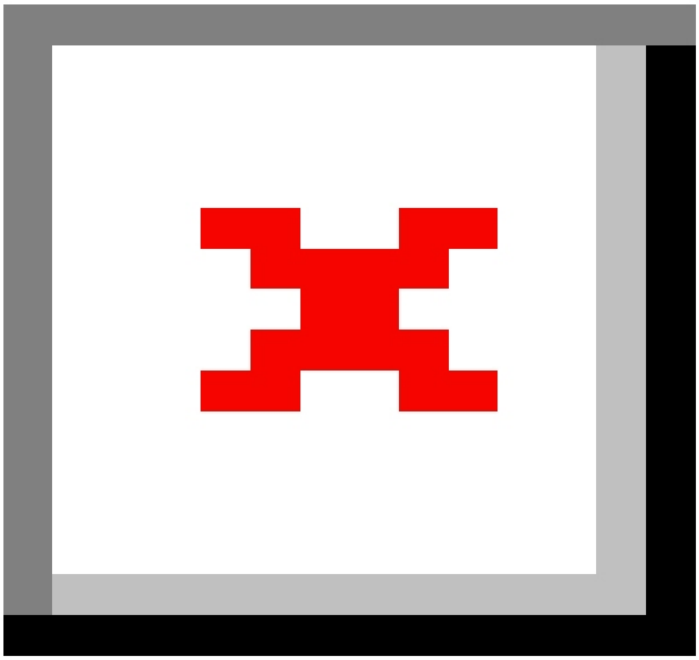
Subject:	RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT
Date:	2020/05/16 06:27:06
Priority:	Normal
Type:	Note

National total ILINet visits per week (black line in 2019-20 data)—still seeing significant suppression of F2F outpatient visits.



Below is Georgia data. Even with reopening, still seeing significant suppression of F2F outpatient visits.

PERCENTAGE OF VISITS FOR INFLUENZA-LIKE-ILLNESS REPORTED BY SENTINEL PROVIDERS

YEAR	WEEK	ILITOTAL	TOTAL PATIENTS	NUM. OF PROVIDERS	%UNWEIGHTED ILI
2019	40	1,995	83,743	95	2.38
2019	41	1,946	78,815	93	2.47
2019	42	1,981	78,494	95	2.52

2019	43	2,387	78,935	93	3.02
2019	44	2,571	76,448	92	3.36
2019	45	3,168	80,943	94	3.91
2019	46	3,545	78,830	93	4.50
2019	47	3,668	70,290	95	5.22
2019	48	4,381	76,308	98	5.74
2019	49	4,273	82,643	97	5.17
2019	50	5,585	84,267	100	6.63
2019	51	8,335	87,512	97	9.52
2019	52	10,623	86,609	99	12.27
2020	1	8,250	87,691	98	9.41
2020	2	5,944	85,419	98	6.96
2020	3	5,426	80,254	98	6.76
2020	4	5,258	79,648	97	6.60
2020	5	6,754	84,548	98	7.99
2020	6	6,799	87,785	99	7.75
2020	7	5,083	83,508	98	6.09
2020	8	4,195	81,425	100	5.15
2020	9	3,659	80,322	100	4.56
2020	10	4,437	81,586	100	5.44
2020	11	6,564	81,428	98	8.06
2020	12	5,839	64,637	96	9.03
2020	13	3,818	51,457	96	7.42
2020	14	2,336	42,483	96	5.50
2020	15	1,712	40,263	94	4.25
2020	16	1,271	41,025	94	3.10
2020	17	990	41,589	91	2.38
2020	18	931	44,869	92	2.07
2020	19	864	47,696	91	1.81

Sent from Mail for Windows 10

From: Dr. (b)(6)
Sent: Friday, May 15, 2020 9:07 PM
To: Caneva, Duane
Cc: (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (DSHS); Dr. (b)(6) (b)(6) BOURNE, ALEXANDRA; (b)(6) (b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(6) Keim, MD MBA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) (b)(6) (b)(6) S; (b)(6) (b)(6) McGinn, (b)(6) (b)(6) (b)(6) Kellermann; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) DC; (b)(6)

JtCIVtUSARMY (USA); (b)((b)(6) MD; Fantinato, Jessica (USDA.GOV); Martin, Greg (b)(6) (b)((b)(6) (b)(6 (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b)((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; (b)(6 Hassell, (b)((Chris) (OS/ASPR/IO); (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6 (b)(6 (b)((b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, (b)((b)(6) (b)(6) (b)((b)((b) (b)(6 Krohmer, Jon (NHTSA); (b)(6) (APHMFP - Emergency Medicine); You, Edward H. (WMD) (FBI); (b)(6 ((b)(6 W
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

"LTC data by state. I have 3 data points (Apr 23, May 7 and May 14). See 1st spreadsheet for summary table. This virus is steadily moving through our LTC population in the US. Recall the estimates of 2.1M Americans who are residents in nursing homes or residential care. With 150K known cases and 30K deaths, this equates to about a 7% attack rate with a 20% fatality rate (I would assume we are learning about most cases given that nursing homes are now testing all residents)"

(b)(6) this are very interesting figures. Recall for NYP, 20% of their admitted patients died. So you have 20% fatality rate!! Basically, all those in nursing home would need hospitalization due to their co-existing health conditions and old age. So their fatality fits alarmingly the same as those admitted to NYP. This is the same as what was reported from China early on -- 20% of those admitted to hospitsals died.

On Fri, May 15, 2020 at 4:28 PM Caneva, Duane (b)(6) wrote:
DHS S&T Weekly update to the Master Question List attached.

Data dump:
Science

https://www.eurekalert.org/pub_releases/2020-05/uoa-sdt051420.php

Scientists develop tool to sequence circular DNA
New method will provide insight into genomes of bacteria and viruses, as well as extrachromosomal circular DNA in mammals and plants. University of Alberta biologists have invented a new way for sequencing circular DNA, according to a new study. The tool - called CIDER-Seq - (b) give other scientists rich, accurate data on circular DNA in any type of cell. While our own DNA is linear, circular DNA is common in the genomes of bacteria and viruses. Scientists have also discovered circular DNA within the nuclei of human and plant cells, called extrachromosomal circular DNA (eccDNA). Recently, research has begun to investigate the role of eccDNA in human cancer but progress has been hampered due to the lack of effective methods for studying and sequencing eccDNA.
University of Alberta
14-May-2020

https://www.the-scientist.com/news-opinion/droplets-from-speech-can-float-in-air-for-eight-minutes-study-67538?utm_campaign=TS_DAILY%20NEWSLETTER_2020&utm_source=hs_email&utm_medium=email&utm_content=87992907&_hsenc=p2ANqtz-8aVWmtxVWrgfwS6Sdn6rdCuwqlVjjjN97FH5hsJ_EyKzj_CfTMemFPVuNub4U81QYPW28WuN8ZNrCpAL11PuhiVi3_WsgSrithAppkX6XRQztdyKQ&_hsmi=87992907

Droplets from Speech Can Float in Air for Eight Minutes: Study

The experiments did not involve SARS-CoV-2, but researchers say the results support precautions to avoid possibly spreading COVID-19 by talking.

Kerry Grens

May 15, 2020

Amid concerns that COVID-19 may be spread through aerosols, scientists have shown that tiny respiratory droplets produced when people talk can linger in the air for minutes. The results, published in *PNAS* yesterday (May 13), did not examine the transmission of viruses in spray from speech, but bolsters the idea that talking could present a risk for exposure to the novel coronavirus.

"This study builds on earlier research by the same team showing that speaking may factor into transmission of SARS-CoV-2," a spokesperson for the National Institute of Diabetes and Digestive and Kidney Diseases, where most of the study's authors are based, tells *USA Today*.
The authors used laser light sheets to capture on video the movement of small droplets emitted from a person's mouth as the speaker repeated the phrase "stay healthy" for 25 seconds. They calculated that the half-life of these particles in the air, considering the time it took them to fall 30 cm, was eight minutes. "This study is the most accurate measure of the size, number and frequency of droplets that leave the mouth during a normal conversation and shower any listeners within range," Benjamin Neuman, a virologist at TAMU-Texarkana who was not involved in the research, tells *The Washington Post*.

The researchers did not examine these respiratory droplets in the context of a SARS-CoV-2 infection. But in their paper they write that in a scenario where an infected person is in the vicinity of uninfected people, "At an average viral load of 7×10^6 per milliliter, we estimate that 1 min of loud speaking generates at least 1,000 virion-containing droplet nuclei that remain airborne for more than 8 min. These therefore could be inhaled by others and, according to IAH [independent action hypothesis], trigger a new SARS-CoV-2 infection."

The airborne particles were about 4 μm in diameter, and had dehydrated from respiratory droplets that the authors estimate were larger than 12 μm in diameter when they left the speaker's mouth.

The spokesperson for National Institute of Diabetes and Digestive and Kidney Diseases suggests to USA Today that the study's results support the CDC's recommendation to wear a mask. Although many governments have ordered or urged residents to don masks, it's not clear how well they prevent the transmission of the coronavirus. N95 masks filter 95 percent of particles larger than 0.3 μm (according to an early report describing COVID-19 infections, the SARS-CoV-2 viral particles range from 0.6 to 0.14 μm in diameter). For other types of masks, that efficiency varies considerably. An analysis of materials used in home-made masks found a wide range in their ability to block particles about 0.1 μm in size, from just 7 percent for two layers of quilters' cotton to 84 percent for a mask made from a nanofiber layer paired with cotton ripstop.

A study published in April that asked patients to cough into either surgical masks or cotton masks found neither "effectively filtered SARS–CoV-2 during coughs by infected patients." Other researchers have found that masking policies correlate with fewer COVID-19 cases, and estimate that widespread uptake of the use of masks could considerably limit infections.

A video illustrating the study "Small saliva droplets can remain airborne in an enclosed space for more than 10 minutes, NIDDK study shows" at https://www.youtube.com/watch?v=axmRl6P6xyw)

Health

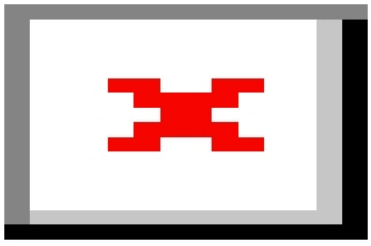
https://www.technologynetworks.com/informatics/news/designing-vaccines-using-artificial-proteins-334877?utm_campaign=NEWSLETTER_TN_Breaking%20Science%20News&utm_source=hs_email&utm_medium=email&utm_content=87986690&_hsenc=p2ANqtz--0rfTHzFameJbAVaHjXCx2uZ_yV7x1M2-

gqE6cYIDj-JEUfzWyptz31mAoA-JWVFGIKQkpYyRnE1rDXBrUA28xGbUWkB_frRIF--mwfuA6JvoeRjg&_hsmi=87986690

Designing Vaccines Using Artificial Proteins

May 15, 2020 | Original story from EPFL

Vaccines are one of the most effective interventions to prevent the spreading of infectious diseases. They trigger the immune system to produce antibodies that protect us against infection. However, we still lack efficacious vaccines for many important pathogens, like the flu or dengue fever. "When a vaccine doesn't work well, we tend to think that it's because the antibodies produced are not protective," says Bruno Correia, a professor at the Laboratory of Protein Design & Immunoengineering (LPDI) in EPFL's School of Engineering. "It's usually because our immune system is simply making the wrong type of antibodies". Scientists in Correia's lab have now developed a strategy to design artificial proteins that very precisely instruct the body's immune system which antibodies to produce. The study has been published in the journal *Science*.



EPFL scientists have developed a new computational approach to create artificial proteins, which showed promising results in vivo as functional vaccines. This approach opens the possibility to engineer safer and more effective vaccines. Credit: © 2020 EPFL

A disease without a vaccine

Correia's team focused on the design of de novo proteins that can result in a vaccine for the respiratory syncytial virus (RSV). RSV causes serious lung infections and is a leading cause of hospitalization in infants and the elderly, "Despite several decades of research, up to today there is still no vaccine or cure for respiratory syncytial virus," says Correia.

The artificial proteins were created in the laboratory and then tested in animal models, and triggered the immune system to produce specific antibodies against weak spots in RSV. "Our findings are encouraging because they indicate that one day we will be able to design vaccines that target specific viruses more effectively, by prompting the immune system to generate those particular antibodies," says Correia. "We still have a lot of work ahead to make the vaccine we developed more effective - this study is a first step in that direction."

Methods for creating de novo proteins have applications well beyond immunology - they can also be used in various branches of biotechnology to expand the structural and functional range of natural proteins. "We can now use the protein design tools to create proteins for other biomedical applications such as protein-based drugs or functionalized biomaterials," concludes Sesterhenn.

Reference: F. Sesterhenn, C. Yang, J. Bonet, J. T. (b)(6) X. Wen, Y. Wang, C. Chiang, L. A. Abriata, I.

Kucharska, G. Castoro, S. S. Vollers, M. Galloux, E. Dheilly, S. Rosset, P. Corthésy, S. Georgeon, M. Villard, C. A. Richard, D. Descamps, T. Delgado, E. Oricchio, M. Rameix-Welti, V. Más, S. Ervin, J. F. Eléouët, S. Riffault, J. T. Bates, J. P. Julien, Y. Li, T. Jardetzky, T. Krey & B. E. Correia. *De novo protein design enables the precise induction of RSV-neutralizing antibodies.* Science

https://protect2.fireeye.com/url?k=999e7145-c5cb7856-999e407a-0cc47adb5650-1be2f2e982ee44f7&u=http://outbreaknewstoday.com/maine-lyme-disease-providers-are-already-reporting-cases-in-2020-and-the-number-will-rise-as-we-enter-the-summer-months-74705/

Maine Lyme disease: 'Providers are already reporting cases in 2020, and the number will rise as we enter the summer months'

The Maine CDC reported a record more than 2,000 Lyme disease cases in 2019 and officials announce during this Lyme Disease Awareness Month that providers are already reporting cases in 2020, and the number will rise as we enter the summer months. This has prompted health officials to advise the public to be aware of tick bites that transmit not only Lyme disease, but also anaplasmosis (a bacterial disease), babesiosis (a parasitic disease) and Powassan virus. Individuals bitten by the deer tick can acquire more than one infection. Many individuals and families are spending more time outdoors during the COVID-19 pandemic. This may put them at increased risk of exposure to tickborne pathogens. Symptoms of anaplasmosis include: fever, headache, malaise and body aches. Symptoms of babesiosis include: extreme fatigue, aches, fever, chills, sweating, dark urine, and possibly anemia. Symptoms of Powassan include: fever, headache, vomiting, weakness, confusion, loss of coordination, speech difficulties, seizures, and encephalitis and meningitis. In 2019, providers reported 685 cases of anaplasmosis, 138 cases of babesiosis and two cases of Powassan.

by News Desk
May 14, 2020

https://www.eurekalert.org/pub_releases/2020-05/wrai-nes051420.php

New evidence suggests malaria cycles are innate to the organism

Scientists from the Walter Reed Army Institute of Research joined partners at Duke University, FAU and Montana State University to publish a study providing clear evidence that malaria's characteristic cycle of fever and chills is a result of the parasite's own influence - not factors from the host. What regulated that cycle, the result of parasites bursting out of infected red blood cells in sync then re-colonizing new red blood cells, has been studied since at least the 1920s. In the current study, evidence challenges the central dogma that a cyclic pattern of parasite growth is solely dependent on cues from the host. Though the specific signals utilized remain to be elucidated, these findings raise the exciting possibility of disrupting this cycle as an antimalarial strategy.

Walter Reed Army Institute of Research
14-May-2020

ASF

https://www.thehindu.com/news/national/other-states/wild-boars-die-in-arunachal-as-african-swine-fever-kills-15000-pigs-in-assam/article31590372.ece

Wild boars die in Arunachal as African swine fever kills 15,000 pigs in Assam

As Assam prepares for mass culling to check the spread of African swine fever (ASF) that has killed almost 15,000 domesticated pigs, adjoining Arunachal Pradesh fears that the "foreign" disease may have "gone wild". This is the 1st time that ASF has been reported in India. Assam claims the disease came from China, where almost 60% of pigs have died since 2018. Officials in Arunachal Pradesh's East Siang district said 6 carcasses of wild boars including 3 piglets were found in a community forest at Lidor Soyit upstream of Sille River. There have been unverified reports of several wild boars dying from an unknown disease in East Siang and Upper Siang districts, but the recovery of the carcasses - some partly eaten by scavengers - on Thursday made officials wary of the possibility of ASF having spread from scores of

domestic pigs that have died in the State over the last 2 months. "A team of forest, veterinary officials and experts trekked about 10 km to locate the carcasses after receiving information from the villages. We suspect ASF is the cause of death but will have to await confirmation after we send blood and tissue samples to labs outside," Divisional Forest Officer (Territorial) Tashi Mize told The Hindu on Friday. Some of the carcasses appeared to have been consumed by porcupines. "ASF is confined to porcine creatures, so other animals are unlikely to be affected. But the possibility of becoming carriers of the virus could affect the wild boar population," he said.
Special Correspondent I Guwahati I may 15, 2020 13:39 IST I Updaated: May 15, 2020 14:10 IST

https://www.ndtv.com/india-news/assam-prepares-for-culling-as-african-swine-fever-kills-nearly-15-000-pigs-2229043

Assam "Prepares" For Culling As African Swine Fever Kills Nearly 15,000 Pigs

The BJP-led government is preparing for mass culling; it has demanded from the centre compensation to farmers who rear pigs. The ASF outbreak has killed nearly 15,000 pigs in Assam and is spreading in new areas despite preventive measures taken by the state government. The state government has issued a high alert in 10 affected districts. It has asked the centre to provide one-time financial package of Rs 144 crore for the farmers who rear pigs. "We are deeply concerned due to this growing crisis in Assam. The deaths are increasing every day. Now, 10 districts have been affected already. 14,919 pigs have died and the number is on the rise. We have alerted the Government of India as well," Assam Animal Husbandry Minister Atul Bora told NDTV. "Initially, 6 districts were affected but now it has spread to 10 districts out of 33, despite the fact that we took all possible steps (for prevention), but it is spreading to new areas. " We had taken biosecurity measures to make sure it doesn't spread further. We declared that area under 1-km radius (of affected areas) as containment zone, and 10-km radius as surveillance zone," the minister added. The Assam government has alerted all wildlife reserves in the state regarding the disease.
Written by Ratnadip Choudhury I Updated: May 15, 2020 08:28 am IST

https://protect2.fireeye.com/url?k=3feb42b5-63be4ba6-3feb738a-0cc47adb5650-b83955ca39cbc93f&u=https://asian-agribiz.com/magazines/asian-pork/asf-update/

Concentration, contact time key to effective disinfectant use

15 May 2020 – The correct concentration and the length of time a disinfectant is in contact with a surface will better determine its effectivity against ASF and other pathogens. Pariwat Poolperm, a swine consultant from Thailand said at a webinar titled Biosecurity: The First Step to Success in Pig Farming that for disinfectants to work against ASF, they must be in contact with surfaces for at least 15-20 minutes. Dr Pariwat also said that not all disinfectants are the same. Pig producers should follow the recommended concentrations for each disinfectant and not overconcentrate or overdilute.

ASF remains a big problem in Asia

14 May 2020 – While the Covid-19 pandemic and its effects have overshadowed ASF in the news, the deadly pig virus continues to be a big problem for Asian pig producers. China and Vietnam are both working on recovery programs, but threats of ASF reinfection and the lack of breeding pigs hamper restocking efforts. Both countries have seen a spike in the number of cases in the last two weeks. In the Philippines, industry observers note that while fewer cases are being reported, a big reason for this is the movement restrictions imposed due to the pandemic. "The virus remains, and it will take some time before it can be eradicated, if at all," an industry practitioner told *Asian Agribiz*. "It is imperative the governments and local pig industries collaborate not just to control ASF spread, but also how to rebuild their industries. Pork will continue to be the preferred meat at least in China, Vietnam, and the Philippines.

Philippines reports new ASF outbreaks

13 May 2020 – The Philippines has 58 new ASF outbreaks in Luzon, the Philippine Bureau of Animal Industry (BAI) reported to the World Organization for Animal Health. The country culled another 11,074 pigs, bringing the total as of May 4 to 282,899. The outbreaks were traced to illegal transport of animals and swill feeding. An industry practitioner told *Asian Agribiz* that while the country continues its fight

against ASF, the government and industry players must begin rebuilding efforts. Unfortunately, he said, nothing concrete has been made, adding that even the country does not have enough ASF test kits.

COVID-19 Webinars

https://protect2.fireeye.com/url?k=57730e54-0b260747-57733f6b-0cc47adb5650-f10d2075868af052&u=https://mailchi.mp/nas/register-for-upcoming-webinars-earth-and-life-sciences-and-covid-19?e=a7a58840e6



Wastewater Monitoring for COVID-19 Disease Surveillance

May 27, 11-1:30 PM EDT

Researchers around the world are currently exploring ways that wastewater samples can help us understand the spread of COVID-19 at a community scale. This webinar will feature a panel discussion with experts on public health and wastewater monitoring to discuss the potential value of data on SARS-CoV-2 in wastewater to inform public health management and what is needed to build a useful surveillance network

Register for Webinar

David Sedlak, UC Berkeley, Moderator

Panelists:

- Vincent Hill, Centers for Disease Control and Prevention
- Barry Liner, Water Environment Federation
- Gertjan Medema, KWR Water Research Institute, Holland
- Nicole Rowan, Colorado Department of Public Health and Environment
- Krista Wigginton, University of Michigan

Key questions for presentations and discussions:

- How can data on SARS-CoV-2 in wastewater be useful as an indicator of COVID-19 cases in a locality?
- How has wastewater disease surveillance been useful with control of other viral pathogens? What problems have been encountered and what can we learn from these experiences for COVID-19?
- What is the capacity of current wastewater monitoring technologies for detecting COVID-19 disease outbreaks (i.e., what is the recovery efficiency, detection rate relative to the loading rates)? What are the costs?
- What technical challenges need to be addressed before this strategy can be broadly implemented as a robust tool? What are the highest priority needs?
- Where might such surveillance be appropriate?
- Is this a useful investment? If so, what would the nation need to do to rapidly invest in a useful surveillance network?

https://protect2.fireeye.com/url?k=1d353af4-416033e7-1d350bcb-0cc47adb5650-587c914dbf82e2d4&u=https://mailchi.mp/nas/register-for-upcoming-webinars-earth-and-life-sciences-and-covid-19?e=a7a58840e6

Reopening after COVID-19: Ensuring Safe Water Supplies at the Building Scale

May 27, 2:30-4:30 PM EDT

Register for Webinar

The COVID-19 pandemic has led to sweeping closures of public buildings, businesses, offices, and schools. With minimal water use, water quality in building plumbing can degrade and foster the growth of the bacteria that cause Legionnaires' disease, a severe form of pneumonia. Legionnaires' disease incidence has been increasing over the past few decades, and without appropriate water management actions, cases could increase sharply after schools and workplaces reopen. A panel of experts will discuss the state of knowledge for building water management to protect public health when reopening after COVID-19.

Ruth Berkelman, Emory University, moderator

Panelists:

- Chris Boyd, Building Water Health Program, NSF International
- David Krause, HealthCare Consulting and Contracting
- Andrew Whelton, Purdue University

Key questions for presentations and discussions:

- What are the water quality issues and related health risks associated with reopening buildings or larger office parks/campuses that have been shuttered or minimally used during the COVID-19 outbreak?
- Are there actions that could (should) be taken now to minimize current or future risk of water-related health risks?
- What guidelines are available for building owners and utilities? What are the responsibilities of various entities?
- What issues about best practices for water management remain unresolved relative to building recommissioning?
- What issues need to be addressed to improve implementation of current guidelines (e.g., communication, training)?
-

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Air Quality, Climate Variability, and COVID-19

May 28, 1:00-3:00 PM EDT

As the global community has raced to understand the COVID-19 pandemic, questions have arisen about how the virus is carried in aerosols, exposure risk in indoor and outdoor environments, how the changes in seasons or climate conditions might affect transmission, and how exposure to air pollution might affect mortality from the virus. This webinar will feature recent atmospheric, climate, and epidemiological research that is contributing to our understanding of the virus transmission, as well as a discussion of how agencies across the federal government are building upon existing efforts to address linkages between environmental conditions and health to understand the pandemic.

This webinar is an open session of the Board on Atmospheric Sciences and Climate spring 2020 meeting.

Register for Webinar

Coronavirus

https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6

From CSSE Dashboard at Johns Hopkins University: 15 May 2020 at 3:32 PM EDT

Total Confirmed: 4,516,360
Global Deaths: 306,051
US deaths: 86,851
Total Test Results in US: 10,341,775

Confirmed Cases by Country/Region/Sovereignty:
1,432,045 US
262,843 Russia
238,003 United Kingdom
230,183 Spain
223,885 Italy
212,198 **Brazil**
179,630 France
175,233 Germany
146,457 Turkey
116,635 Iran
85,784 India
84,495 Peru
84,031 China
75,667 Canada

https://www.washingtonpost.com/politics/2020/05/14/3-takeaways-coronavirus-whistleblower-rick-brights-testimony/?pwapi_token=eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJjb29raWVuYW1lIjoid3BfY3J0aWQiLCJpc3MiOiJDYXJ0YSIsImNvb2tpZXZhbHVlIjoiNWU3YmE4NThhZTdlOGE1OTQ4ODk2NzkzIiwidGFnIjoiNWViZGFiZmZmZTFmZjY1NGMyZGQxYTY5IiwidXJsIjoiaHR0cHM6Ly93d3cud2FzaGluZ3RvbnBvc3QuY29tL3BvbGl0aWNzLzIwMjAvMDUvMTQvMy10YWtlYXdheHMtY29yb25hdmlydXMtd2hpc3RsZWJsb3dlci1yaWNrLWJyaWdodHMtdGVzdGltb255Lz91dG1fY2FtcGFpZ249d3BfdG9feW91cl9oZWFsdGgmdXRtX21lZGl1bT1lbWFpbCZ1dG1fc291cmNlPW5ld3NsZXR0ZXImd3Bpc3JjPW5sX3R5aCZ3cG1rPTEifQ.zDzXu3HqLZZn2jf9oP1z3ihfUQWvxFCFIYpZmt7xs6A&utm_campaign=wp_to_your_health&utm_medium=email&utm_source=newsletter&wpisrc=nl_tyh&wpmk=1

5 takeaways from coronavirus whistleblower Rick Bright's testimony

By Aaron Blake
May 14, 2020 at 1:38 p.m. EDT

A Trump administration vaccine expert who says he was removed from a key role for raising concerns about the federal government's coronavirus response — and its promotion of unproven drugs to treat the virus — testified Thursday before Congress.

Rick Bright became a whistleblower after being removed from his post as director of the Biomedical Advanced Research and Development Authority (BARDA), which falls under the Department of Health and Human Services.

Here are some takeaways from Bright's testimony.

1. 'Lives were lost' because of 'inaction,' unheeded warnings

Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.ment of Health and Human Services — had, in fact, cost lives. "That inaction has put a lot of lives at risk in our front-line health-care workers" Bright said. Bright has said that he pushed for ramping up production of medical

equipment such as masks, but that it went unheeded for months after he was informed that officials didn't think there was a "critical shortage" of masks. "I pushed that forward to the highest levels I could in HHS and got no response," Bright said. "From that moment, I knew that we were going to have a crisis for our health-care workers because we were not taking action. We were already behind the ball. That was our last window of opportunity to turn on that production to save the lives of those health-care workers, and we didn't act." Bright added that even today, the country is dealing with the consequences of that early negligence and that health-care workers are still more at risk than they should be. "Lives were endangered, and I believe lives were lost," Bright said. "And not only that: We were forced to procure these supplies from other countries without the right quality standards. So even our doctors and nurses in the hospitals today are wearing N95-marked masks from other countries that are not providing the sufficient protection that a U.S.-standard N95 mask would provide them. Some of those masks are only 30 percent effective. Therefore, nurses are rushing in the hospitals thinking they're protected, and they're not."

2. Administration pushed vastly expanded use of unproven drugs

One of Bright's key claims is that he was moved to another post after raising objections to the administration pushing the use of the malaria drugs chloroquine and hydroxychloroquine to treat coronavirus. The administration allowed for the emergency use of the drugs to treat the virus, though later studies — which have yet to be peer-reviewed and were not randomized — suggest that the use of the drugs don't help and can, in fact, have negative consequences. The FDA has now warned about the dangers of using the drugs. "My concerns were escalated when I learned that leadership in the Department of Health and Human Services were pushing to make that drug available outside of this emergency use authorization, to flood New York and New Jersey with this drug," Bright said. Bright has cited his skepticism of the drugs for his removal from his post and said the administration wanted to make it easier for people to use them without extensive medical supervision — even people who might not even have the virus. "I believe part of the removal process for me was initiated because of a pushback that I gave when they asked me to put in place an expanded access protocol that would make chloroquine more freely available to Americans that were not under the close supervision of a physician and may not even be confirmed to be infected with the coronavirus," Bright said.

3. Pessimism about 12- to 18-month timeline for vaccine

President Trump has been effusively optimistic about not just treatments such as the chloroquines but about the timeline for a vaccine for the virus. Shortly before Bright's testimony Thursday, Trump even said, "I think we're going to have a vaccine by the end of the year." That's even more optimistic than the 12- to 18-month timeline that medical experts such as Anthony S. Fauci, head of the National Institute of Allergy and Infectious Diseases, have said is realistic for the vaccine. But Bright said that even a year to year-and-a-half timeline might also be overly optimistic. "I still think 12 to 18 months is an aggressive schedule, and I think it's going to take longer than that to do so," Bright said.

4. We don't have 'a single point of leadership' or 'master plan'

As Trump increasingly criticized Fauci, Bright said the government needs to have more regard for it scientists -- and a more consistent message from the top. He said that right now the response has been hampered by not having a "single point of leadership." "We need to install and empower leadership, and we need to unleash the voices of the scientists in our public health system in the United States so they can be heard and their guidances need to be listened to," Bright said. "And we need to be able to convey that information to the American public so they have the truth about the real risk and dire consequences of this virus. He added: "And we don't have a single point of leadership right now for this response, and we don't have a master plan for this response. So those two things are absolutely critical." Fauci has said in recent days that states that move forward with reopening their economies before meeting the guidelines from the Centers for Disease Control and Prevention are risking new outbreaks – which could set back the entire response.

5. Azar, Republicans cast Bright as a malcontent skipping work

As Bright offered one of the most significant rebukes of the federal coronavirus response to date, Republicans on the committee and members of the Trump administration sought to undercut his testimony and character. Health and Human Services Secretary Alex Azar, in particular, had strong words for Bright. "Everything he is complaining about was achieved," Azar said while standing next to Trump on

the White House lawn. “Everything he talked about was done. He says he talked about the need for respirators; we procured respirators under the president’s direction.” Azar echoed Republicans in the hearing who questioned why Bright has been absent from his new posting - a narrower one focused on testing and vaccines at the National Institutes of Health — in recent weeks. “While we’re launching Operation Warp Speed,” Azar said, “he’s not showing up for work to be part of that.” Bright said that he has been on leave while dealing with “very high blood pressure” - owing in part to the stress from recent events. “I had a conversation with my physician about my hypertension and how we’ve been managing it over the last 3 weeks because this has been very stressful to be removed suddenly without explanation from my role and position as a life change for me,” Bright said.

https://www.cidrap.umn.edu/news-perspective/2020/05/global-covid-19-death-toll-exceeds-300000

Global COVID-19 death toll exceeds 300,000

The number of COVID-19 deaths today passed the 300,000 mark, as another city in China went on lockdown to prevent a resurgence and more countries in Europe learned that low numbers of people were exposed in their outbreaks, meaning many are vulnerable to a second wave. Deaths climbed to 301,160 today, with cases rising to 4,413,597, according to the Johns Hopkins online dashboard.
Schnirring | News Editor | CIDRAP News| May 14, 2020

New cluster triggers new lockdown in China

The city of Jilin in northeastern China's Jilin province went on partial lockdown yesterday after a spurt of cases, which now total 21, the *South China Morning Post* reported. Officials closed schools, restricted train and bus service, and banned gatherings after 6 cases new cases were confirmed on May 12. Anyone who wants to leave the city, home to about 4M people, must be tested for COVID-19 48 hours before departure.

The first infection in the cluster was reported last week, linked to a laundry worker from Shulan, a smaller city in Jilin province. So far, investigators haven't determined how she contracted the virus. China has taken aggressive steps to prevent a resurgence, including an earlier lockdown in the city of Suifenhe on the border with Russia, and is now launching an effort to test all Wuhan residents after a cluster of cases was detected in a residential complex.

Today the country reported 3 new cases (all local -2 from Liaoning province also in northeastern China and 1 in Jilin province). In its daily update, the National Health Commission also reported 12 more asymptomatic cases, all but one of them local.

Elsewhere in Asia, Japan's Prime Minister Shinzo Abe today lifted the state of emergency early for 39 of 47 prefectures, *Kyodo News* reported. The emergency order was originally slated to expire at the end of May. However, orders for the cities of Tokyo and Osaka, home to about 50% of Japan's population, will remain in place. Abe said experts will review the situation again on May 21.

South Korea today reported 29 more cases, 20 of them linked to nightclub-related clusters in Seoul, the Korea Centers for Disease Control and Prevention said today.

Studies: Many in France, Spain still vulnerable

As major outbreaks in France and Spain decline, researchers are using seroprevalence studies to gauge how extensively populations were exposed to the virus and help inform planning for potential 2nd waves of pandemic activity.
In France, a study by Pasteur Institute researchers published in *Science* yesterday estimated that 4.4% of the country's population were infected by the COVID-19 virus, Reuters reported. The estimates were higher, between 9% and 10%, for hard-hit areas, which included eastern France and Paris.

The results suggest that without a vaccine, herd immunity won't be enough to avoid a 2nd wave as lockdown steps ease. Pasteur scientists also estimated the 55-day lockdown dramatically dropped the outbreak's reproduction number from 2.0 to 0.67.

Meanwhile, preliminary serosurvey results from Spain suggests 5% of the population was exposed to the virus, Reuters reported, citing Fernando Simon, the country's head of health emergencies.

Lockdown for Chile's capital

Chile's government yesterday ordered a lockdown for its capital Santiago, which has a population of 7M, after experiencing a 60% increase in COVID-19 infections in a 24-hour period, the *Santiago Times* reported. As the country's main hot spot, Santiago has 80% of Chile's cases, which today increased by 2,659 reported cases, for a total of 37,040.

In other global developments:

- Hours after Sanofi's chief executive officer was quoted as saying the US would get first access to its COVID-19 vaccine, the company walked back the statement and said when ready, it will be available in all countries, the Associated Press Sanofi is based in France, and CEO [illegible] Hudson's comments provoked a strong reaction from the French government. The US-based BARDA supported the development of the vaccine.

- A typhoon that struck the Philippines' eastern provinces today sent people to evacuation centers, which was complicated by COVID-19 distancing measures, Reuters reported. One city gave hundreds of evacuees face masks to wear before they were allowed in evacuation shelters, and the local officials added 2 schools as temporary shelters to better accommodate physical distancing.

- Malaysia said it will ease a ban on prayers in mosques starting tomorrow, ahead of the Eid festival, Reuters reported. Congregations will be limited to 30 or fewer. Last week the country started reopening businesses.

https://www.nature.com/articles/d41586-020-01367-9

Dozens of coronavirus drugs are in development — what happens next?

Drug manufacturers face supply-chain weaknesses and sourcing issues as they ramp up complex production processes to meet global demand. The world was waiting for any sign of hope in countering the COVID-19 pandemic when researchers released the 1st encouraging drips of data from a large clinical trial of the antiviral remdesivirEvaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.y a few days - not enough to be branded a 'cure', but hopefully enough to relieve some pressure on overwhelmed health-care systems. The discovery of remdesivir's potential focused attention on the next problem in the development of COVID-19 therapeutics: ramping up complex manufacturing processes to address a global pandemic. It is likely to be one of the biggest drug-making challenges the world has ever faced. Some of the therapies being tested against COVID-19 are novel and difficult to produce. Others - even if they are relatively simple compounds that have been in use for decades - face complications such as supply-chain weaknesses as drug-makers try to scale up production. A major rate-limiting step is going to be manufacturing," says Ezekiel Emanuel (bioethicist at the University of Pennsylvania in Philadelphia). "Getting up to hundreds of millions of doses is hard." Researchers are working furiously to test a wide variety of potential COVID-19 treatments. Those therapies span the gamut of complexity, from familiar generic medications such as the malaria drug hydroxychloroquine, to experimental small molecules like remdesivir, which was previously trialled against the Ebola virus. Scientists are also exploring antibody treatments that tamp down the body's immune response when it becomes destructive, which happens in some critically ill coronavirus patients. And if the history of infectious disease is any guide, it will take a combination of drugs - each with a distinct, even if relatively minor, impact on the disease - to tame the novel CoV. Each treatment will face different challenges when scaling up production, says Stephen Chick, who studies health-care management at INSEAD in

Fontainebleau, France. "If it's successful and the technology is then adopted, you need to be prepared to deliver," says Chick. "And if you're not, you're in trouble."
Nature
Heidi Ledford
14 May 2020

https://protect2.fireeye.com/url?k=25b62f11-79e32602-25b61e2e-0cc47adb5650-6abe7fdadd1958ca&u=https://www.meatingplace.com/Industry/News/Details/92084

COVID-19 Update: JBS/Smithfield testing, new outbreaks
JBS will partner with TX state health officials to test the roughly 3,000 workers at its beef plant north of Amarillo. According to a report from the Texas Tribune, state officials said JBS initially rejected an offer for testing; company spokesperson Nikki Richardson stated the company were unaware of such testing being offered. The state previously dispatched personnel from its Military Department and Division of Emergency Management to run tests on the 3,500 workers at a nearby Tyson Food plant. Meanwhile, COVID-19 continues to spread among workers at JBS' beef plant in Greeley, CO. According to state data cited by KDVR, the number of confirmed cases at the plant is now 316, up from 280 earlier in the week; 6 plant employees have died, along with 1 employee from JBS' corporate offices. JBS began testing all plant workers on Monday.
By Peter Thomas Ricci on 5/15/2020

https://protect2.fireeye.com/url?k=380c9c33-64599520-380cad0c-0cc47adb5650-75c105d4e451e090&u=https://www.meatingplace.com/Industry/News/Details/92107

OSHA treads lightly on COVID-19 complaints: Politico
The Department of Labor's OSHA has conducted few investigations out of the thousands of COVID-19 complaints it has received in the last several weeks, and has issued no citations, according to a report by Politico. The Beltway newsletter reported that the agency has fielded more than 3,800 complaints related to companies not adequately protecting workers from contracting the virus in crowded workplaces, but as of May 13, has opened only 281 inspections and issued no citations. OSHA, often in conjunction with the CDC, has issued a series of guidance documents on measures companies should take on employees' behalf, but has issued no directives or mandatory standards that might trigger a violation. The agency contends more regulation is unnecessary because of the enforcement options already available to it.
By Lisa M. Keefe on 5/15/2020

https://protect2.fireeye.com/url?k=cf247d0c-9371741f-cf244c33-0cc47adb5650-a25401dcb749e6a2&u=https://delawarebusinessnow.com/2020/05/dover-air-force-base-plays-role-in-transport-isolation-systems-for-covid-19-patients/

Dover Air Force Base plays role in transport isolation systems for COVID-19 patients
In the ongoing fight against COVID-19, two Transport Isolation Systems, along with trained medical Airmen, arrived at Dover Air Force Base, Delaware late last month. Dover will serve as the East Coast hub for TIS decontamination in the US, thanks to its strategic location, assets and capabilities. Airmen will support and decontaminate TIS units whose aircrews are conducting COVID-19 positive patient transport missions from Africa, Europe and the Middle East to the U.S. The team is composed of members of 6 different units from across the U.S. The TIS emerged as a result of mobility requirements identified during Operation United Assistance in support of the Ebola outbreak in 2014. This system was designed to provide in-flight medical care while containing any infectious disease, minimizing the risk to aircrew, medical attendants and the airframe. "We have two TIS modules here, because that is a standard configuration ," said Maj. Mark Dellinger, 36th Aeromedical Evacuation Squadron training flight commander. "Each has the capability of carrying 4 patients." Medical personnel assigned to the TIS mission receive multi-day training, including familiarization with the system, patient loading/unloading procedures, donning and doffing PPE, simulated in-flight patient care and infection control procedures. The TIS enables the Department of Defense to transport patients afflicted with or suspected of an

infectious disease like COVID-19 from overseas to the US, providing for an expedient recovery of its personnel, as well as preventing the spread of COVID-19 to aircrews. As part of the whole-of-government response to COVID-19, the TIS mission at Dover AFB will continue for as long as required.
By Delaware Business Now
May 14, 2020

https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-informs-public-about-possible-accuracy-concerns-abbott-id-now-point

Coronavirus (COVID-19) Update: FDA Informs Public about Possible Accuracy Concerns with Abbott ID NOW Point-of-Care Test
FDA News Release
For Immediate Release:
May 14, 2020
Today, the U.S. Food and Drug Administration is alerting the public to early data that suggest potential inaccurate results from using the Abbott ID NOW point-of-care test to diagnose COVID-19. Specifically, the test may return false negative results. "We are still evaluating the information about inaccurate results and are in direct communications with Abbott about this important issue. We will continue to study the data available and are working with the company to create additional mechanisms for studying the test. This test can still be used and can correctly identify many positive cases in minutes. Negative results may need to be confirmed with a high-sensitivity authorized molecular test," said Tim Stenzel, M.D., Ph.D., director of the Office of In Vitro Diagnostics and Radiological Health in the FDA's Center for Devices and Radiological Health.

https://protect2.fireeye.com/url?k=1eb16bab-42e462b8-1eb15a94-0cc47adb5650-bf988528cd1bd6e9&u=https://homelandprepnews.com/stories/49160-dod-hhs-award-contract-enabling-prefilled-syringes-for-future-covid-19-vaccine/

DoD, HHS award contract enabling prefilled syringes for future COVID-19 vaccine
The U.S. DoD and HHS awarded a $138M contract to ApiJect Systems America for Project Jumpstart and RAPID USA, 2 programs designed to expand U.S. production of medical-grade injection devices. The contract will create a U.S.-based supply chain for prefilled syringes by using Blow-Fill-Seal (BFS) aseptic plastics manufacturing technology, suitable for combatting COVID-19 when a vaccine becomes available. By upgrading existing domestic BFS facilities with installations of filling-line and technical improvements, the project will enable the manufacture of more than 100M prefilled syringes for distribution across the US by year-end 2020.
Thursday, May 14, 2020 by Dave Kovaleski
Homeland Preparedness News

https://protect2.fireeye.com/url?k=36177371-6a427a62-3617424e-0cc47adb5650-526a171dedfd6c7d&u=https://www.rcinet.ca/en/2020/05/13/china-will-have-to-answer-questions-about-covid-19-says-trudeau/

China will have to answer questions about COVID-19, says Trudeau
Countries around the world, including Canada, have questions about the origins of the COVID-19 pandemic and about China's behaviour during the early days of the outbreak that need to be asked "in the coming months," Prime Minister Justin Trudeau said Wednesday. Speaking at his daily briefing in Ottawa, Trudeau was responding to a question about recent comments made by Canada's ambassador to China Dominic Barton. The Globe and Mail newspaper reported Wednesday that Barton told a private session of the Canadian International Council last week that China's conduct during the pandemic is damaging its own global "soft power." Earlier this month, The Associated Press reported that U.S. officials believe China covered up the extent of the CoV outbreak - and how contagious the disease is - to stock up on medical supplies needed to respond to it. The revelation comes as the Trump administration has intensified its criticism of China, with Secretary of State Mike Pompeo saying that that country was responsible for the spread of disease and must be held accountable.

Radio Canada International
By Levon Sevunts
Posted: Wednesday, May 13, 2020 13:22

https://www.eurekalert.org/pub_releases/2020-05/uow-elo041420.php

Economists: Lack of COVID-19 preparedness in line with previous findings

The delayed response of U.S. policymakers to the COVID-19 pandemic comes as no surprise to University of Wyoming Professor Jason Shogren and several of his economist colleagues at other institutions. That's because the threat of a catastrophic pandemic in 2014 - the West African Ebola outbreak - did little to change the perception of U.S. citizens regarding the importance of preparing for future outbreaks, according to research conducted by Shogren and his colleagues. "The COVID-19 pandemic has revealed that the U.S. was as unprepared as experts feared, given the responses to the Ebola scare in 2014," the economists wrote in an article that has been accepted by EcoHealth, an international journal that addresses health and sustainability challenges, including public health practices. "This lack of attention to pandemic threats is especially disturbing given the current COVID-19 and any potential future pandemics that may also have very high transmission rates, including transmission before individuals become symptomatic." Joining Shogren in the research were fellow UW economists (b)(6) Aadland, David Finnoff and Alexandre Skiba, along with Jamison Pike and Peter Saszak, of the Ecohealth Alliance; and Kip Viscusi, from Vanderbilt University. Before and after the 2014 Ebola outbreak - which killed thousands of people in West Africa, harmed millions of people in that region and generated significant media coverage in the US - the researchers surveyed U.S. citizens to see if their concerns about a pandemic threat had increased, relative to risks from environmental disasters and terrorism. They were surprised to find relative complacency regarding the threat of a pandemic among the hundreds of people surveyed in 2015. The findings were unexpected because long-standing evidence has shown that people's perceptions usually are distorted toward the most recent news items.
University of Wyoming
14-May-2020

https://www.eurekalert.org/pub_releases/2020-05/ksu-kid051420.php

K-State infectious disease scientist offers road map for future COVID-19 research

Researcher investigates potential therapeutic options at Biosecurity Research Institute. There are many unanswered questions about COVID-19. A Kansas State University infectious disease scientist and collaborators are offering a possible research road map to find the answers. "We need to address these challenges in a scientific manner - in a proactive manner, not in a reactive manner," said Richt, also the director of the university's Center of Excellence for Emerging and Zoonotic Animal Diseases, known as CEEZAD. "With COVID, every day something is new - what was correct yesterday, could be wrong today." Because of the rapid change of knowledge related to CoV, Richt and his collaborators wrote the article to stress importance of studying the ways that COVID-19 could spread between humans and animals. The scientists say that research should focus in several areas, including: The potential for companion animals, such as cats and dogs, to carry the virus; the economic and food security effects if the virus can spread among livestock and poultry; national security areas, especially among service animals such as dogs that detect narcotics or explosives because COVID-19 is known to affect smell and cause hyposmia or anosmia.
Kansas State University
14 May 2020
Manhattan, KS

https://www.eurekalert.org/pub_releases/2020-05/b-nqo051320.php

Nearly quarter of a billion people in Africa will catch coronavirus and up to 190,000 could die

Health systems will struggle to cope without steps to stop spread of the virus, warn WHO experts. Nearly a quarter of a billion people across Africa will catch CoV during the1st year of the pandemic, and up to

190,000 of them will likely die, unless urgent action is taken to control the infection, reveals a predictive modelling study, accepted for publication in BMJ Global Health. These figures indicate a lower rate of exposure and viral spread than in other parts of the world, say the researchers. But the associated rise in hospital admissions, care needs, and impact on other health conditions in the region would severely strain limited health resources and worsen the impact of the virus, they warn. The WHO Africa region includes 47 countries, but excludes Djibouti, Egypt, Libya, Morocco, Somalia, Sudan and Tunisia. As of April 29, 45 countries had reported cases of SARS-CoV-2. Many mathematical models used to predict transmission and death rates in Africa have not adequately incorporated characteristics unique to the region and its individual countries. But these social, developmental, environmental and population health factors nevertheless affect the spread of the virus and the severity of COVID-19, explain the researchers.
BMJ
14-May-2020

https://www.eurekalert.org/pub_releases/2020-05/p-tne050720.php

The newly emerged coronavirus did not spill over from scaly anteaters

Mammals known as scaly anteaters are natural hosts of coronaviruses but are not likely the direct source of the recent outbreak in humans, according to a study published May 14 in the open-access journal PLOS Pathogens by Jinping Chen of the Guangdong Institute of Applied Biological Resources, and colleagues. As noted by the authors, the large-scale surveillance of coronaviruses in these animals, called pangolins, could improve our understanding of the spectrum of coronaviruses circulating in the wild, and could help prevent and control emerging infectious diseases.
PLOS
14-May-2020

https://www.healio.com/primary-care/infectious-diseases/news/online/%7B4880f02b-fcf6-4fc6-b39c-8e15ac5368f3%7D/physicians-brace-for-potential-surge-in-covid-19-cases

Physicians brace for potential surge in COVID-19 cases

As health care workers begin to understand the scope of COVID-19 in their areas and how to respond to it, a new anxiety has set in: How long will the pandemic last? "The biggest stress is not knowing where we're going to go from here," Manu Jain, MD, pulmonary and critical care specialist at Northwestern Memorial Hospital, told Healio Primary Care. "Not knowing how this is going to evolve and how we're going to get back to any sense of normalcy is probably the most stressful part of this whole experience." Physicians on the front lines are often working long hours and caring for severely ill patients. Research published in JAMA Network Open showed high rates of depression (50.4%), anxiety (44.6%), insomnia (34%) and distress (71.5%) among health care workers in Wuhan, China, where the pandemic originated.
May 14, 2020
Healio

https://www.eurekalert.org/pub_releases/2020-05/uob-cdw051320.php

COVID-19 disruption will lead to 28 million surgeries cancelled worldwide

Over 28 million elective surgeries across the globe could be cancelled as a result of the COVID-19 pandemic - leading to patients facing a lengthy wait for their health issues to be resolved, a new study reveals. The CovidSurg Collaborative has projected that, based on a 12-week period of peak disruption to hospital services due to COVID-19, 28.4 million elective surgeries worldwide will cancelled or postponed in 2020. The modelling study, published in the British Journal of Surgery, indicates that each additional week of disruption to hospital services will be associated with a further 2.4M cancellations. Led by researchers at the University of Birmingham, researchers collected detailed information from surgeons across 359 hospitals and 71 countries on plans for cancellation of elective surgery. This data was then statistically modelled to estimate totals for cancelled surgery across 190 countries (attached). The researchers project that worldwide 72.3% of planned surgeries would be cancelled through the peak period of COVID-19 related disruption. Most cancelled surgeries will be for non-cancer conditions. Orthopaedic procedures will be cancelled most frequently, with 6.3M orthopaedic surgeries cancelled

worldwide over a 12-week period. It is also projected that globally 2.3M cancer surgeries will be cancelled or postponed.
University of Birmingham
14-May-2020

https://www.eurekalert.org/pub_releases/2020-05/tmsh-cxi051320.php

Chest X-rays in emergency rooms can help predict severity of COVID-19 in young and middle-aged adults

Chest X-rays performed on young and middle-aged adults with COVID-19 when they arrive at the emergency room can help doctors predict who is at higher risk of severe illness and intubation, Mount Sinai researchers report. The first-of-its kind study, published in the May 14 issue of Radiology*, identifies which patients may need to be hospitalized and intubated based on the severity of CoV patterns in the lungs seen in the X-rays, using a unique scoring system to evaluate severity. The results could help physicians more quickly identify, triage, and aggressively treat these high-risk patients.*
The Mount Sinai Hospital / Mount Sinai School of Medicine
14 May 2020

https://protect2.fireeye.com/url?k=be634cac-e23645bf-be637d93-0cc47adb5650-4db0ac35d6e56627&u=http://outbreaknewstoday.com/hydroxychloroquine-and-azithromycin-to-treat-covid-19-clinical-trial-begins-36926/

Hydroxychloroquine and azithromycin to treat COVID-19 clinical trial begins

A clinical trial has begun to evaluate whether the malaria drug hydroxychloroquine, given together with the antibiotic azithromycin, can prevent hospitalization and death from coronavirus disease 2019 (COVID-19). NIAID is sponsoring the trial, which is being conducted by the NIAID-funded AIDS Clinical Trials Group (ACTG). Teva Pharmaceuticals is donating medications for the study. The Phase 2b trial will enroll approximately 2,000 adults at participating ACTG sites across the US. Study participants must have confirmed infection with SARS-CoV-2, the virus that causes COVID-19, and be experiencing fever, cough and/or shortness of breath. The investigators anticipate that many of those enrolled will be 60 years of age or older or have a comorbidity associated with developing serious complications from COVID-19, such as cardiovascular disease or diabetes. Participants will be randomly assigned to receive short-term treatment with either hydroxychloroquine and azithromycin or matching placebos. People living with HIV and pregnant and breastfeeding women also are eligible to participate in the study. The first participant enrolled today in San Diego, CA.
By Press Release
May 14, 2020

https://www.eurekalert.org/pub_releases/2020-05/f-twi051120.php

Treatment with interferon-α2b speeds up recovery of COVID-19 patients in exploratory study

Treatment with antivirals such as interferons may significantly improve virus clearance and reduce levels of inflammatory proteins in COVID-19 patients, according to a new study in Frontiers in Immunology. Researchers conducting an exploratory study on a cohort of confirmed COVID-19 cases in Wuhan found that treatment with interferon (IFN)-α2b significantly reduced the duration of detectable virus in the upper respiratory tract and reduced blood levels of interleukin(IL)-6 and C-reactive protein (CRP), two inflammatory proteins found in the human body. The findings show potential for the development of an effective antiviral intervention for COVID-19, which is an ongoing global pandemic caused by the novel CoV, SARS-CoV-2.
Frontiers
15-May-2020

https://www.nature.com/articles/d41586-020-01430-5

Dogs caught coronavirus from their owners, genetic *analysis suggests*

But there's no evidence that dogs can pass the virus to people. *The first 2 dogs reported to have CoV probably caught the infection from their owners, say researchers who studied the animals and members of the infected households in Hong Kong. An analysis of viral genetic sequences from the dogs showed them to be identical to those in the infected people. Researchers suspected that the infection had been passed from the owners to the dogs, and the direct genomic link strongly supports that, says Malik Peiris, a virologist at the University of Hong Kong who led the study, which is published today in Nature[1]. The study showed no evidence that dogs can pass the infection to other dogs or people, but it is impossible to be certain in which direction the virus traveled "so we have to keep an open mind", says Peiris. Although the analysis confirms that people with COVID-19 can infect dogs, the probability of this happening is low, says Arjan Stegeman, a veterinary epidemiologist at Utrecht University in the Netherlands. In the study, only 2 of the 15 dogs who lived with infected people caught the disease. But other scientists say the possibility that pets might spread the virus between each other, and to people, needs to be properly investigated as part of managing future outbreaks.*

Nature
Smriti Mallapaty
14 May 2020

From: Dr. (b)(6)
Sent: Friday, May 15, 2020 3:59 PM
To: (b)(6)
Cc: Caneva, Duane (b)(6) (HMFP - Emergency Medicine) (b)(6) (DSHS) (b)(6) Dr. (b)(6) BOURNE, ALEXANDRA (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; (b)(6) Keim, MD MBA (b)(6) MD (b)(6) V.,M.D. (b)(6) S (b)(6) McGinn, (b)(6) Kellermann (b)(6) Eastman, (b)(6) LLogandakar (b)(6) Walters, (b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6) JtCIVtUSARMY (USA) (b)(6) (b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) <CHRISALLEN (b)(6) (b)(6) (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) Hassell, (b)(6) (Chris) (OS/ASPR/IO) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS (b)(6) WOLFE,

HERBERT (b)(6) (b)(6) (b)(6) Marinissen, Maria (HHS/OS/OGA) <Maria.Marinissen@hhs.gov>; Sutter, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Krohmer, Jon (NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine) (b)(6) You, Edward H. (WMD) (FBI) (b)(6) (b)(6) (b)(6) W (b)(6)
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

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(b)(6) good point regarding community mitigation. Traffic starts to jam up again in Atlanta and many more people are going into their office. But yes, churches, schools are all closed and big events are canceled. I finished a few hundreds of business modeling and here's what I found.

1. Large group events remain difficult to open. The percentage of infection is roughly 7%-35% depending on the duration and because it is a sustained inside event, it is hard to maintain the fresh air circulation, the surface, and everything. It's cross-contamination every year. Any infection has high possibility of a hit to infect and it can be very broad in scope, depending on human behavior. Yes, university students are more proned because simply they are sick very often.

2. Across each State, there is no one-size-fit all, not within a State, and not inter-state either. What the models do show is that inter-dependence and cascading effects are certain (can be predicted very well) and hence must be taken into account as States are re-opening. The best they can do is opening strategically county-by-county, or city-by-city. And they will need to look over their shoulders on how their neigjhbours are doing as that will affect them.

3. Spitting, coughing, talking, anything to do with saliva You see the case a London transit worker died from covid-19 (five days from admitted to hospital to death) when a passenger claiming to have covid-19 on the track harrassed her by spitting on her. In US, there are people who do spit, tobacco users, people who chew gums, or people who just spit (I saw people rolling down their car windows) and just do it. Singapore has installed fines on these actions many years ago. This habit still persists in US and this can be rather deadly in the wake of covid-19.

And public health should put restriction on spitting. If the state wants to maintain good public hygiene by deterrance, they can fine like Singapore.

Facemasks remain very critical. Essential workers must use facemasks and so are the citizens. And this should not be an option, but a must. I was surveying several stores this week - pets stores, groceries, and many employees do not use facemasks or any protecton at all and they do cough and of course they talk too. Here's a study in PNAS confirming why it is so important to avoid any droplets of saliva. I think employees need to do it to protect themselves and as customers, we do not want to receive little saliva droplets from cashiers or anyone.

https://www.pnas.org/content/early/2020/05/12/2006874117

And yes, eyes are very important to protect too. Sorry, no better news, here's *JAMA Ophthalmology* reporting tranmission through eyes,

https://protect2.fireeye.com/url?k=3bddc06c-6788c97f-3bddf153-0cc47adb5650-e934a7d54122f687&u=https://www.ajmc.com/newsroom/covid19-may-be-transmitted-through-the-eye-report-finds

So face shields are important too. Goggles are tight-fit and may be more protective. I remain a fan of the face shield especially seeing how the providers work at ease with them and are happier with it than the goggles. This is one of those cost-effective little thing that was invented and very welcome by providers.

4. Delay in tests, delay in test results, delay in everything on the graphs.
It is very hard to decipher all the testing data. First, cases are delayed in discovery. By the time the patient gets the test, there is a time-lag already. Then, it takes 2-5 days, or 7-9 days to get the results, and then posted. So everything is delay. In DeKalb, thousands of the tests never received any results back. So they won't show up anywhere. These are PUI, so their rate of positivity is high. Below are graphs from raw data, without any adjusttment in reporting etc.
Again mortality graph is one to focus.

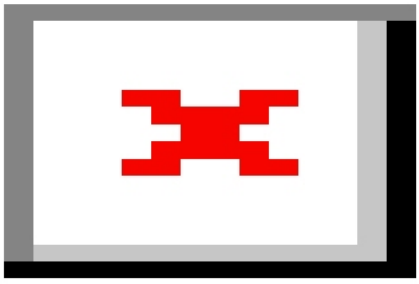


image.png

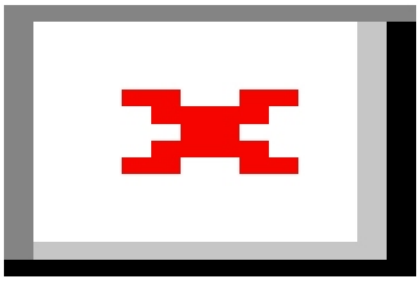
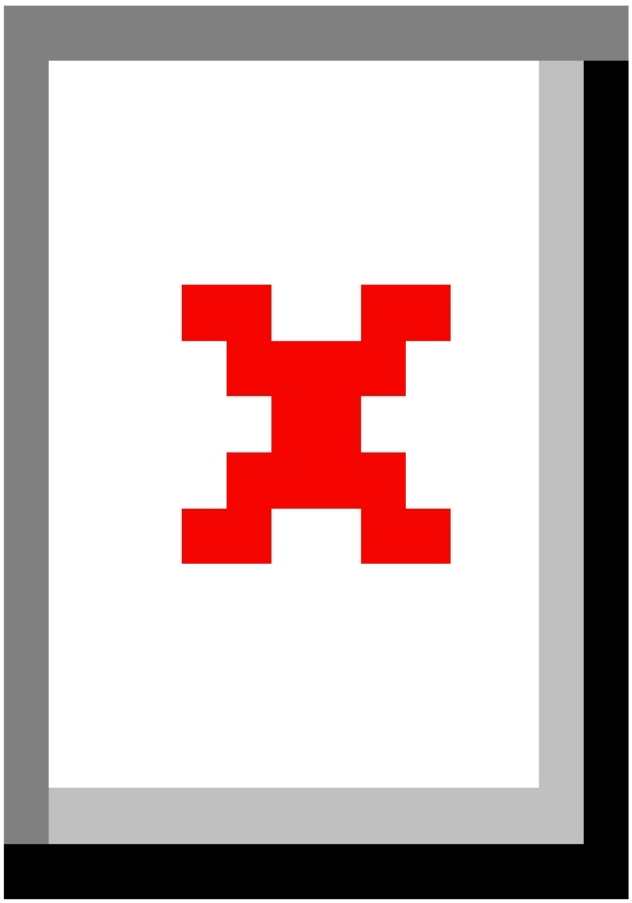
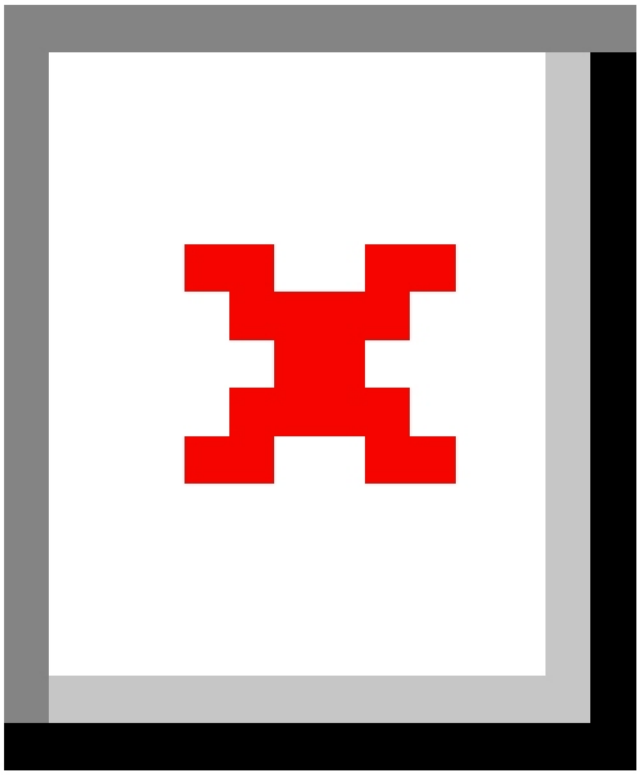


image.png

On Fri, May 15, 2020 at 9:24 AM (b)(6) (b)(6) (b)(6) wrote:
Monitoring Georgia.
First, raw data of cases and deaths reported each day with 7-day moving averages of cases, deaths, tests performed, and % positive (see attached Excel file). I already shared the LTC data from Georgia.

Second, the data from GA Public Health.





Third. Take a look at the data on https://protect2.fireeye.com/url?k=121f29b2-4e4a20a1-121f188d-0cc47adb5650-0cbdc4316860babf&u=https://dashboards.c19hcc.org/ for Georgia.

As I have said earlier, although we are calling what is happening as reopening, what in fact is happening is we are transitioning to the 2007 Community Mitigation Guidance (really TLC). Infected or sick individuals are still being isolated at home, I assume household contacts are still being advised to home quarantine, schools/universities/pre-school/daycare are still closed, and we continue to leverage social distancing strategies (telework; social distancing in restaurants, retail; churches closed, large gatherings canceled); and we are also wearing face masks (at least the majority of people are wearing face masks).

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Friday, May 15, 2020 7:11 AM
To: Caneva, Duane; Dr. (b) (b) (b)(6) (b)(
Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6 (b)((b)(6) (b)(6) (DSHS); Dr. (b) (b) BOURNE, ALEXANDRA; (b)((b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(Keim, MD MBA; (b)(6 (b)(6) (b)((b)(6) (b) (b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6), (b)((b)((b)(S; (b)(6) (b)(McGinn, (b)((b)(6) (b)(6) Kellermann; (b)(6) (b) (b)(6 (b)((b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) LLogandakar; Walters, (b)(6) (b)(6) (b)((b)(6) DC; (b)(6) JtCIVtUSARMY (USA); (b)((b)(6) MD; Fantinato, Jessica (USA.GOV); Martin, Greg (b)(6) (b)((b)(6) (b)(, (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b)((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; (b)(6 Hassell, (b)((Chris) (OS/ASPR/IO); (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6, (b)(6 (b)((b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, (b)((b)(6) (b)(6) (b)((b)((b) (b)(6 Krohmer, Jon (NHTSA); (b)(6) (APHMFP - Emergency Medicine); You, Edward H. (WMD) (FBI); (b)(6) ((b)(6 W
Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

LTC data by state. I have 3 data points (Apr 23, May 7 and May 14). See 1st spreadsheet for summary table. This virus is steadily moving through our LTC population in the US. Recall the estimates of 2.1M Americans who are residents in nursing homes or residential care. With 150K known cases and 30K deaths, this equates to about a 7% attack rate with a 20% fatality rate (I would assume we are learning about most cases given that nursing homes are now testing all residents).

If you are interested in learning more about long term care in the US.
https://www.cdc.gov/nchs/data/series/sr_03/sr03_43-508.pdf There are 8.3M Americans receiving long term care services (not necessarily receiving services at a long term care facility).

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Thursday, May 14, 2020 10:55 AM
To: Caneva, Duane; Dr. (b) (b) (b)(6) (b)(
Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6 (b)((b)(6) (b)(6) (DSHS); Dr. (b) (b) BOURNE, ALEXANDRA; (b)((b)(6) (b)(6) (b)(6) McDonald, Eric;

(b)(Keim, MD MBA; (b)(6 (b)(6) (b)((b)(6) (b) (b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6), (b)((b)((b)(S; (b)(6) (b)(McGinn, (b)((b)(6) (b)(6) Kellermann; (b)(6) (b) (b)(6 (b)(((b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) ((b)(6 (b)(6) LLogandakar; Walters, (b)(6) (b)(6) (b)((b)(6) DC; (b)(6) JtCIVtUSARMY (USA); (b)((b)(6) MD; Fantinato, Jessica (USDA.GOV); Martin, Greg (b)(6) (b)((b)(6) (b)(, (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b) ((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; (b)(6 Hassell, (b)((Chris) (OS/ASPR/IO); (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6, (b)(6 (b)((b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, (b)((b)(6) (b)(6) (b)((b)((b) (b)(6 Krohmer, Jon (NHTSA); (b)(6) (APHMFP - Emergency Medicine); You, Edward H. (WMD) (FBI); (b)(6 ((b)(6 W

Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

We have been following any reports of reported prevalence. Spain recently reported a prevalence of 5%. Spain has a death rate of 577 deaths per million (as of yesterday). It is also at the flat part of its curve (even 2 weeks ago the death rate was 517 deaths per million). Assuming Spain has a prevalence of 5% and a death rate of 577 deaths per million, it would equate to a CFR of 1.16%. So a little higher than the CFR we have been estimating.

We haver been roughly estimating prevalence for all the states (assuming a CFR of 0.9%). But given the high percentage of nursing home deaths in a number of state (>50%), we need to do this cautiously because in a state where a high % of the deaths are in long term care, we could be overestimating prevalence.

Attached is a crude estimate of prevalence for the states. We assumed a CFR of 0.9% and time from infection onset to death of about 2 weeks. We used Apr 27 as roughly 2 weeks ago (it was the only data readily available at hand in a table) to estimate a case ascertainment rate. This is all a little crude, but helps to place some of these raw numbers of confirmed cases in perspective. We added a column of the data we have from May 7 on the % of total COVID deaths coming from LTC (those states with a % >50% are highlighted in red).

Sent from Mail for Windows 10

From: Caneva, Duane
Sent: Thursday, May 14, 2020 9:49 AM
To: Dr. (b) (b) (b)(6) (b)(
Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6 (b)((b)(6) (b)(6 (b)(6) (b)(6) (DSHS); Dr. (b) (b) BOURNE, ALEXANDRA; (b)((b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(Keim, MD MBA; (b)(6 (b)(6) (b)((b)(6) (b) (b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6) (b)((b)((b)(S; (b)(6) (b)(McGinn, (b)((b)(6) (b)(6) Kellermann; (b)(6) (b) (b)(6 (b)(((b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) ((b)(6 (b)(6) LLogandakar; Walters, (b)(6) (b)(6) (b)((b)(6) DC; (b)(6) JtCIVtUSARMY (USA); (b)((b)(6) MD; Fantinato, Jessica (USDA.GOV); Martin, Greg (b)(6) (b)((b)(6) (b)(6 (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b) ((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; (b)(6 Hassell, (b)(

(Chris) (OS/ASPR/IO); [redacted]; WILKINSON, THOMAS; WOLFE, HERBERT; [redacted] Marinissen, Maria (HHS/OS/OGA); Sutter, [redacted] Krohmer, Jon (NHTSA); [redacted] (APHMFP - Emergency Medicine); You, Edward H. (WMD) (FBI); [redacted] W
Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

Some attachments of interest.

C19HCC Dashboard: [redacted]
2bc076c0617c28ad&u=https://dashboards.c19hcc.org/
C19HCC PPE Dashboard: [redacted]
0cc47adb5650-10fc940f0c996ea1&u=https://dashboards.c19hcc.org/ppe

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From: Dr. [redacted]
Sent: Wednesday, May 13, 2020 8:21 PM
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

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Here's the testing situation. I feel very sorry for Brazil. And my colleagues with whom I work on vaccine immunogenicity prediction are in distressed. But they have very little testing kits and very little testing power. So they are testing only the sick patients and many are positive.

On Wed, May 13, 2020 at 8:04 PM Dr. [redacted] wrote:

> Bill, we must understand, US is still in the discovery phase as far as confirmed positive cases, because we are catching up on test still. I believe we have improved over time, so yes, you [redacted] see more confirmed cases. It is actually more important to look at fatality. Granted, counting may not be perfect. My feeling is that no country is perfect in the counting because it simply is a huge number of bodies all needed attention at a very short period of time. It is overwhelming. So everyone undercounts. Here's a little summary. You notice Positive/capita - for Iceland is very high, because they have tested a very large percentage of their small population. We are still behind in testing, And we need to test a lot more. So many people are asymptomatic, not knowing them is a disadvantage to us. Recall, not every positive case needs hospitalization. So that number as close to reality is very important because it gives us a sense of how infectious SARS-CoV-2 is. It also allows us to estimate better the CFR.

Country	Reported death	Reported positive	% death/positive	Population (M)	fatality/capita	Positive/capita
USA	83963	1411488	5.948545	334	251.3862	4226.012
Spain	27104	271095	9.997971	46.9	577.9104	5780.277
Italy	31106	222104	14.00515	50.63	614.3788	4386.806
Germany	7792	173824	4.482695	83.02	93.8569	2093.761
France	27074	140734	19.23771	66.99	404.1499	2100.821

Israel	264	16548	1.595359	8.884	29.71634	1862.674
Iceland	10	1802	0.554939	0.364134	27.46242	4948.728
(b)	33186	229705	14.44723	66.65	497.9145	3446.437

On Wed, May 13, 2020 at 7:43 PM (b)(6) (b)((b)(6) wrote:

(b)

As I understand the data, of the large countries with major impacts, 65% of the cases over last week came from the following 5 countries the U.S. (> 197,600 cases; 603 cases/million), Russia (> 70,600 cases; 489 cases/million), the U.K. (> 35,400 cases; 533 cases/million), Brazil (> 34,500 cases; 164 cases/million), and Peru (> 21,500 cases; 673 cases/million). I don't have the comparable fatality data at hand, but what I've seen has been similar.

I know that "cases" as a datapoint to track is crap because it's based on testing and the populace's threshold for seeking care, but still, we are well above the average on a rate basis. Why is this? I have a hard time believing it's just timing on application of NPIs.

-Bill

From: Dr. (b) (b) (b)(6)
Sent: Wednesday, May 13, 2020 7:34 PM
To: (b)(6) (b)((b)(6)
Cc: (b)(6) (HMFP - Emergency Medicine) (b)(6) Caneva, Duane (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (DSHS) (b)(6) Dr. (b) (b)(6) (b)(6) OURNE, ALEXANDRA (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; (b)(Keim, MD MBA (b)(6) (b) (b)(6) (b)(6) (b) (b)(6) MD (b)(6) (b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b) (b)(6) (b)((b)(S (b)(6) (b)(6) (b) (b)(6) McGinn, (b)((b)(6) (b)(6) (b)(6) Kellermann (b)(6) (b)(6) (b) (b)(6) (b)(6 (b)((b)(6) (b)(6) (b)(6 (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) LLogandakar (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6) JtCIVtUSARMY (USA) (b)(6) (b)((b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) <CHRISALLEN (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) (b)((b)(6) Hassell, (b)(

(Chris) (OS/ASPR/IO) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) (b)(6) WILKINSON, THOMAS (b)(6) WOLFE, HERBERT (b)(6) (b)(6) (b)(6) Marinissen, Maria (HHS/OS/OGA) <Maria.Marinissen@hhs.gov>; Sutter, (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)((b)((b)(6) (b)((b)((b)(6) Krohmer, Jon (NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine) (b)(6) You, Edward H. (WMD) (FBI) (b)(6) (b)(6) ((b)(6) W (b)(6)

Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

Bill, may I ask you how you calculate your values? I am using fatality per capita and infection per capita, we are not the highest. Is that what you are thinking? I must have misunderstood your question.

On Wed, May 13, 2020 at 7:24 PM (b)(6) (b)((b)(6) wrote:

> Does anyone have insight as to why the US has the highest case and fatality rate of any large country. I haven't seen any good explanation of that. It's not that we have so much most inbound international travelers (France exceeds the US on an absolute basis – not just rate, for example, and many countries far exceed us for international arrival rates).
>
> While many feel we should have implemented NPIs earlier and harder, I don't get the sense that we were that far behind the rest of the world to explain the case and fatality rate differences.
>
> Our Chinese arrival rate compared to the rest of the world is hard to figure (the data is there, but I haven't tried to crank it).
>
> With the exception of some inner-cities, we are not a population dense as other major developed countries.
>
> So what was it (and am just missing scholarly discussion somewhere about this huge discrepancy). Everyone knew in detail why Italy blew up, but why us?

(b)(6) (b)(

From: Dr. (b) (b)(6)
Sent: Wednesday, May 13, 2020 5:15 PM
To: (b)(6) (HMFP - Emergency Medicine) (b)(6)
Cc: Caneva, Duane (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) <cmecher@charter.net>; (b)(6) (DSHS) (b)(6) (b)(6) (b)((b)(6) Dr. (b) (b) (b)(6) BOURNE, ALEXANDRA (b)(6) (b)((b)(6)

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Keim, MD MBA (b)(6) (b)(6) (b)(6) (b)(6)
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(b)(6) Walters, (b)(6) (b)(6) (b)(6)
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(b)(6) Fantinato, Jessica (USDA.GOV)
<jessica.fantinato@usda.gov>; Martin, Greg (b)(6) (b)(6) (b)(6)
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Marinissen, Maria (HHS/OS/OGA) <Maria.Marinissen@hhs.gov>; Sutter, (b)(6)
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(b)(6) (b)(6) (b)(6) (b)(6) Krohmer,
Jon (NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine)
(b)(6) You, Edward H. (WMD) (FBI) (b)(6) (b)(6)
(b)(6) W (b)(6)

Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

This looks very nice in the tracing and connectivity of all the cases. I assume the genetic analysis reported recently regarding origin of the US cases will give us such type of information.

https://protect2.fireeye.com/url?k=7a4a7237-261f7b24-7a4a4308-0cc47adb5650-aad33b049e0e4c82&u=https://graphics.reuters.com/CHINA-HEALTH-SOUTHKOREA-CLUSTERS/0100B5G33SB/index.html

On Wed, May 13, 2020 at 4:05 PM (b)(6) (HMFP - Emergency Medicine) (b)(6) wrote:

This is terrific! Thanks Duane

Greg

Sender:	(b)((b)(6) (b)(6)
Recipient:	Dr. (b) (b) (b)(6) Caneva, Duane (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev (b)(6) (b)((b) (b)(6) (b)(6) (HMFP - Emergency Medicine) (b)(6) (b)(6) (b) (b)(6) (b) (b)(6) (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6) Dr. (b) (b) (b)(6) BOURNE, ALEXANDRA (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=474b01361a8b4944a39afbdad800591e-Guest_bea05 (b)(6) (b)((b)((b)(6) (b) (b)(6) (b)(6) (b) (b)(6) MD (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=20f0e9a3ebeb4ef99d30a96386fb2627-Guest_945f5 (b)(6) (b)(6) (b) (b)(6) (b)((b)(S (b)(6) (b)(6) (b) (b)(6) McGinn, (b) (b)(6) (b)(6) (b)(Kellermann (b)(6) (b)(6) (b) (b)(6) (b)((b) (b)(6) (b)(6) (b)((b)(6) Eastman, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d314e75d55434b198c36e0c981e6623d-Contact_753 (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)((b)(6) LLogandakar (b)(6) Walters, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) (b) (b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6) JtCIVtUSARMY (USA) (b)(6)

	(b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4a03b6317c3840afb4ee617008e821a6-Jessica.Fan <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d48a91c6dc5f401a80e245c518874f15-MartinGJ.os (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=908f39d0872d44b1b2c5e3ba11f04968-Joselito.Ig (b)(6) (b)(6) <DMarcozzi@som.umaryland.edu>; Hassell, (b)(6) (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS (b)(6) Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f2fb845c2e154d8e967ec3fdabecfbd6-Herbert.Wol (b)(6) (b)(6) (b)(6) Marinissen, Maria (HHS/OS/OGA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d42fb4d94b041ee88e4f7dd5743e893-Marinissen, <Maria.Marinissen@hhs.gov>; Sutter, (b) (b)(6) (b)(6) (b)(6) (b)(6) (b) (b) (b)(6) (b) (b)(6) (b)(6) Krohmer, Jon (dot.gov) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=46c6513591aa4142b2c1c85354dd1816-Jon.Krohmer <Jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine) (b)(6) You, Edward H. (WMD) (FBI) (b)(6) (b)(6) ((b)(6) W (b)(6)
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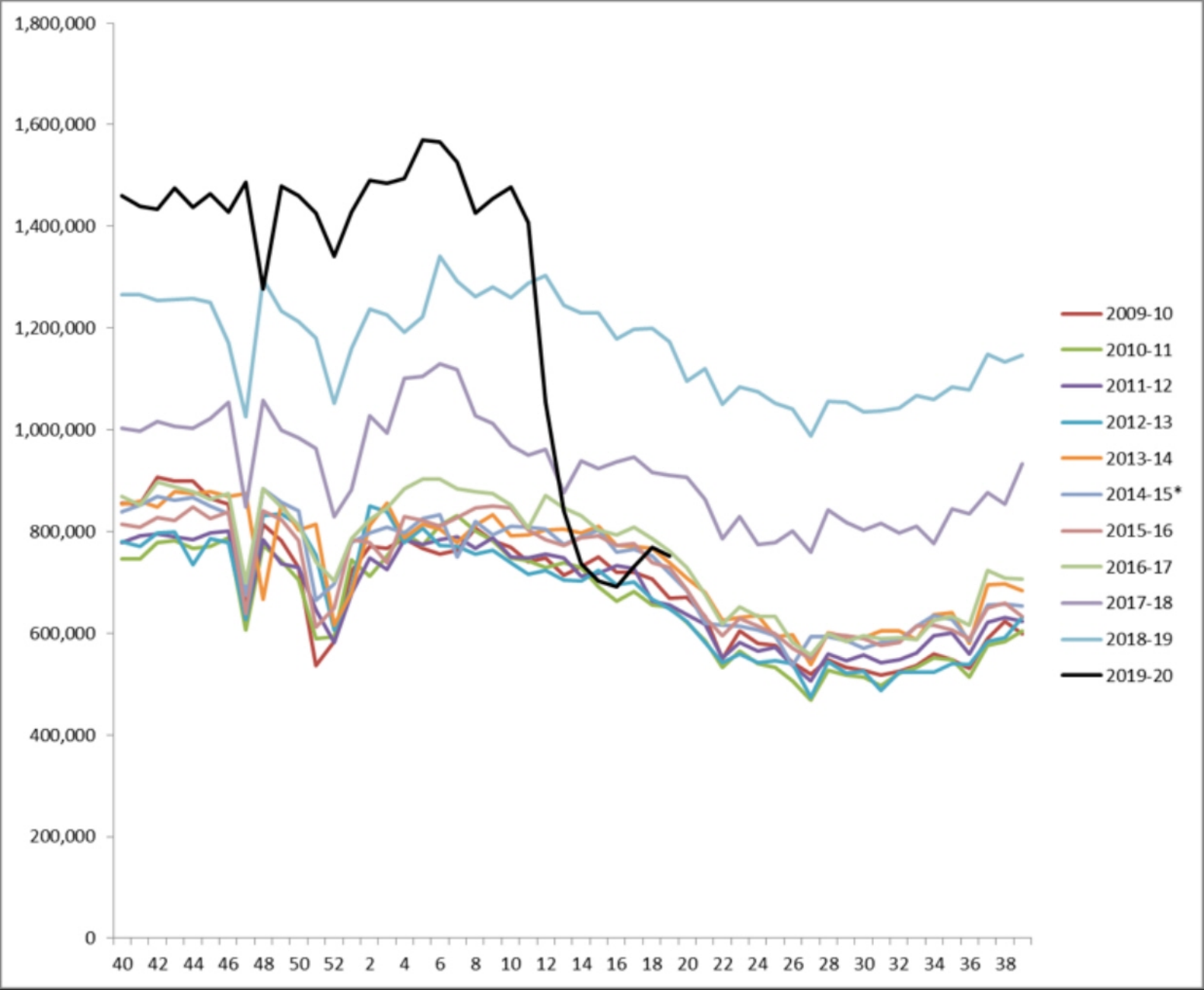
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2009-10
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From:	Brown, Lisa <LBrown@nas.edu>
To:	Brown, Lisa <LBrown@nas.edu>; 'Alexandra Phelan (alp81@georgetown.edu)' <alp81@georgetown.edu>; 'David A Relman (relman@stanford.edu)' <relman@stanford.edu>; 'David Walt (dwalt@bwh.harvard.edu)' <dwalt@bwh.harvard.edu>; 'Diane Griffin (dgriffi6@jhmi.edu)' <dgriffi6@jhmi.edu>; 'Embrey, Ellen (eembrey@stratitia.com)' <eembrey@stratitia.com>; 'Georges Benjamin (georges.benjamin@apha.org)' <georges.benjamin@apha.org>; hick.john /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user7b974f4e (b)(6) 'Jonna Mazet (jkmazet@ucdavis.edu)' <jkmazet@ucdavis.edu>; 'Kent Kester (Kent.Kester@sanofi.com)' <Kent.Kester@sanofi.com>; 'Kristian G. Andersen (b)(6) (b)(6) 'Mark Smolinski (b)(6) (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)' <mbassett@hsph.harvard.edu>; 'Patricia King (b)(6) (b)(6) 'Peggy Hamburg (peggy@hbfam.net)' <peggy@hbfam.net>; 'Peter Daszak (daszak@ecohealthalliance.org)' <daszak@ecohealthalliance.org>; 'Phyllis D. Meadows (PDMeadows@kresge.org)' <PDMeadows@kresge.org>; 'Richard Besser (rbesser@rwjf.org)' <rbesser@rwjf.org>; 'Tara O'Toole (totoole@iqt.org)' <totoole@iqt.org>; 'Trevor Bedford (trevor@bedford.io)' <trevor@bedford.io>; (b)(6) (b)(6) 'Donald Berwick' (b)(6) 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'Baruch Fischhoff' <baruch@cmu.edu>; (b)(6) (b)(6) 'bgroves@georgetown.edu' <bgroves@georgetown.edu>; (b)(6) V. Fineberg (b)(6) (b)(6) Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>; Attal-Juncqua, Aurelia <AAttal-Juncqua@nas.edu>; Feit, Monica <MFeit@nas.edu>; Liao, Julie <JLiao@nas.edu>; Dzau, Victor J. <VDzau@nas.edu>; Kanarek, Morgan <MKanarek@nas.edu>; Hassell, (b)(6) (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; 'Waterman Paige E. EOP/OSTP' <Paige.E.Waterman@ostp.eop.gov>; Watson, Ian (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3bc7da05f4e949ddbf55281ba404386a-Watson, Ian <Ian.Watson@hhs.gov>; 'Motrya Calafiura' <Motrya.Calafiura@georgetown.edu>; Ferris, Nicole <nferris@rwjf.org>
CC:	(b)(6) <mh1898@georgetown.edu>; Kadlec, Robert (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, (b) <Robert.Kadlec@hhs.gov>
Subject:	Standing Committee on EID and 21st Century Health Threats: URGENT Call on Monoclonal Antibodies
Date:	2020/11/10 18:33:30
Start Date:	2020/11/15 11:00:00
End Date:	2020/11/15 13:00:00
Priority:	Normal
Type:	Appointment

Location:	https://nasem.zoom.us/j/96818499306
Attendees:	'Alexandra Phelan (alp81@georgetown.edu)'; (b)(6) A Relman (relman@stanford.edu)'; (b)(6) Walt (dwalt@bwh.harvard.edu)'; 'Diane Griffin (dgriffi6@jhmi.edu)'; 'Embrey, Ellen (eembrey@stratitia.com)'; 'Georges Benjamin (georges.benjamin@apha.org)'; hick.john; 'Jonna Mazet (jkmazet@ucdavis.edu)'; 'Kent Kester (Kent.Kester@sanofi.com)'; 'Kristian G. Andersen (b)(6) (b)(6) Smolinski (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)'; 'Patricia King (b)(6) 'Peggy Hamburg (peggy@hbfam.net)'; 'Peter Daszak (daszak@ecohealthalliance.org)'; 'Phyllis D. Meadows (PDMeadows@kresge.org)'; (b)(6) Besser (rbesser@rwjf.org)'; 'Tara O'Toole (totoole@iqt.org)'; 'Trevor Bedford (trevor@bedford.io)'; (b)(6) 'Donald Berwick'; 'alta.charo@wisc.edu'; 'Jeff.Duchin@kingcounty.gov'; 'Baruch Fischhoff'; (b)(6) 'bgroves@georgetown.edu'; (b)(6) V. Fineberg (b)(6) Pope, Andrew; Pavlin, Julie; Shore, Carolyn; Wollek, Scott; Downey, Autumn; Fine, Emma; Kahn, Benjamin; Attal-Juncqua, Aurelia; Feit, Monica; Liao, Julie; Dzau, Victor J.; Kanarek, Morgan; Hassell, (b)(6) (Chris) (OS/ASPR/IO); 'Waterman Paige E. EOP/OSTP'; Watson, Ian (OS/ASPR/SPPR); 'Motrya Calafiura'; Ferris, Nicole; (b)(6) mh1898@georgetown.edu; Kadlec, Robert (OS/ASPR/IO)

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Meeting ID: 968 1849 9306
International numbers available: https://nasem.zoom.us/u/andiW2L8e

Sender:	Brown, (b)(6) <LBrown@nas.edu>
Recipient:	Brown, (b)(6) <LBrown@nas.edu>; 'Alexandra Phelan (alp81@georgetown.edu)' <alp81@georgetown.edu>; (b)(6) A Relman (relman@stanford.edu)' <relman@stanford.edu>; (b)(6) Walt (dwalt@bwh.harvard.edu)' <dwalt@bwh.harvard.edu>; 'Diane Griffin (dgriffi6@jhmi.edu)' <dgriffi6@jhmi.edu>; 'Embrey, Ellen (eembrey@stratitia.com)' <eembrey@stratitia.com>; 'Georges Benjamin (georges.benjamin@apha.org)' <georges.benjamin@apha.org>; hick.john /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user7b974f4e (b)(6) 'Jonna Mazet (jkmazet@ucdavis.edu)' <jkmazet@ucdavis.edu>; 'Kent Kester (Kent.Kester@sanofi.com)' <Kent.Kester@sanofi.com>; 'Kristian G. Andersen (b)(6) (b)(6) (b)(6) Smolinski (b)(6) (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)' <mbassett@hsph.harvard.edu>; 'Patricia King (b)(6) (b)(6) 'Peggy Hamburg (peggy@hbfam.net)' <peggy@hbfam.net>; 'Peter Daszak (daszak@ecohealthalliance.org)' <daszak@ecohealthalliance.org>; 'Phyllis D. Meadows (PDMeadows@kresge.org)' <PDMeadows@kresge.org>; (b)(6) Besser (rbesser@rwjf.org)' <rbesser@rwjf.org>; 'Tara O'Toole (totoole@iqt.org)' <totoole@iqt.org>; 'Trevor Bedford (trevor@bedford.io)' <trevor@bedford.io>; (b)(6) (b)(6) 'Donald Berwick' (b)(6) 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'Baruch Fischhoff' <baruch@cmu.edu>; (b)(6) (b)(6)

	'bgroves@georgetown.edu' <bgroves@georgetown.edu>; 'Harvey V. Fineberg (harvey.fineberg@moore.org)' <harvey.fineberg@moore.org>; Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>; Attal-Juncqua, Aurelia <AAttal-Juncqua@nas.edu>; Feit, Monica <MFeit@nas.edu>; Liao, Julie <JLiao@nas.edu>; Dzau, Victor J. <VDzau@nas.edu>; Kanarek, Morgan <MKanarek@nas.edu>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; 'Waterman Paige E. EOP/OSTP' <Paige.E.Waterman@ostp.eop.gov>; Watson, Ian (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3bc7da05f4e949ddbf55281ba404386a-Watson, Ian <Ian.Watson@hhs.gov>; 'Motrya Calafiura' <Motrya.Calafiura@georgetown.edu>; Ferris, Nicole <nferris@rwjf.org>; (b)(6) <mh1898@georgetown.edu>; Kadlec, Robert (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, Rob <Robert.Kadlec@hhs.gov>
Sent Date:	2020/11/10 18:33:30

From:	Caneva, Duane (b)(6)
To:	Dr. (b) (b) (b)(6) (b)((b)(6) (b)(6)
CC:	(b)((b) (b)(6) Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.gt;; (b)(6) (b) (b)(6) (b) (b)(6) (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6) Dr. (b) (b) (b)(6) BOURNE, ALEXANDRA (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=474b01361a8b4944a39afbdad800591e-Guest_bea05 (b)(6) (b)((b)((b)(6) (b) (b)(6) (b)(6) (b) (b)(6) MD (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=20f0e9a3ebeb4ef99d30a96386fb2627-Guest_945f5 (b)(6) (b)(6) (b) (b)(6) (b)((b)(S (b)(6) (b)(6) (b) (b)(6) McGinn, (b) (b)(6) (b)(6) (b)(Kellermann (b)(6) (b)(6) (b) (b)(6) (b)((b) (b)(6) (b)(6) (b)((b)(6) Eastman, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d314e75d55434b198c36e0c981e6623d-Contact_753 (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)((b)(6) LLogandakar (b)(6) Walters, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) (b) (b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6) JtCIVtUSARMY (USA) (b)(6) (b) (b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4a03b6317c3840afb4ee617008e821a6-Jessica.Fan <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d48a91c6dc5f401a80e245c518874f15-MartinGJ.os (b)(6) (b) (b)(6) (b)(6) (b)((b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) (b)((b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=908f39d0872d44b1b2c5e3ba11f04968-Joselito.Ig (b)(6)

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Subject:	RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT
Date:	2020/05/15 16:29:49
Priority:	Normal
Type:	Note

DHS S&T Weekly update to the Master Question List attached.

Data dump:

Science

https://www.eurekalert.org/pub_releases/2020-05/uoa-sdt051420.php

Scientists develop tool to sequence circular DNA

New method (b) provide insight into genomes of bacteria and viruses, as well as extrachromosomal circular DNA in mammals and plants. University of Alberta biologists have invented a new way for sequencing circular DNA, according to a new study. The tool - called CIDER-Seq - (b) give other scientists rich, accurate data on circular DNA in any type of cell. While our own DNA is linear, circular DNA is common in the genomes of bacteria and viruses. Scientists have also discovered circular DNA within the nuclei of human and plant cells, called extrachromosomal circular DNA (eccDNA). Recently, research has begun to investigate the role of eccDNA in human cancer but progress has been hampered due to the lack of effective methods for studying and sequencing eccDNA.

University of Alberta
14-May-2020

https://www.the-scientist.com/news-opinion/droplets-from-speech-can-float-in-air-for-eight-minutes-study-67538?utm_campaign=TS_DAILY%20NEWSLETTER_2020&utm_source=hs_email&utm_medium=email&utm_content=87992907&_hsenc=p2ANqtz-

8aVWmtxVWrgfwS6Sdn6rdCuwqlVjjjN97FH5hsJ_EyKzj_CfTMemFPVuNub4U81QYPW28WuN8ZNrCpAL11PuhiVi3_WsgSrithAppkX6XRQztdyKQ&_hsmi=87992907

Droplets from Speech Can Float in Air for Eight Minutes: Study

The experiments did not involve SARS-CoV-2, but researchers say the results support precautions to avoid possibly spreading COVID-19 by talking.

Kerry Grens

May 15, 2020

Amid concerns that COVID-19 may be spread through aerosols, scientists have shown that tiny respiratory droplets produced when people talk can linger in the air for minutes. The results, published in *PNAS* yesterday (May 13), did not examine the transmission of viruses in spray from speech, but bolsters the idea that talking could present a risk for exposure to the novel coronavirus.

"This study builds on earlier research by the same team showing that speaking may factor into transmission of SARS-CoV-2," a spokesperson for the National Institute of Diabetes and Digestive and Kidney Diseases, where most of the study's authors are based, tells *USA Today*.
The authors used laser light sheets to capture on video the movement of small droplets emitted from a person's mouth as the speaker repeated the phrase "stay healthy" for 25 seconds. They calculated that the half-life of these particles in the air, considering the time it took them to fall 30 cm, was eight minutes. "This study is the most accurate measure of the size, number and frequency of droplets that leave the mouth during a normal conversation and shower any listeners within range," Benjamin Neuman, a virologist at TAMU-Texarkana who was not involved in the research, tells *The Washington Post*.

The researchers did not examine these respiratory droplets in the context of a SARS-CoV-2 infection. But in their paper they write that in a scenario where an infected person is in the vicinity of uninfected people, "At an average viral load of 7×10^6 per milliliter, we estimate that 1 min of loud speaking generates at least 1,000 virion-containing droplet nuclei that remain airborne for more than 8 min. These therefore could be inhaled by others and, according to IAH [independent action hypothesis], trigger a new SARS-CoV-2 infection."

The airborne particles were about 4 μm in diameter, and had dehydrated from respiratory droplets that the authors estimate were larger than 12 μm in diameter when they left the speaker's mouth.

The spokesperson for National Institute of Diabetes and Digestive and Kidney Diseases suggests to USA Today that the study's results support the CDC's recommendation to wear a mask. Although many governments have ordered or urged residents to don masks, it's not clear how well they prevent the transmission of the coronavirus. N95 masks filter 95 percent of particles larger than 0.3 μm (according to an early report describing COVID-19 infections, the SARS-CoV-2 viral particles range from 0.6 to 0.14 μm in diameter). For other types of masks, that efficiency varies considerably. An analysis of materials used in home-made masks found a wide range in their ability to block particles about 0.1 μm in size, from just 7 percent for two layers of quilters' cotton to 84 percent for a mask made from a nanofiber layer paired with cotton ripstop.

A study published in April that asked patients to cough into either surgical masks or cotton masks found neither "effectively filtered SARS–CoV-2 during coughs by infected patients." Other researchers have found that masking policies correlate with fewer COVID-19 cases, and estimate that widespread uptake of the use of masks could considerably limit infections.

A video illustrating the study "Small saliva droplets can remain airborne in an enclosed space for more than 10 minutes, NIDDK study shows" at https://www.youtube.com/watch?v=axmRl6P6xyw)

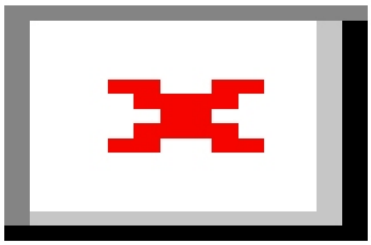
Health

https://www.technologynetworks.com/informatics/news/designing-vaccines-using-artificial-proteins-334877?utm_campaign=NEWSLETTER_TN_Breaking%20Science%20News&utm_source=hs_email&utm_medium=email&utm_content=87986690&_hsenc=p2ANqtz--0rfTHzFameJbAVaHjXCx2uZ_yV7x1M2-gqE6cYIDj-JEUfzWyptz31mAoA-JWVFGIKQkpYyRnE1rDXBrUA28xGbUWkB_frRIF--mwfuA6JvoeRjg&_hsmi=87986690

Designing Vaccines Using Artificial Proteins

May 15, 2020 | Original story from EPFL

Vaccines are one of the most effective interventions to prevent the spreading of infectious diseases. They trigger the immune system to produce antibodies that protect us against infection. However, we still lack efficacious vaccines for many important pathogens, like the flu or dengue fever. "When a vaccine doesn't work well, we tend to think that it's because the antibodies produced are not protective," says Bruno Correia, a professor at the Laboratory of Protein Design & Immunoengineering (LPDI) in EPFL's School of Engineering. "It's usually because our immune system is simply making the wrong type of antibodies". Scientists in Correia's lab have now developed a strategy to design artificial proteins that very precisely instruct the body's immune system which antibodies to produce. The study has been published in the journal *Science*.



EPFL scientists have developed a new computational approach to create artificial proteins, which showed promising results in vivo as functional vaccines. This approach opens the possibility to engineer safer and more effective vaccines. Credit: © 2020 EPFL

A disease without a vaccine

Correia's team focused on the design of de novo proteins that can result in a vaccine for the respiratory syncytial virus (RSV). RSV causes serious lung infections and is a leading cause of hospitalization in infants and the elderly, "Despite several decades of research, up to today there is still no vaccine or cure for respiratory syncytial virus," says Correia.

The artificial proteins were created in the laboratory and then tested in animal models, and triggered the immune system to produce specific antibodies against weak spots in RSV. "Our findings are encouraging because they indicate that one day we will be able to design vaccines that target specific viruses more effectively, by prompting the immune system to generate those particular antibodies," says Correia. "We still have a lot of work ahead to make the vaccine we developed more effective - this study is a first step in that direction."

Methods for creating de novo proteins have applications well beyond immunology - they can also be used in various branches of biotechnology to expand the structural and functional range of natural proteins. "We can now use the protein design tools to create proteins for other biomedical applications such as

protein-based drugs or functionalized biomaterials," concludes Sesterhenn.

Reference: F. Sesterhenn, C. Yang, J. Bonet, J. T. Cramer, X. Wen, Y. Wang, C. Chiang, L. A. Abriata, I. Kucharska, G. Castoro, S. S. Vollers, M. Galloux, E. Dheilly, S. Rosset, P. Corthésy, S. Georgeon, M. Villard, C. A. Richard, D. Descamps, T. Delgado, E. Oricchio, M. Rameix-Welti, V. Más, S. Ervin, J. F. Eléouët, S. Riffault, J. T. Bates, J. P. Julien, Y. Li, T. Jardetzky, T. Krey & B. E. Correia. *De novo protein design enables the precise induction of RSV-neutralizing antibodies.* Science

https://protect2.fireeye.com/url?k=9f97de35-c3c3c749-9f97ef0a-0cc47adc5fa2-a0f9783a25da799f&u=http://outbreaknewstoday.com/maine-lyme-disease-providers-are-already-reporting-cases-in-2020-and-the-number-will-rise-as-we-enter-the-summer-months-74705/

Maine Lyme disease: 'Providers are already reporting cases in 2020, and the number will rise as we enter the summer months'

The Maine CDC reported a record more than 2,000 Lyme disease cases in 2019 and officials announce during this Lyme Disease Awareness Month that providers are already reporting cases in 2020, and the number will rise as we enter the summer months. This has prompted health officials to advise the public to be aware of tick bites that transmit not only Lyme disease, but also anaplasmosis (a bacterial disease), babesiosis (a parasitic disease) and Powassan virus. Individuals bitten by the deer tick can acquire more than one infection. Many individuals and families are spending more time outdoors during the COVID-19 pandemic. This may put them at increased risk of exposure to tickborne pathogens. Symptoms of anaplasmosis include: fever, headache, malaise and body aches. Symptoms of babesiosis include: extreme fatigue, aches, fever, chills, sweating, dark urine, and possibly anemia. Symptoms of Powassan include: fever, headache, vomiting, weakness, confusion, loss of coordination, speech difficulties, seizures, and encephalitis and meningitis. In 2019, providers reported 685 cases of anaplasmosis, 138 cases of babesiosis and two cases of Powassan.
by News Desk
May 14, 2020

https://www.eurekalert.org/pub_releases/2020-05/wrai-nes051420.php

New evidence suggests malaria cycles are innate to the organism

Scientists from the Walter Reed Army Institute of Research joined partners at Duke University, FAU and Montana State University to publish a study providing clear evidence that malaria's characteristic cycle of fever and chills is a result of the parasite's own influence - not factors from the host. What regulated that cycle, the result of parasites bursting out of infected red blood cells in sync then re-colonizing new red blood cells, has been studied since at least the 1920s. In the current study, evidence challenges the central dogma that a cyclic pattern of parasite growth is solely dependent on cues from the host. Though the specific signals utilized remain to be elucidated, these findings raise the exciting possibility of disrupting this cycle as an antimalarial strategy.
Walter Reed Army Institute of Research
14-May-2020

ASF

https://www.thehindu.com/news/national/other-states/wild-boars-die-in-arunachal-as-african-swine-fever-kills-15000-pigs-in-assam/article31590372.ece

Wild boars die in Arunachal as African swine fever kills 15,000 pigs in Assam

As Assam prepares for mass culling to check the spread of African swine fever (ASF) that has killed almost 15,000 domesticated pigs, adjoining Arunachal Pradesh fears that the "foreign" disease may have "gone wild". This is the 1st time that ASF has been reported in India. Assam claims the disease came from China, where almost 60% of pigs have died since 2018. Officials in Arunachal Pradesh's East Siang district said 6 carcasses of wild boars including 3 piglets were found in a community forest at Lidor Soyit

upstream of Sille River. There have been unverified reports of several wild boars dying from an unknown disease in East Siang and Upper Siang districts, but the recovery of the carcasses - some partly eaten by scavengers - on Thursday made officials wary of the possibility of ASF having spread from scores of domestic pigs that have died in the State over the last 2 months. "A team of forest, veterinary officials and experts trekked about 10 km to locate the carcasses after receiving information from the villages. We suspect ASF is the cause of death but will have to await confirmation after we send blood and tissue samples to labs outside," Divisional Forest Officer (Territorial) Tashi Mize told The Hindu on Friday. Some of the carcasses appeared to have been consumed by porcupines. "ASF is confined to porcine creatures, so other animals are unlikely to be affected. But the possibility of becoming carriers of the virus could affect the wild boar population," he said.
Special Correspondent I Guwahati I may 15, 2020 13:39 IST I Updaated: May 15, 2020 14:10 IST

https://www.ndtv.com/india-news/assam-prepares-for-culling-as-african-swine-fever-kills-nearly-15-000-pigs-2229043

Assam "Prepares" For Culling As African Swine Fever Kills Nearly 15,000 Pigs

The BJP-led government is preparing for mass culling; it has demanded from the centre compensation to farmers who rear pigs. The ASF outbreak has killed nearly 15,000 pigs in Assam and is spreading in new areas despite preventive measures taken by the state government. The state government has issued a high alert in 10 affected districts. It has asked the centre to provide one-time financial package of Rs 144 crore for the farmers who rear pigs. "We are deeply concerned due to this growing crisis in Assam. The deaths are increasing every day. Now, 10 districts have been affected already. 14,919 pigs have died and the number is on the rise. We have alerted the Government of India as well," Assam Animal Husbandry Minister Atul Bora told NDTV. "Initially, 6 districts were affected but now it has spread to 10 districts out of 33, despite the fact that we took all possible steps (for prevention), but it is spreading to new areas. " We had taken biosecurity measures to make sure it doesn't spread further. We declared that area under 1-km radius (of affected areas) as containment zone, and 10-km radius as surveillance zone," the minister added. The Assam government has alerted all wildlife reserves in the state regarding the disease.
Written by Ratnadip Choudhury I Updated: May 15, 2020 08:28 am IST

https://protect2.fireeye.com/url?k=fd00f14c-a154e830-fd00c073-0cc47adc5fa2-e1faf52d0072a066&u=https://asian-agribiz.com/magazines/asian-pork/asf-update/

Concentration, contact time key to effective disinfectant use

15 May 2020 – The correct concentration and the length of time a disinfectant is in contact with a surface will better determine its effectivity against ASF and other pathogens. Pariwat Poolperm, a swine consultant from Thailand said at a webinar titled Biosecurity: The First Step to Success in Pig Farming that for disinfectants to work against ASF, they must be in contact with surfaces for at least 15-20 minutes. Dr Pariwat also said that not all disinfectants are the same. Pig producers should follow the recommended concentrations for each disinfectant and not overconcentrate or overdilute.

ASF remains a big problem in Asia

14 May 2020 – While the Covid-19 pandemic and its effects have overshadowed ASF in the news, the deadly pig virus continues to be a big problem for Asian pig producers. China and Vietnam are both working on recovery programs, but threats of ASF reinfection and the lack of breeding pigs hamper restocking efforts. Both countries have seen a spike in the number of cases in the last two weeks. In the Philippines, industry observers note that while fewer cases are being reported, a big reason for this is the movement restrictions imposed due to the pandemic. "The virus remains, and it will take some time before it can be eradicated, if at all," an industry practitioner told *Asian Agribiz*. "It is imperative the governments and local pig industries collaborate not just to control ASF spread, but also how to rebuild their industries. Pork will continue to be the preferred meat at least in China, Vietnam, and the Philippines.

Philippines reports new ASF outbreaks

13 May 2020 – The Philippines has 58 new ASF outbreaks in Luzon, the Philippine Bureau of Animal Industry (BAI) reported to the World Organization for Animal Health. The country culled another 11,074 pigs, bringing the total as of May 4 to 282,899. The outbreaks were traced to illegal transport of animals and swill feeding. An industry practitioner told *Asian Agribiz* that while the country continues its fight against ASF, the government and industry players must begin rebuilding efforts. Unfortunately, he said, nothing concrete has been made, adding that even the country does not have enough ASF test kits.

COVID-19 Webinars

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https://gallery.mailchimp.com/18fe6f8f25ec0bc7509e65e97/images/20c38cdd-bf8e-4932-9fac-481751e2ba50.gif

Wastewater Monitoring for COVID-19 Disease Surveillance

May 27, 11-1:30 PM EDT

Researchers around the world are currently exploring ways that wastewater samples can help us understand the spread of COVID-19 at a community scale. This webinar will feature a panel discussion with experts on public health and wastewater monitoring to discuss the potential value of data on SARS-CoV-2 in wastewater to inform public health management and what is needed to build a useful surveillance network

Register for Webinar

David Sedlak, UC Berkeley, Moderator

Panelists:

- Vincent Hill, Centers for Disease Control and Prevention
- Barry Liner, Water Environment Federation
- Gertjan Medema, KWR Water Research Institute, Holland
- Nicole Rowan, Colorado Department of Public Health and Environment
- Krista Wigginton, University of Michigan

Key questions for presentations and discussions:

- How can data on SARS-CoV-2 in wastewater be useful as an indicator of COVID-19 cases in a locality?
- How has wastewater disease surveillance been useful with control of other viral pathogens? What problems have been encountered and what can we learn from these experiences for COVID-19?
- What is the capacity of current wastewater monitoring technologies for detecting COVID-19 disease outbreaks (i.e., what is the recovery efficiency, detection rate relative to the loading rates)? What are the costs?
- What technical challenges need to be addressed before this strategy can be broadly implemented as a robust tool? What are the highest priority needs?
- Where might such surveillance be appropriate?
- Is this a useful investment? If so, what would the nation need to do to rapidly invest in a useful surveillance network?

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Reopening after COVID-19: Ensuring Safe Water Supplies at the Building Scale

May 27, 2:30-4:30 PM EDT

Register for Webinar

The COVID-19 pandemic has led to sweeping closures of public buildings, businesses, offices, and schools. With minimal water use, water quality in building plumbing can degrade and foster the growth of the bacteria that cause Legionnaires' disease, a severe form of pneumonia. Legionnaires' disease incidence has been increasing over the past few decades, and without appropriate water management actions, cases could increase sharply after schools and workplaces reopen. A panel of experts will discuss the state of knowledge for building water management to protect public health when reopening after COVID-19.

Ruth Berkelman, Emory University, moderator

Panelists:

- Chris Boyd, Building Water Health Program, NSF International
- David Krause, HealthCare Consulting and Contracting
- Andrew Whelton, Purdue University

Key questions for presentations and discussions:

- What are the water quality issues and related health risks associated with reopening buildings or larger office parks/campuses that have been shuttered or minimally used during the COVID-19 outbreak?
- Are there actions that could (should) be taken now to minimize current or future risk of water-related health risks?
- What guidelines are available for building owners and utilities? What are the responsibilities of various entities?
- What issues about best practices for water management remain unresolved relative to building recommissioning?
- What issues need to be addressed to improve implementation of current guidelines (e.g., communication, training)?
- https://protect2.fireeye.com/url?k=f17f3d3f-ad2b2443-f17f0c00-0cc47adc5fa2-7834c472a696ac40&u=https://mailchi.mp/nas/register-for-upcoming-webinars-earth-and-life-sciences-and-covid-19?e=a7a58840e6

Air Quality, Climate Variability, and COVID-19

May 28, 1:00-3:00 PM EDT

As the global community has raced to understand the COVID-19 pandemic, questions have arisen about how the virus is carried in aerosols, exposure risk in indoor and outdoor environments, how the changes in seasons or climate conditions might affect transmission, and how exposure to air pollution might affect mortality from the virus. This webinar will feature recent atmospheric, climate, and epidemiological research that is contributing to our understanding of the virus transmission, as well as a discussion of how agencies across the federal government are building upon existing efforts to address linkages between environmental conditions and health to understand the pandemic.

This webinar is an open session of the Board on Atmospheric Sciences and Climate spring 2020 meeting.

Register for Webinar

Coronavirus

https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6

From CSSE Dashboard at Johns Hopkins University: 15 May 2020 at 3:32 PM EDT

Total Confirmed: 4,516,360
Global Deaths: 306,051
US deaths: 86,851
Total Test Results in US: 10,341,775

Confirmed Cases by Country/Region/Sovereignty:
1,432,045 US
262,843 Russia
238,003 United Kingdom
230,183 Spain
223,885 Italy
212,198 **Brazil**
179,630 France
175,233 Germany
146,457 Turkey
116,635 Iran
85,784 India
84,495 Peru
84,031 China
75,667 Canada

https://www.washingtonpost.com/politics/2020/05/14/3-takeaways-coronavirus-whistleblower-rick-brights-testimony/?pwapi_token=eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJjb29raWVuYW1lIjoid3BfY3J0aWQiLCJpc3MiOiJDYXJ0YSIsImNvb2tpZXZhbHVlIjoiNWU3YmE4NThhZTdlOGE1OTQ4ODk2NzkzIiwidGFnIjoiNWViZGFiZmZmZTFmZjY1NGMyZGQxYTY5IiwidXJsIjoiaHR0cHM6Ly93d3cud2FzaGluZ3RvbnBvc3QuY29tL3BvbGl0aWNzLzIwMjAvMDUvMTQvMy10YWtlYXdheHMtY29yb25hdmlydXMtd2hpc3RsZWJsb3dlci1yaWNrLWJyaWdodHMtdGVzdGltb255Lz91dG1fY2FtcGFpZ249d3BfdG9feW91cl9oZWFsdGgmdXRtX21lZGl1bT1lbWFpbCZ1dG1fc291cmNlPW5ld3NsZXR0ZXImd3Bpc3JjPW5sX3R5aCZ3cG1rPTEifQ.zDzXu3HqLZZn2jf9oP1z3ihfUQWvxFCFIYpZmt7xs6A&utm_campaign=wp_to_your_health&utm_medium=email&utm_source=newsletter&wpisrc=nl_tyh&wpmk=1

5 takeaways from coronavirus whistleblower Rick Bright's testimony

By Aaron Blake
May 14, 2020 at 1:38 p.m. EDT

A Trump administration vaccine expert who says he was removed from a key role for raising concerns about the federal government's coronavirus response — and its promotion of unproven drugs to treat the virus — testified Thursday before Congress.

Rick Bright became a whistleblower after being removed from his post as director of the Biomedical Advanced Research and Development Authority (BARDA), which falls under the Department of Health and Human Services.

Here are some takeaways from Bright's testimony.

1. ‘Lives were lost’ because of ‘inaction,' unheeded warnings

Bright said that early inaction by the government — particularly in the Department of Health and Human Services — had, in fact, cost lives. “That inaction has put a lot of lives at risk in our front-line health-care workers” Bright said. Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd. such as masks, but that it went unheeded for months after he was informed that officials didn’t think there was a “critical shortage” of masks. “I pushed that forward to the highest levels I could in HHS and got no response,” Bright said. “From that moment, I knew that we were going to have a crisis for our health-care workers because we were not taking action. We were already behind the ball. That was our last window of opportunity to turn on that production to save the lives of those health-care workers, and we didn’t act." Bright added that even today, the country is dealing with the consequences of that early negligence and that health-care workers are still more at risk than they should be. “Lives were endangered, and I believe lives were lost,” Bright said. “And not only that: We were forced to procure these supplies from other countries without the right quality standards. So even our doctors and nurses in the hospitals today are wearing N95-marked masks from other countries that are not providing the sufficient protection that a U.S.-standard N95 mask would provide them. Some of those masks are only 30 percent effective. Therefore, nurses are rushing in the hospitals thinking they’re protected, and they’re not.”

2. Administration pushed vastly expanded use of unproven drugs

One of Bright’s key claims is that he was moved to another post after raising objections to the administration pushing the use of the malaria drugs chloroquine and hydroxychloroquine to treat coronavirus. The administration allowed for the emergency use of the drugs to treat the virus, though later studies — which have yet to be peer-reviewed and were not randomized — suggest that the use of the drugs don’t help and can, in fact, have negative consequences. The FDA has now warned about the dangers of using the drugs. “My concerns were escalated when I learned that leadership in the Department of Health and Human Services were pushing to make that drug available outside of this emergency use authorization, to flood New York and New Jersey with this drug,” Bright said. Bright has cited his skepticism of the drugs for his removal from his post and said the administration wanted to make it easier for people to use them without extensive medical supervision — even people who might not even have the virus. “I believe part of the removal process for me was initiated because of a pushback that I gave when they asked me to put in place an expanded access protocol that would make chloroquine more freely available to Americans that were not under the close supervision of a physician and may not even be confirmed to be infected with the coronavirus,” Bright said.

3. Pessimism about 12- to 18-month timeline for vaccine

President Trump has been effusively optimistic about not just treatments such as the chloroquines but about the timeline for a vaccine for the virus. Shortly before Bright’s testimony Thursday, Trump even said, “I think we’re going to have a vaccine by the end of the year.” That’s even more optimistic than the 12- to 18-month timeline that medical experts such as Anthony S. Fauci, head of the National Institute of Allergy and Infectious Diseases, have said is realistic for the vaccine. But Bright said that even a year to year-and-a-half timeline might also be overly optimistic. “I still think 12 to 18 months is an aggressive schedule, and I think it’s going to take longer than that to do so,” Bright said.

4. We don’t have ‘a single point of leadership’ or ‘master plan’

As Trump increasingly criticized Fauci, Bright said the government needs to have more regard for it scientists -- and a more consistent message from the top. He said that right now the response has been hampered by not having a “single point of leadership.” “We need to install and empower leadership, and we need to unleash the voices of the scientists in our public health system in the United States so they can be heard and their guidances need to be listened to,” Bright said. “And we need to be able to convey that information to the American public so they have the truth about the real risk and dire consequences of this virus. He added: "And we don’t have a single point of leadership right now for this response, and we don’t have a master plan for this response. So those two things are absolutely critical.” Fauci has said in recent days that states that move forward with reopening their economies before meeting the guidelines from the Centers for Disease Control and Prevention are risking new outbreaks – which could set back the entire response.

5. Azar, Republicans cast Bright as a malcontent skipping work

As Bright offered one of the most significant rebukes of the federal coronavirus response to date, Republicans on the committee and members of the Trump administration sought to undercut his testimony and character. Health and Human Services Secretary Alex Azar, in particular, had strong words for Bright. “Everything he is complaining about was achieved,” Azar said while standing next to Trump on the White House lawn. “Everything he talked about was done. He says he talked about the need for respirators; we procured respirators under the president’s direction.” Azar echoed Republicans in the hearing who questioned why Bright has been absent from his new posting - a narrower one focused on testing and vaccines at the National Institutes of Health — in recent weeks. “While we’re launching Operation Warp Speed,” Azar said, “he’s not showing up for work to be part of that.” Bright said that he has been on leave while dealing with “very high blood pressure” - owing in part to the stress from recent events. “I had a conversation with my physician about my hypertension and how we’ve been managing it over the last 3 weeks because this has been very stressful to be removed suddenly without explanation from my role and position as a life change for me,” Bright said.

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Global COVID-19 death toll exceeds 300,000

The number of COVID-19 deaths today passed the 300,000 mark, as another city in China went on lockdown to prevent a resurgence and more countries in Europe learned that low numbers of people were exposed in their outbreaks, meaning many are vulnerable to a second wave. Deaths climbed to 301,160 today, with cases rising to 4,413,597, according to the Johns Hopkins online dashboard.
Lisa Schnirring | News Editor | CIDRAP News| May 14, 2020

New cluster triggers new lockdown in China

The city of Jilin in northeastern China's Jilin province went on partial lockdown yesterday after a spurt of cases, which now total 21, the *South China Morning Post* reported. Officials closed schools, restricted train and bus service, and banned gatherings after 6 cases new cases were confirmed on May 12. Anyone who wants to leave the city, home to about 4M people, must be tested for COVID-19 48 hours before departure.

The first infection in the cluster was reported last week, linked to a laundry worker from Shulan, a smaller city in Jilin province. So far, investigators haven't determined how she contracted the virus. China has taken aggressive steps to prevent a resurgence, including an earlier lockdown in the city of Suifenhe on the border with Russia, and is now launching an effort to test all Wuhan residents after a cluster of cases was detected in a residential complex.

Today the country reported 3 new cases (all local -2 from Liaoning province also in northeastern China and 1 in Jilin province). In its daily update, the National Health Commission also reported 12 more asymptomatic cases, all but one of them local.

Elsewhere in Asia, Japan's Prime Minister Shinzo Abe today lifted the state of emergency early for 39 of 47 prefectures, *Kyodo News* reported. The emergency order was originally slated to expire at the end of May. However, orders for the cities of Tokyo and Osaka, home to about 50% of Japan's population, will remain in place. Abe said experts will review the situation again on May 21.

South Korea today reported 29 more cases, 20 of them linked to nightclub-related clusters in Seoul, the Korea Centers for Disease Control and Prevention said today.

Studies: Many in France, Spain still vulnerable

As major outbreaks in France and Spain decline, researchers are using seroprevalence studies to gauge how extensively populations were exposed to the virus and help inform planning for potential 2nd waves of pandemic activity.
In France, a study by Pasteur Institute researchers published in *Science* yesterday estimated that 4.4% of the country's population were infected by the COVID-19 virus, Reuters reported. The estimates were higher, between 9% and 10%, for hard-hit areas, which included eastern France and Paris.

The results suggest that without a vaccine, herd immunity won't be enough to avoid a 2nd wave as lockdown steps ease. Pasteur scientists also estimated the 55-day lockdown dramatically dropped the outbreak's reproduction number from 2.0 to 0.67.

Meanwhile, preliminary serosurvey results from Spain suggests 5% of the population was exposed to the virus, Reuters reported, citing Fernando Simon, the country's head of health emergencies.

Lockdown for Chile's capital

Chile's government yesterday ordered a lockdown for its capital Santiago, which has a population of 7M, after experiencing a 60% increase in COVID-19 infections in a 24-hour period, the *Santiago Times* reported. As the country's main hot spot, Santiago has 80% of Chile's cases, which today increased by 2,659 reported cases, for a total of 37,040.

In other global developments:

- Hours after Sanofi's chief executive officer was quoted as saying the US would get first access to its COVID-19 vaccine, the company walked back the statement and said when ready, it will be available in all countries, the Associated Press Sanofi is based in France, and CEO [illegible] Hudson's comments provoked a strong reaction from the French government. The US-based BARDA supported the development of the vaccine.
- A typhoon that struck the Philippines' eastern provinces today sent people to evacuation centers, which was complicated by COVID-19 distancing measures, Reuters reported. One city gave hundreds of evacuees face masks to wear before they were allowed in evacuation shelters, and the local officials added 2 schools as temporary shelters to better accommodate physical distancing.
- Malaysia said it will ease a ban on prayers in mosques starting tomorrow, ahead of the Eid festival, Reuters reported. Congregations will be limited to 30 or fewer. Last week the country started reopening businesses.

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Dozens of coronavirus drugs are in development — what happens next?
Drug manufacturers face supply-chain weaknesses and sourcing issues as they ramp up complex production processes to meet global demand. The world was waiting for any sign of hope in countering the COVID-19 pandemic when researchers released the 1st encouraging drips of data from a large clinical trial of the antiviral remdesivir last month. The drug, they said, reduced the time to recovery from COVID-19 by a few days - not enough to be branded a 'cure', but hopefully enough to relieve some pressure on overwhelmed health-care systems. The discovery of remdesivir's potential focused attention on the next problem in the development of COVID-19 therapeutics: ramping up complex manufacturing processes to address a global pandemic. It is likely to be one of the biggest drug-making challenges the world has ever faced. Some of the therapies being tested against COVID-19 are novel and difficult to produce. Others - even if they are relatively simple compounds that have been in use for decades - face complications such as supply-chain weaknesses as drug-makers try to scale up production. A major rate-limiting step is going to be manufacturing," says Ezekiel Emanuel (bioethicist at the University of Pennsylvania in Philadelphia). "Getting up to hundreds of millions of doses is hard." Researchers are working furiously to test a wide

variety of potential COVID-19 treatments. Those therapies span the gamut of complexity, from familiar generic medications such as the malaria drug hydroxychloroquine, to experimental small molecules like remdesivir, which was previously trialled against the Ebola virus. Scientists are also exploring antibody treatments that tamp down the body's immune response when it becomes destructive, which happens in some critically ill coronavirus patients. Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.tion of drugs - each with a distinct, even if relatively minor, impact on the disease - to tame the novel CoV. Each treatment will face different challenges when scaling up production, says Stephen Chick, who studies health-care management at INSEAD in Fontainebleau, France. "If it's successful and the technology is then adopted, you need to be prepared to deliver," says Chick. "And if you're not, you're in trouble."
Nature
Heidi Ledford
14 May 2020

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COVID-19 Update: JBS/Smithfield testing, new outbreaks
JBS will partner with TX state health officials to test the roughly 3,000 workers at its beef plant north of Amarillo. According to a report from the Texas Tribune, state officials said JBS initially rejected an offer for testing; company spokesperson Nikki Richardson stated the company were unaware of such testing being offered. The state previously dispatched personnel from its Military Department and Division of Emergency Management to run tests on the 3,500 workers at a nearby Tyson Food plant. Meanwhile, COVID-19 continues to spread among workers at JBS' beef plant in Greeley, CO. According to state data cited by KDVR, the number of confirmed cases at the plant is now 316, up from 280 earlier in the week; 6 plant employees have died, along with 1 employee from JBS' corporate offices. JBS began testing all plant workers on Monday.
By Peter Thomas Ricci on 5/15/2020

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OSHA treads lightly on COVID-19 complaints: Politico
The Department of Labor's OSHA has conducted few investigations out of the thousands of COVID-19 complaints it has received in the last several weeks, and has issued no citations, according to a report by Politico. The Beltway newsletter reported that the agency has fielded more than 3,800 complaints related to companies not adequately protecting workers from contracting the virus in crowded workplaces, but as of May 13, has opened only 281 inspections and issued no citations. OSHA, often in conjunction with the CDC, has issued a series of guidance documents on measures companies should take on employees' behalf, but has issued no directives or mandatory standards that might trigger a violation. The agency contends more regulation is unnecessary because of the enforcement options already available to it.
By Lisa M. Keefe on 5/15/2020

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Dover Air Force Base plays role in transport isolation systems for COVID-19 patients
In the ongoing fight against COVID-19, two Transport Isolation Systems, along with trained medical Airmen, arrived at Dover Air Force Base, Delaware late last month. Dover will serve as the East Coast hub for TIS decontamination in the US, thanks to its strategic location, assets and capabilities. Airmen will support and decontaminate TIS units whose aircrews are conducting COVID-19 positive patient transport missions from Africa, Europe and the Middle East to the U.S. The team is composed of members of 6 different units from across the U.S. The TIS emerged as a result of mobility requirements identified during

Operation United Assistance in support of the Ebola outbreak in 2014. This system was designed to provide in-flight medical care while containing any infectious disease, minimizing the risk to aircrew, medical attendants and the airframe. "We have two TIS modules here, because that is a standard configuration ," said Maj. Mark Dellinger, 36th Aeromedical Evacuation Squadron training flight commander. "Each has the capability of carrying 4 patients." Medical personnel assigned to the TIS mission receive multi-day training, including familiarization with the system, patient loading/unloading procedures, donning and doffing PPE, simulated in-flight patient care and infection control procedures. The TIS enables the Department of Defense to transport patients afflicted with or suspected of an infectious disease like COVID-19 from overseas to the US, providing for an expedient recovery of its personnel, as well as preventing the spread of COVID-19 to aircrews. As part of the whole-of-government response to COVID-19, the TIS mission at Dover AFB will continue for as long as required.
By Delaware Business Now
May 14, 2020

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Coronavirus (COVID-19) Update: FDA Informs Public about Possible Accuracy Concerns with Abbott ID NOW Point-of-Care Test

FDA News Release
For Immediate Release:
May 14, 2020
Today, the U.S. Food and Drug Administration is alerting the public to early data that suggest potential inaccurate results from using the Abbott ID NOW point-of-care test to diagnose COVID-19. Specifically, the test may return false negative results. "We are still evaluating the information about inaccurate results and are in direct communications with Abbott about this important issue. We will continue to study the data available and are working with the company to create additional mechanisms for studying the test. This test can still be used and can correctly identify many positive cases in minutes. Negative results may need to be confirmed with a high-sensitivity authorized molecular test," said Tim Stenzel, M.D., Ph.D., director of the Office of In Vitro Diagnostics and Radiological Health in the FDA's Center for Devices and Radiological Health.

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DoD, HHS award contract enabling prefilled syringes for future COVID-19 vaccine

The U.S. DoD and HHS awarded a $138M contract to ApiJect Systems America for Project Jumpstart and RAPID USA, 2 programs designed to expand U.S. production of medical-grade injection devices. The contract will create a U.S.-based supply chain for prefilled syringes by using Blow-Fill-Seal (BFS) aseptic plastics manufacturing technology, suitable for combatting COVID-19 when a vaccine becomes available. By upgrading existing domestic BFS facilities with installations of filling-line and technical improvements, the project will enable the manufacture of more than 100M prefilled syringes for distribution across the US by year-end 2020.
Thursday, May 14, 2020 by Dave Kovaleski
Homeland Preparedness News

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China will have to answer questions about COVID-19, says Trudeau

Countries around the world, including Canada, have questions about the origins of the COVID-19 pandemic and about China's behaviour during the early days of the outbreak that need to be asked "in

the coming months," Prime Minister Justin Trudeau said Wednesday. Speaking at his daily briefing in Ottawa, Trudeau was responding to a question about recent comments made by Canada's ambassador to China Dominic Barton. The Globe and Mail newspaper reported Wednesday that Barton told a private session of the Canadian International Council last week that China's conduct during the pandemic is damaging its own global "soft power." Earlier this month, The Associated Press reported that U.S. officials believe China covered up the extent of the CoV outbreak - and how contagious the disease is - to stock up on medical supplies needed to respond to it. The revelation comes as the Trump administration has intensified its criticism of China, with Secretary of State Mike Pompeo saying that that country was responsible for the spread of disease and must be held accountable.
Radio Canada International
By Levon Sevunts
Posted: Wednesday, May 13, 2020 13:22

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Economists: Lack of COVID-19 preparedness in line with previous findings
The delayed response of U.S. policymakers to the COVID-19 pandemic comes as no surprise to University of Wyoming Professor Jason Shogren and several of his economist colleagues at other institutions. That's because the threat of a catastrophic pandemic in 2014 - the West African Ebola outbreak - did little to change the perception of U.S. citizens regarding the importance of preparing for future outbreaks, according to research conducted by Shogren and his colleagues. "The COVID-19 pandemic has revealed that the U.S. was as unprepared as experts feared, given the responses to the Ebola scare in 2014," the economists wrote in an article that has been accepted by EcoHealth, an international journal that addresses health and sustainability challenges, including public health practices. "This lack of attention to pandemic threats is especially disturbing given the current COVID-19 and any potential future pandemics that may also have very high transmission rates, including transmission before individuals become symptomatic." Joining Shogren in the research were fellow UW economists David Aadland, David Finnoff and Alexandre Skiba, along with Jamison Pike and Peter Saszak, of the Ecohealth Alliance; and Kip Viscusi, from Vanderbilt University. Before and after the 2014 Ebola outbreak - which killed thousands of people in West Africa, harmed millions of people in that region and generated significant media coverage in the US - the researchers surveyed U.S. citizens to see if their concerns about a pandemic threat had increased, relative to risks from environmental disasters and terrorism. They were surprised to find relative complacency regarding the threat of a pandemic among the hundreds of people surveyed in 2015. The findings were unexpected because long-standing evidence has shown that people's perceptions usually are distorted toward the most recent news items.
University of Wyoming
14-May-2020

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K-State infectious disease scientist offers road map for future COVID-19 research
Researcher investigates potential therapeutic options at Biosecurity Research Institute. There are many unanswered questions about COVID-19. A Kansas State University infectious disease scientist and collaborators are offering a possible research road map to find the answers. "We need to address these challenges in a scientific manner - in a proactive manner, not in a reactive manner," said Richt, also the director of the university's Center of Excellence for Emerging and Zoonotic Animal Diseases, known as CEEZAD. "With COVID, every (b) something is new - what was correct yesterday, could be wrong today." Because of the rapid change of knowledge related to CoV, Richt and his collaborators wrote the article to stress importance of studying the ways that COVID-19 could spread between humans and animals. The scientists say that research should focus in several areas, including: The potential for companion animals, such as cats and dogs, to carry the virus; the economic and food security effects if the virus can spread among livestock and poultry; national security areas, especially among service

animals such as dogs that detect narcotics or explosives because COVID-19 is known to affect smell and cause hyposmia or anosmia.
Kansas State University
14 May 2020
Manhattan, KS

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Nearly quarter of a billion people in Africa will catch coronavirus and up to 190,000 could die

Health systems will struggle to cope without steps to stop spread of the virus, warn WHO experts. Nearly a quarter of a billion people across Africa will catch CoV during the1st year of the pandemic, and up to 190,000 of them will likely die, unless urgent action is taken to control the infection, reveals a predictive modelling study, accepted for publication in BMJ Global Health. These figures indicate a lower rate of exposure and viral spread than in other parts of the world, say the researchers. But the associated rise in hospital admissions, care needs, and impact on other health conditions in the region would severely strain limited health resources and worsen the impact of the virus, they warn. The WHO Africa region includes 47 countries, but excludes Djibouti, Egypt, Libya, Morocco, Somalia, Sudan and Tunisia. As of April 29, 45 countries had reported cases of SARS-CoV-2. Many mathematical models used to predict transmission and death rates in Africa have not adequately incorporated characteristics unique to the region and its individual countries. But these social, developmental, environmental and population health factors nevertheless affect the spread of the virus and the severity of COVID-19, explain the researchers.
BMJ
14-May-2020

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The newly emerged coronavirus did not spill over from scaly anteaters

Mammals known as scaly anteaters are natural hosts of coronaviruses but are not likely the direct source of the recent outbreak in humans, according to a study published May 14 in the open-access journal PLOS Pathogens by Jinping Chen of the Guangdong Institute of Applied Biological Resources, and colleagues. As noted by the authors, the large-scale surveillance of coronaviruses in these animals, called pangolins, could improve our understanding of the spectrum of coronaviruses circulating in the wild, and could help prevent and control emerging infectious diseases.
PLOS
14-May-2020

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Physicians brace for potential surge in COVID-19 cases

As health care workers begin to understand the scope of COVID-19 in their areas and how to respond to it, a new anxiety has set in: How long will the pandemic last? "The biggest stress is not knowing where we're going to go from here," Manu Jain, MD, pulmonary and critical care specialist at Northwestern Memorial Hospital, told Healio Primary Care. "Not knowing how this is going to evolve and how we're going to get back to any sense of normalcy is probably the most stressful part of this whole experience." Physicians on the front lines are often working long hours and caring for severely ill patients. Research published in JAMA Network Open showed high rates of depression (50.4%), anxiety (44.6%), insomnia (34%) and distress (71.5%) among health care workers in Wuhan, China, where the pandemic originated.
May 14, 2020
Healio

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COVID-19 disruption will lead to 28 million surgeries cancelled worldwide

Over 28 million elective surgeries across the globe could be cancelled as a result of the COVID-19 pandemic - leading to patients facing a lengthy wait for their health issues to be resolved, a new study reveals. The CovidSurg Collaborative has projected that, based on a 12-week period of peak disruption to hospital services due to COVID-19, 28.4 million elective surgeries worldwide will cancelled or postponed in 2020. The modelling study, published in the British Journal of Surgery, indicates that each additional week of disruption to hospital services will be associated with a further 2.4M cancellations. Led by researchers at the University of Birmingham, researchers collected detailed information from surgeons across 359 hospitals and 71 countries on plans for cancellation of elective surgery. This data was then statistically modelled to estimate totals for cancelled surgery across 190 countries (attached). The researchers project that worldwide 72.3% of planned surgeries would be cancelled through the peak period of COVID-19 related disruption. Most cancelled surgeries will be for non-cancer conditions. Orthopaedic procedures will be cancelled most frequently, with 6.3M orthopaedic surgeries cancelled worldwide over a 12-week period. It is also projected that globally 2.3M cancer surgeries will be cancelled or postponed.

University of Birmingham
14-May-2020

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Chest X-rays in emergency rooms can help predict severity of COVID-19 in young and middle-aged adults

Chest X-rays performed on young and middle-aged adults with COVID-19 when they arrive at the emergency room can help doctors predict who is at higher risk of severe illness and intubation, Mount Sinai researchers report. The first-of-its kind study, published in the May 14 issue of Radiology*, identifies which patients may need to be hospitalized and intubated based on the severity of CoV patterns in the lungs seen in the X-rays, using a unique scoring system to evaluate severity. The results could help physicians more quickly identify, triage, and aggressively treat these high-risk patients.*

The Mount Sinai Hospital / Mount Sinai School of Medicine
14 May 2020

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Hydroxychloroquine and azithromycin to treat COVID-19 clinical trial begins

A clinical trial has begun to evaluate whether the malaria drug hydroxychloroquine, given together with the antibiotic azithromycin, can prevent hospitalization and death from coronavirus disease 2019 (COVID-19). NIAID is sponsoring the trial, which is being conducted by the NIAID-funded AIDS Clinical Trials Group (ACTG). Teva Pharmaceuticals is donating medications for the study. The Phase 2b trial will enroll approximately 2,000 adults at participating ACTG sites across the US. Study participants must have confirmed infection with SARS-CoV-2, the virus that causes COVID-19, and be experiencing fever, cough and/or shortness of breath. The investigators anticipate that many of those enrolled will be 60 years of age or older or have a comorbidity associated with developing serious complications from COVID-19, such as cardiovascular disease or diabetes. Participants will be randomly assigned to receive short-term treatment with either hydroxychloroquine and azithromycin or matching placebos. People living with HIV and pregnant and breastfeeding women also are eligible to participate in the study. The first participant enrolled today in San Diego, CA.

By Press Release
May 14, 2020

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Treatment with interferon-α2b speeds up recovery of COVID-19 patients in exploratory study

Treatment with antivirals such as interferons may significantly improve virus clearance and reduce levels of inflammatory proteins in COVID-19 patients, according to a new study in Frontiers in Immunology. Researchers conducting an exploratory study on a cohort of confirmed COVID-19 cases in Wuhan found that treatment with interferon (IFN)-α2b significantly reduced the duration of detectable virus in the upper respiratory tract and reduced blood levels of interleukin(IL)-6 and C-reactive protein (CRP), two inflammatory proteins found in the human body. The findings show potential for the development of an effective antiviral intervention for COVID-19, which is an ongoing global pandemic caused by the novel CoV, SARS-CoV-2.

Frontiers
15-May-2020

https://protect2.fireeye.com/url?k=96fd49a1-caa950dd-96fd789e-0cc47adc5fa2-87b7d14066724e15&u=https://www.nature.com/articles/d41586-020-01430-5

Dogs caught coronavirus from their owners, genetic *analysis suggests*

But there's no evidence that dogs can pass the virus to people. *The first 2 dogs reported to have CoV probably caught the infection from their owners, say researchers who studied the animals and members of the infected households in Hong Kong. An analysis of viral genetic sequences from the dogs showed them to be identical to those in the infected people. Researchers suspected that the infection had been passed from the owners to the dogs, and the direct genomic link strongly supports that, says Malik Peiris, a virologist at the University of Hong Kong who led the study, which is published today in Nature[1]. The study showed no evidence that dogs can pass the infection to other dogs or people, but it is impossible to be certain in which direction the virus traveled "so we have to keep an open mind", says Peiris. Although the analysis confirms that people with COVID-19 can infect dogs, the probability of this happening is low, says Arjan Stegeman, a veterinary epidemiologist at Utrecht University in the Netherlands. In the study, only 2 of the 15 dogs who lived with infected people caught the disease. But other scientists say the possibility that pets might spread the virus between each other, and to people, needs to be properly investigated as part of managing future outbreaks.*

Nature
Smriti Mallapaty
14 May 2020

From: Dr. (b)(6)
Sent: Friday, May 15, 2020 3:59 PM
To: (b)(6)
Cc: Caneva, Duane (b)(6) (HMFP - Emergency Medicine) (b)(6) (DSHS) (b)(6) Dr. (b)(6) BOURNE, ALEXANDRA (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; Keim, MD MBA (b)(6) MD (b)(6) V.,M.D. (b)(6) S (b)(6) McGinn,

(b)(6) (b)(6) (b)(6) Kellermann (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) K. (b)(6) (b)(6) (b)(6) (b)(6) LLogandakar (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6) JtCIVtUSARMY (USA) (b)(6) (b)(6) (b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) (b)(6) (b)(6) Hassell, (b)(6) (Chris) (OS/ASPR/IO) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS (b)(6) WOLFE, HERBERT (b)(6) (b)(6) (b)(6) Marinissen, Maria (HHS/OS/OGA) <Maria.Marinissen@hhs.gov>; Sutter, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) Krohmer, Jon (NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine) (b)(6) You, Edward H. (WMD) (FBI) (b)(6) (b)(6) (b)(6) W (b)(6)

Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

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(b)(6) good point regarding community mitigation. Traffic starts to jam up again in Atlanta and many more people are going into their office. But yes, churches, schools are all closed and big events are canceled. I finished a few hundreds of business modeling and here's what I found.

1. Large group events remain difficult to open. The percentage of infection is roughly 7%-35% depending on the duration and because it is a sustained inside event, it is hard to maintain the fresh air circulation, the surface, and everything. It's cross-contamination every year. Any infection has high possibility of a hit to infect and it can be very broad in scope, depending on human behavior. Yes, university students are more proned because simply they are sick very often.

2. Across each State, there is no one-size-fit all, not within a State, and not inter-state either. What the models do show is that inter-dependence and cascading effects are certain (can be predicted very well) and hence must be taken into account as States are re-opening. The best they can do is opening strategically county-by-county, or city-by-city. And they will need to look over their shoulders on how their neigjhbours are doing as that will affect them.

3. Spitting, coughing, talking, anything to do with saliva You see the case a London transit worker died from covid-19 (five days from admitted to hospital to death) when a passenger claiming to have covid-19 on the track harrassed her by spitting on her. In US, there are people who do spit, tobacco users,

people who chew gums, or people who just spit (I saw people rolling down their car windows) and just do it. Singapore has installed fines on these actions many years ago. This habit still persists in US and this can be rather deadly in the wake of covid-19.

And public health should put restriction on spitting. If the state wants to maintain good public hygiene by deterrance, they can fine like Singapore.

Facemasks remain very critical. Essential workers must use facemasks and so are the citizens. And this should not be an option, but a must. I was surveying several stores this week - pets stores, groceries, and many employees do not use facemasks or any protecton at all and they do cough and of course they talk too. Here's a study in PNAS confirming why it is so important to avoid any droplets of saliva. I think employees need to do it to protect themselves and as customers, we do not want to receive little saliva droplets from cashiers or anyone.

https://www.pnas.org/content/early/2020/05/12/2006874117

And yes, eyes are very important to protect too. Sorry, no better news, here's *JAMA Ophthalmology* reporting tranmission through eyes,

https://protect2.fireeye.com/url?k=373a9301-6b6e8a7d-373aa23e-0cc47adc5fa2-a83e33d49eac538f&u=https://www.ajmc.com/newsroom/covid19-may-be-transmitted-through-the-eye-report-finds

So face shields are important too. Goggles are tight-fit and may be more protective. I remain a fan of the face shield especially seeing how the providers work at ease with them and are happier with it than the goggles. This is one of those cost-effective little thing that was invented and very welcome by providers.

4. Delay in tests, delay in test results, delay in everything on the graphs.
It is very hard to decipher all the testing data. First, cases are delayed in discovery. By the time the patient gets the test, there is a time-lag already. Then, it takes 2-5 days, or 7-9 days to get the results, and then posted. So everything is delay. In DeKalb, thousands of the tests never received any results back. So they won't show up anywhere. These are PUI, so their rate of positivity is high. Below are graphs from raw data, without any adjusttment in reporting etc.
Again mortality graph is one to focus.

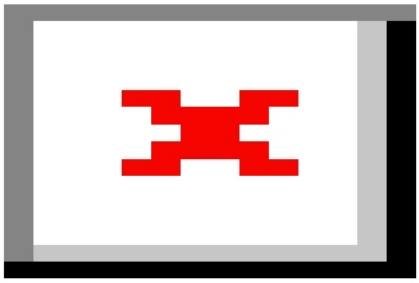


image.png

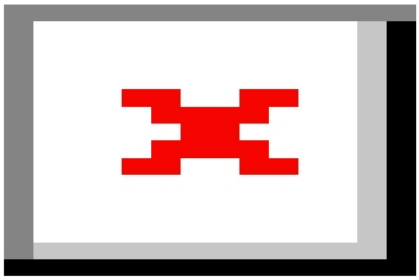
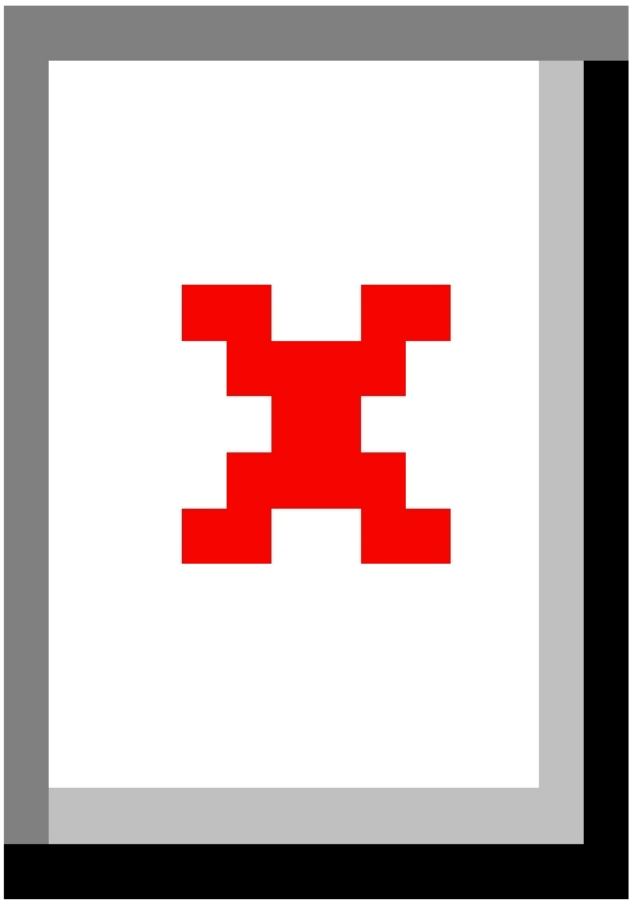
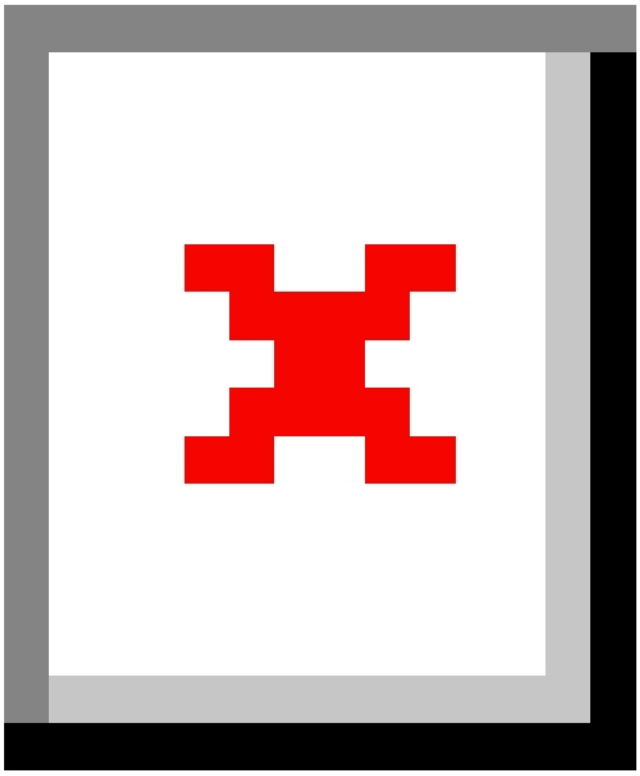


image.png

On Fri, May 15, 2020 at 9:24 AM (b)(6) (b)(6) (b)(6) wrote:
Monitoring Georgia.
First, raw data of cases and deaths reported each day with 7-day moving averages of cases, deaths, tests performed, and % positive (see attached Excel file). I already shared the LTC data from Georgia.

Second, the data from GA Public Health.





Third. Take a look at the data on https://protect2.fireeye.com/url?k=12854aa1-4ed153dd-12857b9e-0cc47adc5fa2-0391992a9ee899d4&u=https://dashboards.c19hcc.org/ for Georgia.

As I have said earlier, although we are calling what is happening as reopening, what in fact is happening is we are transitioning to the 2007 Community Mitigation Guidance (really TLC). Infected or sick individuals are still being isolated at home, I assume household contacts are still being advised to home quarantine, schools/universities/pre-school/daycare are still closed, and we continue to leverage social distancing strategies (telework; social distancing in restaurants, retail; churches closed, large gatherings canceled); and we are also wearing face masks (at least the majority of people are wearing face masks).

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Friday, May 15, 2020 7:11 AM
To: Caneva, Duane; Dr. (b) (b) (b)(6) (b)(
Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6 (b)((b)(6) (b)(6) (DSHS); Dr. (b) (b) BOURNE, ALEXANDRA; (b)((b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(Keim, MD MBA; (b)(6 (b)(6) (b)((b)(6) (b) (b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6), (b)((b)((b)(S; (b)(6) (b)(McGinn, (b)((b)(6) (b)(6) Kellermann; (b)(6) (b) (b)(6 (b)((b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6 (b)(6 (b)(6) LLogandakar; Walters, (b)(6) (b)(6) (b)((b)(6) DC; (b)(6) JtCIVtUSARMY (USA); (b)((b)(6) MD; Fantinato, Jessica (USA.GOV); Martin, Greg (b)(6) (b)((b)(6) (b)(, (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b)((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; (b)(6 Hassell, (b)((Chris) (OS/ASPR/IO); (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6, (b)(6 (b)((b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, (b)((b)(6) (b)(6) (b)((b)((b) (b)(6 Krohmer, Jon (NHTSA); (b)(6) (APHMFP - Emergency Medicine); You, Edward H. (WMD) (FBI); (b)(6 ((b)(6 W
Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

LTC data by state. I have 3 data points (Apr 23, May 7 and May 14). See 1st spreadsheet for summary table. This virus is steadily moving through our LTC population in the US. Recall the estimates of 2.1M Americans who are residents in nursing homes or residential care. With 150K known cases and 30K deaths, this equates to about a 7% attack rate with a 20% fatality rate (I would assume we are learning about most cases given that nursing homes are now testing all residents).

If you are interested in learning more about long term care in the US. https://protect2.fireeye.com/url?k=c15ff247-9d0beb3b-c15fc378-0cc47adc5fa2-fc81f633b2991d7a&u=https://www.cdc.gov/nchs/data/series/sr_03/sr03_43-508.pdf There are 8.3M Americans receiving long term care services (not necessarily receiving services at a long term care facility).

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Thursday, May 14, 2020 10:55 AM
To: Caneva, Duane; Dr. (b) (b) (b)(6) (b)(

Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (DSHS); Dr. (b) (b) BOURNE, ALEXANDRA; (b)(6) (b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(6) Keim, MD MBA; (b)(6) (b)(6) (b)(6) (b)(6) (b) (b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6), (b)(6) (b)(6) (b)(6) S; (b)(6) (b)(6) McGinn, (b)(6) (b)(6) (b)(6) Kellermann; (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) LLogandakar; Walters, (b)(6) (b)(6) (b)(6) (b)(6) DC; (b)(6) JtCIVtUSARMY (USA); (b)(6) (b)(6) MD; Fantinato, Jessica (USDA.GOV); Martin, Greg (b)(6) (b)(6) (b)(6) (b)(6), (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; (b)(6) Hassell, (b)(6) (Chris) (OS/ASPR/IO); (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6), (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, (b)(6) (b)(6) (b)(6) (b)(6) (b) (b)(6) Krohmer, Jon (NHTSA); (b)(6) (APHMFP - Emergency Medicine); You, Edward H. (WMD) (FBI); (b)(6) (b)(6) W
Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

We have been following any reports of reported prevalence. Spain recently reported a prevalence of 5%. Spain has a death rate of 577 deaths per million (as of yesterday). It is also at the flat part of its curve (even 2 weeks ago the death rate was 517 deaths per million). Assuming Spain has a prevalence of 5% and a death rate of 577 deaths per million, it would equate to a CFR of 1.16%. So a little higher than the CFR we have been estimating.

We haver been roughly estimating prevalence for all the states (assuming a CFR of 0.9%). But given the high percentage of nursing home deaths in a number of state (>50%), we need to do this cautiously because in a state where a high % of the deaths are in long term care, we could be overestimating prevalence.

Attached is a crude estimate of prevalence for the states. We assumed a CFR of 0.9% and time from infection onset to death of about 2 weeks. We used Apr 27 as roughly 2 weeks ago (it was the only data readily available at hand in a table) to estimate a case ascertainment rate. This is all a little crude, but helps to place some of these raw numbers of confirmed cases in perspective. We added a column of the data we have from May 7 on the % of total COVID deaths coming from LTC (those states with a % >50% are highlighted in red).

Sent from Mail for Windows 10

From: Caneva, Duane
Sent: Thursday, May 14, 2020 9:49 AM
To: Dr. (b) (b) (b)(6) (b)(6)
Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (DSHS); Dr. (b) (b) BOURNE, ALEXANDRA; (b)(6) (b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(6) Keim, MD MBA; (b)(6) (b)(6) (b)(6) (b)(6) (b) (b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) (b)(6) (b)(6) S; (b)(6) (b)(6) McGinn, (b)(6) (b)(6) (b)(6) Kellermann; (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) LLogandakar; Walters, (b)(6) (b)(6) (b)(6) (b)(6) DC; (b)(6) JtCIVtUSARMY (USA); (b)(6) (b)(6) MD; Fantinato, Jessica (USDA.GOV); Martin, Greg (b)(6)

(b)((b)(6) (b)(6 (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b)((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; (b)(6 Hassell, (b)((Chris) (OS/ASPR/IO); (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6 (b)(6 (b)((b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, (b)((b)(6) (b)(6) (b)((b)((b) (b)(6 Krohmer, Jon (NHTSA); (b)(6) (APHMFP - Emergency Medicine); You, Edward H. (WMD) (FBI); (b)(6 ((b)(6 W
Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

Some attachments of interest.

C19HCC Dashboard: https://protect2.fireeye.com/url?k=8c51baf9-d005a385-8c518bc6-0cc47adc5fa2-61649cccd0cf52af&u=https://dashboards.c19hcc.org/
C19HCC PPE Dashboard: https://protect2.fireeye.com/url?k=db4a14c5-871e0db9-db4a25fa-0cc47adc5fa2-f917f0177f119fac&u=https://dashboards.c19hcc.org/ppe

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From: Dr. (b) (b) (b)(6)
Sent: Wednesday, May 13, 2020 8:21 PM
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

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Here's the testing situation. I feel very sorry for Brazil. And my colleagues with whom I work on vaccine immunogenicity prediction are in distressed. But they have very little testing kits and very little testing power. So they are testing only the sick patients and many are positive.

On Wed, May 13, 2020 at 8:04 PM Dr. (b) (b) (b)(6) wrote:

> Bill, we must understand, US is still in the discovery phase as far as confirmed positive cases, because we are catching up on test still. I believe we have improved over time, so yes, you (b) see more confirmed cases. It is actually more important to look at fatality. Granted, counting may not be perfect. My feeling is that no country is perfect in the counting because it simply is a huge number of bodies all needed attention at a very short period of time. It is overwhelming. So everyone undercounts. Here's a little summary. You notice Positive/capita - for Iceland is very high, because they have tested a very large percentage of their small population. We are still behind in testing, And we need to test a lot more. So many people are asymptomatic, not knowing them is a disadvantage to us. Recall, not every positive case needs hospitalization. So that number as close to reality is very important because it gives us a sense of how infectious SARS-CoV-2 is. It also allows us to estimate better the CFR.

Country	Reported death	Reported positive	% death/positive	Population (M)	fatality/capita	Positive/capita
USA	83963	1411488	5.948545	334	251.3862	4226.012
Spain	27104	271095	9.997971	46.9	577.9104	5780.277
Italy	31106	222104	14.00515	50.63	614.3788	4386.806

Germany	7792	173824	4.482695	83.02	93.8569	2093.761
France	27074	140734	19.23771	66.99	404.1499	2100.821
Israel	264	16548	1.595359	8.884	29.71634	1862.674
Iceland	10	1802	0.554939	0.364134	27.46242	4948.728
(b)	33186	229705	14.44723	66.65	497.9145	3446.437

On Wed, May 13, 2020 at 7:43 PM (b)(6) (b)((b)(6) wrote:

(b)

As I understand the data, of the large countries with major impacts, 65% of the cases over last week came from the following 5 countries the U.S. (> 197,600 cases; 603 cases/million), Russia (> 70,600 cases; 489 cases/million), the U.K. (> 35,400 cases; 533 cases/million), Brazil (> 34,500 cases; 164 cases/million), and Peru (> 21,500 cases; 673 cases/million). I don't have the comparable fatality data at hand, but what I've seen has been similar.

I know that "cases" as a datapoint to track is crap because it's based on testing and the populace's threshold for seeking care, but still, we are well above the average on a rate basis. Why is this? I have a hard time believing it's just timing on application of NPIs.

-Bill

From: Dr. (b) (b) (b)(6)
Sent: Wednesday, May 13, 2020 7:34 PM
To: (b)(6) (b)((b)(6)
Cc: (b)(6) (HMFP - Emergency Medicine) (b)(6) Caneva, Duane (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (DSHS) (b)(6) Dr. (b) (b) <evalee-gatech@pm.me>; BOURNE, ALEXANDRA (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; (b)(Keim, MD MBA (b)(6) (b)((b)(6) (b)(6) (b) (b)(6) MD (b)(6) (b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b) (b)(6) (b)((b)(S (b)(6) (b)(6) (b) (b)(6) McGinn, (b)((b)(6) (b)(6) (b)(6) Kellermann (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) LLogandakar (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6) JtCIVtUSARMY (USA) (b)(6) (b)((b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) <CHRISALLEN (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6)

(b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) (b)(6) Hassell, (b)(6) (Chris) (OS/ASPR/IO) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS (b)(6) WOLFE, HERBERT (b)(6) (b)(6) (b)(6) Marinissen, Maria (HHS/OS/OGA) <Maria.Marinissen@hhs.gov>; Sutter, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Krohmer, Jon (NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine) (b)(6) You, Edward H. (WMD) (FBI) (b)(6) (b)(6) (b)(6) W (b)(6)
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

Bill, may I ask you how you calculate your values? I am using fatality per capita and infection per capita, we are not the highest. Is that what you are thinking? I must have misunderstood your question.

On Wed, May 13, 2020 at 7:24 PM (b)(6) (b)(6) (b)(6) wrote:

> Does anyone have insight as to why the US has the highest case and fatality rate of any large country. I haven't seen any good explanation of that. It's not that we have so much most inbound international travelers (France exceeds the US on an absolute basis – not just rate, for example, and many countries far exceed us for international arrival rates).
>
> While many feel we should have implemented NPIs earlier and harder, I don't get the sense that we were that far behind the rest of the world to explain the case and fatality rate differences.
>
> Our Chinese arrival rate compared to the rest of the world is hard to figure (the data is there, but I haven't tried to crank it).
>
> With the exception of some inner-cities, we are not a population dense as other major developed countries.
>
> So what was it (and am just missing scholarly discussion somewhere about this huge discrepancy). Everyone knew in detail why Italy blew up, but why us?
>
> -Bill (b)(6)

From: Dr. (b)(6) (b)(6) (b)(6)
Sent: Wednesday, May 13, 2020 5:15 PM
To: (b)(6) (HMFP - Emergency Medicine) (b)(6)
Cc: Caneva, Duane (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) <cmecher@charter.net>; (b)(6) (DSHS) (b)(6)

(b)(6) (b)((b)(6) Dr. (b) (b) (b)(6) BOURNE, ALEXANDRA (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; (b)(Keim, MD MBA (b)(6) (b)((b)(6) (b)(6) (b) (b)(6) MD (b)(6) (b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b) (b)(6) (b)((b)(S (b)(6) (b)(6) (b) (b)(6) McGinn, (b)((b)(6) (b)(6) (b)(6) Kellermann (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) LLogandakar (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6) JtCIVtUSARMY (USA) (b)(6) (b)((b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) <CHRISALLEN_10@(b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) (b)((b)(6) Hassell, (b)((Chris) (OS/ASPR/IO) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) (b)(6) WILKINSON, THOMAS (b)(6) WOLFE, HERBERT (b)(6) (b)(6) (b)(6) Marinissen, Maria (HHS/OS/OGA) <Maria.Marinissen@hhs.gov>; Sutter, (b)((b)(6) (b)(6) (b)(6) (b)((b) (b)(6) (b) (b)((b)(6) Krohmer, Jon (NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine) (b)(6) You, Edward H. (WMD) (FBI) (b)(6) (b)(6) (b)(6) W (b)(6)

Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

This looks very nice in the tracing and connectivity of all the cases. I assume the genetic analysis reported recently regarding origin of the US cases will give us such type of information.

https://protect2.fireeye.com/url?k=af45806f-f3119913-af45b150-0cc47adc5fa2-5fb79696b024ce5a&u=https://graphics.reuters.com/CHINA-HEALTH-SOUTHKOREA-CLUSTERS/0100B5G33SB/index.html

On Wed, May 13, 2020 at 4:05 PM (b)(6) (HMFP - Emergency Medicine) <gciotton@bidmc.harvard.edu> wrote:

This is terrific! Thanks Duane

Greg

Sender: Caneva, Duane (b)(6)

Recipient: Dr. (b) (b) (b)(6)
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(b)(6) (b) (b)(6)
(b)(6) (HMFP - Emergency Medicine) (b)(6)
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(b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6)
Dr. (b) (b) (b)(6)
BOURNE, ALEXANDRA (b)(6)
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eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>;
(b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=474b01361a8b4944a39afbdad800591e-Guest_bea05
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Walters, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group
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	(b)(6) (b)(6) (b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6) JtCIVtUSARMY (USA) (b)(6) (b)(6) (b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4a03b6317c3840afb4ee617008e821a6-Jessica.Fan <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d48a91c6dc5f401a80e245c518874f15-MartinGJ.os (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=908f39d0872d44b1b2c5e3ba11f04968-Joselito.Ig (b)(6) (b)(6) (b)(6) Hassell, (b)(6) (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS (b)(6) Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f2fb845c2e154d8e967ec3fdabecfbd6-Herbert.Wol (b)(6) (b)(6) (b)(6) Marinissen, Maria (HHS/OS/OGA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d42fb4d94b041ee88e4f7dd5743e893-Marinissen, <Maria.Marinissen@hhs.gov>; Sutter, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Krohmer, Jon (dot.gov) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=46c6513591aa4142b2c1c85354dd1816-Jon.Krohmer <Jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine) (b)(6) You, Edward H. (WMD) (FBI) (b)(6) (b)(6) (b)(6) (b)(6) W (b)(6)
Sent Date:	2020/05/15 16:28:12
Delivered Date:	2020/05/15 16:29:49

From:	Choi, Kelly <KChoi@nas.edu>
To:	Choi, Kelly <KChoi@nas.edu>; 'Michelle Penny' <mpenny@goldfinchbio.com>; (b)(6) <jennifer.ryan@moore.org>; (b)(6) (b)(6) 'joyce@23andme.com' <joyce@23andme.com>; 'Pamela G. Williams (Assistant to Drs. Ginsburg and Wray)' <pamela.g.williams@duke.edu>; 'geoffrey.ginsburg@duke.edu' <geoffrey.ginsburg@duke.edu>; 'Sharon Terry' <sterry@geneticalliance.org>; 'Judith Woods' <jwoods@acmg.net>; 'mmuenke@acmg.net' <mmuenke@acmg.net>; Addie, Siobhan <SAddie@nas.edu>; Hackmann, Meredith <mhackmann@nas.edu>; Beachy, Sarah <SBeachy@nas.edu>; Pope, Andrew <APope@nas.edu>; Brown, (b) <LBrown@nas.edu>; 'ashastri@23andme.com' <ashastri@23andme.com>
CC:	Alexandra Phelan (alp81@georgetown.edu) <alp81@georgetown.edu>; (b)(A Relman (relman@stanford.edu) <relman@stanford.edu>; (b)(Walt (dwalt@bwh.harvard.edu) <dwalt@bwh.harvard.edu>; Diane Griffin (dgriffi6@jhmi.edu) <dgriffi6@jhmi.edu>; Embrey, Ellen (eembrey@stratitia.com) <eembrey@stratitia.com>; Georges Benjamin (georges.benjamin@apha.org) <georges.benjamin@apha.org>; John Hick (b)(6) (b)(6) Jonna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>; Kent Kester (Kent.Kester@sanofi.com) <Kent.Kester@sanofi.com>; Kristian G. Andersen (b)(6) (b)(6) (b)(Smolinski (b)(6) (b)(6) Mary Travis Bassett (mbassett@hsph.harvard.edu) <mbassett@hsph.harvard.edu>; Patricia King (b)(6) (b)(6) Peggy Hamburg (peggy@hbfam.net) <peggy@hbfam.net>; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Phyllis D. Meadows (PDMeadows@kresge.org) <PDMeadows@kresge.org>; (b)(6 Besser (rbesser@rwjf.org) <rbesser@rwjf.org>; Tara O'Toole (totoole@iqt.org) <totoole@iqt.org>; Trevor Bedford (trevor@bedford.io) <trevor@bedford.io>; (b)(6) Donald Berwick (b)(6) <alta.charo@wisc.edu>; <Jeff.Duchin@kingcounty.gov>; Baruch Fischhoff <baruch@cmu.edu>; (b)(6) <bgroves@georgetown.edu>; (b)(Toni C <antoinette_baric@med.unc.edu>; (b)(6) Kahn, Benjamin <BKahn@nas.edu>; Fine, Emma <EFine@nas.edu>; Watson, Ian (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3bc7da05f4e949ddbf55281ba404386a-Watson, Ian <Ian.Watson@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Paige Waterman (Paige.E.Waterman@ostp.eop.gov) <Paige.E.Waterman@ostp.eop.gov>
Subject:	Joint Meeting of the Genomics Roundtable and the Standing Committee on Infectious Diseases
Date:	2020/06/24 13:19:17
Start Date:	2020/07/01 13:00:00
End Date:	2020/07/01 15:00:00
Priority:	Normal
Type:	Appointment
Location:	https://nasem.zoom.us/j/95540901323

Attendees:	'Michelle Penny'; (b)(6) (b)(6) 'joyce@23andme.com'; 'Pamela G. Williams (Assistant to Drs. Ginsburg and Wray)'; 'geoffrey.ginsburg@duke.edu'; 'Sharon Terry'; 'Judith Woods'; 'mmuenke@acmg.net'; Addie, Siobhan; Hackmann, Meredith; Beachy, Sarah; Pope, Andrew; Brown, (b) 'ashastri@23andme.com'; Alexandra Phelan (alp81@georgetown.edu); (b)(A Relman (relman@stanford.edu); (b)(Walt (dwalt@bwh.harvard.edu); Diane Griffin (dgriffi6@jhmi.edu); Embrey, Ellen (eembrey@stratitia.com); Georges Benjamin (georges.benjamin@apha.org); John Hick (b)(6) Jonna Mazet (jkmazet@ucdavis.edu); Kent Kester (Kent.Kester@sanofi.com); Kristian G. Andersen (b)(6) (b) Smolinski (b)(6) Mary Travis Bassett (mbassett@hsph.harvard.edu); Patricia King (b)(6) Peggy Hamburg (peggy@hbfam.net); Peter Daszak (daszak@ecohealthalliance.org); Phyllis D. Meadows (PDMeadows@kresge.org); (b)(6 Besser (rbesser@rwjf.org); Tara O'Toole (totoole@iqt.org); Trevor Bedford (trevor@bedford.io); (b)(6) Donald Berwick; alta.charo@wisc.edu; Jeff.Duchin@kingcounty.gov; Baruch Fischhoff; (b)(6) bgroves@georgetown.edu; (b)(Toni C; (b)(6) Kahn, Benjamin; Fine, Emma; Watson, Ian (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); Paige Waterman (Paige.E.Waterman@ostp.eop.gov)

Zoom Link (b)(6)

Telephone Dial-In Numbers:
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(UK

Meeting ID: (b)(6)

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	Phyllis D. Meadows (PDMeadows@kresge.org) <PDMeadows@kresge.org>; (b)(6) Besser (rbesser@rwjf.org) <rbesser@rwjf.org>; Tara O'Toole (totoole@iqt.org) <totoole@iqt.org>; Trevor Bedford (trevor@bedford.io) <trevor@bedford.io>; (b)(6) Donald Berwick (b)(6) <alta.charo@wisc.edu>; <Jeff.Duchin@kingcounty.gov>; Baruch Fischhoff <baruch@cmu.edu>; (b)(6) <bgroves@georgetown.edu>; (b)(6) Toni C <antoinette_baric@med.unc.edu>; (b)(6) Kahn, Benjamin <BKahn@nas.edu>; Fine, Emma <EFine@nas.edu>; Watson, Ian (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3bc7da05f4e949ddbf55281ba404386a-Watson, Ian <Ian.Watson@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Paige Waterman (Paige.E.Waterman@ostp.eop.gov) <Paige.E.Waterman@ostp.eop.gov>
Sent Date:	2020/06/24 13:19:17

From:	Tom Inglesby <tinglesby@jhu.edu>
To:	Pope, Andrew <APope@nas.edu>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Watson, Ian D. EOP/OSTP (b)(6)
Subject:	RE: Thanks and News about the letter
Date:	2020/02/08 10:00:55
Priority:	Normal
Type:	Note

Andy, Chris, Ian,
Thanks for the invitation to participate in the process. The resulting letters were well done.
Is there a next step for this committee? Or is the work of this group concluded now?
Best
Tom

From: Pope, Andrew <APope@nas.edu>
Sent: Friday, February 07, 2020 8:25 PM
To: Chakravarti, Aravinda <Aravinda.Chakravarti@nyulangone.org>; andersen@scripps.edu; (b)((b)((b)(6) (b)(6) trevor@bedford.io; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Gigi Gronvall <ggronvall@jhu.edu>; Tom Inglesby <tinglesby@jhu.edu>; Stanley Perlman (stanley-perlman@uiowa.edu) <stanley-perlman@uiowa.edu>
Cc: Diane Griffin <dgriffi6@jhmi.edu>; Chao, Samantha <SChao@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Kearney, William <WKearney@nas.edu>; Symmes, Gregory <GSymmes@nas.edu>; Behney, Clyde <CBehney@nas.edu>; Shern, Lauren <LShern@nas.edu>
Subject: Thanks and News about the letter

Dear all
On behalf of the National Academies I want to say thank you again for your willingness to respond so quickly to our requests for expert expert assistance in developing a rapid response to OSTP on nCoV. We couldn't have done it without you!
Please see our news posting at the following link, and let us know if you have any questions or concerns.

https://protect2.fireeye.com/url?k=389fbc5d-64cab54e-389f8d62-0cc47adb5650-3a2cd5b312a87976&u=http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=272020&_ga=2.118407884.416011462.1581027163-581770746.1511913188

Thanks again and have a great weekend!

Andy
Sent from my "smart" phone...

Sender:	Tom Inglesby <tinglesby@jhu.edu>
Recipient:	Pope, Andrew <APope@nas.edu>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Watson, Ian D. EOP/OSTP (b)(6)
Sent Date:	2020/02/08 10:00:17
Delivered Date:	2020/02/08 10:00:55

From: Caneva, Duane (b)(6)

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Martin, Gregory J (b)(6)
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Dodgen, Daniel (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group
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<Daniel.Dodgen@HHS.GOV>;
DeBord, Kristin (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=d2cce28859884c1c835a9404885d6534-DeBord, Kri
<Kristin.DeBord@hhs.gov>;
Phillips, Sally (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6ce8134846423cb83b5b28464edb60-Phillips, S
<Sally.Phillips@hhs.gov>;
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Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=f2fb845c2e154d8e967ec3fdabecfbd6-Herbert.Wol
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(b)(6) (b)(6) V.,M.D. (b)(6)
(b)(6) (b)(6)

To: (b)(6)
Johnson, Robert (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=0851e89240324306b78740a4a60745e2-Johnson, Ro
<Robert.Johnson@hhs.gov>;
Yeskey, Kevin (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev
<Kevin.Yeskey@hhs.gov>;
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(FYDIBOHF23SPDLT)/cn=Recipients/cn=0fd5845defda4dc0bb45f8fac629cf09-Disbrow, Ga
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(FYDIBOHF23SPDLT)/cn=Recipients/cn=9ba3fed4ee8646ec849a5a87136a24f6-Redd, John
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Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da
<David.Hassell@hhs.gov>;
Hamel, Joseph (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=96d2c1602dfa45e5a5e21452a098b96d-Hamel, Jose
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Dean, Charity A@CDPH (b)(6)
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eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group
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<eric.mcdonald@sdcounty.ca.gov>;
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(b)(6)
WILKINSON, THOMAS <THOMAS.WILKINSON@hq.dhs.gov>;
(b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6)

	KAUSHIK, SANGEETA (b)(6) (b)(6) (b)((b)(6) Tracey (b)(6) (b)(6) Lee, Scott (OS/ASPR/EMMO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=userf6879348 (b)(6) Padget, Larry G (b)(6) (b) (b)(6) (b)(6) Stack, Steven J (CHFS DPH) (b)(6)
Subject:	RE: Red Dawn Breaking Bad, Start Feb 24
Date:	2020/02/26 17:56:58
Priority:	Normal
Type:	Note

Master Question List—things to think about, updated.
Also,
https://www.washingtonpost.com/health/2020/02/25/cdc-coronavirus-test/

From: (b)(6) (b)(6) (b)(6)
Sent: Wednesday, February 26, 2020 3:14 PM
To: Subject: RE: Red Dawn Breaking Bad, Start Feb 24

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Updated cruise ship data including data we can find by country

Country	Passengers/Crew	Cases Hospitalized in Japan	Cases Confirmed upon Repatriation	Total Confirmed Cases	ICU Admissions	Deaths	% Infect
US	434	44	42	86			20%
Hong Kong	364	55	4	59			16%
Canada	256	47		47			18%
Australia	241	47	7	54			22%
UK	78	6	4	10			13%
Italy	35						
South Korea	14						
Israel	11	3	2	5			45%
Japan						4	
Subtotal	1,433	202	59	261			
Total	**3,711**			**744**			**20%**

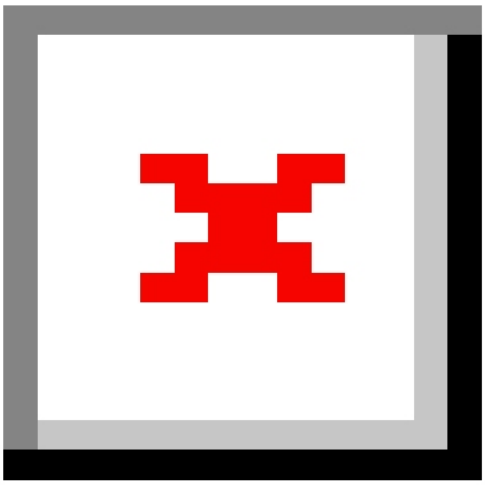
Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			
1-Feb	80 year old passenger confirmed to have COVID-19			
	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,219 teste 73 asympt
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,723 teste 19 seriou
18-Feb	167 more passenger and crew confirmed +	621		3,011 te
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,066 teste 28 seriousl 322 asympt
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	

25-Feb	Death reported in Japan; US reports 40 in US; UK 4; Australia 7; Hong Kong 4; Israel 2; Total 744; plus 4 not on ship	744	4	3,894 teste 35 seriousl 380 asympt
26-Feb	US reports total of 42 cases in US; Japan announces that 45 of 813 former passengers have symptoms and will need to be tested	746	4	

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Wednesday, February 26, 2020 1:46 PM
To: (b)(6) (b)(6) Caneva, Duane; Dr. (b) (b) Martin, (b)(6) J; Walters, (b)(6) (b)(6), (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)((b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6 Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6 V; (b)(6 (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6 (b)(6 TARANTINO, (b)(6 A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) (b), Scott; Padget, Larry G; (b)((b)(6) Stack, Steven J (CHFS DPH)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Number of cases from Diamond Princess cruise ship rises to 42 in US (plus 44 in Japan), for total of 86.



Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Wednesday, February 26, 2020 12:34 PM
To: (b)(6) (b)(6) Caneva, Duane; Dr. (b) (b) Martin, (b)(6) J; Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)((b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) (b), Scott; Padget, Larry G; (b)((b)(6) Stack, (b)(6) J (CHFS DPH)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

I found a treasure trove of information and analysis of the Diamond Princess cruise ship outbreak. Japan's National Institute of Infectious Diseases published a Field Briefing on Feb 21, 2020
https://www.niid.go.jp/niid/en/2019-ncov-e.html

I took the material and built a slide deck.

Take a look.

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Wednesday, February 26, 2020 9:08 AM
To: (b)(6) (b)(6) Caneva, Duane; Dr. (b) (b) Martin, (b)(6) J; Walters, (b)(6) (b)(6), (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)((b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6 (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6 (b)(6 TARANTINO, (b)(6 A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) Lee, Scott; Padget, Larry G; (b)((b)(6) Stack, Steven J (CHFS DPH)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Things keep getting more complicated wrt the cruise ship outbreak. Another 45 patients (out of 813 passengers who let off the ship) have developed symptoms and will require testing.

TOKYO: Dozens of passengers allowed off a coronavirus-stricken ship have developed symptoms including fever and will be asked to take tests for the virus, Japan's health minister said Wednesday.
The news came as another death linked to the virus in Japan was reported and the government urged organisers of major events in the next fortnight to consider cancelling or downsizing them to help curb the spread of infections.
The government has contacted 813 former passengers of the Diamond Princess cruise ship and found "45 people had certain symptoms", Health Minister Katsunobu Kato told parliament.
"We asked all of them (who have symptoms) to see a doctor and to take tests."
Around 970 people were allowed off the boat last week after testing negative for the virus, but several have subsequently been diagnosed with the illness.
Japan has come under increasing pressure over its handling of the crisis on the vessel.
Those allowed off the ship after a 14-day quarantine were asked to stay inside, but no formal measures restricting their movement were imposed.
Opposition lawmakers have blamed the government for failing to implement a fresh (b)(6) quarantine after the passengers left the cruise ship – as was required by countries that repatriated citizens from the boat.
Infections have also continued to rise inside Japan, and Prime Minister Shinzo Abe on Wednesday said hosting large events should be reconsidered.
"In light of the significant infection risks, we will ask that national sporting or cultural events that will attract large crowds be either cancelled, postponed or downsized for the next two weeks," Abe told a cabinet task force meeting on the outbreak.
Concerts cancelled

After the announcement, Nippon Professional Baseball Organization said its unofficial spring games through March 15 would be held in empty stadiums, before the official season opens on March 20.
Some top Japanese musicians, including all-male group Exile and female trio Perfume cancelled concerts, while Tokyo Girls Collection fashion show on Saturday will be held with no audience, according to their organisers.
The virus has also forced professional football, rugby, golf, tennis and other sports to reschedule games or to hold their events with no fans in attendance.
The government has also asked state-operated museums and theatres to consider closing or cancelling shows.
The government has repeatedly said that the coming weeks will be critical in limiting the spread of the virus in Japan.
But its measures have been largely advisory, including recommending that people work from home or commute off-peak.
The recommendations come as the local government in northern Hokkaido announced in its latest update on the virus the death of a local resident, whose name, gender and age were not revealed.
The governor of Hokkaido, where at least 38 people have been diagnosed, said he was requesting local municipalities to close public schools for one week from Thursday.
In Tokyo meanwhile, the regional education board said public high schools may start classes late to spare students travelling on packed commuter trains.
Japan has seen at least 165 infections separate from the outbreak on the cruise ship.
The outbreak has raised fears that the Olympic Games to be hosted in Tokyo this summer could be cancelled, a possibility government officials and organisers have rejected.
“We have not thought about it. We have not heard about it. We have made inquiries, and we were told there is no such plan,” Tokyo 2020 CEO Toshiro Muto told reporters.
“Our basic thinking is to conduct the Olympics and Paralympics as planned. That’s our assumption.”

Sent from Mail for Windows 10

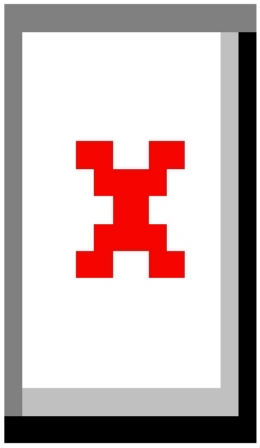
From: (b)(6) (b)(6)
Sent: Wednesday, February 26, 2020 9:01 AM
To: (b)(6) (b)(6) Caneva, Duane; Dr. (b) (b) Martin, (b)(6) J; Walters, (b)(6) (b)(6), (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)((b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6 Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6 V; (b)(6 (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6 (b)(6 TARANTINO, (b)(6 A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) (b), Scott; Padget, Larry G; (b)((b)(6) Stack, (b)(6) J (CHFS DPH)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

https://www.theguardian.com/world/2020/feb/26/wuhan-nurses-plea-international-medics-help-fight-coronavirus

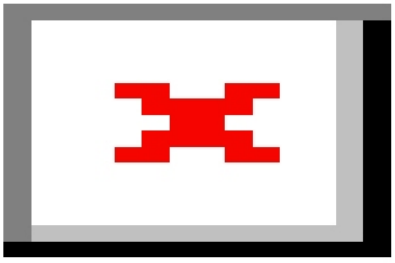
Moving description from the front lines of conditions in Wuhan . . . And a picture of what we will likely face soon . . .

From: (b)(6) (b)(6) (b)(6)
Sent: 26 February 2020 04:11
To: Caneva, Duane (b)(6) (b)(6) (b)(6) (b)(6) Dr. (b)(6) (b)(6) Martin, (b)(6) J (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)(6) (b)(6) Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)(6) (Chris) (OS/ASPR/IO) (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) (b)(6) Tracey (b)(6) (b)(6) (b)(6) Scott (b)(6) Padget, Larry G (b)(6) (b)(6) (b)(6) (b)(6) Stack, (b)(6) J (CHFS DPH) (b)(6)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

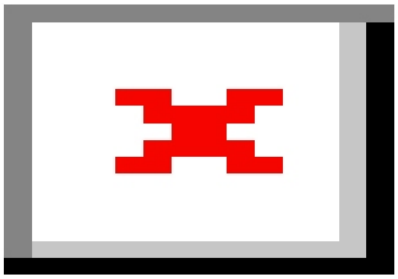
Watching ILI in a few key areas--NYC, Chicago, CA, and TX. Week 7 data (week ending Feb 15). Flu is now trending down. This data is a little old (now 10 days old). Week 8 data coming soon.
Chicago

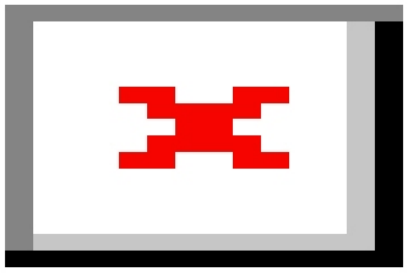


NYC

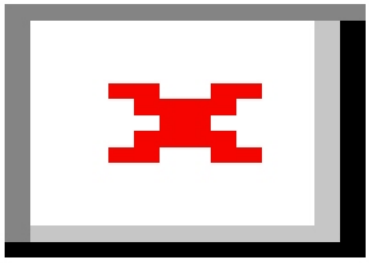


CA





TX



Sent from Mail for Windows 10

From: Caneva, Duane
Sent: Tuesday, February 25, 2020 10:40 PM
To: (b)(6) (b)(6) (b)(6) (b)(6) Dr. (b) (b) Martin, (b)(6) J; Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)((b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6 (b)(6 TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) b)(6) (b), Scott; Padget, Larry G; (b)((b)(6) Stack, (b)(6) J (CHFS DPH)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

ASTHO sponsored meeting hosted by White House this evening. Good discussion and input from many state and local Public Health Official partners. We are all in this together, and preparedness and response slowly transitions to community mitigation efforts and the frontline boots on the ground. Still only 14 cases *detected*.
Red Dawn Breaking…

From: (b)(6) (b)(6) (b)(6)
Sent:
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

https://www.sciencemag.org/news/2020/02/coronavirus-infections-keep-mounting-after-cruise-ship-fiasco-japan
TOKYO—All but a handful of the passengers of the disease-stricken Diamond Princess cruise ship berthed in Yokohama have disembarked. But for Japan, the saga is far from over. Much of the crew remains on board, enduring another 14 days of quarantine—although this time under conditions that Japanese officials hope will prevent any additional infections.

But there has been another worrisome development: As of today, eight public servants who worked on the ship to support the quarantine have tested positive for COVID-19, and more may follow. Most of the roughly 90 health ministry employees who visited the ship during the first 2-week quarantine that ended on 19 February initially returned to their normal work duties, but in light of the infections, the health ministry yesterday revised its policy and now those potentially exposed to the virus on the Diamond Princess are self-quarantining at home for 14 days, according to a ministry official who asked not to be identified.

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Tuesday, February 25, 2020 7:41 PM
To: (b)(6) (b)(6) Dr. (b) (b)

Cc: Martin, (b)(6) J; Walters, (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)((b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6 Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6 V; (b)(6 (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6 (b)(6 TARANTINO, (b)(6 A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b) , Scott; Padget, Larry G; (b)((b)(6)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Some updates. Will send the Hubei/Wuhan update later.

Singapore and Hong Kong continue to hold the line. I attached the case studies we did to monitor when they pulled the trigger in NPIs—lessons for us and for others.
Singapore (+1 case) 91 cases/0 deaths /7 in ICU (still 4 kids—none currently hospitalized/2 were asymptomatic
Hong Kong (+4) 85 cases/2 deaths/ 4 critical; 2 serious (still no kids reported)

Japan 170 cases/1 death/7 serious

Explosive growth in South Korea, Italy, and Iran
South Korea 977 cases/11 deaths/6 critical
99 out of 102 people in the psychiatric department of a hospital in South Korea tested positive for coronavirus infection.
https://www.bloomberg.com/news/articles/2020-02-22/nearly-all-patients-in-south-korean-psychiatric-ward-have-virus
Yesterday, the Korean government raised the alert level from Orange(Level 3) to Red (Level 4) in order to prepare for a possible nation-wide transmission. It was a proactive decision taking into consideration the pattern and speed of transmission.

Italy 322 cases/11 deaths/114 in hospital; 35 in ICU
Public events in Veneto and Lombardy are banned - All schools in Lombardy and Veneto will be closed - Venice Carnival will be shut down, shows canceled at Milan La Scala

Iran 95 cases/16 deaths

Bahrain 23 cases/0 deaths
Bahrain closes all kindergartens, schools, universities, and training centers in the country for at least 2 weeks to prevent the spread of coronavirus

New countries today

- • Algeria
- • Austria
- • Croatia
- • Switzerland

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Tuesday, February 25, 2020 5:47 PM
To: Dr. (b) (b)
Cc: (b)(6) (b)(6) Martin, (b)(6) J; Walters, (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)((b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b) (b)(6) (b)(6), (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6 Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6 V; (b)(6 (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6 (b)(6 TARANTINO, (b)(6 A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b), Scott; Padget, Larry G; (b)((b)(6)
Subject: Re: Red Dawn Breaking Bad, Start Feb 24

Big news today from China is the continued drop in new cases (down to just over 500 today) and the number of provinces (>20) with no new cases at all. It remains to be seen if China can hold the line but its interventions ARE working to reduce transmission dramatically and (b)(6 is right that Singapore and Hong Kong are demonstrating the value of an early, rapid, aggressive response. Whether the rest of the world, and the U.S., can mount a similarly effective response I do not know, but China has shown what can be done with NPIs.

+ (b)((b)(6) from WEF. Welcome (b)(-

Sent from my iPhone

On 25 Feb 2020, at 18:14, Dr. (b) (b) (b)(6) wrote:

It is unclear if S. Korea will be able to setup so many temp. beds as China. They're very slow in picking up social distancing and social awareness, proper NPI. Iran is way behind in terms of medical care. I fear they will have very high mortality.

(b)(6)
https://newton.isye.gatech.edu/DrLee/
mobile: (b)(6)

Sent with ProtonMail Secure Email.

------- Original Message -------
On Tuesday, February 25, 2020 11:34 AM, (b)(6 (b)(6) (b)(6) wrote:

South Korea now has 977 cases and 10 deaths. They are about where Wuhan was on January 25thEvaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.p; I would expect the same for South Korea with the epicenter being in Seoul.

I think Iran is about at the same point (maybe even a little ahead) of South Korea. Tehran is another very large city that will likely becomes its epicenter.

I see a few hopeful signs. Singapore and Hong Kong have done a great job thus far and have implemented NPIs very early. Both have great surveillance. They are holding the line. They are also small and islands. Japan on the other hand is struggling and hasn't been as aggressive as Singapore and Hong Kong.

The other thing that gives me hope is what I see in Hubei and Wuhan. I realize the data is a little sketchy because China has gone back and forth with the definition of cases, but I tried to smooth that over by looking at cumulative hospitalization rates per 100,000 (like we do for flu). Hubei (and Wuhan is a city within Hubei) reports each day the current number of people in the hospital (# currently in severe condition, # in critical condition), cumulative number of hospital discharges, cumulative deaths, and cumulative cases. From this we can estimate cumulative hospitalizations and then rates. 92% of the cases have been hospitalized (up thru Feb 2nd 100% of the cases they reported were hospitalized). Knowing the number of cases in Wuhan, we have been estimating the number hospitalized assuming a similar % of the cases requiring hospitalization rate for Wuhan (that 92% of the cases are being hospitalized—that number is adjusted each (b) based on current data). So we really can't back out the Wuhan numbers from the Hubei numbers. The best we can do is compare Hubei totals (including Wuhan) with an estimate of Wuhan. This data is good enough to show that the Chinese appear to be slowing transmission outside of Wuhan (They were late to implement NPIs in Wuhan but were able to implement NPIs earlier in the epidemic outside of Wuhan because the outbreak had about a 2 week head-start in Wuhan).

<E0B38B2300CE43F09DC37BFDDDB81F3C.png>

We need to emulate the blue curve. If I could subtract Wuhan, this curve would be significantly lower.

Remember the goals of NPIs.

<CB432B1C32644B219725D229547BEDDC.png>

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Tuesday, February 25, 2020 10:30 AM
To: (b)(6) (b)(6) Dr. (b) (b)
Cc: Martin, (b)(6) J; Walters, (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)((b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6 Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6 V; (b)(6 (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6 (b)(6 TARANTINO, (b)(6 A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) (b), Scott; Padget, Larry G
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Death #4 from Diamond Princess.

https://twitter.com/BNODesk/status/1232124151789477889

From: (b)(6) (b)(6) (b)(6)
Sent: 25 February 2020 14:10
To: Dr. (b) (b) (b)(6)
Cc: Martin, (b)(6) J (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)((b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>;

Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) (b)(6) Tracey (b)(6) (b)(6) (b) Scott (b)(6) Padget, Larry G (b)(6)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

We should plan assuming we won't have enough PPE—so need to change the battlefield and how we envision or even define the front lines. The frontlines for mild illness need to pivot from our usual way of dealing with ILI in our clinics and ERs to non-face-to-face alternatives for the delivery of care (by phone/telehealth/home care). It means we need to shrink the problem and think of COVID patients in two groups: (1) those with mild enough disease that they can be managed thru self-care in the home; and (2) those will more severe disease that cannot be managed at home and likely require hospitalization. The first group needs to be managed by phone/telehealth with "prescriptions" for home isolation qD X 14 days (no refills) and home isolation for household members qD X 14 days (refills allowed). And only the second group should be coming to our ERs. It is why we need to look broadly at our healthcare system (even including minute clinics at CVS/Walgreens and stand alone urgent care centers). We need to start introducing this now.

Sent from Mail for Windows 10

From: Dr. (b) (b)
Sent: Tuesday, February 25, 2020 8:47 AM
To: (b)(6) (b)(6)
Cc: Martin, (b)(6) J; Walters, (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)((b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b) (b)(6) (b)(6), (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) (b), Scott; Padget, Larry G
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

This is extremely troubling that healthcare workers, including medical leaders are contracting the COVID-19 while caring for the infected. I am very worried about the supply-chain regarding all the protective gears, medical supplies and everything that is needed to combat this disease. The demand is rising and there is no guarantee that we can continue with the supply since the supply-chain has been disrupted.

I do not know if we have enough resources to protect all frontline providers.

(b)(6)

https://newton.isye.gatech.edu/DrLee/

mobile: (b)(6)

Sent with ProtonMail Secure Email.

------- Original Message -------

On Tuesday, February 25, 2020 8:37 AM, (b)(6) (b)(6) (b)(6) wrote:

For those who cannot access Twitter but can access YouTube, here is the video.

https://www.youtube.com/watch?v=4AX4dbXIsSw

Imagine if something like this happened in the US with an equivalent national leader (watching him coughing during a press conference, rubbing his nose, and wiping the sweat from his forehead, and leaning on the podium with one hand while someone else is speaking) and then learning afterwards that he is infected with COVID. That is what has happened in Iran.

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Tuesday, February 25, 2020 8:01 AM

To: Martin, (b)(6) J; Walters, (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) Dr. (b)((b)((b)(, Scott

Cc: Padget, Larry G

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Modeling isolation and social distancing (not)

https://twitter.com/BNODesk/status/1232276183305400320

Imagine how widespread it must be to see this?

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Tuesday, February 25, 2020 7:20 AM

To: Martin, (b)(6) J; Walters, (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)((b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A;

WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) Dr. (b)((b)((b)(Scott

Cc: Padget, Larry G

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Just a word of caution. Here is what those numbers would mean. These are the projections using an attack rate of 30% (could send you the model in Excel and you can plug in whatever attack rate you like). I suspect that those CFRs are inflated because of case ascertainment issues (the actual denominator is much larger). The most recent background annual death data in the US (US Vital Statistics) is from 2017. It is useful to have those numbers of comparison.

I think those CFRs are on the high side., but don't have anything better to offer.

The best data we have for estimating CFR will be from the cruise ship, where we have a circumscribed population. That data is extremely valuable because the cruise ship had a crew of 1,045 (young and health) and 2,666 passengers (elderly). It will be important to look at each group separately. The data that I am aware of (all obtained thru open sources) is shared below this table).

AGE	2017 Census	2017 All Cause Mortality per 100,00	Actual 2017 All Cause Deaths	CFR	Projected 2019-nCoV Deaths	Ratio Projected Deaths to 2017 All Cause Deaths
<1 year	3,853,472	567.0	22,335	0.0%	0	0.00
1-4 years	16,085,388	24.3	3,880	0.0%	0	0.00
5 to 9 years	20,304,238	11.6	2,354	0.0%	0	0.00
10 to 14 years	20,778,454	15.5	3,217	0.2%	12,467	3.88
15 to 19 years	21,131,660	51.5	10,886	0.2%	12,679	1.16
20 to 24 years	22,118,635	95.6	21,139	0.2%	13,271	0.63
25 to 29 years	23,370,460	121.0	28,276	0.2%	14,022	0.50
30 to 34 years	21,972,212	145.4	31,939	0.2%	13,183	0.41
35 to 39 years	21,231,997	173.8	36,901	0.2%	12,739	0.35
40 to 44 years	19,643,373	218.4	42,895	0.4%	23,572	0.55
45 to 49 years	20,973,858	313.2	65,698	0.4%	25,169	0.38
50 to 54 years	21,401,094	488.0	104,444	1.3%	83,464	0.80
55 to 59 years	22,007,956	736.5	162,098	1.3%	85,831	0.53
60 to 64 years	19,987,702	1,050.2	209,908	3.6%	215,867	1.03

65 to 69 years	16,836,381	1,473.5	248,087	3.6%	181,833	0.73
70 to 74 years	12,847,065	2,206.9	283,523	8.0%	308,330	1.09
75 to 79 years	8,741,261	3,517.8	307,498	8.0%	209,790	0.68
80 to 84 years	5,965,290	5,871.7	350,261	14.8%	264,859	0.76
85 years and over	6,468,682	13,573.6	878,035	14.8%	287,209	0.33
Total population	**325,719,178**	**863.8**	**2,813,503**	**1.8%**	**1,764,286**	**0.63**

Attack Rate	30%

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			
1-Feb	80 year old passenger confirmed to have COVID-19			
	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,219 tested 73 asympt

16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		
17-Feb	85 more passenger and crew confirmed +	454		1,723 tested 19 seriou
18-Feb	167 more passenger and crew confirmed +	621		3,011 te
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,066 tested 28 seriously 322 asymp
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	
25-Feb	Death reported in Japan	691	4	

Total passengers and crew:

691 cases (~50% asymptomatic) / 28 seriously ill (4%) / 4 deaths (a lagging measure)

So overall, a lower limit CFR of 0.6%--this includes the young healthy crew members and the elderly passengers.

Assuming the number of seriously ill approximates the % of cases requiring ICU care (4%) and the typical mortality rates for patients with pneumonia admitted to the ICU are 15%-50%, then CFR would be estimated to be0.6%-2% overall. The ICU data is sketchy (last data point I have is from Japan only on Feb 20). If someone has actual numbers of patients admitted to the ICU, just plug in and make your won estimate.

Americans:

Total Americans 434

- 329 evacuated
- 61 remained on board
- 44 in hospitals in Japan

80 cases (44 hospitalized in Japan/36 cases in US)

Media has only reported on a single American who was in the ICU in Japan (that is from Feb 11). There is nothing being reported in the media on current numbers of cases in ICU of Americans in the US or Japan. If anyone has that data (but cannot share it), would suggest you take that number divide it by the number of known American cases (80) to estimate a % of cases requiring ICU care. Multiply that number by 15%-50% to get a range of CFRs.

A while back I shared some estimates based upon the data from the cruise ship and compared to the 2005 HHS projections of a severe pandemic. Just to put those numbers in perspective. The 2005 estimates were that 30% of the population would become ill (30% attack rate); 11% of those who became ill would require hospitalization; 1.6% of those who became ill would require ICU care; and 2% of those who became ill would die.

We are in the ballpark.

Sent from Mail for Windows 10

From: Martin, (b)(6) J

Sent: Tuesday, February 25, 2020 6:04 AM

To: Walters, (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)((b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) , (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) Dr. (b)((b)((b)((b)(, Scott; (b)(6) (b)(6)

Cc: Padget, Larry G

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Wil,

This is what I've been using in our provider PowerPoint

Greg

Gregory J. Martin, MD

Chief, Tropical Medicine-Infectious Diseases

Bureau of Medical Services

US Department of State

2401 E St NW (SA-1)

Washington, DC 20522

BlackBerry while traveling: (b) (b)(6)

(b)(6)

From: Walters, (b)(6) (b)(6)

Sent: Tuesday, February 25, 2020 6:56 PM

To: (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) MARIEFRED (b)(6) (b)(6) (b)(6) V.,M.D. <MVCALLAHAN@mgh.harvard.edu>; (b)(6) rbaric@email.unc.edu; Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)(6) (b)(6) Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)(6) (Chris) (OS/ASPR/IO)

(b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) (b)(6) (b)(6) V (b)(6) Martin, Gregory J (b)(6) (b)(6) (b)(6) <LBorio@iqt.org>; (b)(6) (b)((b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) <nah2005@med.cornell.edu>; (b)(6) (b)(6) (b)(6) Dr. (b)((b)(6) (b)(Scott (b)(6) (b)(6) (b)(6) (b)(6)

Subject: Re: Red Dawn Breaking Bad, Start Feb 24

Colleagues,

Does anyone have a case fatality rate projection broken down by age?

William A. Walters, M.D., MBA

Executive Director and

Managing Director for Operational Medicine

Bureau of Medical Services

U.S. Department of State

(703) 957-9493

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

From: (b)(6) (b)(6) (b)(6)
Sent: Monday, February 24, 2020 4:58:53 PM
To: (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) <DMarcozzi(b)(6) (b)(6) (b)(6) J CIV USARMY (USA)

(b)(6) (b)(6) (b)(6) (b)(6) Walters, (b)(6)
(b)(6) (b)(6) (b)(6) (b)(6) WOLFE,
HERBERT (b)(6) Eastman, (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) V.,M.D.
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA)
<Robert.Johnson@hhs.gov>; Yeskey, (b)(6) (b)(6) Disbrow, Gary
(OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR)
<John.Redd@hhs.gov>; Hassell, (b)(6) (Chris) (OS/ASPR/IO) (b)(6)
Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH
(b)(6) (b)(6) (b)(6) V (b)(6) Martin, (b)(6) J
(b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(
(b)(6) eric.mcdonald@sdcounty.ca.gov <eric.mcdonald@sdcounty.ca.gov>;
(b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A
(b)(6) WILKINSON, THOMAS
(b)(6) (b)(6)
(b)(6) KAUSHIK, SANGEETA (b)(6)
(b)(6) (b)(6) (b)(6) Tracey (b)(6)
(b)(6) Dr. (b)(((b) (b)(6) (b)(Scott
(b)(6)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Several new countries announced first confirmed cases

Afghanistan

Bahrain

Iraq

Kuwait

Oman

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Monday, February 24, 2020 1:51 PM

To: (b)(6) (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)((b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6, (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) b)(6) Dr. (b) ((b)((b), Scott (OS/ASPR/EMMO)

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

The number of Americans confirmed positives from the cruise ship evacuated to the US was incorrect, it should have been 36

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Monday, February 24, 2020 1:28 PM

To: (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)((b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6, (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6))(6) Dr. (b) ((b)((b), Scott (OS/ASPR/EMMO)

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Interesting account from China –

https://www.huffpost.com/entry/coronavirus-covid19-life-china-precautions_n_5e4eaa73c5b6df1e8be3d4d7

From: (b)(6) (b)(6) <(b)(6)

Sent: 24 February 2020 18:18

To: Caneva, Duane (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA) (b)(6) (b)(6) (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)(6) (Chris) (OS/ASPR/IO) (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) (b)(6) (b)(6) V (b)(6) Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) <LBorio@iqt.org>; (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) <nah2005@med.cornell.edu> (b)(6) (b)(6) <tmcNamara@westernu.edu>; Dr. (b)(6) (b)(6) (b)(6) Scott (OS/ASPR/EMMO) (b)(6)

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Headlines:

Markets In Total Panic Mode As Coronavirus Cases Jump

"It's Total Panic" - Store-Shelves Empty As Virus-Spread Sparks Panic-Buying Food & Masks Across Italy

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Monday, February 24, 2020 1:01 PM

To: Caneva, Duane; (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) b)(6) Dr. (b) ((b)((b), Scott (OS/ASPR/EMMO)

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

-Singapore +1 over the past 3 days (90 cases/0 deaths) 38 currently hospitalized, 7 in ICU

-Hong Kong now up to 81 cases/2 deaths

-South Korea continues to have explosive growth now up to 833 cases/7 deaths

-Japan is up to 156 cases/2 deaths

> **According to the Ministry of Health, Labor and Welfare, two new cases of infection have been confirmed on the 24th, including employees of the Ministry of Health, Labor and Welfare and quarantine officers who responded on a cruise ship. 7 staff members of the Ministry of Health, Labor and Welfare and quarantine officers have been confirmed +.**

-Italy has 227 cases/7 deaths

-Iran 61 cases/12 deaths

Sent from Mail for Windows 10

From: Caneva, Duane

Sent: Monday, February 24, 2020 12:30 PM

To: (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)((b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) Dr. (b) ((b)(Redd, John (OS/ASPR/SPPR); (b)(6) (b)(6) Yeskey, Kevin; Lee, Scott (OS/ASPR/EMMO)

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Singapore COVID-19 Guidance Page:

https://www.gov.sg/article/covid-19-sector-specific-advisories

Best,

Duane

From: Caneva, Duane

Sent: Monday, February 24, 2020 12:28 PM

To: Subject: Red Dawn Breaking Bad, Start Feb 24

Importance: High

All,

This is a new Red Dawn Email String. Please use this one going forward.

Best,

Duane

Duane C. Caneva, MD, MS

Chief Medical Officer

Department of Homeland Security

(b)(6)

(b)(6) (c)

(b)(6)

(b)(6)

Executive Assistant: (b)(6) (b)(6) (b)(6) (b)(6)

(U) Warning: This document is UNCLASSIFIED//FOR OFFICIAL USE ONLY (U//FOUO). It contains information that may be exempt from public release under the Freedom of Information Act

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Recipient:	(b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dr. (b) J (b) (b)(6) Martin, (b)(6) J (b)(6) Walters, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c23f0d7c1d634508918e1c87cf50c48c-Dodgen, (b) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d2cce28859884c1c835a9404885d6534-DeBord, Kri <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6ce8134846423cb83b5b28464edb60-Phillips, S <Sally.Phillips@hhs.gov>; (b) (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA) (b)(6) (b) (b) (b)(6) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f2fb845c2e154d8e967ec3fdabecfbd6-Herbert.Wol (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group

	(FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6cb05aaaff4f9fb1ee44181880376c-Guest_37b50 (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V., M.D. (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0851e89240324306b78740a4a60745e2-Johnson, Ro <Robert.Johnson@hhs.gov>; Yeskey, Kevin (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev <Kevin.Yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0fd5845defda4dc0bb45f8fac629cf09-Disbrow, Ga <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ba3fed4ee8646ec849a5a87136a24f6-Redd, John <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=96d2c1602dfa45e5a5e21452a098b96d-Hamel, Jose <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) (b)((b)(V (b)(6) (b)((b)(6) (b)(6) (b)(6) (b) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b)((b)((b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2b8ce179913e4ec6a251a91616b1bc4a-Guest_de2e9 (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)((b)(6) Tracey (b)(6) (b)(6) (b) Scott (OS/ASPR/EMMO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=userf6879348 (b)(6) Padget, Larry G (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(J (CHFS DPH) (b)(6)
Sent Date:	2020/02/26 17:56:02
Delivered Date:	2020/02/26 17:56:58
Message Flags:	Unread

Coronavirus Disease 2019 (COVID-19) in the U.S.

Updated February 26, 2020

CDC is closely monitoring an outbreak of respiratory illness caused by a novel (new) coronavirus. The outbreak first started in Wuhan, China, but cases have been identified in a growing number of other international locations, including the United States. This page will be updated regularly on Mondays, Wednesdays, and Fridays.

COVID-19: Confirmed Cases in the United States*†

Travel-related	12
Person-to-person spread	2
Total confirmed cases	14
Total tested	445

* This table represents cases detected and tested in the United States through U.S. public health surveillance systems since January 21, 2020. It does not include people who returned to the U.S. via State Department-chartered flights.
† Numbers closed out at 4 p.m. the day before reporting.

COVID-19: Cases among Persons Repatriated to the United States†

	Wuhan, China	*Diamond Princess* Cruise Ship‡
Positive	3	42

†Numbers closed out at 4 p.m. the day before reporting.
‡Cases have laboratory confirmation and may or may not have been symptomatic.

From:	Brown, Lisa <LBrown@nas.edu>
To:	'Alexandra Phelan (alp81@georgetown.edu)' <alp81@georgetown.edu>; 'David A Relman (relman@stanford.edu)' <relman@stanford.edu>; 'David Walt (dwalt@bwh.harvard.edu)' <dwalt@bwh.harvard.edu>; 'Diane Griffin (dgriffi6@jhmi.edu)' <dgriffi6@jhmi.edu>; 'Embrey, Ellen (eembrey@stratitia.com)' <eembrey@stratitia.com>; 'Georges Benjamin (georges.benjamin@apha.org)' <georges.benjamin@apha.org>; hick.john /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user7b974f4e (b)(6) 'Jonna Mazet (jkmazet@ucdavis.edu)' <jkmazet@ucdavis.edu>; 'Kent Kester (Kent.Kester@sanofi.com)' <Kent.Kester@sanofi.com>; 'Kristian G. Andersen (b)(6) (b)(6) 'Mark Smolinski (b)(6) (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)' <mbassett@hsph.harvard.edu>; 'Patricia King (b)(6) (b)(6) 'Peggy Hamburg (peggy@hbfam.net)' <peggy@hbfam.net>; 'Peter Daszak (daszak@ecohealthalliance.org)' <daszak@ecohealthalliance.org>; 'Phyllis D. Meadows (PDMeadows@kresge.org)' <PDMeadows@kresge.org>; 'Richard Besser (rbesser@rwjf.org)' <rbesser@rwjf.org>; 'Tara O'Toole (totoole@iqt.org)' <totoole@iqt.org>; 'Trevor Bedford (trevor@bedford.io)' <trevor@bedford.io>; (b)(6) (b)(6) 'Donald Berwick' (b)(6) 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'Baruch Fischhoff' <baruch@cmu.edu>; (b)(6) (b)(6) 'bgroves@georgetown.edu' <bgroves@georgetown.edu>; (b)(6) V. Fineberg (b)(6) (b)(6) Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>; Attal-Juncqua, Aurelia <AAttal-Juncqua@nas.edu>; Feit, Monica <MFeit@nas.edu>; Liao, Julie <JLiao@nas.edu>; Dzau, Victor J. <VDzau@nas.edu>; Kanarek, Morgan <MKanarek@nas.edu>; Hassell, (b)(6) (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da (b)(6) 'Waterman Paige E. EOP/OSTP' <Paige.E.Waterman@ostp.eop.gov>; Watson, Ian (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3bc7da05f4e949ddbf55281ba404386a-Watson, Ian <Ian.Watson@hhs.gov>; 'Motrya Calafiura' <Motrya.Calafiura@georgetown.edu>; Ferris, Nicole <nferris@rwjf.org>
CC:	(b)(6) <mh1898@georgetown.edu>; Kadlec, Robert (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, (b) <Robert.Kadlec@hhs.gov>
Subject:	Standing Committee on EID and 21st Century Health Threats: URGENT Call on Monoclonal Antibodies
Date:	2020/11/13 17:10:05
Start Date:	2020/11/15 11:00:00
End Date:	2020/11/15 13:00:00
Priority:	Normal
Type:	Schedule.Meeting.Request
Location:	https://nasem.zoom.us/j/96818499306

Attendees:	'Alexandra Phelan (alp81@georgetown.edu)'; 'David A Relman (relman@stanford.edu)'; 'David Walt (dwalt@bwh.harvard.edu)'; 'Diane Griffin (dgriffi6@jhmi.edu)'; 'Embrey, Ellen (eembrey@stratitia.com)'; 'Georges Benjamin (georges.benjamin@apha.org)'; hick.john; 'Jonna Mazet (jkmazet@ucdavis.edu)'; 'Kent Kester (Kent.Kester@sanofi.com)'; 'Kristian G. Andersen (b)(6) 'Mark Smolinski (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)'; 'Patricia King (b)(6) 'Peggy Hamburg (peggy@hbfam.net)'; 'Peter Daszak (daszak@ecohealthalliance.org)'; 'Phyllis D. Meadows (PDMeadows@kresge.org)'; 'Richard Besser (rbesser@rwjf.org)'; 'Tara O'Toole (totoole@iqt.org)'; 'Trevor Bedford (trevor@bedford.io)'; (b)(6) 'Donald Berwick'; 'alta.charo@wisc.edu'; 'Jeff.Duchin@kingcounty.gov'; 'Baruch Fischhoff'; (b)(6) 'bgroves@georgetown.edu'; 'Harvey V. Fineberg (b)(6) Pope, Andrew; Pavlin, Julie; Shore, Carolyn; Wollek, Scott; Downey, Autumn; Fine, Emma; Kahn, Benjamin; Attal-Juncqua, Aurelia; Feit, Monica; Liao, Julie; Dzau, Victor J.; Kanarek, Morgan; Hassell, David (Chris) (OS/ASPR/IO); 'Waterman Paige E. EOP/OSTP'; Watson, Ian (OS/ASPR/SPPR); 'Motrya Calafiura'; Ferris, Nicole; (b)(6) mh1898@georgetown.edu; Kadlec, Robert (OS/ASPR/IO)

Join from PC, Mac, Linux, iOS or Android: (b)(6)

Or iPhone one-tap:
US: (b)(6)
Or Telephone:
Dial(for higher quality, dial a number based on your current location):
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Meeting ID (b)(6)
International numbers available: https://nasem.zoom.us/u/andiW2L8e

Sender:	Brown, Lisa <LBrown@nas.edu>
Recipient:	'Alexandra Phelan (alp81@georgetown.edu)' <alp81@georgetown.edu>; 'David A Relman (relman@stanford.edu)' <relman@stanford.edu>; 'David Walt (dwalt@bwh.harvard.edu)' <dwalt@bwh.harvard.edu>; 'Diane Griffin (dgriffi6@jhmi.edu)' <dgriffi6@jhmi.edu>; 'Embrey, Ellen (eembrey@stratitia.com)' <eembrey@stratitia.com>; 'Georges Benjamin (georges.benjamin@apha.org)' <georges.benjamin@apha.org>; hick.john /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user7b974f4e (b)(6) 'Jonna Mazet (jkmazet@ucdavis.edu)' <jkmazet@ucdavis.edu>; 'Kent Kester (Kent.Kester@sanofi.com)' <Kent.Kester@sanofi.com>; 'Kristian G. Andersen (b)(6) (b)(6) 'Mark Smolinski (b)(6) (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)' <mbassett@hsph.harvard.edu>; 'Patricia King (b)(6) (b)(6) 'Peggy Hamburg (peggy@hbfam.net)' <peggy@hbfam.net>; 'Peter Daszak (daszak@ecohealthalliance.org)' <daszak@ecohealthalliance.org>; 'Phyllis D. Meadows (PDMeadows@kresge.org)' <PDMeadows@kresge.org>; 'Richard Besser (rbesser@rwjf.org)' <rbesser@rwjf.org>; 'Tara O'Toole (totoole@iqt.org)' <totoole@iqt.org>; 'Trevor Bedford (trevor@bedford.io)' <trevor@bedford.io>; (b)(6) (b)(6) 'Donald Berwick' (b)(6) 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'Baruch Fischhoff' <baruch@cmu.edu>; (b)(6) (b)(6) 'bgroves@georgetown.edu' <bgroves@georgetown.edu>; (b)(6) V. Fineberg (b)(6) (b)(6)

	Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>; Attal-Juncqua, Aurelia <AAttal-Juncqua@nas.edu>; Feit, Monica <MFeit@nas.edu>; Liao, Julie <JLiao@nas.edu>; Dzau, Victor J. <VDzau@nas.edu>; Kanarek, Morgan <MKanarek@nas.edu>; Hassell, (b)((Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; 'Waterman Paige E. EOP/OSTP' <(b)(6) Watson, Ian (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3bc7da05f4e949ddbf55281ba404386a-Watson, Ian <Ian.Watson@hhs.gov>; 'Motrya Calafiura' <Motrya.Calafiura@georgetown.edu>; Ferris, Nicole <nferris@rwjf.org>; (b)(6) <mh1898@georgetown.edu>; Kadlec, Robert (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a182eda693d040d3832bae6efcf7a255-Kadlec, (b <Robert.Kadlec@hhs.gov>
Sent Date:	2020/11/13 17:09:31
Delivered Date:	2020/11/13 17:10:05

From:	Dzau, Victor J. <VDzau@nas.edu>
To:	Brown, Lisa <LBrown@nas.edu>
CC:	Alexandra Phelan (alp81@georgetown.edu) <alp81@georgetown.edu>; David A Relman (relman@stanford.edu) <relman@stanford.edu>; David Walt (dwalt@bwh.harvard.edu) <dwalt@bwh.harvard.edu>; Diane Griffin (dgriffi6@jhmi.edu) <dgriffi6@jhmi.edu>; Embrey, Ellen (eembrey@stratitia.com) <eembrey@stratitia.com>; Georges Benjamin (georges.benjamin@apha.org) <georges.benjamin@apha.org>; hick.john /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user7b974f4e (b)(6) Jonna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>; Kent Kester (Kent.Kester@sanofi.com) <Kent.Kester@sanofi.com>; Kristian G. Andersen (b)(6) (b)(6) Mark Smolinski (b)(6) (b)(6) Mary Travis Bassett (mbassett@hsph.harvard.edu) <mbassett@hsph.harvard.edu>; Patricia King (b)(6) (b)(6) Peggy Hamburg (peggy@hbfam.net) <peggy@hbfam.net>; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Phyllis D. Meadows (PDMeadows@kresge.org) <PDMeadows@kresge.org>; (b)(6) Besser (rbesser@rwjf.org) <rbesser@rwjf.org>; Tara O'Toole (totoole@iqt.org) <totoole@iqt.org>; Trevor Bedford (trevor@bedford.io) <trevor@bedford.io>; (b)(6) Donald Berwick (b)(6) <alta.charo@wisc.edu>; <Jeff.Duchin@kingcounty.gov>; Baruch Fischhoff <baruch@cmu.edu>; (b)(6) <bgroves@georgetown.edu>; Harvey V. Fineberg (harvey.fineberg@moore.org) <harvey.fineberg@moore.org>; Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>; Attal-Juncqua, Aurelia <AAttal-Juncqua@nas.edu>; Feit, Monica <MFeit@nas.edu>; Liao, Julie <JLiao@nas.edu>; Kanarek, Morgan <MKanarek@nas.edu>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Waterman Paige E. EOP/OSTP <(b)(6) Watson, Ian (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3bc7da05f4e949ddbf55281ba404386a-Watson, Ian <Ian.Watson@hhs.gov>; Motrya Calafiura <Motrya.Calafiura@georgetown.edu>; Ferris, Nicole <nferris@rwjf.org>
Subject:	Re: Standing Committee on EID and 21st Century Health Threats: URGENT Call on Monoclonal Antibodies
Date:	2020/11/10 21:41:26
Priority:	Normal
Type:	Note

I can join 11-11:25 am. After that I have to join another conference

> On Nov 10, 2020, at 6:32 PM, Brown, Lisa <LBrown@nas.edu> wrote:

>
>

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Sent Date:	2020/11/10 21:40:14
Delivered Date:	2020/11/10 21:41:26

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	Houchens, Christopher (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7ac94a574bd04528b7c91bbd61893975-Houchens, C (b)(6) Liao, Julie <JLiao@nas.edu>; Minicucci, Charles <CMinicucci@nas.edu>; Lee, Kathleen, VHACIN (b)(6) 'lolmedo@unicef.org' <lolmedo@unicef.org>; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=615b1ecad5774aa7b8408cfea2d6844b-celeste.gra <vjk1@cdc.gov>; <gostin@georgetown.edu>; Bernard Okech (b)(6) 'Waterman Paige E. EOP/OSTP' <Paige.E.Waterman@ostp.eop.gov>; Watson, Ian (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3bc7da05f4e949ddbf55281ba404386a-Watson, Ian <Ian.Watson@hhs.gov>; Sarah Cleaveland <sarah.cleaveland@glasgow.ac.uk>; Garcia,A. Isabel <aigarcia@dental.ufl.edu>; 'Koenen, Karestan' <kkoenen@hsph.harvard.edu>; 'Orin Levine' <Orin.Levine@gatesfoundation.org>; Maureen Litchveld <mlichtve@tulane.edu>; <Olugbenga.Ogedegbe@nyumc.org>; Del Rio, Carlos <CDelRio@nas.edu>; 'Tennenberg, MD, MPH. Alan [JRDUS]' <atennenb@ITS.JNJ.com>; 'John, Chandy C' <chjohn@iu.edu>; (b)(6) (b)(6) 'Hermsen, Elizabeth D' <elizabeth.hermsen@merck.com>; 'Andrew Clements' <aclements@usaid.gov>; 'Espinal, Dr. Marcos (WDC)' <espinalm@paho.org>; Mair, Michael (FDA/OC) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) 'peter.sands@theglobalfund.org' <peter.sands@theglobalfund.org>; 'suerie.moon@graduateinstitute.ch' <suerie.moon@graduateinstitute.ch>; 'twscott@ucdavis.edu' <twscott@ucdavis.edu>
Subject:	Expert Meeting on the Impact of Globalization on Future Health Crises
Date:	2020/09/17 08:47:19
Start Date:	2020/09/18 15:30:00
End Date:	2020/09/18 17:30:00
Priority:	Normal
Type:	Schedule.Meeting.Request
Location:	https://nasem.zoom.us/j/96069123196?pwd=cWNjWHlRb3VlWVhRMkpqT3ZSVWYvUT09
Attendees:	'Alexandra Phelan (alp81@georgetown.edu)'; 'David A Relman (relman@stanford.edu)'; (b)(6) Walt (dwalt@bwh.harvard.edu)'; 'Embrey, Ellen (eembrey@stratitia.com)'; 'Georges Benjamin (georges.benjamin@apha.org)'; 'Harvey V. Fineberg (harvey.fineberg@moore.org)'; hick.john; 'Jonna Mazet (jkmazet@ucdavis.edu)'; 'Kent Kester (Kent.Kester@sanofi.com)'; 'Kristian G. Andersen (b)(6) 'Mark Smolinski (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)'; 'Patricia King (b)(6) 'Peggy Hamburg (peggy@hbfam.net)'; 'Peter Daszak (daszak@ecohealthalliance.org)'; 'Phyllis D. Meadows (PDMeadows@kresge.org)'; 'Richard Besser (rbesser@rwjf.org)'; 'Tara O'Toole (totoole@iqt.org)'; 'Trevor Bedford (trevor@bedford.io)'; (b)(6) 'Donald Berwick'; 'alta.charo@wisc.edu'; 'Jeff.Duchin@kingcounty.gov'; 'Baruch Fischhoff'; Pope, Andrew; Pavlin, Julie; Shore, Carolyn; Wollek, Scott; Downey, Autumn; Fine, Emma; Kahn, Benjamin; Attal-Juncqua, Aurelia; Hassell, (b)(6) (Chris) (OS/ASPR/IO); KATHRYBR; (b)(6) Ann Kurth; 'Baker, Kelly'; Michele Barry; Malick Diara; Kanter, Andrew S.; Scott Ratzan MD; Tishkoff, Sarah; Gostin; Moerder, Claire; Koss, Michelle; Alisha Medina; Al-Amin, Ameena; 'Anderson, Kevin'; Cassetti, Cristina (NIH/NIAID) [E]; (b) Harris'; 'Roselle, Gary, VHACIN'; 'RASANATHAN, Kumanan'; Zahn, Matthew; 'Rafael Obregon'; Khabbaz, Rima (CDC/DDID/NCEZID/OD); 'miller.769@osu.edu'; Houchens, Christopher (OS/ASPR/BARDA); Liao, Julie; Minicucci, Charles; Lee, Kathleen, VHACIN; 'lolmedo@unicef.org'; Grant, Celeste (CDC/DDID/NCEZID/OD) (CTR); gostin@georgetown.edu; Bernard Okech; 'Waterman Paige E. EOP/OSTP'; Watson, Ian (OS/ASPR/SPPR); Sarah Cleaveland; Garcia,A. Isabel; 'Koenen, Karestan'; 'Orin Levine'; Maureen Litchveld; Olugbenga.Ogedegbe@nyumc.org; Del Rio, Carlos; 'Tennenberg, MD,

	MPH. Alan [JRDUS]'; 'John, Chandy C'; (b)(6) 'Hermsen, Elizabeth D'; 'Andrew Clements'; 'Espinal, Dr. Marcos (WDC)'; Mair, Michael (FDA/OC); 'peter.sands@theglobalfund.org'; 'suerie.moon@graduateinstitute.ch'; 'twscott@ucdavis.edu'

When: Sep 18, 2020 3:30:00 PM

(b)(6)

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Join from PC, Mac, Linux, iOS or Android:

(b)(6)

Password (b)(6)

Or iPhone one-tap:

US: (b)(6)

Or Telephone:

US: + (b)(6)

Meeting ID (b)(6)

Password (b)(6)

International numbers available: https://nasem.zoom.us/u/abvzRBFVKI

Sender:	Brown, Lisa <LBrown@nas.edu>
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Sent Date:	2020/09/17 08:47:03
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From:	Choi, Kelly <KChoi@nas.edu>
To:	'Michelle Penny' <mpenny@goldfinchbio.com>; (b)(6) <jennifer.ryan@moore.org>; 'harvey.fineberg@moore.org' <harvey.fineberg@moore.org>; 'joyce@23andme.com' <joyce@23andme.com>; 'Pamela G. Williams (Assistant to Drs. Ginsburg and Wray)' <pamela.g.williams@duke.edu>; 'geoffrey.ginsburg@duke.edu' <geoffrey.ginsburg@duke.edu>; 'Sharon Terry' <sterry@geneticalliance.org>; 'Judith Woods' <jwoods@acmg.net>; 'mmuenke@acmg.net' <mmuenke@acmg.net>; Addie, Siobhan <SAddie@nas.edu>; Hackmann, Meredith <mhackmann@nas.edu>; Beachy, Sarah <SBeachy@nas.edu>; Pope, Andrew <APope@nas.edu>; Brown, Lisa <LBrown@nas.edu>; 'ashastri@23andme.com' <ashastri@23andme.com>
CC:	Alexandra Phelan (alp81@georgetown.edu) <alp81@georgetown.edu>; David A Relman (relman@stanford.edu) <relman@stanford.edu>; David Walt (dwalt@bwh.harvard.edu) <dwalt@bwh.harvard.edu>; Diane Griffin (dgriffi6@jhmi.edu) <dgriffi6@jhmi.edu>; Embrey, Ellen (eembrey@stratitia.com) <eembrey@stratitia.com>; Georges Benjamin (georges.benjamin@apha.org) <georges.benjamin@apha.org>; John Hick (b)(6) (b)(6) Jonna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>; Kent Kester (Kent.Kester@sanofi.com) <Kent.Kester@sanofi.com>; Kristian G. Andersen (b)(6) (b)(6) Mark Smolinski (b)(6) (b)(6) Mary Travis Bassett (mbassett@hsph.harvard.edu) <mbassett@hsph.harvard.edu>; Patricia King (b)(6) (b)(6) Peggy Hamburg (peggy@hbfam.net) <peggy@hbfam.net>; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Phyllis D. Meadows (PDMeadows@kresge.org) <PDMeadows@kresge.org>; Richard Besser (rbesser@rwjf.org) <rbesser@rwjf.org>; Tara O'Toole (totoole@iqt.org) <totoole@iqt.org>; Trevor Bedford (trevor@bedford.io) <trevor@bedford.io>; (b)(6) Donald Berwick (b)(6) <alta.charo@wisc.edu>; <Jeff.Duchin@kingcounty.gov>; Baruch Fischhoff <baruch@cmu.edu>; (b)(6) <bgroves@georgetown.edu>; Baric, Toni C <antoinette_baric@med.unc.edu>; (b)(6) Kahn, Benjamin <BKahn@nas.edu>; Fine, Emma <EFine@nas.edu>; Watson, Ian (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3bc7da05f4e949ddbf55281ba404386a-Watson, Ian <Ian.Watson@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Paige Waterma (b)(6) (b)(6)
Subject:	Joint Meeting of the Genomics Roundtable and the Standing Committee on Infectious Diseases
Date:	2020/06/29 14:16:59
Start Date:	2020/07/01 13:00:00
End Date:	2020/07/01 15:00:00
Priority:	Normal
Type:	Schedule.Meeting.Request
Location	(b)(6)
Attendees:	'Michelle Penny'; 'jennifer.ryan@moore.org'; 'harvey.fineberg@moore.org'; 'joyce@23andme.com';

	'Pamela G. Williams (Assistant to Drs. Ginsburg and Wray)'; 'geoffrey.ginsburg@duke.edu'; 'Sharon Terry'; 'Judith Woods'; 'mmuenke@acmg.net'; Addie, Siobhan; Hackmann, Meredith; Beachy, Sarah; Pope, Andrew; Brown, Lisa; 'ashastri@23andme.com'; Alexandra Phelan (alp81@georgetown.edu); David A Relman (relman@stanford.edu); David Walt (dwalt@bwh.harvard.edu); Diane Griffin (dgriffi6@jhmi.edu); Embrey, Ellen (eembrey@stratitia.com); Georges Benjamin (georges.benjamin@apha.org); John Hick (b)(6) Jonna Mazet (jkmazet@ucdavis.edu); Kent Kester (Kent.Kester@sanofi.com); Kristian G. Andersen (b)(6) Mark Smolinski (b)(6) Mary Travis Bassett (mbassett@hsph.harvard.edu); Patricia King (b)(6) Peggy Hamburg (peggy@hbfam.net); Peter Daszak (daszak@ecohealthalliance.org); Phyllis D. Meadows (PDMeadows@kresge.org); Richard Besser (rbesser@rwjf.org); Tara O'Toole (totoole@iqt.org); Trevor Bedford (trevor@bedford.io); (b)(6) Donald Berwick; alta.charo@wisc.edu; Jeff.Duchin@kingcounty.gov; Baruch Fischhoff; (b)(6) bgroves@georgetown.edu; (b)(Toni C; (b)(6) Kahn, Benjamin; Fine, Emma; Watson, Ian (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Paige Waterman (Paige.E.Waterman@ostp.eop.gov)

Zoom Link (b)(6)

Telephone Dial-In Numbers:
(US (b)(6)
(UK

Meeting ID (b)(6)

Sender:	Choi, Kelly <KChoi@nas.edu>
Recipient:	'Michelle Penny' <mpenny@goldfinchbio.com>; (b)(6) (b)(6) (b)(6) (b)(6) 'joyce@23andme.com' <joyce@23andme.com>; 'Pamela G. Williams (Assistant to Drs. Ginsburg and Wray)' <pamela.g.williams@duke.edu>; 'geoffrey.ginsburg@duke.edu' <geoffrey.ginsburg@duke.edu>; 'Sharon Terry' <sterry@geneticalliance.org>; 'Judith Woods' <jwoods@acmg.net>; 'mmuenke@acmg.net' <mmuenke@acmg.net>; Addie, Siobhan <SAddie@nas.edu>; Hackmann, Meredith <mhackmann@nas.edu>; Beachy, Sarah <SBeachy@nas.edu>; Pope, Andrew <APope@nas.edu>; Brown, Lisa <LBrown@nas.edu>; 'ashastri@23andme.com' <ashastri@23andme.com>; Alexandra Phelan (alp81@georgetown.edu) <alp81@georgetown.edu>; David A Relman (relman@stanford.edu) <relman@stanford.edu>; David Walt (dwalt@bwh.harvard.edu) <dwalt@bwh.harvard.edu>; Diane Griffin (dgriffi6@jhmi.edu) <dgriffi6@jhmi.edu>; Embrey, Ellen (eembrey@stratitia.com) <eembrey@stratitia.com>; Georges Benjamin (georges.benjamin@apha.org) <georges.benjamin@apha.org>; John Hick (b)(6) (b)(6) Jonna Mazet (jkmazet@ucdavis.edu) <jkmazet@ucdavis.edu>; Kent Kester (Kent.Kester@sanofi.com) <Kent.Kester@sanofi.com>; Kristian G. Andersen (b)(6) (b)(6) Mark Smolinski (b)(6) (b)(6) Mary Travis Bassett (mbassett@hsph.harvard.edu) <mbassett@hsph.harvard.edu>; Patricia King (b)(6) (b)(6) Peggy Hamburg (peggy@hbfam.net) <peggy@hbfam.net>; Peter Daszak (daszak@ecohealthalliance.org) <daszak@ecohealthalliance.org>; Phyllis D. Meadows (PDMeadows@kresge.org) <PDMeadows@kresge.org>; Richard Besser (rbesser@rwjf.org) <rbesser@rwjf.org>;

	Tara O'Toole (totoole@iqt.org) <totoole@iqt.org>; Trevor Bedford (trevor@bedford.io) <trevor@bedford.io>; (b)(6) Donald Berwick (b)(6) <alta.charo@wisc.edu>; <Jeff.Duchin@kingcounty.gov>; Baruch Fischhoff <baruch@cmu.edu>; (b)(6) <bgroves@georgetown.edu>; Baric, Toni C <antoinette_baric@med.unc.edu>; (b)(6) Kahn, Benjamin <BKahn@nas.edu>; Fine, Emma <EFine@nas.edu>; Watson, Ian (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3bc7da05f4e949ddbf55281ba404386a-Watson, Ian <Ian.Watson@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; (b)(6)
Sent Date:	2020/06/29 14:15:03
Delivered Date:	2020/06/29 14:16:59

From:	Caneva, Duane (b)(6)
To:	Tracey (b)(6) (b)(6) Dr. (b) J (b) (b)(6)
CC:	(b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Martin, (b)(6) J (b)(6) Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.p (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c23f0d7c1d634508918e1c87cf50c48c-Dodgen, Dan <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d2cce28859884c1c835a9404885d6534-DeBord, Kri <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6ce8134846423cb83b5b28464edb60-Phillips, S <Sally.Phillips@hhs.gov>; (b) (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA) (b)(6) (b) (b) (b)(6) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f2fb845c2e154d8e967ec3fdabecfbd6-Herbert.Wol (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6cb05aaaff4f9fb1ee44181880376c-Guest_37b50 (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V., M.D. (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0851e89240324306b78740a4a60745e2-Johnson, Ro <Robert.Johnson@hhs.gov>; Yeskey, Kevin (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev <Kevin.Yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0fd5845defda4dc0bb45f8fac629cf09-Disbrow, Ga <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ba3fed4ee8646ec849a5a87136a24f6-Redd, John <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=96d2c1602dfa45e5a5e21452a098b96d-Hamel, Jose <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) (b) (b) V (b)(6) (b) (b)(6) (b)(6) (b)(6) (b) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b) (b) (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2b8ce179913e4ec6a251a91616b1bc4a-Guest_de2e9 (b)(6) WILKINSON, THOMAS <THOMAS.WILKINSON@hq.dhs.gov>; (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group

	(FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)((b)(6) (b) Scott (OS/ASPR/EMMO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=userf6879348 (b)(6) Padget, Larry G (b)(6)
Subject:	RE: Red Dawn Breaking Bad, Start Feb 24
Date:	2020/02/25 16:25:09
Priority:	Normal
Type:	Note

Required Information Matrix.

From: Tracey (b)(6) (b)(6)
Sent: Tuesday, February 25, 2020 4:02 PM
ToSubject: Re: Red Dawn Breaking Bad, Start Feb 24

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Dear (b)(Very glad to hear. As a veterinarian, I do not know the ins and outs of public health. So we can do this? Is someone taking the lead on this to make sure this can be utilized? Tracey

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From: Dr. (b) (b) (b)(6)
Sent: Tuesday, February 25, 2020 12:52:58 PM
To: Tracey (b)(6) (b)(6)
Cc: (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Martin, (b)(6) J (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)((b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) (b)(6) (b)(6) V

(b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
eric.mcdonald@sdcounty.ca.gov <eric.mcdonald@sdcounty.ca.gov>; (b)(6) (b)(6)
(b)(6) TARANTINO, (b)(6) A (b)(6) WILKINSON,
THOMAS (b)(6) (b)(6)
(b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6)
(b)(6) (b)(6) Lee, Scott <Scott.Lee@hhs.gov>; Padget, Larry G
(b)(6)
Subject: Re: Red Dawn Breaking Bad, Start Feb 24

Tracey, this sounds like drivethrough POD that local public health department have practiced for over a decade now and know how to run rather efficiently. Can they do the swab themselves? Or server has to walk up to the driver and perform/instruct. Still need to protect them. Bur yes, it can be fast and rather safe -- at least separate everyone. That's the whole idea of drivethrough. Online site can be used for registration, or an app can be used to register. it's all avalable and out there. I have tested many sites on these since 2015.

About S Korea... It needs not be this "secretive" religion cult with strange practice in order to spread COVID-19. Even a regular chucch could just be as good ia transmiion platform. People hug, shake hands, sit very close to each other... drink out of the same cup... That's why social distaning is so imporntant. Church service in Hong Kong becomes online the moment they put out NPI advice. So we need to take note...

(b)(6)
https://newton.isye.gatech.edu/DrLee/
mobile: (b)(6)

Sent with ProtonMail Secure Email.

- - - - - - - Original Message - - - - - - -
On Tuesday, February 25, 2020 2:30 PM, Tracey (b)(6)
(b)(6) wrote:

Here is an idea. We have discussed the need to use swabs that hospitals use to screen for flu A and B. If negative, then assume it may be COVID-19. But we do not want clinics to be overrun.

What if we were to enlist drive through pharmacies to hand out/collect swabs from people who remain in their cars? Pharmacist could ask questions and enter into that person's records electronically. They could tell the person that they will receive a phone call or text with +/- flu results and wether they should seek care at the hospital.
The logistics of getting the swabs to a local hospital for testing would have to be worked out.

We would need a form that could be put on the pharmacy website that people could fill out on line.

There are many more pharmacies in the USA than there are hospitals. Using drive up services that keeps possible patients in their cars would decrease crowding in health facilities

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From: Dr. (b)(6)
Sent: Tuesday, February 25, 2020 11:07:37 AM
To: (b)(6)
Cc: (b)(6) Martin, (b)(6) J (b)(6) Walters, (b)(6) Caneva, Duane (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) J CIV USARMY (USA) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) V.,M.D. (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) V (b)(6) eric.mcdonald@sdcounty.ca.gov <eric.mcdonald@sdcounty.ca.gov>; (b)(6) TARANTINO, (b)(6) A (b)(6) WILKINSON, THOMAS (b)(6) KAUSHIK, SANGEETA (b)(6) Tracey (b)(6) Scott <Scott.Lee@hhs.gov>; Padget, Larry G (b)(6)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Indeed, very flu-like... and (b)(6) you have circled around those CFR of flu (based on only confirimed cases) and that should give us a very comparison for COVID-19, not counting anything projected.

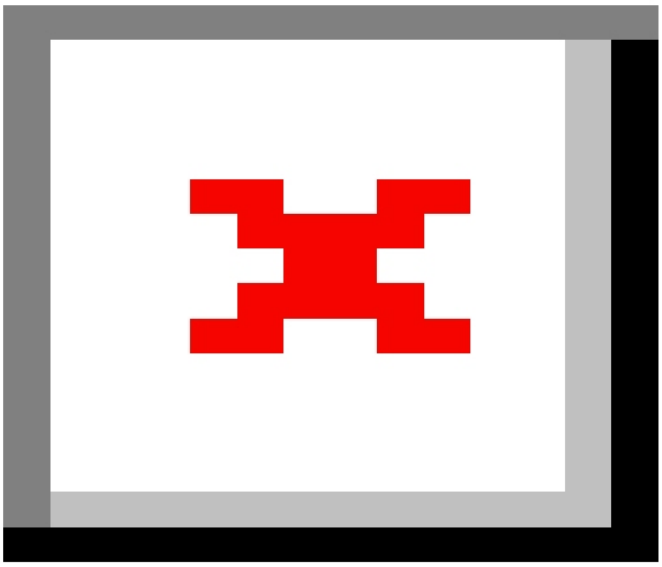
I think screening and hospitalization are critical.
Call center is good. But I would prefer video-conferencing better especially for patients with some sypmtoms. I think being able to see them give us some "clues" on advice etc.

(b)(6)
https://newton.isye.gatech.edu/DrLee/
mobile: (b)(6)

Sent with ProtonMail Secure Email.

Original Message
On Tuesday, February 25, 2020 12:12 PM, (b)(6) (b)(6) (b)(6) wrote:

Just like Philly and St. Louis the curves growing out in real time . . .



From: (b)(6) (b)(6) (b)(6)
Sent: 25 February 2020 16:34
To: (b)(6) (b)(6) (b)(6) Dr. (b) (6) (b) <evalee-gatech@pm.me>
Cc: Martin, (b)(6) J (b)(6) Walters, (b)(6) (b)(6) (b)(6) Caneva, Duane <duane.caneva@hq.dhs.gov>; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) (b)(6)

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WOLFE, HERBERT (b)(6) Eastman, (b)(6)
(b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) hq.dhs.gov>; (b)(6) (b)(6) V.,M.D.
<MVCALLAHAN@mgh.harvard.edu>; (b)(6) rbaric@email.unc.edu; Johnson,
Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)(6)
<kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>;
Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)(6) (Chris)
(OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO)
<Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>;
(b)(6) (b)(6) V (b)(6) (b)(6) edu>; (b)(6) (b)(6) (b)(6)
(b)(6) (b) <DHanfling@iqt.org>; eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6)
(b)(6) (b)(6) dhs.gov>; TARANTINO, DAVID A (b)(6) (b)(6)
WILKINSON, THOMAS (b)(6) (b)(6) gruber@dshs.texas.gov;
KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6)
(b)(6) Tracey (b)(6) <tmcNamara@westernu.edu>; Lee,
Scott <Scott.Lee@hhs.gov>; Padget, Larry G (b)(6)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

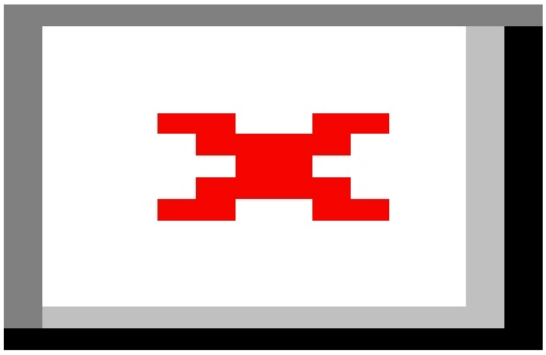
South Korea now has 977 cases and 10 deaths. They are about where Wuhan was on January 25th (so about 1 month behind). Wuhan was overwhelmed less than 2 weeks later. I would expect the same for South Korea with the epicenter being in Seoul.

I think Iran is about at the same point (maybe even a little ahead) of South Korea. Tehran is another very large city that will likely becomes its epicenter.

I see a few hopeful signs. Singapore and Hong Kong have done a great job thus far and have implemented NPIs very early. Both have great surveillance. They are holding the line. They are also small and islands. Japan on the other hand is struggling and hasn't been as aggressive as Singapore and Hong Kong.

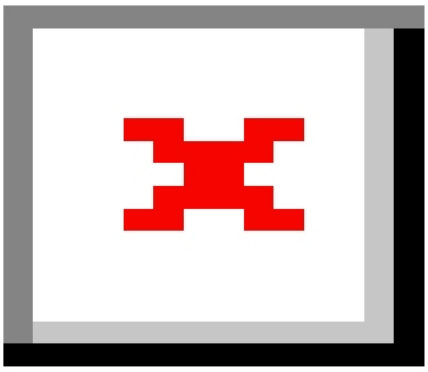
The other thing that gives me hope is what I see in Hubei and Wuhan. I realize the data is a little sketchy because China has gone back and forth with the definition of cases, but I tried to smooth that over by looking at cumulative hospitalization rates per 100,000 (like we do for flu). Hubei

(and Wuhan is a city within Hubei) reports each day the current number of people in the hospital (# currently in severe condition, # in critical condition), cumulative number of hospital discharges, cumulative deaths, and cumulative cases. From this we can estimate cumulative hospitalizations and then rates. 92% of the cases have been hospitalized (up thru Feb 2nd 100% of the cases they reported were hospitalized). Knowing the number of cases in Wuhan, we have been estimating the number hospitalized assuming a similar % of the cases requiring hospitalization rate for Wuhan (that 92% of the cases are being hospitalized—that number is adjusted each day based on current data). So we really can't back out the Wuhan numbers from the Hubei numbers. The best we can do is compare Hubei totals (including Wuhan) with an estimate of Wuhan. This data is good enough to show that the Chinese appear to be slowing transmission outside of Wuhan (They were late to implement NPIs in Wuhan but were able to implement NPIs earlier in the epidemic outside of Wuhan because the outbreak had about a 2 week head-start in Wuhan).



We need to emulate the blue curve. If I could subtract Wuhan, this curve would be significantly lower.

Remember the goals of NPIs.



Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Tuesday, February 25, 2020 10:30 AM
To: (b)(6) (b)(6) Dr. (b) (b)
Cc: Martin, (b)(6) J; Walters, (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) Lee, Scott; Padget, Larry G

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Death #4 from Diamond Princess.

https://twitter.com/BNODesk/status/1232124151789477889

From: (b)(6) (b)(6) (b)(6)
Sent: 25 February 2020 14:10
To: Dr. (b) (b) (b)(6)
Cc: Martin, (b)(6) J(b)(6) Walters, (b)(6)
<WaltersWA2@state.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) net>; Caneva, Duane (b)(6)
(b)(6) com; Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>;
DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally
(OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6)
<DMarcozzi@som.umaryland.edu>; (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) dhs.gov>; WOLFE, HE
(b)(6) Eastman, (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) (b)(6) (b)(6) b)(6) (b)(6)
V., M.D. <MVCALLAHAN@mgh.harvard.edu>; (b)(6)
Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin
<kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>;
Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)(6) (Chris)
(OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO)
<Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH <Charity.Dean@cdph.ca.gov>;
(b)(6) (b)(6) V (b)(6) (b)(6) edu>; (b)(6) (b)(6) (b)(6)
(b)(6) (b) <DHanfling@iqt.org>; eric.mcdonald@sdcounty.ca.gov; (b)(6 (b)(6)
(b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) (b)(6)
WILKINSON, THOMAS (b)(6) (b)(6) gruber@dshs.texas.gov;
KAUSHIK, SANGEETA (b)(6) (b)(6)
<nah2005@med.cornell.edu>; Tracey (b)(6) (b)(6) (b)(
Scott <Scott.Lee@hhs.gov>; Padget, Larry G (b)(6)
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

We should plan assuming we won't have enough PPE—so need to change the battlefield and how we envision or even define the front lines. The frontlines for mild illness need to pivot from our usual way of dealing with ILI in our clinics and ERs to non-face-to-face alternatives for the delivery of care (by phone/telehealth/home care). It means we need to shrink the problem and think of COVID patients in two groups: (1) those with mild enough disease that they can be managed thru self-care in the home; and (2) those will more severe disease that cannot be managed at home and likely require hospitalization. The first group needs to be managed by phone/telehealth with "prescriptions" for home isolation qD X 14 days (no refills) and home isolation for household members qD X 14 days (refills allowed). And only the second group should be coming to our ERs. It is why we need to look broadly at our healthcare system (even including minute clinics at CVS/Walgreens and stand alone urgent care centers). We need to start introducing this now.

Sent from Mail for Windows 10

From: Dr. (b)(6)
Sent: Tuesday, February 25, 2020 8:47 AM
To: (b)(6)
Cc: Martin, (b)(6) J; Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6); Caneva, Duane; (b)(6) (b)(6) com; Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6); (b)(6) (b)(6) J CIV USARMY (USA); (b)((b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V., M.D.; (b)(6))(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6 (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) gruber@dshs.texas.gov; KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6))(6) (b)(Scott; Padget, Larry G
Subject: RE: Red Dawn Breaking Bad, Start Feb 24

This is extremely troubling that healthcare workers, including medical leaders are contracting the COVID-19 while caring for the infected. I am very worried about the supply-chain regarding all the protective gears, medical supplies and everything that is needed to combat this disease. The demand is rising and there is no guarantee that we can continue with the supply since the supply-chain has been disrupted.

I do not know if we have enough resources to protect all frontline providers.

(b)(6)

https://newton.isye.gatech.edu/DrLee/

mobile: (b)(6)

Sent with ProtonMail Secure Email.

Original Message

On Tuesday, February 25, 2020 8:37 AM, (b)(6) (b)(6) (b)(6) wrote:

For those who cannot access Twitter but can access YouTube, here is the video.

https://www.youtube.com/watch?v=4AX4dbXIsSw

Imagine if something like this happened in the US with an equivalent national leader (watching him coughing during a press conference, rubbing his nose, and wiping the sweat from his forehead, and leaning on the podium with one hand while someone else is speaking) and then learning afterwards that he is infected with COVID. That is what has happened in Iran.

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Tuesday, February 25, 2020 8:01 AM

To: Martin, (b)(6) J; Walters, (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane; (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) b)(6) Dr. (b)((b)((b), Scott

Cc: Padget, Larry G

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Modeling isolation and social distancing (not)

https://twitter.com/BNODesk/status/1232276183305400320

Imagine how widespread it must be to see this?

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Tuesday, February 25, 2020 7:20 AM

To: Martin, (b)(6) J; Walters, (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A;

WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) Dr. (b)((b)((b)(Scott

Cc: Padget, Larry G

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Just a word of caution. Here is what those numbers would mean. These are the projections using an attack rate of 30% (could send you the model in Excel and you can plug in whatever attack rate you like). I suspect that those CFRs are inflated because of case ascertainment issues (the actual denominator is much larger). The most recent background annual death data in the US (US Vital Statistics) is from 2017. It is useful to have those numbers of comparison.

I think those CFRs are on the high side., but don't have anything better to offer.

The best data we have for estimating CFR will be from the cruise ship, where we have a circumscribed population. That data is extremely valuable because the cruise ship had a crew of 1,045 (young and health) and 2,666 passengers (elderly). It will be important to look at each group separately. The data that I am aware of (all obtained thru open sources) is shared below this table).

AGE	2017 Census	2017 All Cause Mortality per 100,00	Actual 2017 All Cause Deaths	CFR	Projected 2019-nCoV Deaths	Ratio Projected Deaths to 2017 All Cause Deaths
<1 year	3,853,472	567.0	22,335	0.0%	0	0.00
1-4 years	16,085,388	24.3	3,880	0.0%	0	0.00
5 to 9 years	20,304,238	11.6	2,354	0.0%	0	0.00
10 to 14 years	20,778,454	15.5	3,217	0.2%	12,467	3.88
15 to 19 years	21,131,660	51.5	10,886	0.2%	12,679	1.16
20 to 24 years	22,118,635	95.6	21,139	0.2%	13,271	0.63
25 to 29 years	23,370,460	121.0	28,276	0.2%	14,022	0.50
30 to 34 years	21,972,212	145.4	31,939	0.2%	13,183	0.41
35 to 39 years	21,231,997	173.8	36,901	0.2%	12,739	0.35
40 to 44 years	19,643,373	218.4	42,895	0.4%	23,572	0.55
45 to 49 years	20,973,858	313.2	65,698	0.4%	25,169	0.38
50 to 54 years	21,401,094	488.0	104,444	1.3%	83,464	0.80
55 to 59 years	22,007,956	736.5	162,098	1.3%	85,831	0.53
60 to 64 years	19,987,702	1,050.2	209,908	3.6%	215,867	1.03

65 to 69 years	16,836,381	1,473.5	248,087	3.6%	181,833	0.73
70 to 74 years	12,847,065	2,206.9	283,523	8.0%	308,330	1.09
75 to 79 years	8,741,261	3,517.8	307,498	8.0%	209,790	0.68
80 to 84 years	5,965,290	5,871.7	350,261	14.8%	264,859	0.76
85 years and over	6,468,682	13,573.6	878,035	14.8%	287,209	0.33
Total population	**325,719,178**	**863.8**	**2,813,503**	**1.8%**	**1,764,286**	**0.63**

Attack Rate	**30%**

Date	Event	Cumulative Number of Confirmed Cases	Cumulative Number of Deaths	Note
20-Jan	Cruise ship departs from Yokohama Japan			
25-Jan	80 year old passenger disembarks in Hong Kong			
1-Feb	80 year old passenger confirmed to have COVID-19			
	When results known, certificate of landing canceled and ship under quarantine. Tests for the virus would be administered to three groups: those with symptoms, those who got off in Hong Kong, and those who had close contact with the infected passenger.			
3-Feb	Ship arrives in port of Yokohama Japan			
5-Feb	10 passengers and crew confirmed +	10		
6-Feb	31 more passengers and crew confirmed +	41		
7-Feb	30 more passenger and crew confirmed +	61		
8-Feb	9 more passenger and crew confirmed +	70		
10-Feb	66 more passenger and crew confirmed +	136		439 tes
11-Feb	39 more passenger and crew confirmed +	175		492 tes
12-Feb	28 more passenger and crew confirmed +	203		4 in IC
13-Feb	15 more passenger and crew confirmed +	218		713 tes
14-Feb	67 more passenger and crew confirmed +	285		927 tes
15-Feb	70 more passenger and crew confirmed +	355		1,219 tested; asymptor
16-Feb	329 American evacuated from cruise ship (14 of the evacuees found to be +) 61 Americans remained on board 44 Americans remained hospitalized in Japan	369		

17-Feb	85 more passenger and crew confirmed +	454		1,723 tested; seriousl
18-Feb	167 more passenger and crew confirmed +	621		3,011 te
19-Feb	2 deaths	621	2	
20-Feb	13 more passenger and crew confirmed +	634	2	3,066 tested; seriously ill; asymptor
23-Feb	Death reported in Japan		3	
24-Feb	Japan updates total to 691; US reports 36 in US	691	3	
25-Feb	Death reported in Japan	691	4	

Total passengers and crew:

691 cases (~50% asymptomatic) / 28 seriously ill (4%) / 4 deaths (a lagging measure)

So overall, a lower limit CFR of 0.6%--this includes the young healthy crew members and the elderly passengers.

Assuming the number of seriously ill approximates the % of cases requiring ICU care (4%) and the typical mortality rates for patients with pneumonia admitted to the ICU are 15%-50%, then CFR would be estimated to be0.6%-2% overall. The ICU data is sketchy (last data point I have is from Japan only on Feb 20). If someone has actual numbers of patients admitted to the ICU, just plug in and make your won estimate.

Americans:

Total Americans 434

- 329 evacuated
- 61 remained on board
- 44 in hospitals in Japan

80 cases (44 hospitalized in Japan/36 cases in US)

Media has only reported on a single American who was in the ICU in Japan (that is from Feb 11). There is nothing being reported in the media on current numbers of cases in ICU of Americans in the US or Japan. If anyone has that data (but cannot share it), would suggest you take that number divide it by the number of known American cases (80) to estimate a % of cases requiring ICU care. Multiply that number by 15%-50% to get a range of CFRs.

A while back I shared some estimates based upon the data from the cruise ship and compared to the 2005 HHS projections of a severe pandemic. Just to put those numbers in perspective. The 2005 estimates were that 30% of the population would become ill (30% attack rate); 11% of those who became ill would require hospitalization; 1.6% of those who became ill would require ICU care; and 2% of those who became ill would die.

We are in the ballpark.

Sent from Mail for Windows 10

From: (b)(6)

Sent: Tuesday, February 25, 2020 6:04 AM

To: Walters, (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)((b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) Dr. (b)((b)((b)((b)(, Scott; (b)(6) (b)(6)

Cc: Padget, Larry G

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Wil,

This is what I've been using in our provider PowerPoint

Greg

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

Chief, Tropical Medicine-Infectious Diseases

Bureau of Medical Services

US Department of State

2401 E St NW (SA-1)

Washington, DC 20522

BlackBerry while traveling: (b) (b)(6)

(b)(6)

From: Walters, (b)(6) (b)(6)

Sent: Tuesday, February 25, 2020 6:56 PM

To: (b)(6) (b)(6) (b)(6) (b)(6) Caneva, Duane (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)(6) (b)(6) Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) (b)(6) (b)(6) V (b)(6) Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) b)(6) (b)((b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) 6)

(b)(6) Dr. (b)(6) (b)(6) Scott
(b)(6) (b)(6) (b)(6) (b)(6)

Subject: Re: Red Dawn Breaking Bad, Start Feb 24

Colleagues,

Does anyone have a case fatality rate projection broken down by age?

William A. Walters, M.D., MBA

Executive Director and

Managing Director for Operational Medicine

Bureau of Medical Services

U.S. Department of State

(b)(6)

(b)(6)

(b)(6)

(b)(6)

From: (b)(6) (b)(6) (b)(6)
Sent: Monday, February 24, 2020 4:58:53 PM
To: (b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) Caneva, Duane (b)(6)
(b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR)
<Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR)
<Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6)
(b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA)
(b)(6) (b)(6) (b)(6) <lkoonin1@gmail.com>; Walters, (b)(6)
(b)(6) (b)(6) (b)(6) (b)(6) WOLFE,
HERBER (b)(6) Eastman, (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) V.,M.D.
(b)(6) jwleduc@UTMB.EDU (b)(6)
(b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA)
<Robert.Johnson@hhs.gov>; Yeskey, (b)(6) (b)(6) Disbrow, Gary

(OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)(6) (Chris) (OS/ASPR/IO) (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) (b)(6) (b)(6) V (b)(6) Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) ; (b)(6) (b)((b)(6) eric.mcdonald@sdcounty.ca.gov <eric.mcdonald@sdcounty.ca.gov>; (b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) (b)(6) Tracey (b)(6) (b)(6) Dr. (b)(((b) (b)(6) (b)(Scott (b)(6)

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Several new countries announced first confirmed cases

Afghanistan

Bahrain

Iraq

Kuwait

Oman

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Monday, February 24, 2020 1:51 PM

To: (b)(6) (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) Walters, William (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO);

Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) b)(6) Dr. (b) ((b)((b), Scott (OS/ASPR/EMMO)

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

The number of Americans confirmed positives from the cruise ship evacuated to the US was incorrect, it should have been 36

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Monday, February 24, 2020 1:28 PM

To: (b)(6) (b)(6) Caneva, Duane; (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)((b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) b)(6) Dr. (b) ((b)((b)(Scott (OS/ASPR/EMMO)

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Interesting account from China

https://www.huffpost.com/entry/coronavirus-covid19-life-china-precautions_n_5e4eaa73c5b6df1e8be3d4d7

From: (b)(6) (b)(6) (b)(6)

Sent: 24 February 2020 18:18

To: Caneva, Duane (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA) (b)(6) (b)(6) (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin (b)(6) Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)(6) (Chris) (OS/ASPR/IO) (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) (b)(6) (b)(6) V (b)(6) Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dr. (b)(6) (b)(6) (b)(6) Lee, Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Headlines:

Markets In Total Panic Mode As Coronavirus Cases Jump

″It's Total Panic″ - Store-Shelves Empty As Virus-Spread Sparks Panic-Buying Food & Masks Across Italy

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Monday, February 24, 2020 1:01 PM

To: Caneva, Duane; (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)((b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6), (b)(6) TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) Dr. (b) ((b)((b), Scott (OS/ASPR/EMMO)

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

-Singapore +1 over the past 3 days (90 cases/0 deaths) 38 currently hospitalized, 7 in ICU

-Hong Kong now up to 81 cases/2 deaths

-South Korea continues to have explosive growth now up to 833 cases/7 deaths

-Japan is up to 156 cases/2 deaths

> **According to the Ministry of Health, Labor and Welfare, two new cases of infection have been confirmed on the 24th, including employees of the Ministry of Health, Labor and Welfare and quarantine officers who responded on a cruise ship. 7 staff**

members of the Ministry of Health, Labor and Welfare and quarantine officers have been confirmed +.

-Italy has 227 cases/7 deaths

-Iran 61 cases/12 deaths

Sent from Mail for Windows 10

From: Caneva, Duane

Sent: Monday, February 24, 2020 12:30 PM

To: (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA); (b)((b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Dean, Charity A@CDPH; (b)(6) (b)(6) V; Martin, (b)(6) J (b)(6) (b)(6) (b)(6) (b)(6) (b)(eric.mcdonald@sdcounty.ca.gov; (b)(6) David; TARANTINO, (b)(6) A; WILKINSON, THOMAS; (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) Tracey (b)(6) Dr. (b) ((b)(Redd, John (OS/ASPR/SPPR); (b)(6) (b)(6) Yeskey, Kevin; Lee, Scott (OS/ASPR/EMMO)

Subject: RE: Red Dawn Breaking Bad, Start Feb 24

Singapore COVID-19 Guidance Page:

https://www.gov.sg/article/covid-19-sector-specific-advisories

Best,

Duane

From: Caneva, Duane

Sent: Monday, February 24, 2020 12:28 PM

To: Subject: Red Dawn Breaking Bad, Start Feb 24

Importance: High

All,

This is a new Red Dawn Email String. Please use this one going forward.

Best,

Duane

Duane C. Caneva, MD, MS

Chief Medical Officer

Department of Homeland Security

(b)(6) (o)

(b)(6) (c)

(b)(6)

(b)(6)

Executive Assistant: (b)(6) (b)(6) (b)(6) (b)(6)

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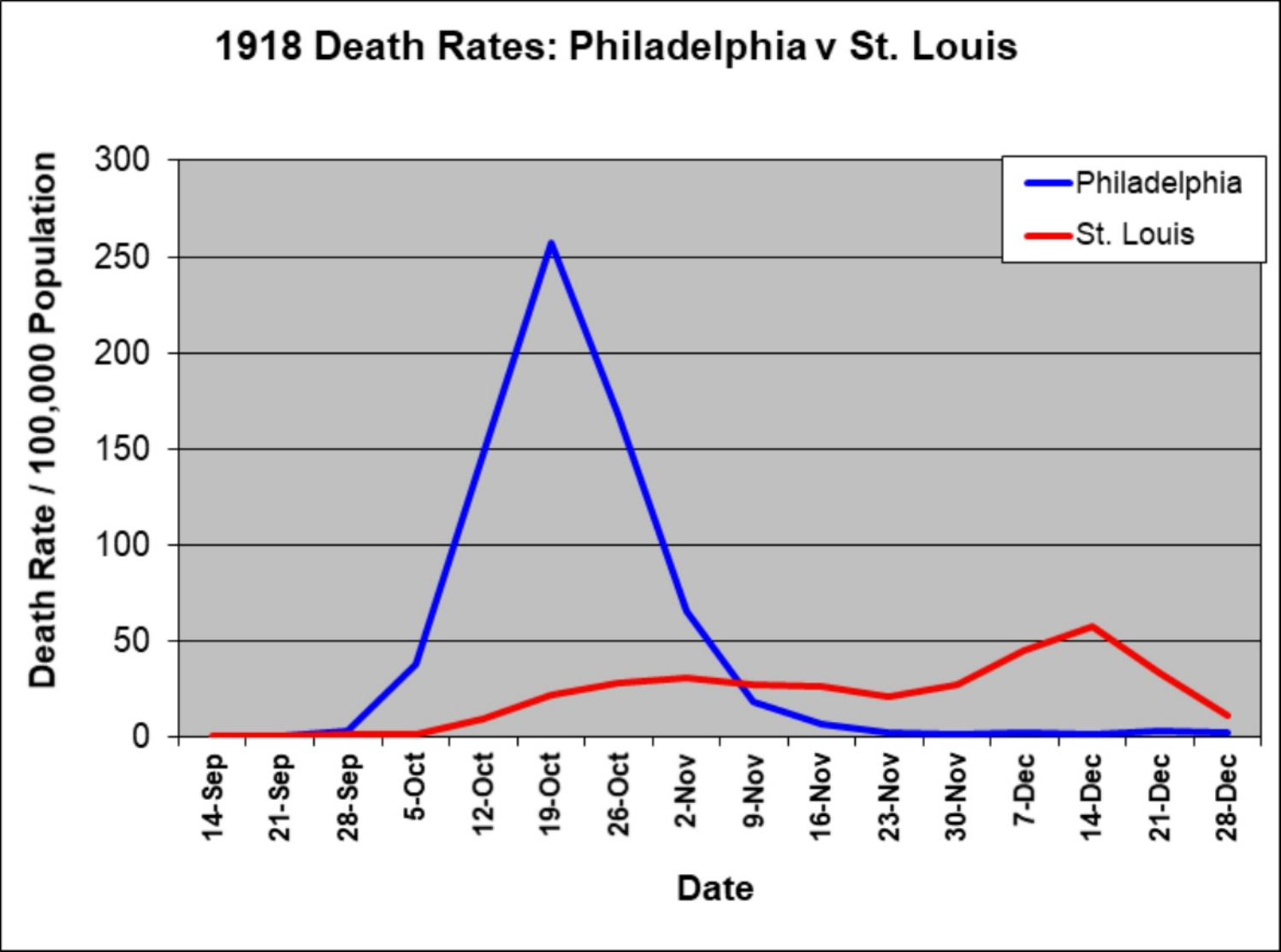
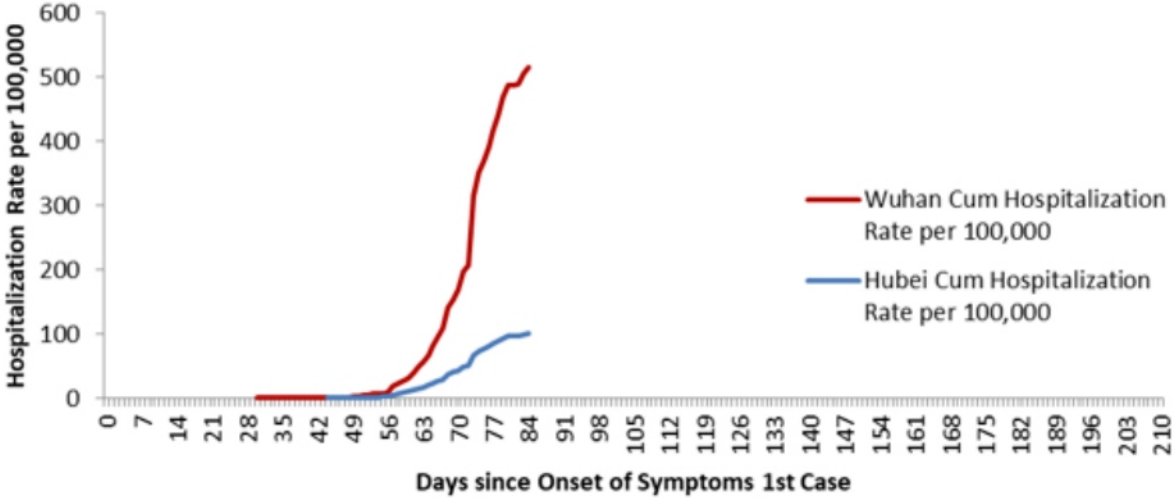
Sender:	Caneva, Duane (b)(6)
Recipient:	Tracey (b)(6) (b)(6) Dr. (b) J (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) Martin, (b)(6) J (b)(6) Walters, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c23f0d7c1d634508918e1c87cf50c48c-Dodgen, Dan <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d2cce28859884c1c835a9404885d6534-DeBord, Kri <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6ce8134846423cb83b5b28464edb60-Phillips, S <Sally.Phillips@hhs.gov>; (b)((b)(6) (b)(6) (b)(6) (b)(6) J CIV USARMY (USA) (b)(6) (b) (b)((b)(6) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f2fb845c2e154d8e967ec3fdabecfbd6-Herbert.Wol (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6cb05aaaff4f9fb1ee44181880376c-Guest_37b50 (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0851e89240324306b78740a4a60745e2-Johnson, Ro <Robert.Johnson@hhs.gov>; Yeskey, Kevin (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev <Kevin.Yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0fd5845defda4dc0bb45f8fac629cf09-Disbrow, Ga <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ba3fed4ee8646ec849a5a87136a24f6-Redd, John

	<John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=96d2c1602dfa45e5a5e21452a098b96d-Hamel, Jose <Joseph.Hamel@hhs.gov>; Dean, Charity A@CDPH (b)(6) (b)((b)(V (b)(6) (b)((b)(6) (b)(6) (b)(6) (b) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b)((b)((b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2b8ce179913e4ec6a251a91616b1bc4a-Guest_de2e9 (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)((b)(6) (b) Scott (OS/ASPR/EMMO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=userf6879348 (b)(6) Padget, Larry G (b)(6)
Sent Date:	2020/02/25 16:21:30
Delivered Date:	2020/02/25 16:25:09
Message Flags:	Unread

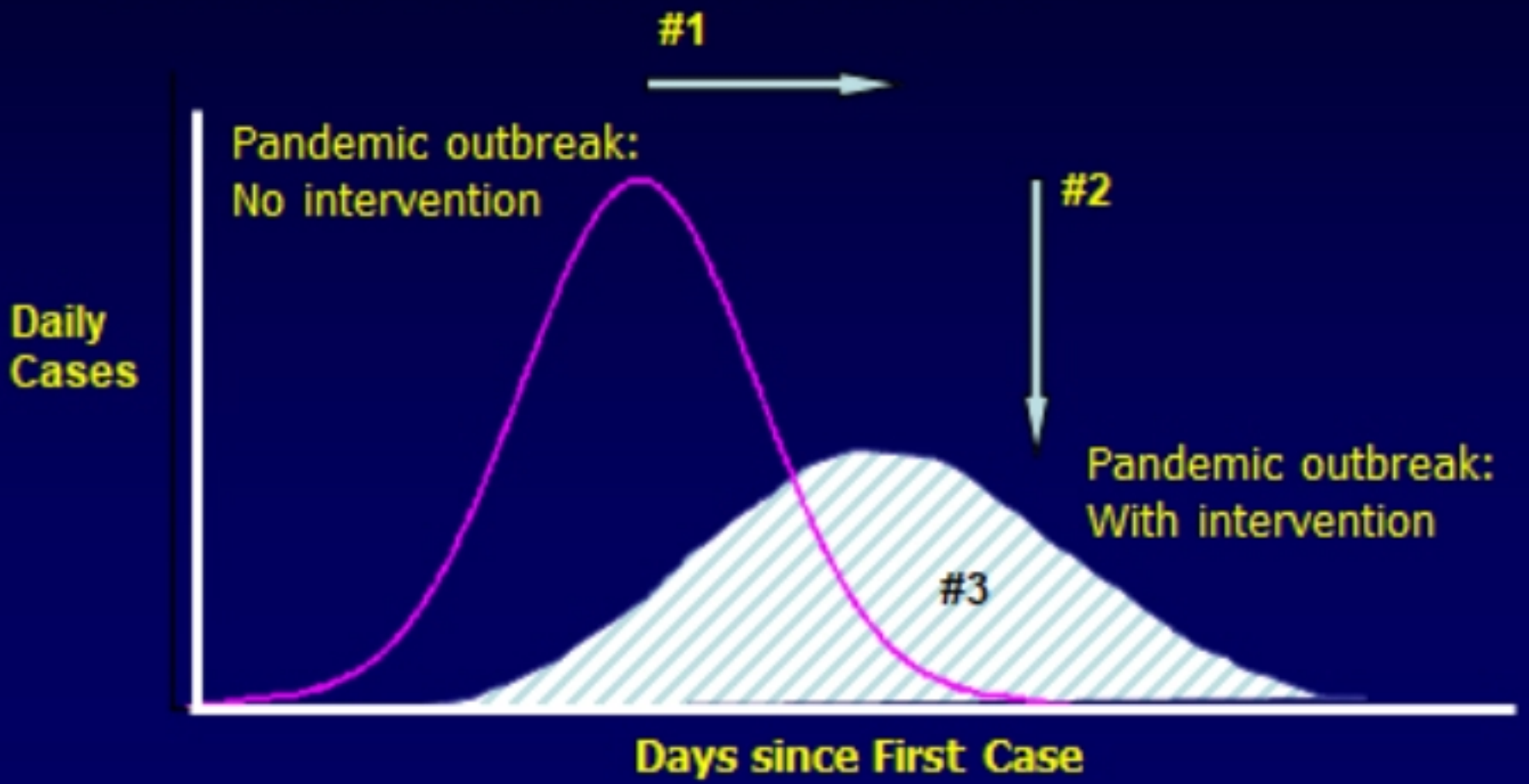

1918 Death Rates: Philadelphia v St. Louis
Death Rate / 100,000 Population
300
250
200
150
100
50
0
Philadelphia
St. Louis
14-Sep
21-Sep
28-Sep
5-Oct
12-Oct
19-Oct
26-Oct
2-Nov
9-Nov
16-Nov
23-Nov
30-Nov
7-Dec
14-Dec
21-Dec
28-Dec
Date

Daily Cumulative 2019-nCoV Hospitalization Rate per 100,000 Wuhan and Hubei



Community-Based Interventions

1. Delay outbreak peak
2. Decompress peak burden on hospitals / infrastructure
3. Diminish overall cases and health impacts



From:	Brown, Lisa <LBrown@nas.edu>
To:	'Alexandra Phelan (alp81@georgetown.edu)' <alp81@georgetown.edu>; 'David A Relman (relman@stanford.edu)' <relman@stanford.edu>; 'David Walt (dwalt@bwh.harvard.edu)' <dwalt@bwh.harvard.edu>; 'Embrey, Ellen (eembrey@stratitia.com)' <eembrey@stratitia.com>; 'Georges Benjamin (georges.benjamin@apha.org)' <georges.benjamin@apha.org>; 'Harvey V. Fineberg (harvey.fineberg@moore.org)' <harvey.fineberg@moore.org>; hick.john /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user7b974f4e (b)(6) 'Jonna Mazet (jkmazet@ucdavis.edu)' <jkmazet@ucdavis.edu>; 'Kent Kester (Kent.Kester@sanofi.com)' <Kent.Kester@sanofi.com>; 'Kristian G. Andersen (b)(6) (b)(6) 'Mark Smolinski (b)(6) (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)' <mbassett@hsph.harvard.edu>; 'Patricia King (b)(6) (b)(6) 'Peggy Hamburg (peggy@hbfam.net)' <peggy@hbfam.net>; 'Peter Daszak (daszak@ecohealthalliance.org)' <daszak@ecohealthalliance.org>; 'Phyllis D. Meadows (PDMeadows@kresge.org)' <PDMeadows@kresge.org>; 'Richard Besser (rbesser@rwjf.org)' <rbesser@rwjf.org>; 'Tara O'Toole (totoole@iqt.org)' <totoole@iqt.org>; 'Trevor Bedford (trevor@bedford.io)' <trevor@bedford.io>; (b)(6) (b)(6) 'Donald Berwick' (b)(6) 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'Baruch Fischhoff' <baruch@cmu.edu>; Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>; Attal-Juncqua, Aurelia <AAttal-Juncqua@nas.edu>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; KATHRYBR <KATHRYBR@dni.gov>
Subject:	Expert Meeting on the Impact of Globalization on Future Health Crises
Date:	2020/09/15 08:15:18
Start Date:	2020/09/18 15:30:00
End Date:	2020/09/18 17:30:00
Priority:	Normal
Type:	Schedule.Meeting.Request
Location:	(b)(6)
Attendees:	'Alexandra Phelan (alp81@georgetown.edu)'; 'David A Relman (relman@stanford.edu)'; 'David Walt (dwalt@bwh.harvard.edu)'; 'Embrey, Ellen (eembrey@stratitia.com)'; 'Georges Benjamin (georges.benjamin@apha.org)'; 'Harvey V. Fineberg (harvey.fineberg@moore.org)'; hick.john; 'Jonna Mazet (jkmazet@ucdavis.edu)'; 'Kent Kester (Kent.Kester@sanofi.com)'; 'Kristian G. Andersen (b)(6) 'Mark Smolinski (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)'; 'Patricia King (b)(6) 'Peggy Hamburg (peggy@hbfam.net)'; 'Peter Daszak (daszak@ecohealthalliance.org)'; 'Phyllis D. Meadows (PDMeadows@kresge.org)'; 'Richard Besser (rbesser@rwjf.org)'; 'Tara O'Toole (totoole@iqt.org)'; 'Trevor Bedford (trevor@bedford.io)'; (b)(6) 'Donald Berwick'; 'alta.charo@wisc.edu'; 'Jeff.Duchin@kingcounty.gov'; 'Baruch Fischhoff'; Pope, Andrew; Pavlin, Julie; Shore, Carolyn; Wollek, Scott; Downey, Autumn; Fine, Emma; Kahn, Benjamin; Attal-Juncqua, Aurelia; Hassell, David (Chris) (OS/ASPR/IO); KATHRYBR

Join from PC, Mac, Linux, iOS or Android:
(b)(6)
Password (b)(6)

Or iPhone one-tap:
US: (b)(6)
Or Telephone:
US: (b)(6)
Meeting ID (b)(6)
Password (b)(6)
International numbers available: https://nasem.zoom.us/u/abvzRBFVKI

Sender:	Brown, Lisa <LBrown@nas.edu>
Recipient:	'Alexandra Phelan (alp81@georgetown.edu)' <alp81@georgetown.edu>; 'David A Relman (relman@stanford.edu)' <relman@stanford.edu>; 'David Walt (dwalt@bwh.harvard.edu)' <dwalt@bwh.harvard.edu>; 'Embrey, Ellen (eembrey@stratitia.com)' <eembrey@stratitia.com>; 'Georges Benjamin (georges.benjamin@apha.org)' <georges.benjamin@apha.org>; 'Harvey V. Fineberg (harvey.fineberg@moore.org)' <harvey.fineberg@moore.org>; hick.john /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user7b974f4e (b)(6) 'Jonna Mazet (jkmazet@ucdavis.edu)' <jkmazet@ucdavis.edu>; 'Kent Kester (Kent.Kester@sanofi.com)' <Kent.Kester@sanofi.com>; 'Kristian G. Andersen (b)(6) (b)(6) 'Mark Smolinski (b)(6) (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)' <mbassett@hsph.harvard.edu>; 'Patricia King (b)(6) (b)(6) 'Peggy Hamburg (peggy@hbfam.net)' <peggy@hbfam.net>; 'Peter Daszak (daszak@ecohealthalliance.org)' <daszak@ecohealthalliance.org>; 'Phyllis D. Meadows (PDMeadows@kresge.org)' <PDMeadows@kresge.org>; (b)(6) Besser (rbesser@rwjf.org)' <rbesser@rwjf.org>; 'Tara O'Toole (totoole@iqt.org)' <totoole@iqt.org>; 'Trevor Bedford (trevor@bedford.io)' <trevor@bedford.io>; (b)(6) (b)(6) 'Donald Berwick' (b)(6) 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'Baruch Fischhoff' <baruch@cmu.edu>; Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>; Attal-Juncqua, Aurelia <AAttal-Juncqua@nas.edu>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; KATHRYBR <KATHRYBR@dni.gov>
Sent Date:	2020/09/15 08:13:51
Delivered Date:	2020/09/15 08:15:18

From:	Caneva, Duane (b)(6)
To:	Dr. (b) (b) (b)(6) (b) (b)(6) (b)(6) Dr. (b) (b) (b)(6)
CC:	Tracey (b)(6) (b)(6) (b) (b)(6) (b)(6) (b) (b) S (b)(6) Brian Benson (b)(6) Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty (b)(6) (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a104469df5184cc38bf02034af7eca04-Hunt, Richa (b)(6) (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS (b)(6) M.D. (b)(6) (b) V (b)(6) (b) (b)(6) Charity A@CDPH (b)(6) (b)(6) J (b)(6) Walters, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c23f0d7c1d634508918e1c87cf50c48c-Dodgen, Dan <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d2cce28859884c1c835a9404885d6534-DeBord, Kri <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6ce8134846423cb83b5b28464edb60-Phillips, S <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) (b) (b) (b)(6) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f2fb845c2e154d8e967ec3fdabecfbd6-Herbert.Wol (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6cb05aaaff4f9fb1ee44181880376c-Guest_37b50 (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0851e89240324306b78740a4a60745e2-Johnson, Ro <Robert.Johnson@hhs.gov>; Yeskey, Kevin (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev <Kevin.Yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0fd5845defda4dc0bb45f8fac629cf09-Disbrow, Ga <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ba3fed4ee8646ec849a5a87136a24f6-Redd, John <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=96d2c1602dfa45e5a5e21452a098b96d-Hamel, Jose <Joseph.Hamel@hhs.gov>; (b)(6) (b)(6)

	(b) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b)((b)((b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2b8ce179913e4ec6a251a91616b1bc4a-Guest_de2e9 (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6) KAUSHIK, SANGEETA (b)(6) Lee, Scott (OS/ASPR/EMMO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=userf6879348 <Scott.Lee@hhs.gov>; Larry G (b)(6) (b) (b)(6) (b)(6) (b)((b)(6)) (b)(6) Adams, Jerome (HHS/OASH) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=184fe51f7350400b8a99dabd65ac0db5-Adams, Jero (b)(6) (b)(6) (b)(6) (b)(6) Fantinato, Jessica (USDA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4a03b6317c3840afb4ee617008e821a6-Jessica.Fan <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)((b)(6) (b)((b)(6) (b)(6) (b) (b)(6) Ignacio, Joselito (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=908f39d0872d44b1b2c5e3ba11f04968-Joselito.Ig (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b) (b)(6) (b)(6) (b)(((b)(W (b)(6) (b)((b) (b)(6) LLogandakar (b)(6)
Subject:	RE: Red Dawn Raging Start March 4
Date:	2020/03/05 22:16:34
Priority:	Normal
Type:	Note

Updated Master Question/ Answer List from DHS Science and Technology.

From: Dr. (b) (b) (b)(6)
Sent: Thursday, March 5, 2020 9:15 PM
ToSubject: Re: Red Dawn Raging Start March 4

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Also relate to Seattle:

- King county recommended telework on March 4. [[They said the analysis from me solidifies their decision-making. I don't know who has seen what.]]

- Private sectors responded subsequently: Amazon, Google, Facebook, and Microsoft are asking Seattle-based staff to work from home because of coronavirus and Amazon and Facebook have shut down individual offices as well

- Don't know about school children. They can be vectors.

At the current infection rate, they are faster than the blue curve I have, since I seeded only one case as of Feb 23. It is unclear if they have multiple. The vulnerable population accelerates the infection curve.

On Thu, Mar 5, 2020 at 9:02 PM (b)(6) wrote:

SEATTLE — The number of statewide coronavirus cases rose to 70 Thursday, up from 39 on Wednesday, with a another fatal case in King County bringing to death toll in Washington to 11.

Of the 70 cases, 51 are in King County, 18 in Snohomish County and one in Grant County. King County Update
https://www.kingcounty.gov/depts/hea...he-impact.aspx

King County offered this statement about closig schools (we have heard many of these agruments before)

Public Health is not currently recommending that schools proactively close unless they have a confirmed case of COVID-19 in a staff member or student.

This guidance may have been confusing for some families and schools because schools bring together large groups of children. School closures have significant negative impacts on our community. We will be providing additional information to schools about how to stay open safely. The considerations we have taken in our decision not to currently recommend routine closure at schools include:

- **• Children are not known to get seriously ill from COVID-19**
- **• Closing schools may not be effective because some children may congregate anyway, at other locations**
- **• Many parents, such as healthcare workers, need to be at work. If these critical workers stay home with children it causes significant impacts on the healthcare system and other institutions that are essential for our community to function**
- **• If schools close, some children might have to stay home with alternative caregivers, such as elders, who are more vulnerable**
- **• We don't know how effective children are in spreading this disease**

From: (b)(6)
To: (b)(6)
Cc: "Tracey (b)(6) "Dr. (b) (b)(Duane", (b)((b)(6) (b)(S", "Brian Benson", (b)(6)
(VA.GOV)", (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) THOMAS", "M.D.", (b)(6) V", (b)(6)
"Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel
(OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) (b)(6)
(b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert
(OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", (b)((Chris)
(OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", (b)(6)
(b)(6) A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6
(b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b Jessica (USDA.GOV)", "DC",
(b)(6) (b)(6) (b)(6) (b J", Joselito", (b)((b)(6) (b)(6) (b)(6)
(b)(6) (b)(6)
Sent: Thursday March 5 2020 8:12:24PM
Subject: RE: Red Dawn Raging Start March 4

Beijing reports 4 new cases of coronavirus, all of which were imported from Italy, according to the city's health commission

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From (b)(6)
To: (b)(6)
Cc (b)(6) (b)(6) "Dr. (b) (b)(Duane", (b)((b)(6) (b)(S", "Brian Benson", (b)(6)
(VA.GOV)", (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) THOMAS", "M.D.", (b)(6) V", (b)(6)
"Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel
(OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) CIV USARMY (USA)",
(b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert
(OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris)
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(b)(6) A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6
(b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b Jessica (USDA.GOV)", "DC",
(b)(6) (b)(6) (b)(6) (b (Joselito", (b)((b)(6) (b)(6) (b)(6)
(b)(6) (b)(6)
Sent: Thursday March 5 2020 4:45:23PM
Subject: RE: Red Dawn Raging Start March 4

I like to ask myself, knowing what I know now, what do I wish I would have done 2 weeks ago.

Attached is a slide that show side by side the ranking of countries by the number of cases and deaths reported for Feb 20 and Mar 5.

Imagine what this is going to look like in 2 more weeks. What will we have wished we had done today?

From: (b)(6)
To: (b)(6)
Cc: "Tracey (b)(6) "Dr. (b) (b)(Duane", (b)((b)(6) (b)(S", "Brian Benson", (b)(6) (VA.GOV)", (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) THOMAS", "M.D.", (b)(6) V", (b)(6) "Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) CIV USARMY (USA)", (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", (b)(6) Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", (b)((Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", (b)(6) (b)(6) A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b Jessica (USDA.GOV)", "DC", (b)(6) (b)(6) (b)(6) (b J", Joselito", (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
Sent: Thursday March 5 2020 4:19:09PM
Subject: RE: Red Dawn Raging Start March 4

Some news reports (pressure now on CA Governor, SF mayor, and state and local public health leaders):

San Francisco reports first 2 cases of coronavirus; both are the result of community spread

Palestinian Authority President Mahmoud Abbas has declared a state of emergency due to coronavirus; all schools and universities will be closed - Jerusalem Post

Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.y Israel in coordination with the Palestinian Authority, according to local media. As of midnight, no one is allowed to enter or leave the city.

From: (b)(6)
To: (b)(6)
Cc: "Tracey (b)(6) "Dr. (b) (b)(Duane", (b)((b)(6) (b)(S", "Brian Benson", (b)(6) (VA.GOV)", (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) THOMAS", "M.D.", (b)(6) V", (b)(6) "Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", (b)(6) (b)(6) A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b Jessica (USDA.GOV)", "DC", (b)(6) (b)(6) (b)(6) (b J", Joselito", (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
Sent: Thursday March 5 2020 3:59:49PM
Subject: RE: Red Dawn Raging Start March 4

(b)(6) (b)(6) asked me to forward this message from Italy to our group

Preparing for COVID-19 - Message from the ESICM President & colleagues in Northern Italy

https://protect2.fireeye.com/url?k=c812a9b8-9447a068-c8129887-0cc47a6a52de-bb27990557a0fa7c&u=https://mailchi.mp/esicm/the-future-of-haemodynamic-monitoring-first-webinar-of-the-year-1009715

From: (b)(6)
To: "Tracey (b)(6)
Cc: "Dr. (b) (b)(Duane", (b)((b)(6) (b)(S", "Brian Benson", (b)(6) (VA.GOV)", (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) THOMAS", "M.D.", (b)(6) V", (b)(6) "Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) (b)(6) (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", (b)((Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", (b)(6) (b)(6 A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) (b)(6) (b)(6))", Jerome (HHS/OASH)", (b)(6) (b) Jessica (USDA.GOV)", "DC", (b)(6) (b)(6) (b)(6) (b) J", Joselito", (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
Sent: Thursday March 5 2020 3:46:37PM
Subject: RE: Red Dawn Raging Start March 4

History doesn't repeat itself, but often does rhyme.

In 1918, the pandemic started on the east coast and swept across the country from east to west. The initial cities that were hit were understandably a little slow to react. Initially, public health leaders minimized the threat. It was fascinating knowing how the outbreak would unfold to read newspaper accounts and the quotes and responses by politicians and health departments (who early on tried to reassure and calm the public by communicating that they thought the worst had passed when the outbreak was just beginning to accelerate). These cities on the east coast had the misfortune of being the first to face this threat. Other cities like St. Louis were lucky in that they had the chance to see what was happening to the east and act more quickly and more aggressively. Influenza never traveled faster than modern transportation. In 1918, travel was by ship or train.

In 2020, this pandemic seems to be starting on the opposite coast. Seattle has the misfortune of being the first major US city to be impacted. We are seeing some of the same reassurances from political and public health leaders to calm the public and minimize the threat. We have heard that Americans are at low risk. We also have heard it is a mild disease where more than 80% of those infected have either no symptoms or very mild disease, and only the very elderly or those with underlying medical conditions are at risk. Only 0.5% of those who become infected die (and again the vast majority are very old with chronic conditions).That description sounds even milder than flu because flu also hits the very young and anyone who had the flu would not likely remember it as a mild disease. And we hear that this disease is not impacting children so really no need to close the schools. I suspect there will be other cities in California and Oregon up and

down the west coast that will soon be impacted and leaders will also need to make a decision re the public health interventions. Like 1918 we willl have a natural experiment to assess the effectiveness of the public health interventions (both the measures and the timing). The question is how quickly will this outbreak emerge since a number of areas across the US have already been seeded and influenza can now travel at the speed of air travel. If we are lucky the outbreaks will be asynchronous and some cities will have enough time to be able to learn from the first cities like Seattle and judge the wisdom of the decisions being made now. But this isn't 1918 and I'm not sure there will be enough time for that to happen. What is unfortunate is that they don't need to wait for results from the Seattle experiment, they can learn from China's experience, Hong Kong's experience, and Singapore's experience. They can also go back to the body of work that has been done on community mitigation. Has CDC modeled the interventions they are proposing? How effectively do these interventions reduce community transmission? In short, where is the science to support these recommendations in the face of what we are learning from the experiences of China, Hong Kong and Singapore? When history judges our response, the comparison will be to the best practices. Unlike 1918, we were actually blessed to know about those best practices before COVID arrived. Seems like a sin not to take full advantage of that knowledge.

From: (b)(6) (b)(6)
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Cc: "Dr. (b) (b)(Duane", (b)((b)(6) (b)(S", "Brian Benson", (b)(6) (VA.GOV)", (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) THOMAS", "M.D.", (b)(6) V", (b)(6) "Charity A@CDPH", (b)(6) J", (b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) (b)(6) (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", (b)(6) Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", David", DAVID A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b Jessica (USDA.GOV)", "DC", (b)(6) (b)(6) (b)(6) (b J", Joselito", (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
Sent: Thursday March 5 2020 2:02:25PM
Subject: RE: Red Dawn Raging Start March 4

Unbelievable and unfortunate.

From: (b)(6) (b)(6)
Sent: Thursday, March 05, 2020 10:53 AM
To: 'cmecher@charter.net' (b)(6)
Cc: 'Dr. (b) (b)((b)(6) 'Caneva, Duane' (b)(6) (b)((b)(6) (b)(6) (b)(6 (b)(S' (b)(6) 'Brian Benson' (b)(6) (b)(6) (b)(6 (VA.GOV)' (b)(6) Tracey (b)(6) (b)(6) 'Hunt, (b)(6) (OS/ASPR/EMMO)' (b)(6) (b)(6) (b)(6) (b)(6) 'WILKINSON, THOMAS' (b)(6)

'M.D.' (b)(6) (b)(6) V' (b)(6) (b)(6) (b)(6) 'Charity A@CDPH' (b)(6) (b)(6) J' (b)(6) 'Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) 'Dodgen, Daniel (OS/ASPR/SPPR)' <Daniel.Dodgen@hhs.gov>; 'DeBord, Kristin (OS/ASPR/SPPR)' <Kristin.DeBord@hhs.gov>; 'Phillips, Sally (OS/ASPR/SPPR)' <Sally.Phillips@hhs.gov>; (b)(6) CIV USARMY (USA)' (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) 'WOLFE, HERBERT' (b)(6) 'Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) 'jwleduc@utmb.edu' (b)(6) 'Johnson, Robert (OS/ASPR/BARDA)' <Robert.Johnson@hhs.gov>; 'Yeskey, (b)(6) (b)(6) 'Disbrow, Gary (OS/ASPR/BARDA)' <Gary.Disbrow@hhs.gov>; 'Redd, John (OS/ASPR/SPPR)' <John.Redd@hhs.gov>; 'Hassell, David (Chris) (OS/ASPR/IO)' <David.Hassell@hhs.gov>; 'Hamel, Joseph (OS/ASPR/IO)' <Joseph.Hamel@hhs.gov>; (b)(6) (b)(6) (b)(6) (b)(6) 'eric.mcdonald@sdcounty.ca.gov' <eric.mcdonald@sdcounty.ca.gov>; (b)(6) (b)(6) (b)(6) (b)(6) A' (b)(6) 'david.gruber@dshs.texas.gov' (b)(6) 'KAUSHIK, SANGEETA' (b)(6) (b)(Scott (OS/ASPR/EMMO)' <Scott.Lee@hhs.gov>; 'Larry G' (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6))' (b)(6) 'Adams, (b)(6) (HHS/OASH)' (b)(6) (b)(6) (b)(6) (b)(6) 'Fantinato, Jessica (USDA.GOV)' <jessica.fantinato@usda.gov>; 'DC' <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) 'Ignacio, Joselito' (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) <chrisallen (b)(6) (b)(6) (b)(6) (b)(6)

Subject: Re: Red Dawn Raging Start March 4

Listening to CDC. Anita Patel has just summarized CDC guidance re community mitigation measures. They are not recommending closing schools--talking about reactive school closure (e.g., a student becomes ill and they close the school to disinfect).

Very unfortunate.

From: (b)(6)
To: "Dr. (b)(6)
Cc: Duane", (b)(6) (b)(6) (b)(S", "Brian Benson", (b)(6) (VA.GOV)" (b)(6) (b)(6) (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) THOMAS", "M.D.", (b)(6) V", "David", "Charity A@CDPH", (b)(6) J", (b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) J CIV USARMY (USA)", (b)(6) (b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", (b)(6) Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", (b)(6) (b)(6 A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b Jessica (USDA.GOV)", "DC", (b)(6) (b)(6) (b)(6) (b Joselito", (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)

Sent: Thursday March 5 2020 1:50:09PM
Subject: Re: Red Dawn Raging Start March 4

CDC is going to hold a meeting today on telehealth. Just some background as we prepare to gear up for implementing teleheath,

Annually, primary care clinics see 482M patients (actually patient visits) in the US (the total number of outpatient visits is about 900K). Over a 3 month period primary care providers see about 120M patient visits. So hold onto that number for a moment,

Let's assume this outbreak has an attack rate of 30% (so about 100M infected) and that 50% of those infected are asymptomatic (50M). Let's assume the other 50% (those 50M who are symptomatic) are the ones seeking care. How many telehealth visits per patient do we think will be required? There will be the initial presentation, then most of these patients (35%-38% of those who were infected, so 35M-38M) will be 'prescribed' home isolation for 14 days). The remainder will require hospitalization but probably not before additional teleheath visits as their conditions worsens. How many follow up telehealth visits will be necessary to monitor the health of these patients in home isolation? Let's say we want to touch base with the patients twice per week, so that is another 4 visit per patient. that would equate to 140M-152M visits. Now add in the other 50M visits for initial presentation and we are up to about 200M telehealth visits. That is about double the number of all primary care visits in the US over a 3 month period. This is probably a conservative estimate since any patient on home quarantine will probably also be seeking to speak with their physician or primary care provider and chronically ill and elderly patients will likely require daily checks. This also does not include the background demand we see each day (for the management of chronic conditions etc.) where we would also like to use telehealth.

We have never done this on this scale before. We have people from large healthcare systems on this email, how are you planning to scale up to meet the demand for COVID and meet the needs of non-COVID patients with chronic conditions?

From: "Dr. (b) (b)
To: Duane"
Cc: (b)((b)(6) (b)(6) b)(S", "Brian Benson", (b)(6) (VA.GOV)", "Tracey (b)(6) (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) THOMAS", "M.D.", (b)(6) V", (b)(6) "Charity A@CDPH", (b)(6) J", (b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) CIV USARMY (USA)", (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", (b)(6) Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", (b)((Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", (b)(6) (b)(6 A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b) Jessica (USDA.GOV)", "DC", (b)(6) (b)(6) (b)(6) (b) (Joselito", (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6)

Sent: Thursday March 5 2020 1:05:54PM
Subject: Re: Red Dawn Raging Start March 4

Yes, we have a huge burden, and we are all thinking about the entire system and the cascading downstream effects. Perhaps a drawing will make a good exercise for the policy makers. We like to use the binary trees, since it explodes fast enough already. I think a tree with the contact rate would be great to show the policy makers so they know how many of the elderly infected would end up in hospitals/beds and we can even show the queues!

On Thu, Mar 5, 2020 at 12:02 PM Caneva, Duane (b)(6) wrote:
Not just the grandparents, but the healthcare system functionality for everyone, too. There is increased mortality in older age groups, but the hospital stays are 2-3 times longer, resource intense, and affect access and availability for everyone in the community.

From: (b)((b)(6) (b)(6)
Sent: Thursday, March 5, 2020 11:52 AM
To: (b)(6)
Cc: Caneva, Duane (b)(6) (b)((b)(S (b)(6) Brian Benson (b)(6) (b)(6) (b)(6) (VA.GOV) (b)(6) Tracey (b)(6) (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) (b)(6) (b)(6) (b)(6) Dr. (b) (b) (b)(6) WILKINSON, THOMAS (b)(6) M.D. (b)(6) (b)(6) V (b)(6) (b)(<DMarcozzi@som.umaryland.edu>; Charity A@CDPH (b)(6) (b)(6) J (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) J CIV USARMY (USA) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)((b)(6) Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)((Chris) (OS/ASPR/IO) (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b)(6) (b)(6) (b) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6 (b)((b)(6) TARANTINO, (b)(6) A (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b) Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>; Larry G (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH) (b)(6) (b)(6) (b)(6) (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b) (b)(6) Ignacio, Joselito (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) <chrisallen (b)(6) (b)((b)(6) (b)(6)
Subject: Re: Red Dawn Raging Start March 4

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One of the principles he teaches is to provide or introduce incentives and disincentives to shape complex situations. We haven't yet convinced the country of the incentives. I continue to like (b)(6) framing: keep the kids out of school to save the grandparents, not the kids.

(b)(

On Mar 5, 2020, at 11:34 AM, (b)(6) wrote:

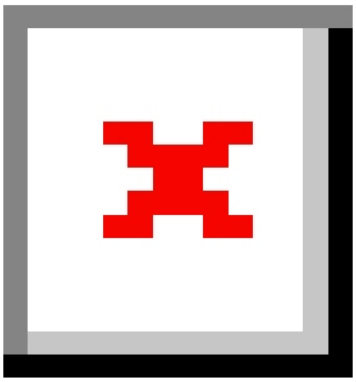
Dave Snowden's Cynefin model is great. Always need to know which domain you are in.

There are pieces of what is happening in other domains as well--we are learning as we go from the best practices and China (knowable). And although we have some SOP for NPIs, we are in the complex domain trying to reinforce the emergence of patterns we want thru some simple rules (staying home if you are ill, staying home if someone is ill, closing schools, and avoiding socially dense environments (social distancing)). Every person could operationalize these rules and adapt them to whatever local conditions might exist (in their home and at work, etc.). If a large enough fraction of 330M Americans follow those simple rules we drive down disease transmission. Modify the rules and the pattern changes. We also know that complex systems are exquisitely dependent upon initial conditions and those will be different in each community. Modelers have done just this (Bob Glass in particular). They have learned what rules seem to favor the emergence of the patterns we desire. When leaders modify those simple rules (or exclude one altogether) and pull the trigger at different points in the outbreak, the outcomes are nonlinear and not predictable.

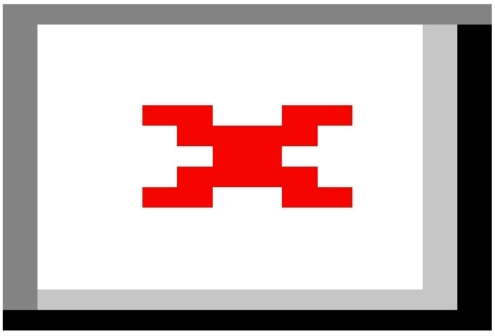
From: "Caneva, Duane"
To: (b)(6)
Cc: (b)(S", "Brian Benson", (b)(6) (VA.GOV)", (b)(6 y (b)(6) (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) "Dr. (b) (b)(THOMAS", "M.D.", (b)(6) V", (b)(6) (b)((b)(6) "Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) (b)(6) (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", (b)(6) Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", (b)((Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", (b)(6) (b)(6 A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b Jessica (USDA.GOV)", "DC", (b)(6) (b)(6) (b)(6) (b J", Joselito", (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6)

Sent: Thursday March 5 2020 11:01:33AM
Subject: RE: Red Dawn Raging Start March 4

Cynefin Model



Wicked Problem—think we're lower right.



From (b)(6)
Sent: Thursday, March 5, 2020 10:49 AM

To: (b)(6) (b)(6)
Cc: (b)(6) (b)(S' (b)(6) 'Brian Benson' (b)(6) Caneva, Duane (b)(6) (b)(6) (b)(6) (VA.GOV)' <carter.mecher@va.gov>; 'Tracey (b)(6) (b)(6) 'Hunt, (b)(6) (OS/ASPR/EMMO)' (b)(6) (b)(6) (b)(6) (b)(6) 'Dr. (b) (b) (b)(6) WILKINSON, THOMAS (b)(6) 'M.D.' (b)(6) (b)(6) V' (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) 'Charity A@CDPH' (b)(6) (b)(6) (b (b)(6) 'Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) 'Dodgen, Daniel (OS/ASPR/SPPR)' <Daniel.Dodgen@HHS.GOV>; 'DeBord, Kristin (OS/ASPR/SPPR)' <Kristin.DeBord@hhs.gov>; 'Phillips, Sally (OS/ASPR/SPPR)' <Sally.Phillips@hhs.gov>; (b)(6) CIV USARMY (USA)' (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) 'jwleduc@utmb.edu' (b)(6) 'Johnson, Robert (OS/ASPR/BARDA)' <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; 'Disbrow, Gary (OS/ASPR/BARDA)' <Gary.Disbrow@hhs.gov>; 'Redd, John (OS/ASPR/SPPR)' <John.Redd@hhs.gov>; 'Hassell, David (Chris) (OS/ASPR/IO)' <David.Hassell@hhs.gov>; 'Hamel, Joseph (OS/ASPR/IO)' <Joseph.Hamel@hhs.gov>; (b)(6) (b)(6) (b)((b)(6) 'eric.mcdonald@sdcounty.ca.gov' <eric.mcdonald@sdcounty.ca.gov>; (b)(6 (b)((b)(6) TARANTINO, (b)(6) A (b)(6) 'david.gruber@dshs.texas.gov' (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(Scott (OS/ASPR/EMMO)' <Scott.Lee@hhs.gov>; 'Larry G' (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6))' (b)(6) 'Adams, (b)(6) (HHS/OASH)' (b)(6) (b)(6) (b)(6) ((b)(6) 'Fantinato, Jessica (USDA.GOV)' <jessica.fantinato@usda.gov>; 'DC' <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b ((b)(6) Ignacio, Joselito (b)(6)
Subject: RE: Red Dawn Raging Start March 4

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Projections for Notional US City with population of 3.3M (1% of US population) with attack rate of 30% .

(b)(6) (b)(6) and Duane, We can use this for discussions being planned.

As of yesterday, Wuhan has reported 49,671 cases and 2,305 deaths. The cases are plateauing but deaths will continue to rise over the next month (deaths lag cases by about 3 weeks). There are currently 1,041 patients who remain in critical condition. A conservative final death count would be on the order of about 3,000. Assuming an overall CFR of 0.5%, we could estimate a projected number infected as ~600K in Wuhan. Assuming Wuhan has a population of 8.4M, that equates to an attack rate of 600K/8.4M = 7%. Even if we think that cases and deaths could be

under-reported. and China was hiding half the numbers, the attack rate would still only be 14% (a mitigated outbreak).

I had a real hard time reconciling that until I read the paper that (b)(6) shared that concluded that the outbreak in Wuhan was a mitigated outbreak Wuhan was a little late to respond. But they made up for that delay with intensity of interventions that seemed to have worked. Given what we have seen in Wuhan, I don't even want to imagine an unmitigated outbreak. But Seattle is on the way to revealing it for us.

From: (b)(6)
To: (b)(6)
Cc: (b)(S", "Brian Benson", Duane", (b)(6) (VA.GOV)", "Tracey (b)(6) (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) "Dr. (b) (b)(THOMAS", "MD.", (b)(6) V", (b)(6) (b)((b)(6) "Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) CIV USARMY (USA)", (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", (b)(6) Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", (b)((Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", (b)(6) (b)(6 A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b Jessica (USDA.GOV)", "DC", (b)(6) (b)(6) (b)(6) (b J", Joselito"
Sent: Thursday March 5 2020 10:03:26AM
Subject: RE: Red Dawn Raging Start March 4

Bad translation from Japan re cruse ship numbers (8 more cases plus correction of numbers due to duplicates).

March 5, 2020 22:05 The outbreak of eight new passengers has been revealed on the Diamond Princess, a cruise ship in which outbreaks of the new coronavirus have been confirmed. A total of 696 passengers and occupants of cruise ships were confirmed to be infected, excluding those who became infected after returning home.

On January 1, the cruise ship Diamond Princess, which was confirmed to be infected with the new coronavirus, was disembarked on the 1st of this month. However, according to the Ministry of Health, Labor and Welfare, she left after a period of health observation. As a result of carrying out a virus test for them, eight new passengers were found to be infected.

A total of 696 people were confirmed to be infected on the cruise ship, excluding those who became infected after returning home.

According to the Ministry of Health, Labor and Welfare, in addition to this 696 people, there is one crew member who got on board after the cruise ship entered Yokohama Port and was confirmed infected.

In addition, the Ministry of Health, Labor and Welfare had previously announced the

number of people confirmed to be infected on a cruise ship by the total number of people, but from the 5th, corrected the number to duplicate people and announced it. about it.

From: (b)(6)
To: (b)(6)
Cc: (b)(S", "Brian Benson", Duane", (b)(6) (VA.GOV)", (b)(6), b)(6) (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) "Dr. (b (b)(THOMAS", "M.D.", (b)(6) V", (b)(6) (b)((b)(6) "Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) J CIV USARMY (USA)", (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", (b)((Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", (b)(6) (b)(6 A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b Jessica (USDA.GOV)", "DC", (b)(6) (b)(6) (b)(6) (b (Joselito"
Sent: Thursday March 5 2020 9:23:32AM
Subject: RE: Red Dawn Raging Start March 4

Don't remember if I shared this story from Japan.

Japan's Prime Minister Shinzo Abe called on schools to close nationwide from March 2 for several weeks to prevent the spread of the new coronavirus.

"The government considers the health and safety of children above anything else," Abe said.

"We request all primary, junior high and high schools... across the nation to close temporarily from March 2 next week until their spring break."

From: (b)(6)
To: (b)(6)
Cc: (b)(S", "Brian Benson", Duane", (b)(6) (VA.GOV)", "Tracey (b)(6) (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) "Dr. (b (b)(THOMAS", "M.D.", (b)(6) V", (b)(6) (b)((b)(6) "Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) J CIV USARMY (USA)", (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", (b)(6) Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", (b)((Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", (b)(6) (b)(6 A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) "Steven Jt(tCHFStDPH)", Jerome (HHS/OASH)", (b)(6) (b Jessica (USDA.GOV)", "DC",

(b)(6) (b)(6) (b)(6) (b J", Joselito"
Sent: Thursday March 5 2020 9:16:43AM
Subject: RE: Red Dawn Raging Start March 4

From: (b)(6)
To: (b)(6)
Cc: (b)(S", "Brian Benson", Duane", (b)(6 (VA.GOV)", "Tracey (b)(6) (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) "Dr. (b (b)(THOMAS", "M.D.", (b)(6) V", (b)(6) (b)((b)(6) "Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) (b)(6) (USA)", (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", (b)(6) Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", (b)((Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", (b)(6) (b)(6 A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b Jessica (USDAGOV)", "DC", (b)(6) (b)(6) (b)(6) (b J", Joselito"
Sent: Thursday March 5 2020 9:04:49AM
Subject: RE: Red Dawn Raging Start March 4

Forgot the assessment for VA. The VA will be hit particularly hard due to the fact that half the veterans are age 65+. VA hospitals are pretty much geriatric acute care facilities.

From: (b)(6)
To: (b)(S"
Cc: "Brian Benson", Duane", (b)(6 (VA.GOV)", "Tracey (b)(6) (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) "Dr. (b (b)(THOMAS", "M.D.", (b)(6) V", (b)(6) (b)((b)(6) "Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) (b)(6) (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.ca.gov", David", (b)(6 A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", "Ryan (b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b Jessica (USDA.GOV)", "DC", (b)(6) (b)(6) (b)(6) (b J", Joselito"
Sent: Thursday March 5 2020 8:55:31AM
Subject: RE: Red Dawn Raging Start March 4

Impact assessment I pulled together and shared with my leaders. I utilized the attack rate of 20% that was experienced on the Diamond Princess so that I could begin to help people get their head around what is perceived to be a mild outbreak means. I purposely used an actual event (and actual attack rate) for comparison so as not to be perceived as fear mongering. I sense confusion among very smart people (politicians, physicians, public health leaders) who hear that more than 80% of those who are infected have mild disease and that overall case fatality rates are on the order of 0.5%. And they then equate these stats to a mild outbreak. They really don't consider attack rates and the impact of the 20% with something other than mild illness means.

A more reasonable attack rate to plan for is around 40%, so just double everything in the attached reports You all can look at these projections and envision what will happen to our healthcare system if we don't take aggressive actions to slow community transmission now. This is not the time to get fancy or creative with NPIs and try to finesse things (ala carte implementation). We should learn from China and the other best practice nations already fighting this disease. We know what works; we just need the will to do it. We should be treating this like we treat stroke and acute coronary syndromes where time = tissue. In this case time = transmission.

From: (b)(6) (b)((b)
To: "Brian Benson", Duane"
Cc: (b)(6) (b)(6) (b)(6) (VA.GOV)",(b)(6) (b)(6) (b)(6) (OS/ASPR/EMMO)", (b)(6) (b)(6) "Dr. (b) (b)(THOMAS", "M.D.", (b)(6) V", (b)(6) (b)((b)(6) "Charity A@CDPH", (b)(6) ((b)(6) (b)(6) (b)(6) (b)(6) Daniel (OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", (b)(6) (b)(6) (b)((b)(6) (b)(6) HERBERT", (b)(6) (b)(6) (b)(6) Robert (OS/ASPR/BARDA)", (b)(6) Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", (b)((Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", (b)(6) (b)(6 "eric.mcdonald@sdcounty.cagov", (b)(6) (b)(6 A", (b)(6) SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", (b)(6 (b)(6) (b)(6) (b)(6))", (b)(6) (HHS/OASH)", (b)(6) (b) Jessica (USDA.GOV)", "DC", (b)(6) (b)(6) (b)(6) (b) J", Joselito"
Sent: Thursday March 5 2020 7:52:21AM
Subject: RE: Red Dawn Raging Start March 4

Hi Brian,
No coronavirus RNA viruses don't incorporate their genomes into the host DNA
Yes, potential hit and run disease is pulmonary fibrosis, which can occur as a result of acute lung injury months to years later
No, there is absolutely no evidence that this virus is bioengineered.
(b)(

From: Brian Benson (b)(6)
Sent: Thursday, March 5, 2020 12:08 AM

To: Caneva, Duane (b)(6)
Cc: (b)(6) (b)(6) <cmecher@charter.net>; (b)(6) (b)(6) (VA.GOV) (b)(6) racey (b)(6) (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) (b)(6) (b)(6) (b)(6) Dr. (b) (b) (b)(6) WILKINSON, THOMAS (b)(6) M.D. (b)(6) (b)(6) V (b)(6) (b)((b)(6) (b)((b)(6) (b)(6) Charity A@CDPH (b)(6) (b)((b)(S (b)(6) (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) J CIV USARMY (USA) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)((Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b)(6) (b)(6) (b) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6 (b)((b)(6) TARANTINO, (b)(6) A (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) Lee, Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>; Larry G (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) Adams, Jerome (HHS/OASH) (b)(6) (b)(6) (b)(6) (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b) (b)(6) Ignacio, Joselito (b)(6)
Subject: Re: Red Dawn Raging Start March 4

Duane, thanks for including me in the conversation.

I've been reading what I can on PubMed and in the news, but can't find many answers, thus I'll asks this group. First, being that some viruses are capable of inserting their DNA into hosts genome, is there any evidence that this RNA virus can do that? I have nothing to support this, but I ask to anticipate any late term effects, i.e. Cancer, cardiomyopathy, diabetes, auto immune diseases or other post viral syndromes. Secondly, are there any restriction sites in this strain that are not present in others of the same family, suggesting this is engineered? Lastly, what's gong on in North Korea?

Folks, those of you that know me understand I'm glad to help in any way I can. Please let me know

On Mar 4, 2020, at 10:24 PM, Caneva, Duane (b)(6) wrote:

Please use this thread as of evening of 04 March.

Duane C. Caneva, MD, MS
Chief Medical Officer
Department of Homeland Security
(b)(6) (o)

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

Executive Assistant: (b)(6) (b)(6) (b)(6) (b)(6)

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Sender:	Caneva, Duane (b)(6)
Recipient:	Dr. (b) (b) (b)(6) (b)(6) (b)(6) (b)(6) Dr. (b) (b) (b)(6) Tracey (b)(6) (b)(6) (b) (b)(6) (b)(6) (b) (b)(S (b)(6) Brian Benson (b)(6) (b)(6) (b)((VA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) Hunt, Richard (OS/ASPR/EMMO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a104469df5184cc38bf02034af7eca04-Hunt, Richa (b)(6) (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS (b)(6) M.D. (b)(6) (b)(V (b)(6) (b) (b)(6) Charity A@CDPH (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c23f0d7c1d634508918e1c87cf50c48c-Dodgen, (b <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d2cce28859884c1c835a9404885d6534-DeBord, Kri <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6ce8134846423cb83b5b28464edb60-Phillips, S <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) (b)(6) (b) (b)((b)(6) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f2fb845c2e154d8e967ec3fdabecfbd6-Herbert.Wol (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6cb05aaaff4f9fb1ee44181880376c-Guest_37b50 (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0851e89240324306b78740a4a60745e2-Johnson, Ro <Robert.Johnson@hhs.gov>; Yeskey, Kevin (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group

	(FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev <Kevin.Yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0fd5845defda4dc0bb45f8fac629cf09-Disbrow, Ga <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ba3fed4ee8646ec849a5a87136a24f6-Redd, John <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=96d2c1602dfa45e5a5e21452a098b96d-Hamel, Jose <Joseph.Hamel@hhs.gov>; (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2b8ce179913e4ec6a251a91616b1bc4a-Guest_de2e9 (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 KAUSHIK, SANGEETA Lee, Scott (OS/ASPR/EMMO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=userf6879348 <Scott.Lee@hhs.gov>; Larry G (b)(6)) Adams, (HHS/OASH) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=184fe51f7350400b8a99dabd65ac0db5-Adams, Jero <Jerome.Adams@hhs.gov>; Fantinato, Jessica (USDA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4a03b6317c3840afb4ee617008e821a6-Jessica.Fan <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) Ignacio, Joselito /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=908f39d0872d44b1b2c5e3ba11f04968-Joselito.Ig (b)(6) W
Sent Date:	2020/03/05 22:16:03
Delivered Date:	2020/03/05 22:16:34
Message Flags:	Unread

From:	(b)((b)(6 (b)(6)
To:	Dr. (b (b (b)(6) Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.DIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev (b)(6)
CC:	(b)((b) (b)(6) (b)(6) (HMFP - Emergency Medicine) (b)(6) (b)(6 (b) (b)(6) (b) (b)(6) (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6) Dr. (b (b (b)(6) BOURNE, ALEXANDRA (b)(6) (b) (b)(6) (b)(6) (b)(6 (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=474b01361a8b4944a39afbdad800591e-Guest_bea05 (b)(6) (b)((b)((b)(6) (b) (b)(6 (b)(6) (b) (b)(6 MD (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=20f0e9a3ebeb4ef99d30a96386fb2627-Guest_945f5 (b)(6) (b)(6 (b) (b)(6) (b)((b)(S (b)(6) (b)(6) (b (b)(6) McGinn, (b) (b)(6) (b)(6) (b)(Kellermann (b)(6) (b)(6 (b) (b)(6) (b)((b) (b)(6) (b)(6) (b)((b)(6) Eastman, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d314e75d55434b198c36e0c981e6623d-Contact_753 (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)((b)(6) LLogandakar (b)(6) Walters, (b)(6 (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) (b) (b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6 (b)(6) (b)(6) (b) (b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4a03b6317c3840afb4ee617008e821a6-Jessica.Fan <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d48a91c6dc5f401a80e245c518874f15-MartinGJ.os (b)(6) (b) (b)(6 (b)(6) (b)((b)(6 (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)((b)(6) (b)((b)(6 (b)((b)(6) (b)(6) (b (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group

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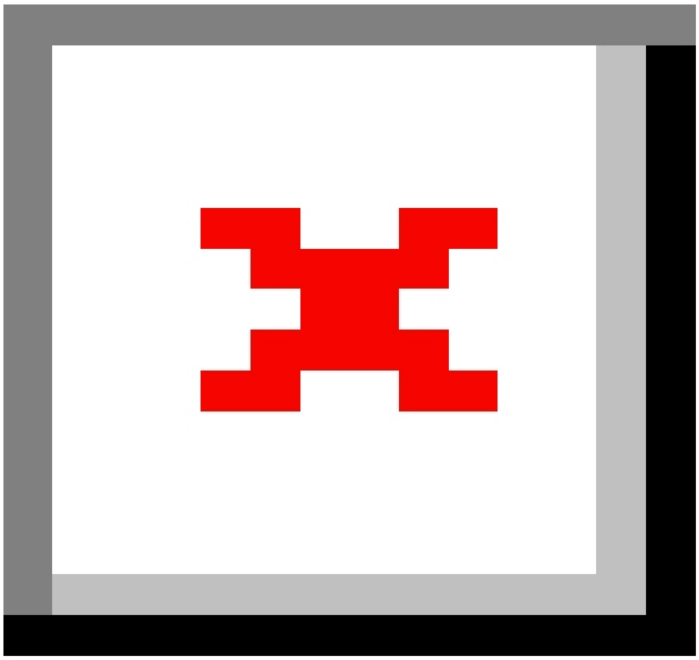
Subject:	RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT
Date:	2020/05/16 06:27:05
Priority:	Normal
Type:	Note

National total ILINet visits per week (black line in 2019-20 data)—still seeing significant suppression of F2F outpatient visits.



Below is Georgia data. Even with reopening, still seeing significant suppression of F2F outpatient visits.

PERCENTAGE OF VISITS FOR INFLUENZA-LIKE-ILLNESS REPORTED BY SENTINEL PROVIDERS

YEAR	WEEK	ILITOTAL	TOTAL PATIENTS	NUM. OF PROVIDERS	%UNWEIGHTED ILI
2019	40	1,995	83,743	95	2.38
2019	41	1,946	78,815	93	2.47
2019	42	1,981	78,494	95	2.52

2019	43	2,387	78,935	93	3.02
2019	44	2,571	76,448	92	3.36
2019	45	3,168	80,943	94	3.91
2019	46	3,545	78,830	93	4.50
2019	47	3,668	70,290	95	5.22
2019	48	4,381	76,308	98	5.74
2019	49	4,273	82,643	97	5.17
2019	50	5,585	84,267	100	6.63
2019	51	8,335	87,512	97	9.52
2019	52	10,623	86,609	99	12.27
2020	1	8,250	87,691	98	9.41
2020	2	5,944	85,419	98	6.96
2020	3	5,426	80,254	98	6.76
2020	4	5,258	79,648	97	6.60
2020	5	6,754	84,548	98	7.99
2020	6	6,799	87,785	99	7.75
2020	7	5,083	83,508	98	6.09
2020	8	4,195	81,425	100	5.15
2020	9	3,659	80,322	100	4.56
2020	10	4,437	81,586	100	5.44
2020	11	6,564	81,428	98	8.06
2020	12	5,839	64,637	96	9.03
2020	13	3,818	51,457	96	7.42
2020	14	2,336	42,483	96	5.50
2020	15	1,712	40,263	94	4.25
2020	16	1,271	41,025	94	3.10
2020	17	990	41,589	91	2.38
2020	18	931	44,869	92	2.07
2020	19	864	47,696	91	1.81

Sent from Mail for Windows 10

From: Dr. (b)(6)
Sent: Friday, May 15, 2020 9:07 PM
To: Caneva, Duane
Cc: (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (DSHS); Dr. (b)(6) (b)(6) BOURNE, ALEXANDRA; (b)(6) (b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(6) Keim, MD MBA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6) (b)(6) (b)(6) (b)(6) S; (b)(6) (b)(6) McGinn, (b)(6) (b)(6) (b)(6) Kellermann; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) DC; (b)(6)

(b)(6) (b)((b)(6) MD; Fantinato, Jessica (USDA.GOV); Martin, Greg (b)(6) (b)((b)(6) (b)(6 (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b)((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; David; Hassell, David (Chris) (OS/ASPR/IO); (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6 (b)(6 (b)((b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, (b)((b)(6) (b)(6) (b)((b)((b) (b)(6 Krohmer, Jon (NHTSA); (b)(6) (APHMFP - Emergency Medicine); You, Edward H. (WMD) (FBI); (b)(6) ((b)(6 W
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

"LTC data by state. I have 3 data points (Apr 23, May 7 and May 14). See 1st spreadsheet for summary table. This virus is steadily moving through our LTC population in the US. Recall the estimates of 2.1M Americans who are residents in nursing homes or residential care. With 150K known cases and 30K deaths, this equates to about a 7% attack rate with a 20% fatality rate (I would assume we are learning about most cases given that nursing homes are now testing all residents)"

(b)(6) this are very interesting figures. Recall for NYP, 20% of their admitted patients died. So you have 20% fatality rate!! Basically, all those in nursing home would need hospitalization due to their co-existing health conditions and old age. So their fatality fits alarmingly the same as those admitted to NYP. This is the same as what was reported from China early on -- 20% of those admitted to hospitsals died.

On Fri, May 15, 2020 at 4:28 PM Caneva, Duane (b)(6) wrote:
DHS S&T Weekly update to the Master Question List attached.

Data dump:
Science

https://www.eurekalert.org/pub_releases/2020-05/uoa-sdt051420.php

Scientists develop tool to sequence circular DNA
New method will provide insight into genomes of bacteria and viruses, as well as extrachromosomal circular DNA in mammals and plants. University of Alberta biologists have invented a new way for sequencing circular DNA, according to a new study. The tool - called CIDER-Seq - will give other scientists rich, accurate data on circular DNA in any type of cell. While our own DNA is linear, circular DNA is common in the genomes of bacteria and viruses. Scientists have also discovered circular DNA within the nuclei of human and plant cells, called extrachromosomal circular DNA (eccDNA). Recently, research has begun to investigate the role of eccDNA in human cancer but progress has been hampered due to the lack of effective methods for studying and sequencing eccDNA.
University of Alberta
14-May-2020

https://www.the-scientist.com/news-opinion/droplets-from-speech-can-float-in-air-for-eight-minutes-study-67538?utm_campaign=TS_DAILY%20NEWSLETTER_2020&utm_source=hs_email&utm_medium=email&utm_content=87992907&_hsenc=p2ANqtz-8aVWmtxVWrgfwS6Sdn6rdCuwqlVjjjN97FH5hsJ_EyKzj_CfTMemFPVuNub4U81QYPW28WuN8ZNrCpAL11PuhiVi3_WsgSrithAppkX6XRQztdyKQ&_hsmi=87992907

Droplets from Speech Can Float in Air for Eight Minutes: Study

The experiments did not involve SARS-CoV-2, but researchers say the results support precautions to avoid possibly spreading COVID-19 by talking.

Kerry Grens

May 15, 2020

Amid concerns that COVID-19 may be spread through aerosols, scientists have shown that tiny respiratory droplets produced when people talk can linger in the air for minutes. The results, published in *PNAS* yesterday (May 13), did not examine the transmission of viruses in spray from speech, but bolsters the idea that talking could present a risk for exposure to the novel coronavirus.

"This study builds on earlier research by the same team showing that speaking may factor into transmission of SARS-CoV-2," a spokesperson for the National Institute of Diabetes and Digestive and Kidney Diseases, where most of the study's authors are based, tells *USA Today*.
The authors used laser light sheets to capture on video the movement of small droplets emitted from a person's mouth as the speaker repeated the phrase "stay healthy" for 25 seconds. They calculated that the half-life of these particles in the air, considering the time it took them to fall 30 cm, was eight minutes. "This study is the most accurate measure of the size, number and frequency of droplets that leave the mouth during a normal conversation and shower any listeners within range," Benjamin Neuman, a virologist at TAMU-Texarkana who was not involved in the research, tells *The Washington Post*.

The researchers did not examine these respiratory droplets in the context of a SARS-CoV-2 infection. But in their paper they write that in a scenario where an infected person is in the vicinity of uninfected people, "At an average viral load of 7×10^6 per milliliter, we estimate that 1 min of loud speaking generates at least 1,000 virion-containing droplet nuclei that remain airborne for more than 8 min. These therefore could be inhaled by others and, according to IAH [independent action hypothesis], trigger a new SARS-CoV-2 infection."

The airborne particles were about 4 μm in diameter, and had dehydrated from respiratory droplets that the authors estimate were larger than 12 μm in diameter when they left the speaker's mouth.

The spokesperson for National Institute of Diabetes and Digestive and Kidney Diseases suggests to USA Today that the study's results support the CDC's recommendation to wear a mask. Although many governments have ordered or urged residents to don masks, it's not clear how well they prevent the transmission of the coronavirus. N95 masks filter 95 percent of particles larger than 0.3 μm (according to an early report describing COVID-19 infections, the SARS-CoV-2 viral particles range from 0.6 to 0.14 μm in diameter). For other types of masks, that efficiency varies considerably. An analysis of materials used in home-made masks found a wide range in their ability to block particles about 0.1 μm in size, from just 7 percent for two layers of quilters' cotton to 84 percent for a mask made from a nanofiber layer paired with cotton ripstop.

A study published in April that asked patients to cough into either surgical masks or cotton masks found neither "effectively filtered SARS–CoV-2 during coughs by infected patients." Other researchers have found that masking policies correlate with fewer COVID-19 cases, and estimate that widespread uptake of the use of masks could considerably limit infections.

A video illustrating the study "Small saliva droplets can remain airborne in an enclosed space for more than 10 minutes, NIDDK study shows" at https://www.youtube.com/watch?v=axmRl6P6xyw)

Health

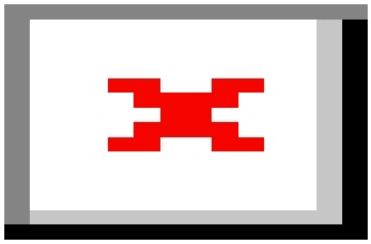
https://www.technologynetworks.com/informatics/news/designing-vaccines-using-artificial-proteins-334877?utm_campaign=NEWSLETTER_TN_Breaking%20Science%20News&utm_source=hs_email&utm_medium=email&utm_content=87986690&_hsenc=p2ANqtz--0rfTHzFameJbAVaHjXCx2uZ_yV7x1M2-

gqE6cYIDj-JEUfzWyptz31mAoA-JWVFGIKQkpYyRnE1rDXBrUA28xGbUWkB_frRlF--mwfuA6JvoeRjg&_hsmi=87986690

Designing Vaccines Using Artificial Proteins

May 15, 2020 | Original story from EPFL

Vaccines are one of the most effective interventions to prevent the spreading of infectious diseases. They trigger the immune system to produce antibodies that protect us against infection. However, we still lack efficacious vaccines for many important pathogens, like the flu or dengue fever. "When a vaccine doesn't work well, we tend to think that it's because the antibodies produced are not protective," says Bruno Correia, a professor at the Laboratory of Protein Design & Immunoengineering (LPDI) in EPFL's School of Engineering. "It's usually because our immune system is simply making the wrong type of antibodies". Scientists in Correia's lab have now developed a strategy to design artificial proteins that very precisely instruct the body's immune system which antibodies to produce. The study has been published in the journal *Science*.



EPFL scientists have developed a new computational approach to create artificial proteins, which showed promising results in vivo as functional vaccines. This approach opens the possibility to engineer safer and more effective vaccines. Credit: © 2020 EPFL

A disease without a vaccine

Correia's team focused on the design of de novo proteins that can result in a vaccine for the respiratory syncytial virus (RSV). RSV causes serious lung infections and is a leading cause of hospitalization in infants and the elderly, "Despite several decades of research, up to today there is still no vaccine or cure for respiratory syncytial virus," says Correia.

The artificial proteins were created in the laboratory and then tested in animal models, and triggered the immune system to produce specific antibodies against weak spots in RSV. "Our findings are encouraging because they indicate that one day we will be able to design vaccines that target specific viruses more effectively, by prompting the immune system to generate those particular antibodies," says Correia. "We still have a lot of work ahead to make the vaccine we developed more effective - this study is a first step in that direction."

Methods for creating de novo proteins have applications well beyond immunology - they can also be used in various branches of biotechnology to expand the structural and functional range of natural proteins. "We can now use the protein design tools to create proteins for other biomedical applications such as protein-based drugs or functionalized biomaterials," concludes Sesterhenn.

Reference: F. Sesterhenn, C. Yang, J. Bonet, J. T. Cramer, X. Wen, Y. Wang, C. Chiang, L. A. Abriata, I.

Kucharska, G. Castoro, S. S. Vollers, M. Galloux, E. Dheilly, S. Rosset, P. Corthésy, S. Georgeon, M. Villard, C. A. Richard, D. Descamps, T. Delgado, E. Oricchio, M. Rameix-Welti, V. Más, S. Ervin, J. F. Eléouët, S. Riffault, J. T. Bates, J. P. Julien, Y. Li, T. Jardetzky, T. Krey & B. E. Correia. *De novo protein design enables the precise induction of RSV-neutralizing antibodies.* Science

https://protect2.fireeye.com/url?k=999e7145-c5cb7856-999e407a-0cc47adb5650-1be2f2e982ee44f7&u=http://outbreaknewstoday.com/maine-lyme-disease-providers-are-already-reporting-cases-in-2020-and-the-number-will-rise-as-we-enter-the-summer-months-74705/

Maine Lyme disease: 'Providers are already reporting cases in 2020, and the number will rise as we enter the summer months'

The Maine CDC reported a record more than 2,000 Lyme disease cases in 2019 and officials announce during this Lyme Disease Awareness Month that providers are already reporting cases in 2020, and the number will rise as we enter the summer months. This has prompted health officials to advise the public to be aware of tick bites that transmit not only Lyme disease, but also anaplasmosis (a bacterial disease), babesiosis (a parasitic disease) and Powassan virus. Individuals bitten by the deer tick can acquire more than one infection. Many individuals and families are spending more time outdoors during the COVID-19 pandemic. This may put them at increased risk of exposure to tickborne pathogens. Symptoms of anaplasmosis include: fever, headache, malaise and body aches. Symptoms of babesiosis include: extreme fatigue, aches, fever, chills, sweating, dark urine, and possibly anemia. Symptoms of Powassan include: fever, headache, vomiting, weakness, confusion, loss of coordination, speech difficulties, seizures, and encephalitis and meningitis. In 2019, providers reported 685 cases of anaplasmosis, 138 cases of babesiosis and two cases of Powassan.

by News Desk
May 14, 2020

https://www.eurekalert.org/pub_releases/2020-05/wrai-nes051420.php

New evidence suggests malaria cycles are innate to the organism

Scientists from the Walter Reed Army Institute of Research joined partners at Duke University, FAU and Montana State University to publish a study providing clear evidence that malaria's characteristic cycle of fever and chills is a result of the parasite's own influence - not factors from the host. What regulated that cycle, the result of parasites bursting out of infected red blood cells in sync then re-colonizing new red blood cells, has been studied since at least the 1920s. In the current study, evidence challenges the central dogma that a cyclic pattern of parasite growth is solely dependent on cues from the host. Though the specific signals utilized remain to be elucidated, these findings raise the exciting possibility of disrupting this cycle as an antimalarial strategy.

Walter Reed Army Institute of Research
14-May-2020

ASF

https://www.thehindu.com/news/national/other-states/wild-boars-die-in-arunachal-as-african-swine-fever-kills-15000-pigs-in-assam/article31590372.ece

Wild boars die in Arunachal as African swine fever kills 15,000 pigs in Assam

As Assam prepares for mass culling to check the spread of African swine fever (ASF) that has killed almost 15,000 domesticated pigs, adjoining Arunachal Pradesh fears that the "foreign" disease may have "gone wild". This is the 1st time that ASF has been reported in India. Assam claims the disease came from China, where almost 60% of pigs have died since 2018. Officials in Arunachal Pradesh's East Siang district said 6 carcasses of wild boars including 3 piglets were found in a community forest at Lidor Soyit upstream of Sille River. There have been unverified reports of several wild boars dying from an unknown disease in East Siang and Upper Siang districts, but the recovery of the carcasses - some partly eaten by scavengers - on Thursday made officials wary of the possibility of ASF having spread from scores of

domestic pigs that have died in the State over the last 2 months. "A team of forest, veterinary officials and experts trekked about 10 km to locate the carcasses after receiving information from the villages. We suspect ASF is the cause of death but will have to await confirmation after we send blood and tissue samples to labs outside," Divisional Forest Officer (Territorial) Tashi Mize told The Hindu on Friday. Some of the carcasses appeared to have been consumed by porcupines. "ASF is confined to porcine creatures, so other animals are unlikely to be affected. But the possibility of becoming carriers of the virus could affect the wild boar population," he said.
Special Correspondent I Guwahati I may 15, 2020 13:39 IST I Updaated: May 15, 2020 14:10 IST

https://www.ndtv.com/india-news/assam-prepares-for-culling-as-african-swine-fever-kills-nearly-15-000-pigs-2229043

Assam "Prepares" For Culling As African Swine Fever Kills Nearly 15,000 Pigs

The BJP-led government is preparing for mass culling; it has demanded from the centre compensation to farmers who rear pigs. The ASF outbreak has killed nearly 15,000 pigs in Assam and is spreading in new areas despite preventive measures taken by the state government. The state government has issued a high alert in 10 affected districts. It has asked the centre to provide one-time financial package of Rs 144 crore for the farmers who rear pigs. "We are deeply concerned due to this growing crisis in Assam. The deaths are increasing every day. Now, 10 districts have been affected already. 14,919 pigs have died and the number is on the rise. We have alerted the Government of India as well," Assam Animal Husbandry Minister Atul Bora told NDTV. "Initially, 6 districts were affected but now it has spread to 10 districts out of 33, despite the fact that we took all possible steps (for prevention), but it is spreading to new areas. " We had taken biosecurity measures to make sure it doesn't spread further. We declared that area under 1-km radius (of affected areas) as containment zone, and 10-km radius as surveillance zone," the minister added. The Assam government has alerted all wildlife reserves in the state regarding the disease.
Written by Ratnadip Choudhury I Updated: May 15, 2020 08:28 am IST

https://protect2.fireeye.com/url?k=3feb42b5-63be4ba6-3feb738a-0cc47adb5650-b83955ca39cbc93f&u=https://asian-agribiz.com/magazines/asian-pork/asf-update/

Concentration, contact time key to effective disinfectant use

15 May 2020 – The correct concentration and the length of time a disinfectant is in contact with a surface will better determine its effectivity against ASF and other pathogens. Pariwat Poolperm, a swine consultant from Thailand said at a webinar titled Biosecurity: The First Step to Success in Pig Farming that for disinfectants to work against ASF, they must be in contact with surfaces for at least 15-20 minutes. Dr Pariwat also said that not all disinfectants are the same. Pig producers should follow the recommended concentrations for each disinfectant and not overconcentrate or overdilute.

ASF remains a big problem in Asia

14 May 2020 – While the Covid-19 pandemic and its effects have overshadowed ASF in the news, the deadly pig virus continues to be a big problem for Asian pig producers. China and Vietnam are both working on recovery programs, but threats of ASF reinfection and the lack of breeding pigs hamper restocking efforts. Both countries have seen a spike in the number of cases in the last two weeks. In the Philippines, industry observers note that while fewer cases are being reported, a big reason for this is the movement restrictions imposed due to the pandemic. "The virus remains, and it will take some time before it can be eradicated, if at all," an industry practitioner told *Asian Agribiz*. "It is imperative the governments and local pig industries collaborate not just to control ASF spread, but also how to rebuild their industries. Pork will continue to be the preferred meat at least in China, Vietnam, and the Philippines.

Philippines reports new ASF outbreaks

13 May 2020 – The Philippines has 58 new ASF outbreaks in Luzon, the Philippine Bureau of Animal Industry (BAI) reported to the World Organization for Animal Health. The country culled another 11,074 pigs, bringing the total as of May 4 to 282,899. The outbreaks were traced to illegal transport of animals and swill feeding. An industry practitioner told *Asian Agribiz* that while the country continues its fight

against ASF, the government and industry players must begin rebuilding efforts. Unfortunately, he said, nothing concrete has been made, adding that even the country does not have enough ASF test kits.

COVID-19 Webinars

https://protect2.fireeye.com/url?k=57730e54-0b260747-57733f6b-0cc47adb5650-f10d2075868af052&u=https://mailchi.mp/nas/register-for-upcoming-webinars-earth-and-life-sciences-and-covid-19?e=a7a58840e6



Wastewater Monitoring for COVID-19 Disease Surveillance

May 27, 11-1:30 PM EDT

Researchers around the world are currently exploring ways that wastewater samples can help us understand the spread of COVID-19 at a community scale. This webinar will feature a panel discussion with experts on public health and wastewater monitoring to discuss the potential value of data on SARS-CoV-2 in wastewater to inform public health management and what is needed to build a useful surveillance network

Register for Webinar

David Sedlak, UC Berkeley, Moderator

Panelists:

- Vincent Hill, Centers for Disease Control and Prevention
- Barry Liner, Water Environment Federation
- Gertjan Medema, KWR Water Research Institute, Holland
- Nicole Rowan, Colorado Department of Public Health and Environment
- Krista Wigginton, University of Michigan

Key questions for presentations and discussions:

- How can data on SARS-CoV-2 in wastewater be useful as an indicator of COVID-19 cases in a locality?
- How has wastewater disease surveillance been useful with control of other viral pathogens? What problems have been encountered and what can we learn from these experiences for COVID-19?
- What is the capacity of current wastewater monitoring technologies for detecting COVID-19 disease outbreaks (i.e., what is the recovery efficiency, detection rate relative to the loading rates)? What are the costs?
- What technical challenges need to be addressed before this strategy can be broadly implemented as a robust tool? What are the highest priority needs?
- Where might such surveillance be appropriate?
- Is this a useful investment? If so, what would the nation need to do to rapidly invest in a useful surveillance network?

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Reopening after COVID-19: Ensuring Safe Water Supplies at the Building Scale

May 27, 2:30-4:30 PM EDT

Register for Webinar

The COVID-19 pandemic has led to sweeping closures of public buildings, businesses, offices, and schools. With minimal water use, water quality in building plumbing can degrade and foster the growth of the bacteria that cause Legionnaires' disease, a severe form of pneumonia. Legionnaires' disease incidence has been increasing over the past few decades, and without appropriate water management actions, cases could increase sharply after schools and workplaces reopen. A panel of experts will discuss the state of knowledge for building water management to protect public health when reopening after COVID-19.

Ruth Berkelman, Emory University, moderator

Panelists:

- Chris Boyd, Building Water Health Program, NSF International
- David Krause, HealthCare Consulting and Contracting
- Andrew Whelton, Purdue University

Key questions for presentations and discussions:

- What are the water quality issues and related health risks associated with reopening buildings or larger office parks/campuses that have been shuttered or minimally used during the COVID-19 outbreak?
- Are there actions that could (should) be taken now to minimize current or future risk of water-related health risks?
- Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.e the responsibilities of various entities?
- What issues about best practices for water management remain unresolved relative to building recommissioning?
- What issues need to be addressed to improve implementation of current guidelines (e.g., communication, training)?
-

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Air Quality, Climate Variability, and COVID-19

May 28, 1:00-3:00 PM EDT

As the global community has raced to understand the COVID-19 pandemic, questions have arisen about how the virus is carried in aerosols, exposure risk in indoor and outdoor environments, how the changes in seasons or climate conditions might affect transmission, and how exposure to air pollution might affect mortality from the virus. This webinar will feature recent atmospheric, climate, and epidemiological research that is contributing to our understanding of the virus transmission, as well as a discussion of how agencies across the federal government are building upon existing efforts to address linkages between environmental conditions and health to understand the pandemic.

This webinar is an open session of the Board on Atmospheric Sciences and Climate spring 2020 meeting.

Register for Webinar

Coronavirus

https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6

From CSSE Dashboard at Johns Hopkins University: 15 May 2020 at 3:32 PM EDT

Total Confirmed: 4,516,360
Global Deaths: 306,051
US deaths: 86,851
Total Test Results in US: 10,341,775

Confirmed Cases by Country/Region/Sovereignty:
1,432,045 US
262,843 Russia
238,003 United Kingdom
230,183 Spain
223,885 Italy
212,198 **Brazil**
179,630 France
175,233 Germany
146,457 Turkey
116,635 Iran
85,784 India
84,495 Peru
84,031 China
75,667 Canada

https://www.washingtonpost.com/politics/2020/05/14/3-takeaways-coronavirus-whistleblower-rick-brights-testimony/?pwapi_token=eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJjb29raWVuYW1lIjoid3BfY3J0aWQiLCJpc3MiOiJDYXJ0YSIsImNvb2tpZXZhbHVlIjoiNWU3YmE4NThhZTdlOGE1OTQ4ODk2NzkzIiwidGFnIjoiNWViZGFiZmZmZTFmZjY1NGMyZGQxYTY5IiwidXJsIjoiaHR0cHM6Ly93d3cud2FzaGluZ3RvbnBvc3QuY29tL3BvbGl0aWNzLzIwMjAvMDUvMTQvMy10YWtlYXdheHMtY29yb25hdmlydXMtd2hpc3RsZWJsb3dlci1yaWNrLWJyaWdodHMtdGVzdGltb255Lz91dG1fY2FtcGFpZ249d3BfdG9feW91cl9oZWFsdGgmdXRtX21lZGl1bT1lbWFpbCZ1dG1fc291cmNlPW5ld3NsZXR0ZXImd3Bpc3JjPW5sX3R5aCZ3cG1rPTEifQ.zDzXu3HqLZZn2jf9oP1z3ihfUQWvxFCFIYpZmt7xs6A&utm_campaign=wp_to_your_health&utm_medium=email&utm_source=newsletter&wpisrc=nl_tyh&wpmk=1

5 takeaways from coronavirus whistleblower Rick Bright's testimony

By Aaron Blake
May 14, 2020 at 1:38 p.m. EDT

A Trump administration vaccine expert who says he was removed from a key role for raising concerns about the federal government's coronavirus response — and its promotion of unproven drugs to treat the virus — testified Thursday before Congress.

Rick Bright became a whistleblower after being removed from his post as director of the Biomedical Advanced Research and Development Authority (BARDA), which falls under the Department of Health and Human Services.

Here are some takeaways from Bright's testimony.

1. 'Lives were lost' because of 'inaction,' unheeded warnings

Bright said that early inaction by the government — particularly in the Department of Health and Human Services — had, in fact, cost lives. "That inaction has put a lot of lives at risk in our front-line health-care workers" Bright said. Bright has said that he pushed for ramping up production of medical equipment such

as masks, but that it went unheeded for months after he was informed that officials didn't think there was a "critical shortage" of masks. "I pushed that forward to the highest levels I could in HHS and got no response," Bright said. "From that moment, I knew that we were going to have a crisis for our health-care workers because we were not taking action. We were already behind the ball. That was our last window of opportunity to turn on that production to save the lives of those health-care workers, and we didn't act." Bright added that even today, the country is dealing with the consequences of that early negligence and that health-care workers are still more at risk than they should be. "Lives were endangered, and I believe lives were lost," Bright said. "And not only that: We were forced to procure these supplies from other countries without the right quality standards. So even our doctors and nurses in the hospitals today are wearing N95-marked masks from other countries that are not providing the sufficient protection that a U.S.-standard N95 mask would provide them. Some of those masks are only 30 percent effective. Therefore, nurses are rushing in the hospitals thinking they're protected, and they're not."

2. Administration pushed vastly expanded use of unproven drugs

One of Bright's key claims is that he was moved to another post after raising objections to the administration pushing the use of the malaria drugs chloroquine and hydroxychloroquine to treat coronavirus. The administration allowed for the emergency use of the drugs to treat the virus, though later studies — which have yet to be peer-reviewed and were not randomized — suggest that the use of the drugs don't help and can, in fact, have negative consequences. The FDA has now warned about the dangers of using the drugs. "My concerns were escalated when I learned that leadership in the Department of Health and Human Services were pushing to make that drug available outside of this emergency use authorization, to flood New York and New Jersey with this drug," Bright said. Bright has cited his skepticism of the drugs for his removal from his post and said the administration wanted to make it easier for people to use them without extensive medical supervision — even people who might not even have the virus. "I believe part of the removal process for me was initiated because of a pushback that I gave when they asked me to put in place an expanded access protocol that would make chloroquine more freely available to Americans that were not under the close supervision of a physician and may not even be confirmed to be infected with the coronavirus," Bright said.

3. Pessimism about 12- to 18-month timeline for vaccine

President Trump has been effusively optimistic about not just treatments such as the chloroquines but about the timeline for a vaccine for the virus. Shortly before Bright's testimony Thursday, Trump even said, "I think we're going to have a vaccine by the end of the year." That's even more optimistic than the 12- to 18-month timeline that medical experts such as Anthony S. Fauci, head of the National Institute of Allergy and Infectious Diseases, have said is realistic for the vaccine. But Bright said that even a year to year-and-a-half timeline might also be overly optimistic. "I still think 12 to 18 months is an aggressive schedule, and I think it's going to take longer than that to do so," Bright said.

4. We don't have 'a single point of leadership' or 'master plan'

As Trump increasingly criticized Fauci, Bright said the government needs to have more regard for it scientists -- and a more consistent message from the top. He said that right now the response has been hampered by not having a "single point of leadership." "We need to install and empower leadership, and we need to unleash the voices of the scientists in our public health system in the United States so they can be heard and their guidances need to be listened to," Bright said. "And we need to be able to convey that information to the American public so they have the truth about the real risk and dire consequences of this virus. He added: "And we don't have a single point of leadership right now for this response, and we don't have a master plan for this response. So those two things are absolutely critical." Fauci has said in recent days that states that move forward with reopening their economies before meeting the guidelines from the Centers for Disease Control and Prevention are risking new outbreaks – which could set back the entire response.

5. Azar, Republicans cast Bright as a malcontent skipping work

As Bright offered one of the most significant rebukes of the federal coronavirus response to date, Republicans on the committee and members of the Trump administration sought to undercut his testimony and character. Health and Human Services Secretary Alex Azar, in particular, had strong words for Bright. "Everything he is complaining about was achieved," Azar said while standing next to Trump on the White House lawn. "Everything he talked about was done. He says he talked about the need for

respirators; we procured respirators under the president's direction." Azar echoed Republicans in the hearing who questioned why Bright has been absent from his new posting - a narrower one focused on testing and vaccines at the National Institutes of Health — in recent weeks. "While we're launching Operation Warp Speed," Azar said, "he's not showing up for work to be part of that." Bright said that he has been on leave while dealing with "very high blood pressure" - owing in part to the stress from recent events. "I had a conversation with my physician about my hypertension and how we've been managing it over the last 3 weeks because this has been very stressful to be removed suddenly without explanation from my role and position as a life change for me," Bright said.

https://www.cidrap.umn.edu/news-perspective/2020/05/global-covid-19-death-toll-exceeds-300000

Global COVID-19 death toll exceeds 300,000

The number of COVID-19 deaths today passed the 300,000 mark, as another city in China went on lockdown to prevent a resurgence and more countries in Europe learned that low numbers of people were exposed in their outbreaks, meaning many are vulnerable to a second wave. Deaths climbed to 301,160 today, with cases rising to 4,413,597, according to the Johns Hopkins online dashboard.
Lisa Schnirring | News Editor | CIDRAP News| May 14, 2020

New cluster triggers new lockdown in China

The city of Jilin in northeastern China's Jilin province went on partial lockdown yesterday after a spurt of cases, which now total 21, the *South China Morning Post* reported. Officials closed schools, restricted train and bus service, and banned gatherings after 6 cases new cases were confirmed on May 12. Anyone who wants to leave the city, home to about 4M people, must be tested for COVID-19 48 hours before departure.

The first infection in the cluster was reported last week, linked to a laundry worker from Shulan, a smaller city in Jilin province. So far, investigators haven't determined how she contracted the virus. China has taken aggressive steps to prevent a resurgence, including an earlier lockdown in the city of Suifenhe on the border with Russia, and is now launching an effort to test all Wuhan residents after a cluster of cases was detected in a residential complex.

Today the country reported 3 new cases (all local -2 from Liaoning province also in northeastern China and 1 in Jilin province). In its daily update, the National Health Commission also reported 12 more asymptomatic cases, all but one of them local.

Elsewhere in Asia, Japan's Prime Minister Shinzo Abe today lifted the state of emergency early for 39 of 47 prefectures, *Kyodo News* reported. The emergency order was originally slated to expire at the end of May. However, orders for the cities of Tokyo and Osaka, home to about 50% of Japan's population, will remain in place. Abe said experts will review the situation again on May 21.

South Korea today reported 29 more cases, 20 of them linked to nightclub-related clusters in Seoul, the Korea Centers for Disease Control and Prevention said today.

Studies: Many in France, Spain still vulnerable

As major outbreaks in France and Spain decline, researchers are using seroprevalence studies to gauge how extensively populations were exposed to the virus and help inform planning for potential 2nd waves of pandemic activity.
In France, a study by Pasteur Institute researchers published in *Science* yesterday estimated that 4.4% of the country's population were infected by the COVID-19 virus, Reuters reported. The estimates were higher, between 9% and 10%, for hard-hit areas, which included eastern France and Paris.

The results suggest that without a vaccine, herd immunity won't be enough to avoid a 2nd wave as lockdown steps ease. Pasteur scientists also estimated the 55-day lockdown dramatically dropped the outbreak's reproduction number from 2.0 to 0.67.

Meanwhile, preliminary serosurvey results from Spain suggests 5% of the population was exposed to the virus, Reuters reported, citing Fernando Simon, the country's head of health emergencies.

Lockdown for Chile's capital

Chile's government yesterday ordered a lockdown for its capital Santiago, which has a population of 7M, after experiencing a 60% increase in COVID-19 infections in a 24-hour period, the *Santiago Times* reported. As the country's main hot spot, Santiago has 80% of Chile's cases, which today increased by 2,659 reported cases, for a total of 37,040.

In other global developments:

- Hours after Sanofi's chief executive officer was quoted as saying the US would get first access to its COVID-19 vaccine, the company walked back the statement and said when ready, it will be available in all countries, the Associated Press Sanofi is based in France, and CEO Paul Hudson's comments provoked a strong reaction from the French government. The US-based BARDA supported the development of the vaccine.

- A typhoon that struck the Philippines' eastern provinces today sent people to evacuation centers, which was complicated by COVID-19 distancing measures, Reuters reported. One city gave hundreds of evacuees face masks to wear before they were allowed in evacuation shelters, and the local officials added 2 schools as temporary shelters to better accommodate physical distancing.

- Malaysia said it will ease a ban on prayers in mosques starting tomorrow, ahead of the Eid festival, Reuters reported. Congregations will be limited to 30 or fewer. Last week the country started reopening businesses.

https://www.nature.com/articles/d41586-020-01367-9

Dozens of coronavirus drugs are in development — what happens next?

Drug manufacturers face supply-chain weaknesses and sourcing issues as they ramp up complex production processes to meet global demand. The world was waiting for any sign of hope in countering the COVID-19 pandemic when researchers released the 1st encouraging drips of data from a large clinical trial of the antiviral remdesivir last month. The drug, they said, reduced the time to recovery from COVID-19 by a few days - not enough to be branded a 'cure', but hopefully enough to relieve some pressure on overwhelmed health-care systems. The discovery of remdesivir's potential focused attention on the next problem in the development of COVID-19 therapeutics: ramping up complex manufacturing processes to address a global pandemic. It is likely to be one of the biggest drug-making challenges the world has ever faced. Some of the therapies being tested against COVID-19 are novel and difficult to produce. Others - even if they are relatively simple compounds that have been in use for decades - Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd. up production. A major rate-limiting step is going to be manufacturing," says Ezekiel Emanuel (bioethicist at the University of Pennsylvania in Philadelphia). "Getting up to hundreds of millions of doses is hard." Researchers are working furiously to test a wide variety of potential COVID-19 treatments. Those therapies span the gamut of complexity, from familiar generic medications such as the malaria drug hydroxychloroquine, to experimental small molecules like remdesivir, which was previously trialled against the Ebola virus. Scientists are also exploring antibody treatments that tamp down the body's immune response when it becomes destructive, which happens in some critically ill coronavirus patients. And if the history of infectious disease is any guide, it will take a combination of drugs - each with a distinct, even if relatively minor, impact on the disease - to tame the novel CoV. Each treatment will face different challenges when scaling up production, says Stephen Chick, who studies health-care management at INSEAD in Fontainebleau,

France. "If it's successful and the technology is then adopted, you need to be prepared to deliver," says Chick. "And if you're not, you're in trouble."
Nature
Heidi Ledford
14 May 2020

https://protect2.fireeye.com/url?k=25b62f11-79e32602-25b61e2e-0cc47adb5650-6abe7fdadd1958ca&u=https://www.meatingplace.com/Industry/News/Details/92084

COVID-19 Update: JBS/Smithfield testing, new outbreaks
JBS will partner with TX state health officials to test the roughly 3,000 workers at its beef plant north of Amarillo. According to a report from the Texas Tribune, state officials said JBS initially rejected an offer for testing; company spokesperson Nikki Richardson stated the company were unaware of such testing being offered. The state previously dispatched personnel from its Military Department and Division of Emergency Management to run tests on the 3,500 workers at a nearby Tyson Food plant. Meanwhile, COVID-19 continues to spread among workers at JBS' beef plant in Greeley, CO. According to state data cited by KDVR, the number of confirmed cases at the plant is now 316, up from 280 earlier in the week; 6 plant employees have died, along with 1 employee from JBS' corporate offices. JBS began testing all plant workers on Monday.
By Peter Thomas Ricci on 5/15/2020

https://protect2.fireeye.com/url?k=380c9c33-64599520-380cad0c-0cc47adb5650-75c105d4e451e090&u=https://www.meatingplace.com/Industry/News/Details/92107

OSHA treads lightly on COVID-19 complaints: Politico
The Department of Labor's OSHA has conducted few investigations out of the thousands of COVID-19 complaints it has received in the last several weeks, and has issued no citations, according to a report by Politico. The Beltway newsletter reported that the agency has fielded more than 3,800 complaints related to companies not adequately protecting workers from contracting the virus in crowded workplaces, but as of May 13, has opened only 281 inspections and issued no citations. OSHA, often in conjunction with the CDC, has issued a series of guidance documents on measures companies should take on employees' behalf, but has issued no directives or mandatory standards that might trigger a violation. The agency contends more regulation is unnecessary because of the enforcement options already available to it.
By Lisa M. Keefe on 5/15/2020

https://protect2.fireeye.com/url?k=cf247d0c-9371741f-cf244c33-0cc47adb5650-a25401dcb749e6a2&u=https://delawarebusinessnow.com/2020/05/dover-air-force-base-plays-role-in-transport-isolation-systems-for-covid-19-patients/

Dover Air Force Base plays role in transport isolation systems for COVID-19 patients
In the ongoing fight against COVID-19, two Transport Isolation Systems, along with trained medical Airmen, arrived at Dover Air Force Base, Delaware late last month. Dover will serve as the East Coast hub for TIS decontamination in the US, thanks to its strategic location, assets and capabilities. Airmen will support and decontaminate TIS units whose aircrews are conducting COVID-19 positive patient transport missions from Africa, Europe and the Middle East to the U.S. The team is composed of members of 6 different units from across the U.S. The TIS emerged as a result of mobility requirements identified during Operation United Assistance in support of the Ebola outbreak in 2014. This system was designed to provide in-flight medical care while containing any infectious disease, minimizing the risk to aircrew, medical attendants and the airframe. "We have two TIS modules here, because that is a standard configuration ," said Maj. Mark Dellinger, 36th Aeromedical Evacuation Squadron training flight commander. "Each has the capability of carrying 4 patients." Medical personnel assigned to the TIS mission receive multi-day training, including familiarization with the system, patient loading/unloading procedures, donning and doffing PPE, simulated in-flight patient care and infection control procedures. The TIS enables the Department of Defense to transport patients afflicted with or suspected of an

infectious disease like COVID-19 from overseas to the US, providing for an expedient recovery of its personnel, as well as preventing the spread of COVID-19 to aircrews. As part of the whole-of-government response to COVID-19, the TIS mission at Dover AFB will continue for as long as required.
By Delaware Business Now
May 14, 2020

https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-informs-public-about-possible-accuracy-concerns-abbott-id-now-point

Coronavirus (COVID-19) Update: FDA Informs Public about Possible Accuracy Concerns with Abbott ID NOW Point-of-Care Test
FDA News Release
For Immediate Release:
May 14, 2020
Today, the U.S. Food and Drug Administration is alerting the public to early data that suggest potential inaccurate results from using the Abbott ID NOW point-of-care test to diagnose COVID-19. Specifically, the test may return false negative results. "We are still evaluating the information about inaccurate results and are in direct communications with Abbott about this important issue. We will continue to study the data available and are working with the company to create additional mechanisms for studying the test. This test can still be used and can correctly identify many positive cases in minutes. Negative results may need to be confirmed with a high-sensitivity authorized molecular test," said Tim Stenzel, M.D., Ph.D., director of the Office of In Vitro Diagnostics and Radiological Health in the FDA's Center for Devices and Radiological Health.

https://protect2.fireeye.com/url?k=1eb16bab-42e462b8-1eb15a94-0cc47adb5650-bf988528cd1bd6e9&u=https://homelandprepnews.com/stories/49160-dod-hhs-award-contract-enabling-prefilled-syringes-for-future-covid-19-vaccine/

DoD, HHS award contract enabling prefilled syringes for future COVID-19 vaccine
The U.S. DoD and HHS awarded a $138M contract to ApiJect Systems America for Project Jumpstart and RAPID USA, 2 programs designed to expand U.S. production of medical-grade injection devices. The contract will create a U.S.-based supply chain for prefilled syringes by using Blow-Fill-Seal (BFS) aseptic plastics manufacturing technology, suitable for combatting COVID-19 when a vaccine becomes available. By upgrading existing domestic BFS facilities with installations of filling-line and technical improvements, the project will enable the manufacture of more than 100M prefilled syringes for distribution across the US by year-end 2020.
Thursday, May 14, 2020 by Dave Kovaleski
Homeland Preparedness News

https://protect2.fireeye.com/url?k=36177371-6a427a62-3617424e-0cc47adb5650-526a171dedfd6c7d&u=https://www.rcinet.ca/en/2020/05/13/china-will-have-to-answer-questions-about-covid-19-says-trudeau/

China will have to answer questions about COVID-19, says Trudeau
Countries around the world, including Canada, have questions about the origins of the COVID-19 pandemic and about China's behaviour during the early days of the outbreak that need to be asked "in the coming months," Prime Minister Justin Trudeau said Wednesday. Speaking at his daily briefing in Ottawa, Trudeau was responding to a question about recent comments made by Canada's ambassador to China Dominic Barton. The Globe and Mail newspaper reported Wednesday that Barton told a private session of the Canadian International Council last week that China's conduct during the pandemic is damaging its own global "soft power." Earlier this month, The Associated Press reported that U.S. officials believe China covered up the extent of the CoV outbreak - and how contagious the disease is - to stock up on medical supplies needed to respond to it. The revelation comes as the Trump administration has intensified its criticism of China, with Secretary of State Mike Pompeo saying that that country was responsible for the spread of disease and must be held accountable.

Radio Canada International
By Levon Sevunts
Posted: Wednesday, May 13, 2020 13:22

https://www.eurekalert.org/pub_releases/2020-05/uow-elo041420.php

Economists: Lack of COVID-19 preparedness in line with previous findings

The delayed response of U.S. policymakers to the COVID-19 pandemic comes as no surprise to University of Wyoming Professor Jason Shogren and several of his economist colleagues at other institutions. That's because the threat of a catastrophic pandemic in 2014 - the West African Ebola outbreak - did little to change the perception of U.S. citizens regarding the importance of preparing for future outbreaks, according to research conducted by Shogren and his colleagues. "The COVID-19 pandemic has revealed that the U.S. was as unprepared as experts feared, given the responses to the Ebola scare in 2014," the economists wrote in an article that has been accepted by EcoHealth, an international journal that addresses health and sustainability challenges, including public health practices. "This lack of attention to pandemic threats is especially disturbing given the current COVID-19 and any potential future pandemics that may also have very high transmission rates, including transmission before individuals become symptomatic." Joining Shogren in the research were fellow UW economists David Aadland, David Finnoff and Alexandre Skiba, along with Jamison Pike and Peter Saszak, of the Ecohealth Alliance; and Kip Viscusi, from Vanderbilt University. Before and after the 2014 Ebola outbreak - which killed thousands of people in West Africa, harmed millions of people in that region and generated significant media coverage in the US - the researchers surveyed U.S. citizens to see if their concerns about a pandemic threat had increased, relative to risks from environmental disasters and terrorism. They were surprised to find relative complacency regarding the threat of a pandemic among the hundreds of people surveyed in 2015. The findings were unexpected because long-standing evidence has shown that people's perceptions usually are distorted toward the most recent news items.

University of Wyoming
14-May-2020

https://www.eurekalert.org/pub_releases/2020-05/ksu-kid051420.php

K-State infectious disease scientist offers road map for future COVID-19 research

Researcher investigates potential therapeutic options at Biosecurity Research Institute. There are many unanswered questions about COVID-19. A Kansas State University infectious disease scientist and collaborators are offering a possible research road map to find the answers. "We need to address these challenges in a scientific manner - in a proactive manner, not in a reactive manner," said Richt, also the director of the university's Center of Excellence for Emerging and Zoonotic Animal Diseases, known as CEEZAD. "With COVID, every day something is new - what was correct yesterday, could be wrong today." Because of the rapid change of knowledge related to CoV, Richt and his collaborators wrote the article to stress importance of studying the ways that COVID-19 could spread between humans and animals. The scientists say that research should focus in several areas, including: The potential for companion animals, such as cats and dogs, to carry the virus; the economic and food security effects if the virus can spread among livestock and poultry; national security areas, especially among service animals such as dogs that detect narcotics or explosives because COVID-19 is known to affect smell and cause hyposmia or anosmia.

Kansas State University
14 May 2020
Manhattan, KS

https://www.eurekalert.org/pub_releases/2020-05/b-nqo051320.php

Nearly quarter of a billion people in Africa will catch coronavirus and up to 190,000 could die

Health systems will struggle to cope without steps to stop spread of the virus, warn WHO experts. Nearly a quarter of a billion people across Africa will catch CoV during the1st year of the pandemic, and up to

190,000 of them will likely die, unless urgent action is taken to control the infection, reveals a predictive modelling study, accepted for publication in BMJ Global Health. These figures indicate a lower rate of exposure and viral spread than in other parts of the world, say the researchers. But the associated rise in hospital admissions, care needs, and impact on other health conditions in the region would severely strain limited health resources and worsen the impact of the virus, they warn. The WHO Africa region includes 47 countries, but excludes Djibouti, Egypt, Libya, Morocco, Somalia, Sudan and Tunisia. As of April 29, 45 countries had reported cases of SARS-CoV-2. Many mathematical models used to predict transmission and death rates in Africa have not adequately incorporated characteristics unique to the region and its individual countries. But these social, developmental, environmental and population health factors nevertheless affect the spread of the virus and the severity of COVID-19, explain the researchers.
BMJ
14-May-2020

https://www.eurekalert.org/pub_releases/2020-05/p-tne050720.php

The newly emerged coronavirus did not spill over from scaly anteaters

Mammals known as scaly anteaters are natural hosts of coronaviruses but are not likely the direct source of the recent outbreak in humans, according to a study published May 14 in the open-access journal PLOS Pathogens by Jinping Chen of the Guangdong Institute of Applied Biological Resources, and colleagues. As noted by the authors, the large-scale surveillance of coronaviruses in these animals, called pangolins, could improve our understanding of the spectrum of coronaviruses circulating in the wild, and could help prevent and control emerging infectious diseases.
PLOS
14-May-2020

https://www.healio.com/primary-care/infectious-diseases/news/online/%7B4880f02b-fcf6-4fc6-b39c-8e15ac5368f3%7D/physicians-brace-for-potential-surge-in-covid-19-cases

Physicians brace for potential surge in COVID-19 cases

As health care workers begin to understand the scope of COVID-19 in their areas and how to respond to it, a new anxiety has set in: How long will the pandemic last? "The biggest stress is not knowing where we're going to go from here," Manu Jain, MD, pulmonary and critical care specialist at Northwestern Memorial Hospital, told Healio Primary Care. "Not knowing how this is going to evolve and how we're going to get back to any sense of normalcy is probably the most stressful part of this whole experience." Physicians on the front lines are often working long hours and caring for severely ill patients. Research published in JAMA Network Open showed high rates of depression (50.4%), anxiety (44.6%), insomnia (34%) and distress (71.5%) among health care workers in Wuhan, China, where the pandemic originated.
May 14, 2020
Healio

https://www.eurekalert.org/pub_releases/2020-05/uob-cdw051320.php

COVID-19 disruption will lead to 28 million surgeries cancelled worldwide

Over 28 million elective surgeries across the globe could be cancelled as a result of the COVID-19 pandemic - leading to patients facing a lengthy wait for their health issues to be resolved, a new study reveals. The CovidSurg Collaborative has projected that, based on a 12-week period of peak disruption to hospital services due to COVID-19, 28.4 million elective surgeries worldwide will cancelled or postponed in 2020. The modelling study, published in the British Journal of Surgery, indicates that each additional week of disruption to hospital services will be associated with a further 2.4M cancellations. Led by researchers at the University of Birmingham, researchers collected detailed information from surgeons across 359 hospitals and 71 countries on plans for cancellation of elective surgery. This data was then statistically modelled to estimate totals for cancelled surgery across 190 countries (attached). The researchers project that worldwide 72.3% of planned surgeries would be cancelled through the peak period of COVID-19 related disruption. Most cancelled surgeries will be for non-cancer conditions. Orthopaedic procedures will be cancelled most frequently, with 6.3M orthopaedic surgeries cancelled

worldwide over a 12-week period. It is also projected that globally 2.3M cancer surgeries will be cancelled or postponed.
University of Birmingham
14-May-2020

https://www.eurekalert.org/pub_releases/2020-05/tmsh-cxi051320.php

Chest X-rays in emergency rooms can help predict severity of COVID-19 in young and middle-aged adults

Chest X-rays performed on young and middle-aged adults with COVID-19 when they arrive at the emergency room can help doctors predict who is at higher risk of severe illness and intubation, Mount Sinai researchers report. The first-of-its kind study, published in the May 14 issue of Radiology*, identifies which patients may need to be hospitalized and intubated based on the severity of CoV patterns in the lungs seen in the X-rays, using a unique scoring system to evaluate severity. The results could help physicians more quickly identify, triage, and aggressively treat these high-risk patients.*
The Mount Sinai Hospital / Mount Sinai School of Medicine
14 May 2020

https://protect2.fireeye.com/url?k=be634cac-e23645bf-be637d93-0cc47adb5650-4db0ac35d6e56627&u=http://outbreaknewstoday.com/hydroxychloroquine-and-azithromycin-to-treat-covid-19-clinical-trial-begins-36926/

Hydroxychloroquine and azithromycin to treat COVID-19 clinical trial begins

A clinical trial has begun to evaluate whether the malaria drug hydroxychloroquine, given together with the antibiotic azithromycin, can prevent hospitalization and death from coronavirus disease 2019 (COVID-19). NIAID is sponsoring the trial, which is being conducted by the NIAID-funded AIDS Clinical Trials Group (ACTG). Teva Pharmaceuticals is donating medications for the study. The Phase 2b trial will enroll approximately 2,000 adults at participating ACTG sites across the US. Study participants must have confirmed infection with SARS-CoV-2, the virus that causes COVID-19, and be experiencing fever, cough and/or shortness of breath. The investigators anticipate that many of those enrolled will be 60 years of age or older or have a comorbidity associated with developing serious complications from COVID-19, such as cardiovascular disease or diabetes. Participants will be randomly assigned to receive short-term treatment with either hydroxychloroquine and azithromycin or matching placebos. People living with HIV and pregnant and breastfeeding women also are eligible to participate in the study. The first participant enrolled today in San Diego, CA.
By Press Release
May 14, 2020

https://www.eurekalert.org/pub_releases/2020-05/f-twi051120.php

Treatment with interferon-α2b speeds up recovery of COVID-19 patients in exploratory study

Treatment with antivirals such as interferons may significantly improve virus clearance and reduce levels of inflammatory proteins in COVID-19 patients, according to a new study in Frontiers in Immunology. Researchers conducting an exploratory study on a cohort of confirmed COVID-19 cases in Wuhan found that treatment with interferon (IFN)-α2b significantly reduced the duration of detectable virus in the upper respiratory tract and reduced blood levels of interleukin(IL)-6 and C-reactive protein (CRP), two inflammatory proteins found in the human body. The findings show potential for the development of an effective antiviral intervention for COVID-19, which is an ongoing global pandemic caused by the novel CoV, SARS-CoV-2.
Frontiers
15-May-2020

https://www.nature.com/articles/d41586-020-01430-5

Dogs caught coronavirus from their owners, genetic *analysis suggests*

But there's no evidence that dogs can pass the virus to people. *The first 2 dogs reported to have CoV probably caught the infection from their owners, say researchers who studied the animals and members of the infected households in Hong Kong. An analysis of viral genetic sequences from the dogs showed them to be identical to those in the infected people. Researchers suspected that the infection had been passed from the owners to the dogs, and the direct genomic link strongly supports that, says Malik Peiris, a virologist at the University of Hong Kong who led the study, which is published today in Nature[1]. The study showed no evidence that dogs can pass the infection to other dogs or people, but it is impossible to be certain in which direction the virus traveled "so we have to keep an open mind", says Peiris. Although the analysis confirms that people with COVID-19 can infect dogs, the probability of this happening is low, says Arjan Stegeman, a veterinary epidemiologist at Utrecht University in the Netherlands. In the study, only 2 of the 15 dogs who lived with infected people caught the disease. But other scientists say the possibility that pets might spread the virus between each other, and to people, needs to be properly investigated as part of managing future outbreaks.*

Nature
Smriti Mallapaty
14 May 2020

From: Dr. (b)(6)
Sent: Friday, May 15, 2020 3:59 PM
To: (b)(6)
Cc: Caneva, Duane (b)(6) (HMFP - Emergency Medicine) (b)(6) (DSHS) (b)(6) Dr. (b)(6) BOURNE, ALEXANDRA (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; Keim, MD MBA (b)(6) MD (b)(6) V.,M.D. (b)(6) S (b)(6) McGinn, (b)(6) Kellermann (b)(6) Eastman, (b)(6) Walters, (b)(6) DC <michelle.colby@usda.gov>; (b)(6) JSA) (b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) KAUSHIK, SANGEETA (b)(6) <CHRISALLEN (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) Hassell, (Chris) (OS/ASPR/IO) (b)(6)) (b)(6) WILKINSON, THOMAS (b)(6) WOLFE,

HERBERT (b)(6) (b)(6) (b)(6) Marinissen, Maria (HHS/OS/OGA) <Maria.Marinissen@hhs.gov>; Sutter, (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)((b) (b)(6) (b) (b)((b)(6) Krohmer, Jon (NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine) (b)(6) You, Edward H. (WMD) (FBI) (b)(6) (b)(6) ((b)(6) W (b)(6)
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

(b)(6) good point regarding community mitigation. Traffic starts to jam up again in Atlanta and many more people are going into their office. But yes, churches, schools are all closed and big events are canceled. I finished a few hundreds of business modeling and here's what I found.

1. Large group events remain difficult to open. The percentage of infection is roughly 7%-35% depending on the duration and because it is a sustained inside event, it is hard to maintain the fresh air circulation, the surface, and everything. It's cross-contamination every year. Any infection has high possibility of a hit to infect and it can be very broad in scope, depending on human behavior. Yes, university students are more proned because simply they are sick very often.

2. Across each State, there is no one-size-fit all, not within a State, and not inter-state either. What the models do show is that inter-dependence and cascading effects are certain (can be predicted very well) and hence must be taken into account as States are re-opening. The best they can do is opening strategically county-by-county, or city-by-city. And they will need to look over their shoulders on how their neigjhbours are doing as that will affect them.

3. Spitting, coughing, talking, anything to do with saliva You see the case a London transit worker died from covid-19 (five days from admitted to hospital to death) when a passenger claiming to have covid-19 on the track harrassed her by spitting on her. In US, there are people who do spit, tobacco users, people who chew gums, or people who just spit (I saw people rolling down their car windows) and just do it. Singapore has installed fines on these actions many years ago. This habit still persists in US and this can be rather deadly in the wake of covid-19.

And public health should put restriction on spitting. If the state wants to maintain good public hygiene by deterrance, they can fine like Singapore.

Facemasks remain very critical. Essential workers must use facemasks and so are the citizens. And this should not be an option, but a must. I was surveying several stores this week - pets stores, groceries, and many employees do not use facemasks or any protecton at all and they do cough and of course they talk too. Here's a study in PNAS confirming why it is so important to avoid any droplets of saliva. I think employees need to do it to protect themselves and as customers, we do not want to receive little saliva droplets from cashiers or anyone.

https://www.pnas.org/content/early/2020/05/12/2006874117

And yes, eyes are very important to protect too. Sorry, no better news, here's *JAMA Ophthalmology* reporting tranmission through eyes,

https://protect2.fireeye.com/url?k=3bddc06c-6788c97f-3bddf153-0cc47adb5650-e934a7d54122f687&u=https://www.ajmc.com/newsroom/covid19-may-be-transmitted-through-the-eye-report-finds

So face shields are important too. Goggles are tight-fit and may be more protective. I remain a fan of the face shield especially seeing how the providers work at ease with them and are happier with it than the goggles. This is one of those cost-effective little thing that was invented and very welcome by providers.

4. Delay in tests, delay in test results, delay in everything on the graphs.
It is very hard to decipher all the testing data. First, cases are delayed in discovery. By the time the patient gets the test, there is a time-lag already. Then, it takes 2-5 days, or 7-9 days to get the results, and then posted. So everything is delay. In DeKalb, thousands of the tests never received any results back. So they won't show up anywhere. These are PUI, so their rate of positivity is high. Below are graphs from raw data, without any adjusttment in reporting etc.
Again mortality graph is one to focus.

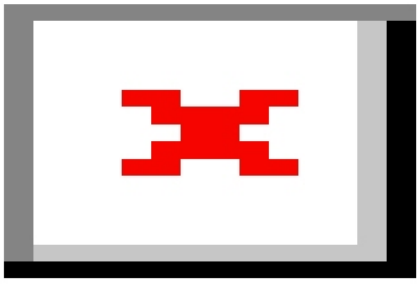


image.png

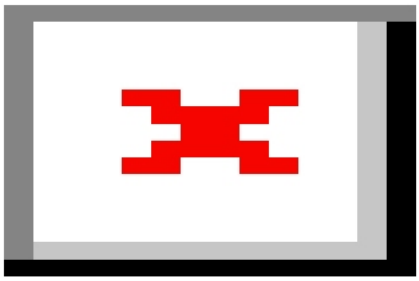
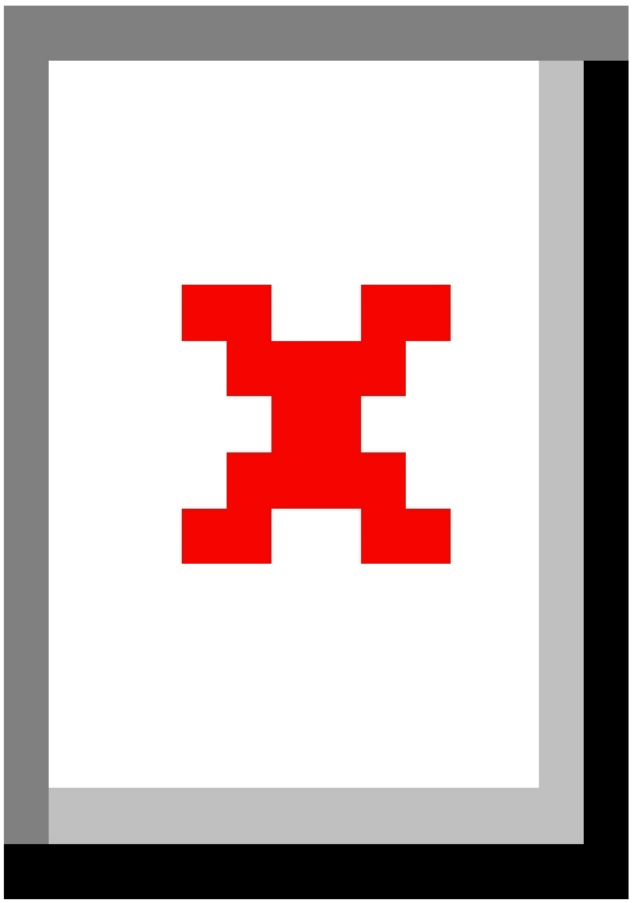
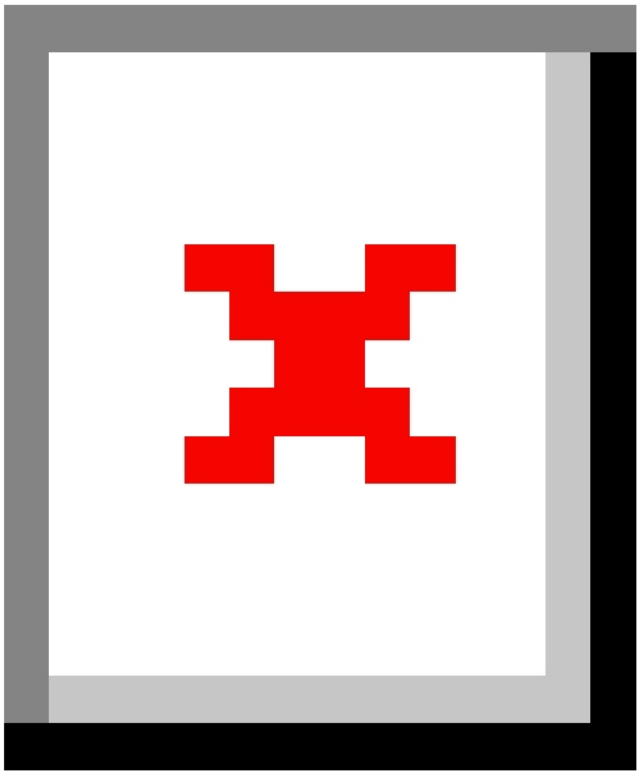


image.png

On Fri, May 15, 2020 at 9:24 AM (b)(6) (b)(6) <cmecher@charter.net> wrote:
Monitoring Georgia.
First, raw data of cases and deaths reported each (b) with (b)(moving averages of cases, deaths, tests performed, and % positive (see attached Excel file). I already shared the LTC data from Georgia.

Second, the data from GA Public Health.





Third. Take a look at the data on https://protect2.fireeye.com/url?k=121f29b2-4e4a20a1-121f188d-0cc47adb5650-0cbdc4316860babf&u=https://dashboards.c19hcc.org/ for Georgia.

As I have said earlier, although we are calling what is happening as reopening, what in fact is happening is we are transitioning to the 2007 Community Mitigation Guidance (really TLC). Infected or sick individuals are still being isolated at home, I assume household contacts are still being advised to home quarantine, schools/universities/pre-school/daycare are still closed, and we continue to leverage social distancing strategies (telework; social distancing in restaurants, retail; churches closed, large gatherings canceled); and we are also wearing face masks (at least the majority of people are wearing face masks).

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Friday, May 15, 2020 7:11 AM
To: Caneva, Duane; Dr. (b) (b) (b)(6) (b)(
Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6 (b)((b)(6) (b)(6) (DSHS); Dr. (b) (b) BOURNE, ALEXANDRA; (b)((b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(Keim, MD MBA; (b)(6 (b)(6) (b)((b)(6) (b) (b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6), (b)((b)((b)(S; (b)(6) (b)(McGinn, (b)((b)(6) (b)(6) Kellermann; (b)(6) (b) (b)(6 (b)((b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6 (b)(6 (b)(6) LLogandakar; Walters, (b)(6) (b)(6) (b)((b)(6) DC; (b)(6) JtCIVtUSARMY (USA); (b)((b)(6) MD; Fantinato, Jessica (USA.GOV); Martin, Greg (b)(6) (b)((b)(6) (b)(, (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b)((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; David; Hassell, David (Chris) (OS/ASPR/IO); (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6, (b)(6 (b)((b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, (b)((b)(6) (b)(6) (b)((b)((b) (b)(6 Krohmer, Jon (NHTSA); (b)(6) (APHMFP - Emergency Medicine); (b)(6))(6) ((b)(6 W
Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

LTC data by state. I have 3 data points (Apr 23, May 7 and May 14). See 1st spreadsheet for summary table. This virus is steadily moving through our LTC population in the US. Recall the estimates of 2.1M Americans who are residents in nursing homes or residential care. With 150K known cases and 30K deaths, this equates to about a 7% attack rate with a 20% fatality rate (I would assume we are learning about most cases given that nursing homes are now testing all residents).

If you are interested in learning more about long term care in the US.
https://www.cdc.gov/nchs/data/series/sr_03/sr03_43-508.pdf There are 8.3M Americans receiving long term care services (not necessarily receiving services at a long term care facility).

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Thursday, May 14, 2020 10:55 AM
To: Caneva, Duane; Dr. (b) (b) (b)(6) (b)(
Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6 (b)((b)(6) (b)(6) (DSHS); Dr. (b) (b) BOURNE, ALEXANDRA; (b)((b)(6) (b)(6) (b)(6) McDonald, Eric;

(b)(Keim, MD MBA; (b)(6 (b)(6) (b)((b)(6) (b) (b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6), (b)((b)((b)(S; (b)(6) (b)(McGinn, (b)((b)(6) (b)(6) Kellermann; (b)(6) (b) (b)(6 (b)(((b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) ((b)(6 (b)(6) LLogandakar; Walters, (b)(6) (b)(6) (b)((b)(6) DC; (b)(6) (b)(6) (b)((b)(6) MD; Fantinato, Jessica (USDA.GOV); Martin, Greg (b)(6) (b)((b)(6) (b)(, (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b) ((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; David; Hassell, David (Chris) (OS/ASPR/IO); (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6, (b)(6 (b)((b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, Mark; (b)(6) (b)(6) (b)((b)((b) (b)(6 Krohmer, Jon (NHTSA); (b)(6) (APHMFP - Emergency Medicine) (b)(6) (6) ((b)(6 W

Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

We have been following any reports of reported prevalence. Spain recently reported a prevalence of 5%. Spain has a death rate of 577 deaths per million (as of yesterday). It is also at the flat part of its curve (even 2 weeks ago the death rate was 517 deaths per million). Assuming Spain has a prevalence of 5% and a death rate of 577 deaths per million, it would equate to a CFR of 1.16%. So a little higher than the CFR we have been estimating.

We haver been roughly estimating prevalence for all the states (assuming a CFR of 0.9%). But given the high percentage of nursing home deaths in a number of state (>50%), we need to do this cautiously because in a state where a high % of the deaths are in long term care, we could be overestimating prevalence.

Attached is a crude estimate of prevalence for the states. We assumed a CFR of 0.9% and time from infection onset to death of about 2 weeks. We used Apr 27 as roughly 2 weeks ago (it was the only data readily available at hand in a table) to estimate a case ascertainment rate. This is all a little crude, but helps to place some of these raw numbers of confirmed cases in perspective. We added a column of the data we have from May 7 on the % of total COVID deaths coming from LTC (those states with a % >50% are highlighted in red).

Sent from Mail for Windows 10

From: Caneva, Duane
Sent: Thursday, May 14, 2020 9:49 AM
To: Dr. (b) (b) (b)(6) (b)(
Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6 (b)((b)(6) (b)(6 (b)(6) (DSHS); Dr. (b) (b) BOURNE, ALEXANDRA; (b)((b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(Keim, MD MBA; (b)(6 (b)(6) (b)((b)(6) (b) (b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6) (b)((b)((b)(S; (b)(6) (b)(McGinn, (b)((b)(6) (b)(6) Kellermann; (b)(6) (b) (b)(6 (b)(((b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) ((b)(6 (b)(6) (b)(6) alters, (b)(6) (b)(6) (b)((b)(6) DC; (b)(6) JtCIVtUSARMY (USA); (b)((b)(6) MD; Fantinato, Jessica (USDA.GOV); Martin, Greg (b)(6) (b)((b)(6) (b)(6 (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b) ((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; David; Hassell, (b)(

(Chris) (OS/ASPR/IO); [redacted]; WILKINSON, THOMAS; WOLFE, HERBERT; [redacted] Marinissen, Maria (HHS/OS/OGA); Sutter, [redacted] Krohmer, Jon (NHTSA); [redacted] (APHMFP - Emergency Medicine); [redacted] W
Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

Some attachments of interest.

C19HCC Dashboard: https://protect2.fireeye.com/url?k=21befdfd-7debf4ee-21beccc2-0cc47adb5650-2bc076c0617c28ad&u=https://dashboards.c19hcc.org/
C19HCC PPE Dashboard: https://protect2.fireeye.com/url?k=31315ee8-6d6457fb-31316fd7-0cc47adb5650-10fc940f0c996ea1&u=https://dashboards.c19hcc.org/ppe

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From: Dr. [redacted]
Sent: Wednesday, May 13, 2020 8:21 PM
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Here's the testing situation. I feel very sorry for Brazil. And my colleagues with whom I work on vaccine immunogenicity prediction are in distressed. But they have very little testing kits and very little testing power. So they are testing only the sick patients and many are positive.

On Wed, May 13, 2020 at 8:04 PM Dr. [redacted] wrote:

> Bill, we must understand, US is still in the discovery phase as far as confirmed positive cases, because we are catching up on test still. I believe we have improved over time, so yes, you [redacted] see more confirmed cases. It is actually more important to look at fatality. Granted, counting may not be perfect. My feeling is that no country is perfect in the counting because it simply is a huge number of bodies all needed attention at a very short period of time. It is overwhelming. So everyone undercounts. Here's a little summary. You notice Positive/capita - for Iceland is very high, because they have tested a very large percentage of their small population. We are still behind in testing, And we need to test a lot more. So many people are asymptomatic, not knowing them is a disadvantage to us. Recall, not every positive case needs hospitalization. So that number as close to reality is very important because it gives us a sense of how infectious SARS-CoV-2 is. It also allows us to estimate better the CFR.

Country	Reported death	Reported positive	% death/positive	Population (M)	fatality/capita	Positive/capita
USA	83963	1411488	5.948545	334	251.3862	4226.012
Spain	27104	271095	9.997971	46.9	577.9104	5780.277
Italy	31106	222104	14.00515	50.63	614.3788	4386.806
Germany	7792	173824	4.482695	83.02	93.8569	2093.761
France	27074	140734	19.23771	66.99	404.1499	2100.821

Israel	264	16548	1.595359	8.884	29.71634	1862.674
Iceland	10	1802	0.554939	0.364134	27.46242	4948.728
U.K.	33186	229705	14.44723	66.65	497.9145	3446.437

On Wed, May 13, 2020 at 7:43 PM (b)(6) (b)((b)(6) wrote:

(b)(

As I understand the data, of the large countries with major impacts, 65% of the cases over last week came from the following 5 countries the U.S. (> 197,600 cases; 603 cases/million), Russia (> 70,600 cases; 489 cases/million), the U.K. (> 35,400 cases; 533 cases/million), Brazil (> 34,500 cases; 164 cases/million), and Peru (> 21,500 cases; 673 cases/million). I don't have the comparable fatality data at hand, but what I've seen has been similar.

I know that "cases" as a datapoint to track is crap because it's based on testing and the populace's threshold for seeking care, but still, we are well above the average on a rate basis. Why is this? I have a hard time believing it's just timing on application of NPIs.

-Bill

From: Dr. (b)((b)(6)

Sent: Wednesday, May 13, 2020 7:34 PM

To: (b)(6) (b)((b)(6)

Cc: (b)(6) (HMFP - Emergency Medicine) (b)(6) Caneva, Duane (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (DSHS) (b)(6) Dr. (b)((b)(<(b)(6) (b)(6) URNE, ALEXANDRA (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; (b)(Keim, MD MBA (b)(6) (b)((b)(6) (b)(6) (b)((b)(6) MD (b)(6) (b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b)((b)(6) (b)((b)(S (b)(6) (b)(6) (b)((b)(6) McGinn, (b)((b)(6) (b)(6) (b)(6) Kellermann (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)((b)((b)(6) (b)(6) (b)(6 (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6) JtCIVtUSARMY (USA) (b)(6) (b)((b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6 (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) <CHRISALLEN (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) (b)((b)(6) Hassell, David

(Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) (b)(6) WILKINSON, THOMAS (b)(6) WOLFE, HERBERT (b)(6) (b)(6) (b)(6) Marinissen, Maria (HHS/OS/OGA) <Maria.Marinissen@hhs.gov>; Sutter, (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)((b)((b)(6) (b)((b)((b)(6) Krohmer, Jon (NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine) (b)(6) (b)(6) WMD) (FBI) (b)(6) (b)(6) ((b)(6) W (b)(6)
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

Bill, may I ask you how you calculate your values? I am using fatality per capita and infection per capita, we are not the highest. Is that what you are thinking? I must have misunderstood your question.

On Wed, May 13, 2020 at 7:24 PM (b)(6) (b)((b)(6) wrote:

> Does anyone have insight as to why the US has the highest case and fatality rate of any large country. I haven't seen any good explanation of that. It's not that we have so much most inbound international travelers (France exceeds the US on an absolute basis – not just rate, for example, and many countries far exceed us for international arrival rates).
>
> While many feel we should have implemented NPIs earlier and harder, I don't get the sense that we were that far behind the rest of the world to explain the case and fatality rate differences.
>
> Our Chinese arrival rate compared to the rest of the world is hard to figure (the data is there, but I haven't tried to crank it).
>
> With the exception of some inner-cities, we are not a population dense as other major developed countries.
>
> So what was it (and am just missing scholarly discussion somewhere about this huge discrepancy). Everyone knew in detail why Italy blew up, but why us?
>
> -Bill (b)(

From: Dr. (b) (b) (b)(6)
Sent: Wednesday, May 13, 2020 5:15 PM
To: (b)(6) (HMFP - Emergency Medicine) (b)(6)
Cc: Caneva, Duane (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (DSHS) (b)(6) (b)(6) (b)((b)(6) Dr. (b) ((b) (b)(6) BOURNE, ALEXANDRA (b)(6) (b)((b)(6)

(b)(6) (b)(6) (b)(6)
(b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; (b)(6)
Keim, MD MBA (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
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(b)(6) (b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6)
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(b)(6) Fantinato, Jessica (USDA.GOV)
<jessica.fantinato@usda.gov>; Martin, Greg (b)(6) (b)(6) (b)(6)
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SANGEETA (b)(6) (b)(6) (b)(6)
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(b)(6) Ignacio, Joselito (b)(6) David
(b)(6) Hassell, David (Chris) (OS/ASPR/IO)
<David.Hassell@hhs.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
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(b)(6) (b)(6) (b)(6)
Marinissen, Maria (HHS/OS/OGA) <Maria.Marinissen@hhs.gov>; Sutter, (b)(6)
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(b)(6) (b)(6) (b)(6) (b)(6) Krohmer,
Jon (NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine)
(b)(6) You, Edward H. (WMD) (FBI) (b)(6) (b)(6)
(b)(6) W (b)(6)

Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

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This looks very nice in the tracing and connectivity of all the cases. I assume the genetic analysis reported recently regarding origin of the US cases will give us such type of information.

https://protect2.fireeye.com/url?k=7a4a7237-261f7b24-7a4a4308-0cc47adb5650-aad33b049e0e4c82&u=https://graphics.reuters.com/CHINA-HEALTH-SOUTHKOREA-CLUSTERS/0100B5G33SB/index.html

On Wed, May 13, 2020 at 4:05 PM (b)(6) (HMFP - Emergency Medicine) (b)(6) wrote:

This is terrific! Thanks Duane

Greg

Sender:	(b)((b)(6) (b)(6)
Recipient:	Dr. (b) (b) (b)(6) Caneva, Duane (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev (b)(6) (b)((b) (b)(6) (b)(6) (HMFP - Emergency Medicine) (b)(6) (b)(6) (b) (b)(6) (b) (b)(6) (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6) Dr. (b) (b) (b)(6) BOURNE, ALEXANDRA (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=474b01361a8b4944a39afbdad800591e-Guest_bea05 (b)(6) (b)((b)((b)(6) (b) (b)(6) (b)(6) (b) (b)(6) MD (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=20f0e9a3ebeb4ef99d30a96386fb2627-Guest_945f5 (b)(6) (b)(6) (b) (b)(6) (b)((b)(S (b)(6) (b)(6) (b) (b)(6) McGinn, (b) (b)(6) (b)(6) (b)(Kellermann (b)(6) (b)(6) (b) (b)(6) (b)((b) (b)(6) (b)(6) (b)((b)(6) Eastman, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d314e75d55434b198c36e0c981e6623d-Contact_753 (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)((b)(6) LLogandakar (b)(6) Walters, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) (b) (b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6) JtCIVtUSARMY (USA) (b)(6)

	(b)(6) (b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4a03b6317c3840afb4ee617008e821a6-Jessica.Fan <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d48a91c6dc5f401a80e245c518874f15-MartinGJ.os (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=908f39d0872d44b1b2c5e3ba11f04968-Joselito.Ig (b)(6) (b)(6) (b)(6) Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS (b)(6) Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f2fb845c2e154d8e967ec3fdabecfbd6-Herbert.Wol (b)(6) (b)(6) (b)(6) Marinissen, Maria (HHS/OS/OGA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5d42fb4d94b041ee88e4f7dd5743e893-Marinissen, <Maria.Marinissen@hhs.gov>; Sutter, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Krohmer, Jon (dot.gov) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=46c6513591aa4142b2c1c85354dd1816-Jon.Krohmer <Jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine) (b)(6) (b)(6) (WMD) (FBI) (b)(6) (b)(6) ((b)(6) W (b)(6)
Sent Date:	2020/05/16 06:26:44
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Message Flags:	Unread

From:	Brown, Lisa <LBrown@nas.edu>
To:	'Alexandra Phelan (alp81@georgetown.edu)' <alp81@georgetown.edu>; 'David A Relman (relman@stanford.edu)' <relman@stanford.edu>; 'David Walt (dwalt@bwh.harvard.edu)' <dwalt@bwh.harvard.edu>; 'Diane Griffin (dgriffi6@jhmi.edu)' <dgriffi6@jhmi.edu>; 'Embrey, Ellen (eembrey@stratitia.com)' <eembrey@stratitia.com>; 'Georges Benjamin (georges.benjamin@apha.org)' <georges.benjamin@apha.org>; hick.john /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user7b974f4e (b)(6) 'Jonna Mazet (jkmazet@ucdavis.edu)' <jkmazet@ucdavis.edu>; 'Kent Kester (Kent.Kester@sanofi.com)' <Kent.Kester@sanofi.com>; 'Kristian G. Andersen (b)(6) (b)(6) 'Mark Smolinski (b)(6) (b)(6) 'Mary Travis Bassett (mbassett@hsph.harvard.edu)' <mbassett@hsph.harvard.edu>; 'Patricia King (b)(6) (b)(6) 'Peggy Hamburg (peggy@hbfam.net)' <peggy@hbfam.net>; 'Peter Daszak (daszak@ecohealthalliance.org)' <daszak@ecohealthalliance.org>; 'Phyllis D. Meadows (PDMeadows@kresge.org)' <PDMeadows@kresge.org>; 'Richard Besser (rbesser@rwjf.org)' <rbesser@rwjf.org>; 'Tara O'Toole (totoole@iqt.org)' <totoole@iqt.org>; 'Trevor Bedford (trevor@bedford.io)' <trevor@bedford.io>; (b)(6) (b)(6) 'Donald Berwick' (b)(6) 'alta.charo@wisc.edu' <alta.charo@wisc.edu>; 'Jeff.Duchin@kingcounty.gov' <Jeff.Duchin@kingcounty.gov>; 'Baruch Fischhoff' <baruch@cmu.edu>; (b)(6) (b)(6) 'bgroves@georgetown.edu' <bgroves@georgetown.edu>; 'Harvey V. Fineberg (harvey.fineberg@moore.org)' <harvey.fineberg@moore.org>; Pope, Andrew <APope@nas.edu>; Pavlin, Julie <JPavlin@nas.edu>; Shore, Carolyn <CShore@nas.edu>; Wollek, Scott <SWollek@nas.edu>; Downey, Autumn <ADowney@nas.edu>; Fine, Emma <EFine@nas.edu>; Kahn, Benjamin <BKahn@nas.edu>; Attal-Juncqua, Aurelia <AAttal-Juncqua@nas.edu>; Feit, Monica <MFeit@nas.edu>; Liao, Julie <JLiao@nas.edu>; Dzau, Victor J. <VDzau@nas.edu>; Kanarek, Morgan <MKanarek@nas.edu>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; 'Waterman Paige E. EOP/OSTP' (b)(6) Watson, Ian (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3bc7da05f4e949ddbf55281ba404386a-Watson, Ian <Ian.Watson@hhs.gov>; 'Motrya Calafiura' <Motrya.Calafiura@georgetown.edu>; Ferris, Nicole <nferris@rwjf.org>
Subject:	Standing Committee on EID and 21st Century Health Threats: URGENT Call on Monoclonal Antibodies
Date:	2020/11/10 18:33:30
Start Date:	2020/11/15 11:00:00
End Date:	2020/11/15 13:00:00
Priority:	Normal
Type:	Schedule.Meeting.Request
Location:	https://nasem.zoom.us/j/96818499306
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Subject:	Re: Try "scientists" for their role in crimes against humanity, involving funding, developing dangerous pathogens and/or lying, covering up SARS-CoV-2 origin
Date:	2021/05/09 23:12:15
Priority:	Normal
Type:	Note

The origin of COVID: Did people or nature open Pandora's box at Wuhan?

https://thebulletin.org/2021/05/the-origin-of-covid-did-people-or-nature-open-pandoras-box-at-wuhan/

Best source of disinformation, lies, cover-ups? *TheLancet, Nature Medicine, Science*, FDA/CDC/NIH and the mainstream media.

Best source of facts? Archived Facebook pages taken down by rabid "fact-checkers".

Trusted News Initiative (TNI) is competition for Pravda.

Welcome to a brave new world run by killing, lying, sickening, criminals. Even Hollywood could not have dreamt this up.

The truth is stranger than fiction.

On 3/6/21 11:27 AM, Vinu Arumugham wrote:

In a world of conspiring criminals, it takes "conspiracy theorists" to expose the truth ...

A Bayesian analysis concludes beyond a reasonable doubt that SARS-CoV-2 is not a natural zoonosis but instead is laboratory derived
https://doi.org/10.5281/zenodo.4470232

On 3/3/21 9:32 PM, Vinu Arumugham wrote:

More "scientists" like Trevor Bedford belong on that list.

People investigating the lab origin of SARS-CoV-2 are labelled "conspiracy theorists". But these criminals have now been exposed as being engaged in exactly that - secretly meeting to conspire and mislead the public and cover their tracks. The "conspiracy theorists" hit the nail on the head. This cover up is a **CONSPIRACY FACT**.

Conspirator Trevor Bedford wanted to hide it further by using "secure forms of communication".

More incriminating emails released under FOIA:

Prometheus & Pandora I: Trust the Scientists on COVID, not the Science?

http://prometheusshrugged.substack.com/p/prometheus-and-pandora-i-trust-the

These criminals had already decided on Feb 3, 2020, that the virus had a natural origin. They only wanted to collect data that supports that story.

Their "workplan" wanted "samples to address the **unknowns**" but they already decided that the virus had "evolutionary origins"? That is not science. That is **CONSPIRACY TO COVER UP THEIR CRIMES**.

Even though they had "unknowns", criminal Trevor Bedford had decided that they should **"say "no evidence of genetic engineering" full stop**."

On 2/21/21 2:02 PM, Vinu Arumugham wrote:

Cc:
President Joe Biden Jr.
Vice President Kamala Harris
Senator Dianne Feinstein (D-CA)
Senator Alex Padilla (D-CA)
Representative Zoe Lofgren (D-CA-019)

Governor Gavin Newsom (D-CA)
Lt. Governor Eleni Kounalakis (D-CA)
Attorney General Xavier Becerra (D-CA)
Senator John Laird (D-CA-017)
Assemblyman Ash Kalra (D-CA-027)

Mayor Sam Liccardo (S-At-Large)
Councilmember Sergio Jimenez (S-002)

All,

I demand that the following "scientists" and their co-workers, collaborators be tried for their role in crimes against humanity, involving funding, developing dangerous pathogens and/or lying about SARS-CoV-2 origin or attempting to cover it up.

Francis Collins, NIH

Anthony Fauci, NIAID

Peter Daszak, EcoHealth alliance

Shi Zhengli, WIV

(b)(6) (b)(6) **UNC**

Kristian G. Andersen, Scripps Research

Editors of The Lancet journal for publishing this attempted cover-up:

All the authors of:

Statement in support of the scientists, public health professionals, and medical professionals of China combatting COVID-19

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US Right To Know (usrtk.org) has used documents obtained via FOIA to expose the lies and cover-ups by Daszak, (b)(6) and others.

https://usrtk.org/biohazards-blog-index/

"In the emails, (b)(6) agreed with Daszak's suggestion not to sign The Lancet statement, writing "Otherwise it looks self-serving, and we lose impact.""

"U.S. Right to Know previously reported that Daszak drafted the statement for The Lancet, and orchestrated it to "not be identifiable as coming from any one organization or person" but rather to be seen as "simply a letter from leading scientists"."

Collecting viruses from wild bats, transporting them hundreds of miles and storing them in leaky labs in the middle of a city of 11 million is the **DEFINITION OF INSANITY.** It is the **DEFINITION OF RECKLESS ENDANGERMENT.** Daszak and Zhengli did this for a living. COVID-19 is proof that such stupid work **DOES NOT PREVENT** a pandemic, **IT CREATES ONE**.

Near Misses at UNC Chapel Hill's High-Security Lab Illustrate Risk of Accidents With Coronaviruses

www.propublica.org/article/near-misses-at-unc-chapel-hills-high-security-lab-illustrate-risk-of-accidents-with-coronaviruses

Mounting Lab Accidents Raise SARS Fears

https://science.sciencemag.org/content/304/5671/659

Criminals like Zhengli and (b)(6) ran labs that leak like sieves. They had ZERO control of the viruses. But these incredibly stupid "scientists" did not just store viruses, they modified them to make them more dangerous to humans using gain-of-function (GOF) research, in these leaky labs. **These criminals are a danger to all humans.**

Zhengli said "I had not slept a wink for days." after the Wuhan outbreak. So she knew her dangerous, leaky lab could easily be the source. They had no control of the viruses. The viruses could contaminate and grow in cell cultures, infect animals, humans, etc. ANYWHERE in their labs. THERE IS NO WAY THEY CAN CLAIM the lab was not the source because they **DID NOT EVEN KNOW WHAT WAS GROWING WHERE IN THEIR STUPID LEAKY LABS**.

Root cause of COVID-19? Biotechnology's dirty secret: Contamination. Bioinformatics evidence demonstrates that SARS-CoV-2 was created in a laboratory, unlikely to be a bioweapon but most likely a result of sloppy experiments

https://doi.org/10.5281/zenodo.3766462

Could COVID-19 Have Escaped from a Lab?

https://www.bostonmagazine.com/news/2020/09/09/alina-chan-broad-institute-coronavirus/

Coronavirus may have been a 'cell-culture experiment' gone wrong

www.skynews.com.au/details/_6158843835001

All these BIOHAZARD labs AROUND THE WORLD should be IMMEDIATELY shut down before they make us extinct with their next virus.

Thanks,

Vinu

Sender:	Vinu Arumugham <(b)(6)
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	<david.collingridge@lancet.com>; <niall.boyce@lancet.com>; <audrey.ceschia@lancet.com>; <emma.grainger@lancet.com>; <duc.le@lancet.com>; <jstacey@lancet.com>; <mkoch@lancet.com>; <lchong@aaas.org>; <vvinson@aaas.org>; <jyeston@aaas.org>; <galderton@science-int.co.uk>; <cash@science-int.co.uk>; <jfahrenkamp@science-int.co.uk>; <mfunk@aaas.org>; <bgrochol@aaas.org>; <phines@aaas.org>; <shurtley@science-int.co.uk>; <pkelly@aaas.org>; <pkiberst@aaas.org>; <mlavine@aaas.org>; <smao@aaas.org>; <iosborne@science-int.co.uk>; <bpurnell@aaas.org>; <trai@aaas.org>; <bray@aaas.org>; <jsills@aaas.org>; <hjsmith@aaas.org>; <ksmith@science-int.co.uk>; <jstajic@aaas.org>; <pstern@science-int.co.uk>; <asugden@science-int.co.uk>; <pszuromi@aaas.org>; <vthompso@aaas.org>; <svignier@aaas.org>; <lzahn@aaas.org>; <science_news@aaas.org>; (b)(6) <mail@kaikupferschmidt.de>; (b)(6) <gvogel@aaas.org>
Sent Date:	2021/05/09 23:09:32
Delivered Date:	2021/05/09 23:12:15
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From:	Dr. (b) (b) (b)(6)
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CC:	(b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (HMFP - Emergency Medicine) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6) Dr. (b) (b) (b)(6) BOURNE, ALEXANDRA (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=474b01361a8b4944a39afbdad800591e-Guest_bea05 (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) MD (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=20f0e9a3ebeb4ef99d30a96386fb2627-Guest_945f5 (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) S (b)(6) (b)(6) (b)(6) McGinn, (b) (b)(6) (b)(6) (b)(6) Kellermann (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Eastman, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d314e75d55434b198c36e0c981e6623d-Contact_753 (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) LLogandakar (b)(6) Walters, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)(6) MD (b)(6) Fantinato, Jessica (USDA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4a03b6317c3840afb4ee617008e821a6-Jessica.Fan <jessica.fantinato@usda.gov>; Martin, Greg (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d48a91c6dc5f401a80e245c518874f15-MartinGJ.os (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Larry G (b)(6) Ignacio, Joselito (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group

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Subject:	Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT
Date:	2020/05/15 21:12:01
Priority:	Normal
Type:	Note

"LTC data by state. I have 3 data points (Apr 23, May 7 and May 14). See 1st spreadsheet for summary table. This virus is steadily moving through our LTC population in the US. Recall the estimates of 2.1M Americans who are residents in nursing homes or residential care. With 150K known cases and 30K deaths, this equates to about a 7% attack rate with a 20% fatality rate (I would assume we are learning about most cases given that nursing homes are now testing all residents)"

(b)(6) this are very interesting figures. Recall for NYP, 20% of their admitted patients died. So you have 20% fatality rate!! Basically, all those in nursing home would need hospitalization due to their co-existing health conditions and old age. So their fatality fits alarmingly the same as those admitted to NYP. This is the same as what was reported from China early on -- 20% of those admitted to hospitsals died.

On Fri, May 15, 2020 at 4:28 PM Caneva, Duane (b)(6) wrote:

DHS S&T Weekly update to the Master Question List attached.

Data dump:

Science

https://www.eurekalert.org/pub_releases/2020-05/uoa-sdt051420.php

Scientists develop tool to sequence circular DNA

New method will provide insight into genomes of bacteria and viruses, as well as extrachromosomal circular DNA in mammals and plants. University of Alberta biologists have invented a new way for sequencing circular DNA, according to a new study. The tool - called CIDER-Seq - will give other scientists rich, accurate data on circular DNA in any type of cell. While our own DNA is linear, circular DNA is common in the genomes of bacteria and viruses. Scientists have also discovered circular DNA within the nuclei of human and plant cells, called extrachromosomal circular DNA (eccDNA). Recently, research has begun to investigate the role of eccDNA in human cancer but progress has been hampered due to the lack of effective methods for studying and sequencing eccDNA.

University of Alberta

14-May-2020

https://www.the-scientist.com/news-opinion/droplets-from-speech-can-float-in-air-for-eight-minutes-study-67538?utm_campaign=TS_DAILY%20NEWSLETTER_2020&utm_source=hs_email&utm_medium=email&utm_content=87992907&_hsenc=p2ANqtz-8aVWmtxVWrgfwS6Sdn6rdCuwqlVjjjN97FH5hsJ_EyKzj_CfTMemFPVuNub4U81QYPW28WuN8ZNrCpAL11PuhiVi3_WsgSrithAppkX6XRQztdyKQ&_hsmi=87992907

Droplets from Speech Can Float in Air for Eight Minutes: Study

The experiments did not involve SARS-CoV-2, but researchers say the results support precautions to avoid possibly spreading COVID-19 by talking.

Kerry Grens

May 15, 2020

Amid concerns that COVID-19 may be spread through aerosols, scientists have shown that tiny respiratory droplets produced when people talk can linger in the air for minutes. The results, published in *PNAS*Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd. speech, but bolsters the idea that talking could present a risk for exposure to the novel coronavirus.

“This study builds on earlier research by the same team showing that speaking may factor into transmission of SARS-CoV-2,” a spokesperson for the National Institute of Diabetes and Digestive and Kidney Diseases, where most of the study’s authors are based, tells *USA Today*.

The authors used laser light sheets to capture on video the movement of small droplets emitted from a person’s mouth as the speaker repeated the phrase “stay healthy” for 25 seconds. They calculated that the half-life of these particles in the air, considering the time it took them to fall 30 cm, was eight minutes.

“This study is the most accurate measure of the size, number and frequency of droplets that leave the mouth during a normal conversation and shower any listeners within range,” Benjamin Neuman, a virologist at TAMU-Texarkana who was not involved in the research, tells *The Washington Post*.

The researchers did not examine these respiratory droplets in the context of a SARS-CoV-2 infection. But in their paper they write that in a scenario where an infected person is in the vicinity of uninfected people, “At an average viral load of 7×10^6 per milliliter, we estimate that 1 min of loud speaking generates at least 1,000 virion-containing droplet nuclei that remain airborne for more than 8 min. These therefore could be inhaled by others and, according to IAH [independent action hypothesis], trigger a new SARS-CoV-2 infection.”

The airborne particles were about 4 µm in diameter, and had dehydrated from respiratory droplets that the authors estimate were larger than 12 µm in diameter when they left the speaker’s mouth.

The spokesperson for National Institute of Diabetes and Digestive and Kidney Diseases suggests to USA Today that the study’s results support the CDC’s recommendation to wear a mask. Although many governments have ordered or urged residents to don masks, it’s not clear how well they prevent the transmission of the coronavirus. N95 masks filter 95 percent of particles larger than 0.3 µm (according to an early report describing COVID-19 infections, the SARS-CoV-2 viral particles range from 0.6 to 0.14 µm in diameter). For other types of masks, that efficiency varies considerably. An analysisEvaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.lock particles about 0.1 µm in size, from just 7 percent for two layers of quilters’ cotton to 84 percent for a mask made from a nanofiber layer paired with cotton ripstop.

A study published in April that asked patients to cough into either surgical masks or cotton masks found neither “effectively filtered SARS–CoV-2 during coughs by infected patients.” Other researchers have found that masking policies correlate with fewer COVID-19 cases, and estimate that widespread uptake of the use of masks could considerably limit infections.

A video illustrating the study “Small saliva droplets can remain airborne in an enclosed space for more than 10 minutes, NIDDK study shows” at https://www.youtube.com/watch?v=axmRl6P6xyw)

Health

https://www.technologynetworks.com/informatics/news/designing-vaccines-using-artificial-proteins-334877?utm_campaign=NEWSLETTER_TN_Breaking%20Science%20News&utm_source=hs_email&utm_medium=email&utm_content=87986690&_hsenc=p2ANqtz--0rfTHzFameJbAVaHjXCx2uZ_yV7x1M2-gqE6cYIDj-JEUfzWyptz31mAoA-JWVFGIKQkpYyRnE1rDXBrUA28xGbUWkB_frRIF--mwfuA6JvoeRjg&_hsmi=87986690

Designing Vaccines Using Artificial Proteins

May 15, 2020 | Original story from EPFL

Vaccines are one of the most effective interventions to prevent the spreading of infectious diseases. They trigger the immune system to produce antibodies that protect us against infection. However, we still lack efficacious vaccines for many important pathogens, like the flu or dengue fever. "When a vaccine doesn't work well, we tend to think that it's because the antibodies produced are not protective," says Bruno Correia, a professor at the Laboratory of Protein Design & Immunoengineering (LPDI) in EPFL's School of Engineering. "It's usually because our immune system is simply making the wrong type of antibodies". Scientists in Correia's lab have now developed a strategy to design artificial proteins that very precisely instruct the body's immune system which antibodies to produce. The study has been published in the journal *Science*.

EPFL scientists have developed a new computational approach to create artificial proteins, which showed promising results in vivo as functional vaccines. This approach opens the possibility to engineer safer and more effective vaccines. Credit: © 2020 EPFL

A disease without a vaccine

Correia's team focused on the design of de novo proteins that can result in a vaccine for the respiratory syncytial virus (RSV). RSV causes serious lung infections and is a leading cause of hospitalization in

infants and the elderly, "Despite several decades of research, up to today there is still no vaccine or cure for respiratory syncytial virus," says Correia.

The artificial proteins were created in the laboratory and then tested in animal models, and triggered the immune system to produce specific antibodies against weak spots in RSV. "Our findings are encouraging because they indicate that one day we will be able to design vaccines that target specific viruses more effectively, by prompting the immune system to generate those particular antibodies," says Correia. "We still have a lot of work ahead to make the vaccine we developed more effective - this study is a first step in that direction."

Methods for creating de novo proteins have applications well beyond immunology - they can also be used in various branches of biotechnology to expand the structural and functional range of natural proteins. "We can now use the protein design tools to create proteins for other biomedical applications such as protein-based drugs or functionalized biomaterials," concludes Sesterhenn.

Reference: F. Sesterhenn, C. Yang, J. Bonet, J. T. Cramer, X. Wen, Y. Wang, C. Chiang, L. A. Abriata, I. Kucharska, G. Castoro, S. S. Vollers, M. Galloux, E. Dheilly, S. Rosset, P. Corthésy, S. Georgeon, M. Villard, C. A. Richard, D. Descamps, T. Delgado, E. Oricchio, M. Rameix-Welti, V. Más, S. Ervin, J. F. Eléouët, S. Riffault, J. T. Bates, J. P. Julien, Y. Li, T. Jardetzky, T. Krey & B. E. Correia. *De novo protein design enables the precise induction of RSV-neutralizing antibodies.* Science

https://protect2.fireeye.com/url?k=3b7192a9-67249b79-3b71a396-0cc47a6a52de-e47c83cff55fde78&u=http://outbreaknewstoday.com/maine-lyme-disease-providers-are-already-reporting-cases-in-2020-and-the-number-will-rise-as-we-enter-the-summer-months-74705/

Maine Lyme disease: 'Providers are already reporting cases in 2020, and the number will rise as we enter the summer months'

The Maine CDC reported a record more than 2,000 Lyme disease cases in 2019 and officials announce during this Lyme Disease Awareness Month that providers are already reporting cases in 2020, and the number will rise as we enter the summer months. This has prompted health officials to advise the public to be aware of tick bites that transmit not only Lyme disease, but also anaplasmosis (a bacterial disease), babesiosis (a parasitic disease) and Powassan virus. Individuals bitten by the deer tick can acquire more than one infection. Many individuals and families are spending more time outdoors during the COVID-19 pandemic. This may put them at increased risk of exposure to tickborne pathogens. Symptoms of anaplasmosis include: fever, headache, malaise and body aches. Symptoms of babesiosis include: extreme fatigue, aches, fever, chills, sweating, dark urine, and possibly anemia. Symptoms of Powassan include: fever, headache, vomiting, weakness, confusion, loss of coordination, speech difficulties, seizures, and encephalitis and meningitis. In 2019, providers reported 685 cases of anaplasmosis, 138 cases of babesiosis and two cases of Powassan.

by News Desk

May 14, 2020

https://www.eurekalert.org/pub_releases/2020-05/wrai-nes051420.php

New evidence suggests malaria cycles are innate to the organism

Scientists from the Walter Reed Army Institute of Research joined partners at Duke University, FAU and Montana State University to publish a study providing clear evidence that malaria's characteristic cycle of fever and chills is a result of the parasite's own influence - not factors from the host. What regulated that cycle, the result of parasites bursting out of infected red blood cells in sync then re-colonizing new red blood cells, has been studied since at least the 1920s. In the current study, evidence challenges the central dogma that a cyclic pattern of parasite growth is solely dependent on cues from the host. Though the specific signals utilized remain to be elucidated, these findings raise the exciting possibility of disrupting this cycle as an antimalarial strategy.

Walter Reed Army Institute of Research

14-May-2020

ASF

https://www.thehindu.com/news/national/other-states/wild-boars-die-in-arunachal-as-african-swine-fever-kills-15000-pigs-in-assam/article31590372.ece

Wild boars die in Arunachal as African swine fever kills 15,000 pigs in Assam

As Assam prepares for mass culling to check the spread of African swine fever (ASF) that has killed almost 15,000 domesticated pigs, adjoining Arunachal Pradesh fears that the "foreign" disease may have "gone wild". This is the 1st time that ASF has been reported in India. Assam claims the disease came from China, where almost 60% of pigs have died since 2018. Officials in Arunachal Pradesh's East Siang district said 6 carcasses of wild boars including 3 piglets were found in a community forest at Lidor Soyit upstream of Sille River. There have been unverified reports of several wild boars dying from an unknown disease in East Siang and Upper Siang districts, but the recovery of the carcasses - some partly eaten by scavengers - on Thursday made officials wary of the possibility of ASF having spread from scores of domestic pigs that have died in the State over the last 2 months. "A team of forest, veterinary officials and experts trekked about 10 km to locate the carcasses after receiving information from the villages. We suspect ASF is the cause of death but will have to await confirmation after we send blood and tissue samples to labs outside," Divisional Forest Officer (Territorial) Tashi Mize told The Hindu on Friday. Some of the carcasses appeared to have been consumed by porcupines. "ASF is confined to porcine creatures, so other animals are unlikely to be affected. But the possibility of becoming carriers of the virus could affect the wild boar population," he said.

Special Correspondent I Guwahati I may 15, 2020 13:39 IST I Updaated: May 15, 2020 14:10 IST

https://www.ndtv.com/india-news/assam-prepares-for-culling-as-african-swine-fever-kills-nearly-15-000-pigs-2229043

Assam "Prepares" For Culling As African Swine Fever Kills Nearly 15,000 Pigs

The BJP-led government is preparing for mass culling; it has demanded from the centre compensation to farmers who rear pigs. The ASF outbreak has killed nearly 15,000 pigs in Assam and is spreading in new areas despite preventive measures taken by the state government. The state government has issued a high alert in 10 affected districts. It has asked the centre to provide one-time financial package of Rs 144 crore for the farmers who rear pigs. "We are deeply concerned due to this growing crisis in Assam. The deaths are increasing every day. Now, 10 districts have been affected already. 14,919 pigs have died and the number is on the rise. We have alerted the Government of India as well," Assam Animal Husbandry Minister Atul Bora told NDTV. "Initially, 6 districts were affected but now it has spread to 10 districts out of 33, despite the fact that we took all possible steps (for prevention), but it is spreading to new areas. " We had taken biosecurity measures to make sure it doesn't spread further. We declared that area under 1-km radius (of affected areas) as containment zone, and 10-km radius as surveillance zone," the minister added. The Assam government has alerted all wildlife reserves in the state regarding the disease.

Written by Ratnadip Choudhury I Updated: May 15, 2020 08:28 am IST

https://protect2.fireeye.com/url?k=7a69d197-263cd847-7a69e0a8-0cc47a6a52de-bec301103b9ba89e&u=https://asian-agribiz.com/magazines/asian-pork/asf-update/

Concentration, contact time key to effective disinfectant use

15 May 2020 – The correct concentration and the length of time a disinfectant is in contact with a surface will better determine its effectivity against ASF and other pathogens. Pariwat Poolperm, a swine consultant from Thailand said at a webinar titled Biosecurity: The First Step to Success in Pig Farming that for disinfectants to work against ASF, they must be in contact with surfaces for at least 15-20 minutes. Dr Pariwat also said that not all disinfectants are the same. Pig producers should follow the recommended concentrations for each disinfectant and not overconcentrate or overdilute.

ASF remains a big problem in Asia

14 May 2020 – While the Covid-19 pandemic and its effects have overshadowed ASF in the news, the deadly pig virus continues to be a big problem for Asian pig producers. China and Vietnam are both working on recovery programs, but threats of ASF reinfection and the lack of breeding pigs hamper restocking efforts. Both countries have seen a spike in the number of cases in the last two weeks. In the Philippines, industry observers note that while fewer cases are being reported, a big reason for this is the movement restrictions imposed due to the pandemic. “The virus remains, and it will take some time before it can be eradicated, if at all,” an industry practitioner told *Asian Agribiz*. “It is imperative the governments and local pig industries collaborate not just to control ASF spread, but also how to rebuild their industries. Pork will continue to be the preferred meat at least in China, Vietnam, and the Philippines.

Philippines reports new ASF outbreaks

13 May 2020 – The Philippines has 58 new ASF outbreaks in Luzon, the Philippine Bureau of Animal Industry (BAI) reported to the World Organization for Animal Health. The country culled another 11,074

pigs, bringing the total as of May 4 to 282,899. The outbreaks were traced to illegal transport of animals and swill feeding. An industry practitioner told *Asian Agribiz* that while the country continues its fight against ASF, the government and industry players must begin rebuilding efforts. Unfortunately, he said, nothing concrete has been made, adding that even the country does not have enough ASF test kits.

COVID-19 Webinars

https://protect2.fireeye.com/url?k=c8ad3a24-94f833f4-c8ad0b1b-0cc47a6a52de-368065440827b8dd&u=https://mailchi.mp/nas/register-for-upcoming-webinars-earth-and-life-sciences-and-covid-19?e=a7a58840e6



https://gallery.mailchimp.com/18fe6f8f25ec0bc7509e65e97/images/20c38cdd-bf8e-4932-9fac-481751e2ba50.gif

Wastewater Monitoring for COVID-19 Disease Surveillance

May 27, 11-1:30 PM EDT

Researchers around the world are currently exploring ways that wastewater samples can help us understand the spread of COVID-19 at a community scale. This webinar will feature a panel discussion with experts on public health and wastewater monitoring to discuss the potential value of data on SARS-CoV-2 in wastewater to inform public health management and what is needed to build a useful surveillance network

Register for Webinar

David Sedlak, UC Berkeley, Moderator

Panelists:

- Vincent Hill, Centers for Disease Control and Prevention
- Barry Liner, Water Environment Federation
- Gertjan Medema, KWR Water Research Institute, Holland
- Nicole Rowan, Colorado Department of Public Health and Environment
- Krista Wigginton, University of Michigan

Key questions for presentations and discussions:

- How can data on SARS-CoV-2 in wastewater be useful as an indicator of COVID-19 cases in a locality?
- How has wastewater disease surveillance been useful with control of other viral pathogens? What problems have been encountered and what can we learn from these experiences for COVID-19?
- What is the capacity of current wastewater monitoring technologies for detecting COVID-19 disease outbreaks (i.e., what is the recovery efficiency, detection rate relative to the loading rates)? What are the costs?
- What technical challenges need to be addressed before this strategy can be broadly implemented as a robust tool? What are the highest priority needs?
- Where might such surveillance be appropriate?
- Is this a useful investment? If so, what would the nation need to do to rapidly invest in a useful surveillance network?

https://protect2.fireeye.com/url?k=98f9a688-c4acaf58-98f997b7-0cc47a6a52de-2329072f66989842&u=https://mailchi.mp/nas/register-for-upcoming-webinars-earth-and-life-sciences-and-covid-19?e=a7a58840e6

Reopening after COVID-19: Ensuring Safe Water Supplies at the Building Scale

May 27, 2:30-4:30 PM EDT

Register for Webinar

The COVID-19 pandemic has led to sweeping closures of public buildings, businesses, offices, and schools. With minimal water use, water quality in building plumbing can degrade and foster the growth of the bacteria that cause Legionnaires' disease, a severe form of pneumonia. Legionnaires' disease incidence has been increasing over the past few decades, and without appropriate water management actions, cases could increase sharply after schools and workplaces reopen. A panel of experts will discuss the state of knowledge for building water management to protect public health when reopening after COVID-19.

Ruth Berkelman, Emory University, moderator

Panelists:

- Chris Boyd, Building Water Health Program, NSF International
- David Krause, HealthCare Consulting and Contracting
- Andrew Whelton, Purdue University

Key questions for presentations and discussions:

- What are the water quality issues and related health risks associated with reopening buildings or larger office parks/campuses that have been shuttered or minimally used during the COVID-19 outbreak?
- Are there actions that could (should) be taken now to minimize current or future risk of water-related health risks?
- What guidelines are available for building owners and utilities? What are the responsibilities of various entities?
- What issues about best practices for water management remain unresolved relative to building recommissioning?
- What issues need to be addressed to improve implementation of current guidelines (e.g., communication, training)?
-

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Air Quality, Climate Variability, and COVID-19

May 28, 1:00-3:00 PM EDT

As the global community has raced to understand the COVID-19 pandemic, questions have arisen about how the virus is carried in aerosols, exposure risk in indoor and outdoor environments, how the changes in seasons or climate conditions might affect transmission, and how exposure to air pollution might affect mortality from the virus. This webinar will feature recent atmospheric, climate, and epidemiological research that is contributing to our understanding of the virus transmission, as well as a discussion of how agencies across the federal government are building upon existing efforts to address linkages between environmental conditions and health to understand the pandemic.

This webinar is an open session of the Board on Atmospheric Sciences and Climate spring 2020 meeting.

Register for Webinar

Coronavirus

https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6

From CSSE Dashboard at Johns Hopkins University: 15 May 2020 at 3:32 PM EDT

Total Confirmed: 4,516,360

Global Deaths: 306,051

US deaths: 86,851

Total Test Results in US: 10,341,775

Confirmed Cases by Country/Region/Sovereignty:

1,432,045 US

262,843 Russia

238,003 United Kingdom

230,183 Spain

223,885 Italy

212,198 **Brazil**

179,630 France

175,233 Germany

146,457 Turkey

116,635 Iran

85,784 India

84,495 Peru

84,031 China

75,667 Canada

https://www.washingtonpost.com/politics/2020/05/14/3-takeaways-coronavirus-whistleblower-rick-brights-testimony/?pwapi_token=eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJjb29raWVuYW1lIjoid3BfY3J0aWQiLCJpc3MiOiJDYXJ0YSIsImNvb2tpZXZhbHVlIjoiNWU3YmE4NThhZTdlOGE1OTQ4ODk2NzkzIiwidGFnIjoiNWViZGFiZmZmZTFmZjY1NGMyZGQxYTY5IiwidXJsIjoiaHR0cHM6Ly93d3cud2FzaGluZ3RvbnBvc3QuY29tL3BvbGl0aWNzLzIwMjAvMDUvMTQvMy10YWtlYXdheHMtY29yb25hdmlydXMtd2hpc3RsZWJsb3dlci1yaWNrLWJyaWdodHMtdGVzdGltb255Lz91dG1fY2FtcGFpZ249d3BfdG9feW91cl9oZWFsdGgmdXRtX21lZGl1bT1lbWFpbCZ1dG1fc291cmNlPW5ld3NsZXR0ZXImd3Bpc3JjPW5sX3R5aCZ3cG1rPTEifQ.zDzXu3HqLZZn2jf9oP1z3ihfUQWvxFCFIYpZmt7xs6A&utm_campaign=wp_to_your_health&utm_medium=email&utm_source=newsletter&wpisrc=nl_tyh&wpmk=1

5 takeaways from coronavirus whistleblower Rick Bright's testimony

By Aaron Blake

May 14, 2020 at 1:38 p.m. EDT

A Trump administration vaccine expert who says he was removed from a key role for raising concerns about the federal government's coronavirus response — and its promotion of unproven drugs to treat the virus — testified Thursday before Congress.

Rick Bright became a whistleblower after being removed from his post as director of the Biomedical Advanced Research and Development Authority (BARDA), which falls under the Department of Health and Human Services.

Here are some takeaways from Bright's testimony.

1. 'Lives were lost' because of 'inaction,' unheeded warnings

Bright said that early inaction by the government — particularly in the Department of Health and Human Services — had, in fact, cost lives. "That inaction has put a lot of lives at risk in our front-line health-care workers" Bright said. Bright has said that he pushed for ramping up production of medical equipment such as masks, but that it went unheeded for months after he was informed that officials didn't think there was a "critical shortage" of masks. "I pushed that forward to the highest levels I could in HHS and got no response," Bright said. "From that moment, I knew that we were going to have a crisis for our health-care

workers because we were not taking action. We were already behind the ball. That was our last window of opportunity to turn on that production to save the lives of those health-care workers, and we didn't act." Bright added that even today, the country is dealing with the consequences of that early negligence and that health-care workers are still more at risk than they should be. "Lives were endangered, and I believe lives were lost," Bright said. "And not only that: We were forced to procure these supplies from other countries without the right quality standards. So even our doctors and nurses in the hospitals today are wearing N95-marked masks from other countries that are not providing the sufficient protection that a U.S.-standard N95 mask would provide them. Some of those masks are only 30 percent effective. Therefore, nurses are rushing in the hospitals thinking they're protected, and they're not."

2. Administration pushed vastly expanded use of unproven drugs

One of Bright's key claims is that he was moved to another post after raising objections to the administration pushing the use of the malaria drugs chloroquine and hydroxychloroquine to treat coronavirus. The administration allowed for the emergency use of the drugs to treat the virus, though later studies — which have yet to be peer-reviewed and were not randomized — suggest that the use of the drugs don't help and can, in fact, have negative consequences. The FDA has now warned about the dangers of using the drugs. "My concerns were escalated when I learned that leadership in the Department of Health and Human Services were pushing to make that drug available outside of this emergency use authorization, to flood New York and New Jersey with this drug," Bright said. Bright has cited his skepticism of the drugs for his removal from his post and said the administration wanted to make it easier for people to use them without extensive medical supervision — even people who might not even have the virus. "I believe part of the removal process for me was initiated because of a pushback that I gave when they asked me to put in place an expanded access protocol that would make chloroquine more freely available to Americans that were not under the close supervision of a physician and may not even be confirmed to be infected with the coronavirus," Bright said.

3. Pessimism about 12- to 18-month timeline for vaccine

President Trump has been effusively optimistic about not just treatments such as the chloroquines but about the timeline for a vaccine for the virus. Shortly before Bright's testimony Thursday, Trump even said, "I think we're going to have a vaccine by the end of the year." That's even more optimistic than the 12- to 18-month timeline that medical experts such as Anthony S. Fauci, head of the National Institute of Allergy and Infectious Diseases, have said is realistic for the vaccine. But Bright said that even a year to year-and-a-half timeline might also be overly optimistic. "I still think 12 to 18 months is an aggressive schedule, and I think it's going to take longer than that to do so," Bright said.

4. We don't have 'a single point of leadership' or 'master plan'

As Trump increasingly criticized Fauci, Bright said the government needs to have more regard for it scientists -- and a more consistent message from the top. He said that right now the response has been hampered by not having a "single point of leadership." "We need to install and empower leadership, and we need to unleash the voices of the scientists in our public health system in the United States so they can be heard and their guidances need to be listened to," Bright said. "And we need to be able to convey that information to the American public so they have the truth about the real risk and dire consequences of this virus. He added: "And we don't have a single point of leadership right now for this response, and we don't have a master plan for this response. So those two things are absolutely critical." Fauci has said in recent days that states that move forward with reopening their economies before meeting the guidelines from the Centers for Disease Control and Prevention are risking new outbreaks – which could set back the entire response.

5. Azar, Republicans cast Bright as a malcontent skipping work

As Bright offered one of the most significant rebukes of the federal coronavirus response to date, Republicans on the committee and members of the Trump administration sought to undercut his testimony and character. Health and Human Services Secretary Alex Azar, in particular, had strong words for Bright. “Everything he is complaining about was achieved,” Azar said while standing next to Trump on the White House lawn. “Everything he talked about was done. He says he talked about the need for respirators; we procured respirators under the president’s direction.” Azar echoed Republicans in the hearing who questioned why Bright has been absent from his new posting - a narrower one focused on testing and vaccines at the National Institutes of Health — in recent weeks. “While we’re launching Operation Warp Speed,” Azar said, “he’s not showing up for work to be part of that.” Bright said that he has been on leave while dealing with “very high blood pressure” - owing in part to the stress from recent events. “I had a conversation with my physician about my hypertension and how we’ve been managing it over the last 3 weeks because this has been very stressful to be removed suddenly without explanation from my role and position as a life change for me,” Bright said.

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Global COVID-19 death toll exceeds 300,000

The number of COVID-19 deaths today passed the 300,000 mark, as another city in China went on lockdown to prevent a resurgence and more countries in Europe learned that low numbers of people were exposed in their outbreaks, meaning many are vulnerable to a second wave. Deaths climbed to 301,160 today, with cases rising to 4,413,597, according to the Johns Hopkins online dashboard.

Lisa Schnirring | News Editor | CIDRAP News| May 14, 2020

New cluster triggers new lockdown in China

The city of Jilin in northeastern China's Jilin province went on partial lockdown yesterday after a spurt of cases, which now total 21, the *South China Morning Post* reported. Officials closed schools, restricted train and bus service, and banned gatherings after 6 cases new cases were confirmed on May 12. Anyone who wants to leave the city, home to about 4M people, must be tested for COVID-19 48 hours before departure.

The first infection in the cluster was reported last week, linked to a laundry worker from Shulan, a smaller city in Jilin province. So far, investigators haven't determined how she contracted the virus. China has taken aggressive steps to prevent a resurgence, including an earlier lockdown in the city of Suifenhe on the border with Russia, and is now launching an effort to test all Wuhan residents after a cluster of cases was detected in a residential complex.

Today the country reported 3 new cases (all local -2 from Liaoning province also in northeastern China and 1 in Jilin province). In its daily update, the National Health Commission also reported 12 more asymptomatic cases, all but one of them local.

Elsewhere in Asia, Japan's Prime Minister Shinzo Abe today lifted the state of emergency early for 39 of 47 prefectures, *Kyodo News* reported. The emergency order was originally slated to expire at the end of May. However, orders for the cities of Tokyo and Osaka, home to about 50% of Japan's population, will remain in place. Abe said experts will review the situation again on May 21.

South Korea today reported 29 more cases, 20 of them linked to nightclub-related clusters in Seoul, the Korea Centers for Disease Control and Prevention said today.

Studies: Many in France, Spain still vulnerable

As major outbreaks in France and Spain decline, researchers are using seroprevalence studies to gauge how extensively populations were exposed to the virus and help inform planning for potential 2nd waves of pandemic activity.

In France, a study by Pasteur Institute researchers published in *Science* yesterday estimated that 4.4% of the country's population were infected by the COVID-19 virus, Reuters reported. The estimates were higher, between 9% and 10%, for hard-hit areas, which included eastern France and Paris.

The results suggest that without a vaccine, herd immunity won't be enough to avoid a 2nd wave as lockdown steps ease. Pasteur scientists also estimated the 55-day lockdown dramatically dropped the outbreak's reproduction number from 2.0 to 0.67.

Meanwhile, preliminary serosurvey results from Spain suggests 5% of the population was exposed to the virus, Reuters reported, citing Fernando Simon, the country's head of health emergencies.

Lockdown for Chile's capital

Chile's government yesterday ordered a lockdown for its capital Santiago, which has a population of 7M, after experiencing a 60% increase in COVID-19 infections in a 24-hour period, the *Santiago Times* reported. As the country's main hot spot, Santiago has 80% of Chile's cases, which today increased by 2,659 reported cases, for a total of 37,040.

In other global developments:

- Hours after Sanofi's chief executive officer was quoted as saying the US would get first access to its COVID-19 vaccine, the company walked back the statement and said when ready, it will be available in all countries, the Associated Press Sanofi is based in France, and CEO Paul Hudson's comments provoked a strong reaction from the French government. The US-based BARDA supported the development of the vaccine.

- A typhoon that struck the Philippines' eastern provinces today sent people to evacuation centers, which was complicated by COVID-19 distancing measures, Reuters reported. One city gave hundreds of evacuees face masks to wear before they were allowed in evacuation shelters, and the local officials added 2 schools as temporary shelters to better accommodate physical distancing.

- Malaysia said it will ease a ban on prayers in mosques starting tomorrow, ahead of the Eid festival, Reuters reported. Congregations will be limited to 30 or fewer. Last week the country started reopening businesses.

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Dozens of coronavirus drugs are in development — what happens next?

Drug manufacturers face supply-chain weaknesses and sourcing issues as they ramp up complex production processes to meet global demand. The world was waiting for any sign of hope in countering the COVID-19 pandemic when researchers released the 1st encouraging drips of data from a large clinical trial of the antiviral remdesivir last month. The drug, they said, reduced the time to recovery from COVID-19 by a few days - not enough to be branded a 'cure', but hopefully enough to relieve some pressure on overwhelmed health-care systems. The discovery of remdesivir's potential focused attention on the next problem in the development of COVID-19 therapeutics: ramping up complex manufacturing processes to address a global pandemic. It is likely to be one of the biggest drug-making challenges the world has ever faced. Some of the therapies being tested against COVID-19 are novel and difficult to produce. Others - even if they are relatively simple compounds that have been in use for decades - face complications such as supply-chain weaknesses as drug-makers try to scale up production. A major rate-limiting step is going to be manufacturing," says Ezekiel Emanuel (bioethicist at the University of Pennsylvania in Philadelphia). "Getting up to hundreds of millions of doses is hard." Researchers are working furiously to test a wide variety of potential COVID-19 treatments. Those therapies span the gamut of complexity, from familiar generic medications such as the malaria drug hydroxychloroquine, to experimental small molecules like remdesivir, which was previously trialled against the Ebola virus. Scientists are also exploring antibody treatments that tamp down the body's immune response when it becomes destructive, which happens in some critically ill coronavirus patients. And if the history of infectious disease is any guide, it will take a combination of drugs - each with a distinct, even if relatively minor, impact on the disease - to tame the novel CoV. Each treatment will face different challenges when scaling up production, says Stephen Chick, who studies health-care management at INSEAD in Fontainebleau, France. "If it's successful and the technology is then adopted, you need to be prepared to deliver," says Chick. "And if you're not, you're in trouble."

Nature

Heidi Ledford

14 May 2020

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COVID-19 Update: JBS/Smithfield testing, new outbreaks

JBS will partner with TX state health officials to test the roughly 3,000 workers at its beef plant north of Amarillo. According to a report from the Texas Tribune, state officials said JBS initially rejected an offer for testing; company spokesperson Nikki Richardson stated the company were unaware of such testing being offered. The state previously dispatched personnel from its Military Department and Division of Emergency Management to run tests on the 3,500 workers at a nearby Tyson Food plant. Meanwhile, COVID-19 continues to spread among workers at JBS' beef plant in Greeley, CO. According to state data cited by KDVR, the number of confirmed cases at the plant is now 316, up from 280 earlier in the week; 6 plant employees have died, along with 1 employee from JBS' corporate offices. JBS began testing all plant workers on Monday.

By Peter Thomas Ricci on 5/15/2020

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OSHA treads lightly on COVID-19 complaints: Politico

The Department of Labor's OSHA has conducted few investigations out of the thousands of COVID-19 complaints it has received in the last several weeks, and has issued no citations, according to a report by Politico. The Beltway newsletter reported that the agency has fielded more than 3,800 complaints related to companies not adequately protecting workers from contracting the virus in crowded workplaces, but as of May 13, has opened only 281 inspections and issued no citations. OSHA, often in conjunction with the CDC, has issued a series of guidance documents on measures companies should take on employees' behalf, but has issued no directives or mandatory standards that might trigger a violation. The agency contends more regulation is unnecessary because of the enforcement options already available to it.

By Lisa M. Keefe on 5/15/2020

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Dover Air Force Base plays role in transport isolation systems for COVID-19 patients

In the ongoing fight against COVID-19, two Transport Isolation Systems, along with trained medical Airmen, arrived at Dover Air Force Base, Delaware late last month. Dover will serve as the East Coast hub for TIS decontamination in the US, thanks to its strategic location, assets and capabilities. Airmen will support and decontaminate TIS units whose aircrews are conducting COVID-19 positive patient transport missions from Africa, Europe and the Middle East to the U.S. The team is composed of members of 6 different units from across the U.S. The TIS emerged as a result of mobility requirements identified during Operation United Assistance in support of the Ebola outbreak in 2014. This system was designed to provide in-flight medical care while containing any infectious disease, minimizing the risk to aircrew, medical attendants and the airframe. "We have two TIS modules here, because that is a standard configuration ," said Maj. Mark Dellinger, 36th Aeromedical Evacuation Squadron training flight commander. "Each has the capability of carrying 4 patients." Medical personnel assigned to the TIS mission receive multi-day training, including familiarization with the system, patient loading/unloading procedures, donning and doffing PPE, simulated in-flight patient care and infection control procedures. The TIS enables the Department of Defense to transport patients afflicted with or suspected of an infectious disease like COVID-19 from overseas to the US, providing for an expedient recovery of its personnel, as well as preventing the spread of COVID-19 to aircrews. As part of the whole-of-government response to COVID-19, the TIS mission at Dover AFB will continue for as long as required.

By Delaware Business Now

May 14, 2020

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Coronavirus (COVID-19) Update: FDA Informs Public about Possible Accuracy Concerns with Abbott ID NOW Point-of-Care Test

FDA News Release

For Immediate Release:

May 14, 2020

Today, the U.S. Food and Drug Administration is alerting the public to early data that suggest potential inaccurate results from using the Abbott ID NOW point-of-care test to diagnose COVID-19. Specifically, the test may return false negative results. "We are still evaluating the information about inaccurate results and are in direct communications with Abbott about this important issue. We will continue to study the data available and are working with the company to create additional mechanisms for studying the test. This test can still be used and can correctly identify many positive cases in minutes. Negative results may need to be confirmed with a high-sensitivity authorized molecular test," said Tim Stenzel, M.D., Ph.D., director of the Office of In Vitro Diagnostics and Radiological Health in the FDA's Center for Devices and Radiological Health.

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DoD, HHS award contract enabling prefilled syringes for future COVID-19 vaccine

The U.S. DoD and HHS awarded a $138M contract to ApiJect Systems America for Project Jumpstart and RAPID USA, 2 programs designed to expand U.S. production of medical-grade injection devices. The contract will create a U.S.-based supply chain for prefilled syringes by using Blow-Fill-Seal (BFS) aseptic plastics manufacturing technology, suitable for combatting COVID-19 when a vaccine becomes available. By upgrading existing domestic BFS facilities with installations of filling-line and technical improvements, the project will enable the manufacture of more than 100M prefilled syringes for distribution across the US by year-end 2020.

Thursday, May 14, 2020 by Dave Kovaleski

Homeland Preparedness News

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China will have to answer questions about COVID-19, says Trudeau

Countries around the world, including Canada, have questions about the origins of the COVID-19 pandemic and about China's behaviour during the early days of the outbreak that need to be asked "in the coming months," Prime Minister Justin Trudeau said Wednesday. Speaking at his daily briefing in Ottawa, Trudeau was responding to a question about recent comments made by Canada's ambassador to China Dominic Barton. The Globe and Mail newspaper reported Wednesday that Barton told a private session of the Canadian International Council last week that China's conduct during the pandemic is damaging its own global "soft power." Earlier this month, The Associated Press reported that U.S. officials believe China covered up the extent of the CoV outbreak - and how contagious the disease is - to stock up on medical supplies needed to respond to it. The revelation comes as the Trump administration has intensified its criticism of China, with Secretary of State Mike Pompeo saying that that country was responsible for the spread of disease and must be held accountable.

Radio Canada International

By Levon Sevunts

Posted: Wednesday, May 13, 2020 13:22

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Economists: Lack of COVID-19 preparedness in line with previous findings

The delayed response of U.S. policymakers to the COVID-19 pandemic comes as no surprise to University of Wyoming Professor Jason Shogren and several of his economist colleagues at other institutions. That's because the threat of a catastrophic pandemic in 2014 - the West African Ebola outbreak - did little to change the perception of U.S. citizens regarding the importance of preparing for future outbreaks, according to research conducted by Shogren and his colleagues. "The COVID-19 pandemic has revealed that the U.S. was as unprepared as experts feared, given the responses to the Ebola scare in 2014," the economists wrote in an article that has been accepted by EcoHealth, an international journal that addresses health and sustainability challenges, including public health practices. "This lack of attention to pandemic threats is especially disturbing given the current COVID-19 and any potential future pandemics that may also have very high transmission rates, including transmission before individuals become symptomatic." Joining Shogren in the research were fellow UW economists David Aadland, David Finnoff and Alexandre Skiba, along with Jamison Pike and Peter Saszak, of the Ecohealth Alliance; and Kip Viscusi, from Vanderbilt University. Before and after the 2014 Ebola outbreak - which killed thousands of people in West Africa, harmed millions of people in that region and generated significant media coverage in the US - the researchers surveyed U.S. citizens to see if their concerns about a pandemic threat had increased, relative to risks from environmental disasters and terrorism. They were surprised to find relative complacency regarding the threat of a pandemic among the hundreds of people surveyed in 2015. The findings were unexpected because long-standing evidence has shown that people's perceptions usually are distorted toward the most recent news items.

University of Wyoming

14-May-2020

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K-State infectious disease scientist offers road map for future COVID-19 research

Researcher investigates potential therapeutic options at Biosecurity Research Institute. There are many unanswered questions about COVID-19. A Kansas State University infectious disease scientist and collaborators are offering a possible research road map to find the answers. "We need to address these challenges in a scientific manner - in a proactive manner, not in a reactive manner," said Richt, also the director of the university's Center of Excellence for Emerging and Zoonotic Animal Diseases, known as CEEZAD. "With COVID, every day something is new - what was correct yesterday, could be wrong today." Because of the rapid change of knowledge related to CoV, Richt and his collaborators wrote the article to stress importance of studying the ways that COVID-19 could spread between humans and animals. The scientists say that research should focus in several areas, including: The potential for companion animals, such as cats and dogs, to carry the virus; the economic and food security effects if the virus can spread among livestock and poultry; national security areas, especially among service animals such as dogs that detect narcotics or explosives because COVID-19 is known to affect smell and cause hyposmia or anosmia.

Kansas State University

14 May 2020

Manhattan, KS

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Nearly quarter of a billion people in Africa will catch coronavirus and up to 190,000 could die

Health systems will struggle to cope without steps to stop spread of the virus, warn WHO experts. Nearly a quarter of a billion people across Africa will catch CoV during the1st year of the pandemic, and up to 190,000 of them will likely die, unless urgent action is taken to control the infection, reveals a predictive modelling study, accepted for publication in BMJ Global Health. These figures indicate a lower rate of exposure and viral spread than in other parts of the world, say the researchers. But the associated rise in hospital admissions, care needs, and impact on other health conditions in the region would severely strain limited health resources and worsen the impact of the virus, they warn. The WHO Africa region includes 47 countries, but excludes Djibouti, Egypt, Libya, Morocco, Somalia, Sudan and Tunisia. As of April 29, 45 countries had reported cases of SARS-CoV-2. Many mathematical models used to predict transmission and death rates in Africa have not adequately incorporated characteristics unique to the region and its individual countries. But these social, developmental, environmental and population health factors nevertheless affect the spread of the virus and the severity of COVID-19, explain the researchers.

BMJ

14-May-2020

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The newly emerged coronavirus did not spill over from scaly anteaters

Mammals known as scaly anteaters are natural hosts of coronaviruses but are not likely the direct source of the recent outbreak in humans, according to a study published May 14 in the open-access journal PLOS Pathogens by Jinping Chen of the Guangdong Institute of Applied Biological Resources, and colleagues. As noted by the authors, the large-scale surveillance of coronaviruses in these animals, called pangolins, could improve our understanding of the spectrum of coronaviruses circulating in the wild, and could help prevent and control emerging infectious diseases.

PLOS

14-May-2020

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Physicians brace for potential surge in COVID-19 cases

As health care workers begin to understand the scope of COVID-19 in their areas and how to respond to it, a new anxiety has set in: How long will the pandemic last? "The biggest stress is not knowing where we're going to go from here," Manu Jain, MD, pulmonary and critical care specialist at Northwestern Memorial Hospital, told Healio Primary Care. "Not knowing how this is going to evolve and how we're going to get back to any sense of normalcy is probably the most stressful part of this whole experience." Physicians on the front lines are often working long hours and caring for severely ill patients. Research published in JAMA Network Open showed high rates of depression (50.4%), anxiety (44.6%), insomnia (34%) and distress (71.5%) among health care workers in Wuhan, China, where the pandemic originated.

May 14, 2020

Healio

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COVID-19 disruption will lead to 28 million surgeries cancelled worldwide

Over 28 million elective surgeries across the globe could be cancelled as a result of the COVID-19 pandemic - leading to patients facing a lengthy wait for their health issues to be resolved, a new study reveals. The CovidSurg Collaborative has projected that, based on a 12-week period of peak disruption to hospital services due to COVID-19, 28.4 million elective surgeries worldwide will cancelled or postponed in 2020. The modelling study, published in the British Journal of Surgery, indicates that each additional week of disruption to hospital services will be associated with a further 2.4M cancellations. Led by researchers at the University of Birmingham, researchers collected detailed information from surgeons across 359 hospitals and 71 countries on plans for cancellation of elective surgery. This data was then statistically modelled to estimate totals for cancelled surgery across 190 countries (attached). The researchers project that worldwide 72.3% of planned surgeries would be cancelled through the peak period of COVID-19 related disruption. Most cancelled surgeries will be for non-cancer conditions. Orthopaedic procedures will be cancelled most frequently, with 6.3M orthopaedic surgeries cancelled worldwide over a 12-week period. It is also projected that globally 2.3M cancer surgeries will be cancelled or postponed.

University of Birmingham

14-May-2020

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Chest X-rays in emergency rooms can help predict severity of COVID-19 in young and middle-aged adults

Chest X-rays performed on young and middle-aged adults with COVID-19 when they arrive at the emergency room can help doctors predict who is at higher risk of severe illness and intubation, Mount Sinai researchers report. The first-of-its kind study, published in the May 14 issue of Radiology*, identifies which patients may need to be hospitalized and intubated based on the severity of CoV patterns in the lungs seen in the X-rays, using a unique scoring system to evaluate severity. The results could help physicians more quickly identify, triage, and aggressively treat these high-risk patients.*

The Mount Sinai Hospital / Mount Sinai School of Medicine

14 May 2020

https://protect2.fireeye.com/url?k=30098b4b-6c5c829b-3009ba74-0cc47a6a52de-bf1fe41f71e206eb&u=http://outbreaknewstoday.com/hydroxychloroquine-and-azithromycin-to-treat-covid-19-clinical-trial-begins-36926/

Hydroxychloroquine and azithromycin to treat COVID-19 clinical trial begins

A clinical trial has begun to evaluate whether the malaria drug hydroxychloroquine, given together with the antibiotic azithromycin, can prevent hospitalization and death from coronavirus disease 2019 (COVID-19). NIAID is sponsoring the trial, which is being conducted by the NIAID-funded AIDS Clinical Trials Group (ACTG). Teva Pharmaceuticals is donating medications for the study. The Phase 2b trial will enroll approximately 2,000 adults at participating ACTG sites across the US. Study participants must have confirmed infection with SARS-CoV-2, the virus that causes COVID-19, and be experiencing fever, cough and/or shortness of breath. The investigators anticipate that many of those enrolled will be 60 years of age or older or have a comorbidity associated with developing serious complications from COVID-19, such as cardiovascular disease or diabetes. Participants will be randomly assigned to receive short-term treatment with either hydroxychloroquine and azithromycin or matching placebos. People living with HIV and pregnant and breastfeeding women also are eligible to participate in the study. The first participant enrolled today in San Diego, CA.

By Press Release

May 14, 2020

https://protect2.fireeye.com/url?k=ba865848-e6d35198-ba866977-0cc47a6a52de-135cccde5f5c8dd7&u=https://www.eurekalert.org/pub_releases/2020-05/f-twi051120.php

Treatment with interferon-α2b speeds up recovery of COVID-19 patients in exploratory study

Treatment with antivirals such as interferons may significantly improve virus clearance and reduce levels of inflammatory proteins in COVID-19 patients, according to a new study in Frontiers in Immunology. Researchers conducting an exploratory study on a cohort of confirmed COVID-19 cases in Wuhan found that treatment with interferon (IFN)-α2b significantly reduced the duration of detectable virus in the upper respiratory tract and reduced blood levels of interleukin(IL)-6 and C-reactive protein (CRP), two inflammatory proteins found in the human body. The findings show potential for the development of an

effective antiviral intervention for COVID-19, which is an ongoing global pandemic caused by the novel CoV, SARS-CoV-2.

Frontiers

15-May-2020

https://protect2.fireeye.com/url?k=51904c6e-0dc545be-51907d51-0cc47a6a52de-498b8705bf8ed836&u=https://www.nature.com/articles/d41586-020-01430-5

Dogs caught coronavirus from their owners, genetic *analysis suggests*

But there's no evidence that dogs can pass the virus to people. *The first 2 dogs reported to have CoV probably caught the infection from their owners, say researchers who studied the animals and members of the infected households in Hong Kong. An analysis of viral genetic sequences from the dogs showed them to be identical to those in the infected people. Researchers suspected that the infection had been passed from the owners to the dogs, and the direct genomic link strongly supports that, says Malik Peiris, a virologist at the University of Hong Kong who led the study, which is published today in Nature[1]. The study showed no evidence that dogs can pass the infection to other dogs or people, but it is impossible to be certain in which direction the virus traveled "so we have to keep an open mind", says Peiris. Although the analysis confirms that people with COVID-19 can infect dogs, the probability of this happening is low, says Arjan Stegeman, a veterinary epidemiologist at Utrecht University in the Netherlands. In the study, only 2 of the 15 dogs who lived with infected people caught the disease. But other scientists say the possibility that pets might spread the virus between each other, and to people, needs to be properly investigated as part of managing future outbreaks.*

Nature

Smriti Mallapaty

14 May 2020

From: Dr. (b)(6)
Sent: Friday, May 15, 2020 3:59 PM
To: (b)(6)
Cc: Caneva, Duane (b)(6) (HMFP - Emergency Medicine) (b)(6) (DSHS) (b)(6) Dr. (b)(6) BOURNE, ALEXANDRA (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; Mark Keim, MD MBA (b)(6) MD (b)(6)

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(b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) DC <michelle.colby@usda.gov>; (b)(6)
JtCIVtUSARMY (USA) (b)(6) (b)(6 (b)(6) MD
(b)(6) Fantinato, Jessica (USDA.GOV)
<jessica.fantinato@usda.gov>; Martin, Greg (b)(6) (b)(6) (b)(6 (b)(6)
(b)(6) (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA
(b)(6) (b)(6) (b)(6) <CHRISALLEN (b)(6)
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(b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) Larry G (b)(6) Ignacio, Joselito
(b)(6) (b)(6) (b)(6) Hassell, (b)(6)
(Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; (b)((b)(6) (b)(6)
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THOMAS (b)(6) WOLFE, HERBERT
(b)(6) (b)(6) (b)(6) Marinissen,
Maria (HHS/OS/OGA) <Maria.Marinissen@hhs.gov>; Sutter, (b)(6 (b)(6)
(b)(6) (b)(6) (b)(6))(6 (b)(
(b)(6) (b)((b)(6) (b)(6) Krohmer, Jon
(NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine)
<ahart1@bidmc.harvard.edu>; (b)(6) WMD) (FBI) (b)(6) (b)(6) (b
(b)(6) W (b)(6)

Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

(b)(6) good point regarding community mitigation. Traffic starts to jam up again in Atlanta and many more people are going into their office. But yes, churches, schools are all closed and big events are canceled. I finished a few hundreds of business modeling and here's what I found.

1. Large group events remain difficult to open. The percentage of infection is roughly 7%-35% depending on the duration and because it is a sustained inside event, it is hard to maintain

the fresh air circulation, the surface, and everything. It's cross-contamination every year. Any infection has high possibility of a hit to infect and it can be very broad in scope, depending on human behavior. Yes, university students are more proned because simply they are sick very often.

2. Across each State, there is no one-size-fit all, not within a State, and not inter-state either. What the models do show is that inter-dependence and cascading effects are certain (can be predicted very well) and hence must be taken into account as States are re-opening. The best they can do is opening strategically county-by-county, or city-by-city. And they will need to look over their shoulders on how their neigjhbours are doing as that will affect them.

3. Spitting, coughing, talking, anything to do with saliva You see the case a London transit worker died from covid-19 (five days from admitted to hospital to death) when a passenger claiming to have covid-19 on the track harrassed her by spitting on her. In US, there are people who do spit, tobacco users, people who chew gums, or people who just spit (I saw people rolling down their car windows) and just do it. Singapore has installed fines on these actions many years ago. This habit still persists in US and this can be rather deadly in the wake of covid-19.

And public health should put restriction on spitting. If the state wants to maintain good public hygiene by deterrance, they can fine like Singapore.

Facemasks remain very critical. Essential workers must use facemasks and so are the citizens. And this should not be an option, but a must. I was surveying several stores this week - pets stores, groceries, and many employees do not use facemasks or any protecton at all and they do cough and of course they talk too. Here's a study in PNAS confirming why it is so important to avoid any droplets of saliva. I think employees need to do it to protect themselves and as customers, we do not want to receive little saliva droplets from cashiers or anyone.

https://www.pnas.org/content/early/2020/05/12/2006874117

And yes, eyes are very important to protect too. Sorry, no better news, here's *JAMA Ophthalmology* reporting tranmission through eyes,

https://protect2.fireeye.com/url?k=ffe9804d-a3bc899d-ffe9b172-0cc47a6a52de-4a687a6bfce0ee66&u=https://www.ajmc.com/newsroom/covid19-may-be-transmitted-through-the-eye-report-finds

So face shields are important too. Goggles are tight-fit and may be more protective. I remain a fan of the face shield especially seeing how the providers work at ease with them and are happier with it than the goggles. This is one of those cost-effective little thing that was invented and very welcome by providers.

4. Delay in tests, delay in test results, delay in everything on the graphs.

It is very hard to decipher all the testing data. First, cases are delayed in discovery. By the time the patient gets the test, there is a time-lag already. Then, it takes 2-5 days, or 7-9 days to get the results, and then posted. So everything is delay. In DeKalb, thousands of the tests never received any results back. So they won't show up anywhere. These are PUI, so their rate of positivity is high. Below are graphs from raw data, without any adjusttment in reporting etc.

Again mortality graph is one to focus.

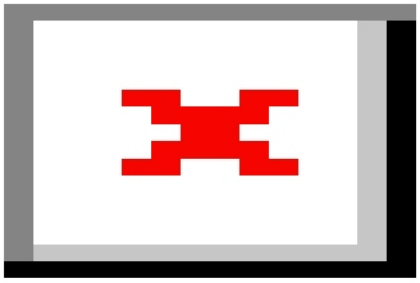


image.png

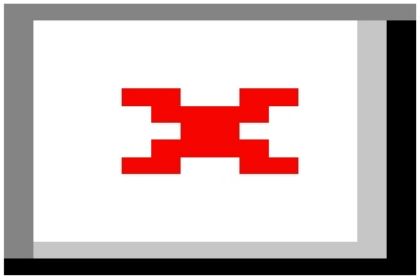


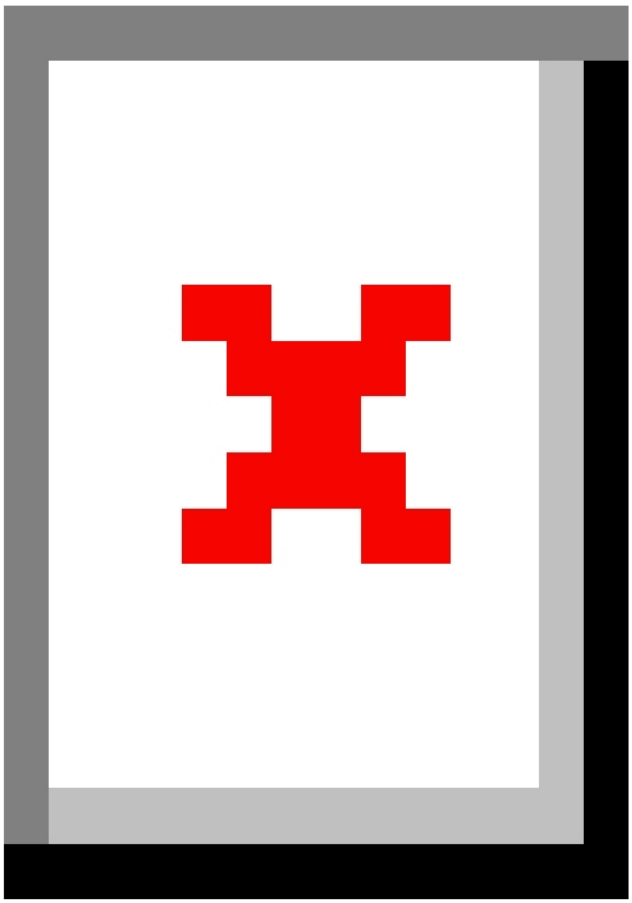
image.png

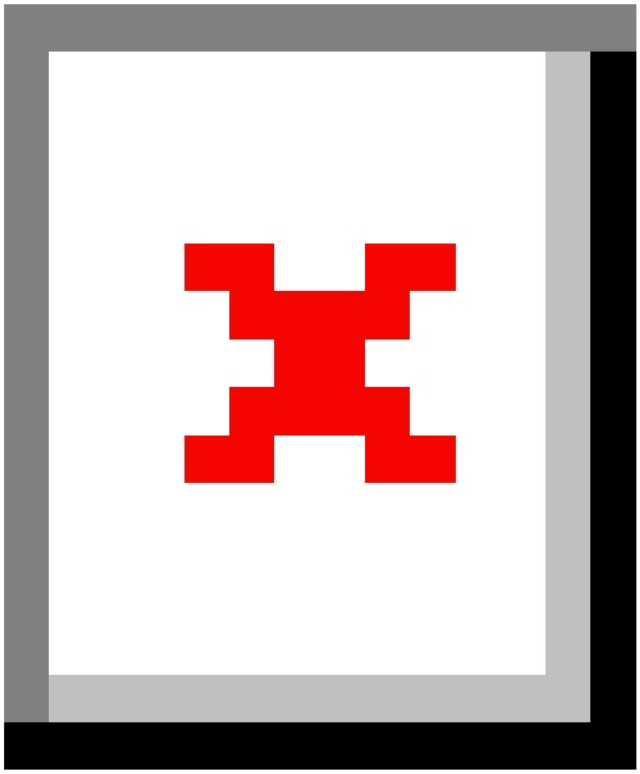
On Fri, May 15, 2020 at 9:24 AM (b)(6) (b)(6) (b)(6) wrote:

Monitoring Georgia.

First, raw data of cases and deaths reported each (b) with (b)(6 moving averages of cases, deaths, tests performed, and % positive (see attached Excel file). I already shared the LTC data from Georgia.

Second, the data from GA Public Health.





Third. Take a look at the data on https://protect2.fireeye.com/url?k=72772603-2e222fd3-7277173c-0cc47a6a52de-86019a0ff243a220&u=https://dashboards.c19hcc.org/ for Georgia.

As I have said earlier, although we are calling what is happening as reopening, what in fact is happening is we are transitioning to the 2007 Community Mitigation Guidance (really TLC). Infected or sick individuals are still being isolated at home, I assume household contacts are still being advised to home quarantine, schools/universities/pre-school/daycare are still closed, and we continue to leverage social distancing strategies (telework; social distancing in restaurants, retail; churches closed, large gatherings canceled); and we are also wearing face masks (at least the majority of people are wearing face masks).

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Friday, May 15, 2020 7:11 AM
To: Caneva, Duane; Dr. (b)((b)((b)(6) (b)(
Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6 (b)((b)(6) (b)(6) (DSHS); Dr. (b)((b)(BOURNE, ALEXANDRA; (b)((b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(6 Keim, MD MBA; (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6) (b)((b)(6 (b)(6) S; (b)(6) (b)(McGinn, (b)(6 (b)(6) (b)(6) Kellermann; (b)(6) (b)((b)(6) (b)(6 ((b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b (b)(6) (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) DC; (b)(6) (b)(6) b)(6 (b)(6) MD; Fantinato, Jessica (USDA.GOV); Martin, Greg (b)(6) (b)(6 (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; (b)(6) Hassell, (b)(6) (Chris) (OS/ASPR/IO); (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, (b)(6 (b)(6) (b)(6) (b)(6 (b)(6 (b)((b)(6) Krohmer, Jon (NHTSA); (b)(6) (APHMFP - Emergency Medicine); (b)(6))(6) (b (b)(6) W
Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

LTC data by state. I have 3 data points (Apr 23, May 7 and May 14). See 1st spreadsheet for summary table. This virus is steadily moving through our LTC population in the US. Recall the estimates of 2.1M Americans who are residents in nursing homes or residential care. With 150K known cases and 30K deaths, this equates to about a 7% attack rate with a 20% fatality rate (I

would assume we are learning about most cases given that nursing homes are now testing all residents).

If you are interested in learning more about long term care in the US. https://protect2.fireeye.com/url?k=86a5fe26-daf0f7f6-86a5cf19-0cc47a6a52de-db022abe032b47ae&u=https://www.cdc.gov/nchs/data/series/sr_03/sr03_43-508.pdf There are 8.3M Americans receiving long term care services (not necessarily receiving services at a long term care facility).

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Thursday, May 14, 2020 10:55 AM
To: Caneva, Duane; Dr. (b)((b)((b)(6) (b)(
Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6 (b)((b)(6) (b)(6) (DSHS); Dr. (b)((b)(BOURNE, ALEXANDRA; (b)((b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(6 Keim, MD MBA; (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6) (b)((b)(6 (b)(6) S; (b)(6) (b)(McGinn, (b)(6 (b)(6) (b)(6) Kellermann; (b)(6) (b)((b)(6) (b)(6 ((b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b (b)(6) (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) DC; (b)(6) (b)(6) b)(6 (b)(6) MD; Fantinato, Jessica (USDA.GOV); Martin, Greg (b)(6) (b)(6 (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b) ((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; (b)(6) Hassell, (b)(6) (Chris) (OS/ASPR/IO); (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, (b)(6 (b)(6) (b)(6) (b)(6 (b)(6 (b)((b)(6) Krohmer, Jon (NHTSA); (b)(6) (APHMFP - Emergency Medicine); (b)(6) b)(6) (b (b)(6) W
Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

We have been following any reports of reported prevalence. Spain recently reported a prevalence of 5%. Spain has a death rate of 577 deaths per million (as of yesterday). It is also at the flat part of its curve (even 2 weeks ago the death rate was 517 deaths per million).

Assuming Spain has a prevalence of 5% and a death rate of 577 deaths per million, it would equate to a CFR of 1.16%. So a little higher than the CFR we have been estimating.

We haver been roughly estimating prevalence for all the states (assuming a CFR of 0.9%). But given the high percentage of nursing home deaths in a number of state (>50%), we need to do this cautiously because in a state where a high % of the deaths are in long term care, we could be overestimating prevalence.

Attached is a crude estimate of prevalence for the states. We assumed a CFR of 0.9% and time from infection onset to death of about 2 weeks. We used Apr 27 as roughly 2 weeks ago (it was the only data readily available at hand in a table) to estimate a case ascertainment rate. This is all a little crude, but helps to place some of these raw numbers of confirmed cases in perspective. We added a column of the data we have from May 7 on the % of total COVID deaths coming from LTC (those states with a % >50% are highlighted in red).

Sent from Mail for Windows 10

From: Caneva, Duane
Sent: Thursday, May 14, 2020 9:49 AM
To: Dr. (b)((b)((b)(6) (b)(
Cc: (b)(6) (HMFP - Emergency Medicine); (b)(6) (b)(6 (b)((b)(6) (b)(6) (b)(6) (b)(6) (DSHS); Dr. (b)(((b)(BOURNE, ALEXANDRA; (b)((b)(6) (b)(6) (b)(6) McDonald, Eric; (b)(6 Keim, MD MBA; (b)(6) (b)(6) (b)((b)(6) (b)((b)(6) MD; (b)(6) (b)(6) V.,M.D.; (b)(6) (b)((b)(6 (b)(6 S; (b)(6) (b)(McGinn, (b)(6 (b)(6) (b)(6) Kellermann; (b)(6) (b)((b)(6) (b)(6 ((b)(6) (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b (b)(6) (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) DC; (b)(6) (b)(6) (b)(6 (b)(6) MD; Fantinato, Jessica (USDA.GOV); Martin, Greg (b)(6) (b)(6 (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(((b)(6) (b)(6) (b)(6) Larry G; Ignacio, Joselito; (b)(6) Hassell, David (Chris) (OS/ASPR/IO); (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6)); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WILKINSON, THOMAS; WOLFE, HERBERT; (b)(6) Marinissen, Maria (HHS/OS/OGA); Sutter, (b)(6) (b)(6) (b)(6) (b)(6 (b)(6 (b)((b)(6) Krohmer, Jon (NHTSA); (b)(6) (APHMFP -

Emergency Medicine); You, Edward H. (WMD) (FBI); (b)(6) (b) (b)(6) W
Subject: RE: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

Some attachments of interest.

C19HCC Dashboard: https://protect2.fireeye.com/url?k=37d98696-6b8c8f46-37d9b7a9-0cc47a6a52de-1d4c9e30f062d75a&u=https://dashboards.c19hcc.org/

C19HCC PPE Dashboard: https://protect2.fireeye.com/url?k=bc0ac9ff-e05fc02f-bc0af8c0-0cc47a6a52de-9e9624e85e19c6c6&u=https://dashboards.c19hcc.org/ppe

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From: Dr. (b)(6) (b) (b)(6)
Sent: Wednesday, May 13, 2020 8:21 PM
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

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Here's the testing situation. I feel very sorry for Brazil. And my colleagues with whom I work on vaccine immunogenicity prediction are in distressed. But they have very little testing kits and very little testing power. So they are testing only the sick patients and many are positive.

On Wed, May 13, 2020 at 8:04 PM Dr. (b)(6) (b) (b)(6) wrote:

> Bill, we must understand, US is still in the discovery phase as far as confirmed positive cases, because we are catching up on test still. I believe we have improved over time, so yes, you will see more confirmed cases. It is actually more important to look at fatality. Granted, counting may not be perfect. My feeling is that no country is perfect in the counting because it simply is a huge number of bodies all needed attention at a very short period of time. It is overwhelming. So everyone undercounts. Here's a little summary. You notice Positive/capita - for Iceland is very high, because they have tested a very large percentage of their small population. We are still behind in testing, And we need to test a lot

more. So many people are asymptomatic, not knowing them is a disadvantage to us. Recall, not every positive case needs hospitalization. So that number as close to reality is very important because it gives us a sense of how infectious SARS-CoV-2 is. It also allows us to estimate better the CFR.

Country	Reported death	Reported positive	% death/positive	Population (M)	fatality/capita	Positive/capita
USA	83963	1411488	5.948545	334	251.3862	4226.012
Spain	27104	271095	9.997971	46.9	577.9104	5780.277
Italy	31106	222104	14.00515	50.63	614.3788	4386.806
Germany	7792	173824	4.482695	83.02	93.8569	2093.761
France	27074	140734	19.23771	66.99	404.1499	2100.821
Israel	264	16548	1.595359	8.884	29.71634	1862.674
Iceland	10	1802	0.554939	0.364134	27.46242	4948.728
U.K.	33186	229705	14.44723	66.65	497.9145	3446.437

On Wed, May 13, 2020 at 7:43 PM (b)(6) (b)((b)(6) wrote:

(b)(

As I understand the data, of the large countries with major impacts, 65% of the cases over last week came from the following 5 countries the U.S. (> 197,600 cases; 603 cases/million), Russia (> 70,600 cases; 489 cases/million), the U.K. (> 35,400 cases; 533 cases/million), Brazil (> 34,500 cases; 164 cases/million), and Peru (> 21,500 cases; 673 cases/million). I don't have the comparable fatality data at hand, but what I've seen has been similar.

I know that "cases" as a datapoint to track is crap because it's based on testing and the populace's threshold for seeking care, but still, we are well above the average on a rate basis. Why is this? I have a hard time believing it's just timing on application of NPIs.

-Bill

From: Dr. (b)((b) (b)(6)
Sent: Wednesday, May 13, 2020 7:34 PM
To: (b)(6) (b)((b)(6)
Cc: (b)(6) (HMFP - Emergency Medicine)

(b)(6) Caneva, Duane (b)(6)
(b)(6) (b)((b)(6) (b)((b)(6)
(b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
(DSHS) (b)(6) Dr. (b)((b)((b)(6)
BOURNE, ALEXANDRA (b)(6) (b)((b)(6)
(b)(6) b)(6) (b)(6)
(b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>;
(b)(6 Keim, MD MBA (b)(6) (b)((b)(6)
(b)(6) (b)((b)(6) MD (b)(6)
(b)(6) (b)(6) V.,M.D. (b)(6) (b)(6) (b)(
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(b)(6) McGinn, (b)((b)(6)
(b)(6) (b)(6) Kellermann (b)(6) (b)(6)
(b)((b)(6) (b)(6) (b)(6 (<llogan@cvm.tamu.edu>;
(b)(6) (b)(6) (b)(6) Eastman, (b)(6)
(b)(6) (b)(6) (b)(6) ((b)(6)
(b)(6) (b)(6) (b)(6) (b)(6))(6)
Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) DC <michelle.colby@usda.gov>; (b)(6)
JtCIVtUSARMY (USA) (b)(6) (b)(6 (b)(6) MD
(b)(6) Fantinato, Jessica (USDA.GOV)
<jessica.fantinato@usda.gov>; Martin, Greg (b)(6) <MartinGJ@state.gov>; (b)(6
(b)(6) (b)(6) (b)(6) (b)(6) <(b)(6)
KAUSHIK, SANGEETA <sangeeta.kaushik@hq.dhs.gov>; (b)(6) (b)(6)
<CHRISALLEN (b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)((<jschnitzer@(b)(6)
jwleduc@utmb.edu; (b)(6) (b)(6) (b)(6) Larry G
(b)(6) Ignacio, Joselito (b)(6) (b)(6)
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<David.Hassell@hhs.gov>; (b)((b)(6) (b)(6) (b)(6) (b)(6)
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THOMAS (b)(6) WOLFE, HERBERT
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(b)(6) (b)((b)(6) (b)(6) Krohmer,
Jon (NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency
Medicine) (b)(6) You, Edward H. (WMD) (FBI)
(b)(6) (b)(6) (b (b)(6) W (b)(6)
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

Bill, may I ask you how you calculate your values? I am using fatality per capita and infection per capita, we are not the highest. Is that what you are thinking? I must have misunderstood your question.

On Wed, May 13, 2020 at 7:24 PM (b)(6) (b)((b)(6) wrote:

> Does anyone have insight as to why the US has the highest case and fatality rate of any large country. I haven't seen any good explanation of that. It's not that we have so much most inbound international travelers (France exceeds the US on an absolute basis – not just rate, for example, and many countries far exceed us for international arrival rates).
>
> While many feel we should have implemented NPIs earlier and harder, I don't get the sense that we were that far behind the rest of the world to explain the case and fatality rate differences.
>
> Our Chinese arrival rate compared to the rest of the world is hard to figure (the data is there, but I haven't tried to crank it).
>
> With the exception of some inner-cities, we are not a population dense as other major developed countries.
>
> So what was it (and am just missing scholarly discussion somewhere about this huge discrepancy). Everyone knew in detail why Italy blew up, but why us?
>
> -Bill (b)(

From: Dr. (b)((b)((b)(6)
Sent: Wednesday, May 13, 2020 5:15 PM
To: (b)(6) (HMFP - Emergency Medicine)
(b)(6)
Cc: Caneva, Duane (b)(6) (b)(6) (b)(6
(b)(6) (b)((b)(6) (b)(6)
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(b)(6) (b)(6) (b)((b)(6) Dr.
(b)(((b) (b)(6) BOURNE, ALEXANDRA
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(b)(6) McDonald, Eric
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MD <rdarling@patronusmedical.com>; (b)(6) (b)(6) V.,M.D.
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(b)(6) Baric, (b)(6 S <rbaric@email.unc.edu>; (b)(6)
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<michelle.colby@usda.gov>; (b)(6) (b)(6)
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(b)(6) Fantinato, Jessica (USDA.GOV)
<jessica.fantinato@usda.gov>; Martin, Greg (b)(6) (b)(6)
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(b)(6) jwleduc@utmb.edu; (b)(6) (b)(6)
(b)(6) Larry G (b)(6) Ignacio,
Joselito (b)(6) (b)(6)
(b)(6) Hassell, (b)(6) (Chris) (OS/ASPR/IO)
<David.Hassell@hhs.gov>; (b)((b)(6) (b)(6) (b)(6)
(b)(6) <ljohnston@patronusmedical.com>; (b)(6) (b)(6))
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<Charity.Dean@cdph.ca.gov>; Marinissen, Maria (HHS/OS/OGA)
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Krohmer, Jon (NHTSA) <jon.krohmer@dot.gov>; (b)(6) (APHMFP -
Emergency Medicine) (b)(6) (b)(6)
(FBI) (b)(6) (b)(6) (b (b)(6) W (b)(6)
Subject: Re: [External] Re: Red Dawn Posturing, Begin May 5, 12:50 EDT

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This looks very nice in the tracing and connectivity of all the cases. I assume the genetic analysis reported recently regarding origin of the US cases will give us such type of information.

https://protect2.fireeye.com/url?k=954c1fd4-c9191604-954c2eeb-0cc47a6a52de-66e4b2f7f2b960a1&u=https://graphics.reuters.com/CHINA-HEALTH-SOUTHKOREA-CLUSTERS/0100B5G33SB/index.html

On Wed, May 13, 2020 at 4:05 PM (b)(6) (HMFP - Emergency Medicine) (b)(6) wrote:

This is terrific! Thanks Duane

Greg

Sender:	Dr. (b) (b) (b)(6)
Recipient:	Caneva, Duane (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b6ba3c00c7944e1b99ed3eecab996186-Duane.Canev (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (HMFP - Emergency Medicine) <gciotton@bidmc.harvard.edu>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user4629b831 (b)(6) Dr. (b) (b) (b)(6) BOURNE, ALEXANDRA (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=04b8a65f67f9453b9749d3d366481f53-Guest_bef32 <eric.mcdonald@sdcounty.ca.gov>; (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=474b01361a8b4944a39afbdad800591e-Guest_bea05 (b)(6) (b)(6) (b)(6)

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<jessica.fantinato@usda.gov>;
Martin, Greg (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group
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Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group
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Marinissen, Maria (HHS/OS/OGA) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=5d42fb4d94b041ee88e4f7dd5743e893-Marinissen,
<Maria.Marinissen@hhs.gov>;
Sutter, (b)(6) (b)(6)
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	(b) (b)(/ (b)(6) Krohmer, Jon (dot.gov) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=46c6513591aa4142b2c1c85354dd1816-Jon.Krohmer <Jon.krohmer@dot.gov>; (b)(6) (APHMFP - Emergency Medicine) (b)(6) You, Edward H. (WMD) (FBI) (b)(6) (b)(/ (/ (b)(/ W (b)(6)
Sent Date:	2020/05/15 21:06:48
Delivered Date:	2020/05/15 21:12:01
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From: Caneva, Duane (b)(6)

To: Brian Benson (b)(6)
Tracey (b)(6) (b)(6)
(b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
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Dr. (b) (b) (b)(6)
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(b)(6)
Hamel, Joseph (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=96d2c1602dfa45e5a5e21452a098b96d-Hamel, Jose
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CC: WILKINSON, THOMAS (b)(6)
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Walters, (b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group
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Dodgen, Daniel (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=c23f0d7c1d634508918e1c87cf50c48c-Dodgen, Dan
<Daniel.Dodgen@HHS.GOV>;
DeBord, Kristin (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=d2cce28859884c1c835a9404885d6534-DeBord, Kri
<Kristin.DeBord@hhs.gov>;
Phillips, Sally (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group
(FYDIBOHF23SPDLT)/cn=Recipients/cn=5d6ce8134846423cb83b5b28464edb60-Phillips, S
<Sally.Phillips@hhs.gov>;
(b)(6) CIV USARMY (USA) (b)(6)
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Wolfe, Herbert (DHS.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group
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(b)(6)

	(b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0851e89240324306b78740a4a60745e2-Johnson, Ro <Robert.Johnson@hhs.gov>; Yeskey, (b) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=6fe6cf13518445fd9c3a1c254e166b3f-Yeskey, Kev <Kevin.Yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0fd5845defda4dc0bb45f8fac629cf09-Disbrow, Ga <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9ba3fed4ee8646ec849a5a87136a24f6-Redd, John <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aedbfb0ff96e4119ac7a3b3abaf71a3d-Hassell, Da <David.Hassell@hhs.gov>; (b)((b)((b)(6) (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2b8ce179913e4ec6a251a91616b1bc4a-Guest_de2e9 (b)(6) KAUSHIK, SANGEETA (b)(6) (b) Scott (OS/ASPR/EMMO) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=userf6879348 <Scott.Lee@hhs.gov>; Larry G <PadgetLG@state.gov>; (b) (b)(6) (b)(6) (b)((b)(6)) (b)(6) Adams, Jerome (HHS/OASH) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=184fe51f7350400b8a99dabd65ac0db5-Adams, Jero <Jerome.Adams@hhs.gov>; (b)(6) (b)(6) (b)(6) Fantinato, Jessica (USDA.GOV) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4a03b6317c3840afb4ee617008e821a6-Jessica.Fan <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)((b)(6) (b)((b)(6) (b)(6) (b) (b)(6) Ignacio, Joselito (b)(6) /o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=908f39d0872d44b1b2c5e3ba11f04968-Joselito.Ig (b)(6) (b) (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)((b) (b)(6) LLogandakar (b)(6) (b)(6) (b)((b)(6) Ronny Jackson (b)(6) (b) (b)(6) MD (b)(6) (b) (b)(6) (b)(6) Jim (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(Kellermann (b)(6) Taylor, Justin (b)((b)(6) (b)(6) (b) W. EOP/OMB (b)(6)
Subject:	RE: Red Dawn Responding, Start 16 March
Date:	2020/03/27 10:59:40
Priority:	Normal
Type:	Note

The Homeland Security Department recently launched and continues to update a new, living document that agency officials can use as a reference tool to inform the choices they must make in response to the COVID-19 crisis.

New update.

From: Brian Benson (b)(6)
Sent: Friday, March 27, 2020 10:26 AM
To: Tracey (b)(6) (b)(6)
Cc: (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dr. (b)(6) Caneva, Duane (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b)(6) MD (b)(6) Dr. (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) (b)(6) (b)(6) (VA.GOV) (b)(6) (b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) W (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) S (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; Matthew J CIV USARMY (USA) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; D isbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>; Larry G (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH) (b)(6) (b)(6) (b)(6) (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Ignacio, Joselito (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) LLogandakar (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Ronny Jackson (b)(6) (b)(6) (b)(6) MD (b)(6) (b)(6) (b)(6) (b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Kellermann (b)(6) Taylor, Justin (b)(6) (b)(6) (b)(6) (b)(6) W. EOP/OMB (b)(6)
Subject: Re: Red Dawn Responding, Start 16 March

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Good morning, hope everybody is staying healthy!

I wanted to ask the group if we need to consider a mechanism by which young and healthy people could be assessed and cleared to return to work. Basically....you'll get sick, but won't end up in the ICU. Also, create guideline for others to be deemed vulnerable and cocooned so they trickle into the ICU at a controllable rate?

This is in the context of our financial situation, though that's not my area of expertise....looks grim.

On Mar 24, 2020, at 4:59 PM, Tracey (b)(6) (b)(6) wrote:

https://protect2.fireeye.com/url?k=404ccd3d-1c19c4ed-404cfc02-0cc47a6a52de-a07b38593269702e&u=https://www.linkedin.com/posts/tom-kirsch-437916100_what-happens-if-health-care-workers-stop-activity-6648321612338778112-vNqv

This is the first real discussion of this threat that I've seen. Thoughts?
Tracey

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From: Tracey (b)(6) (b)(6)
Sent: Tuesday, March 24, 2020 9:17:00 AM
To: (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) Dr. (b) (b)(6) Caneva, Duane (b)(6)
Cc: Hunt, Richard (OS/ASPR/EMMO) <Richard.Hunt@hhs.gov>; Brian Benson (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b) (b)(6) MD (b)(6) Dr. (b) (b) (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov <eric.mcdonald@sdcounty.ca.gov>; (b)(6) (b)((b)(6) (b)(6) (b)(6) (VA.GOV) (b)(6) (b)((b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) ((b)(6) W (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(S (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) USA) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6)

(b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6)
(b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA)
<Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; D isbrow, Gary (OS/ASPR/BARDA)
<Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)((Chris)
(OS/ASPR/IO) <David.Hassell@hhs.gov>; (b)(6 (b)((b)(6) TARANTINO, (b)(6 A
(b)(6) KAUSHIK, SANGEETA (b)(6) (b) Scott
(OS/ASPR/EMMO) <Scott.Lee@hhs.gov>; Larry G (b)(6) (b)((b)(6)
(b)(6) (b)(6) (b)(6)) (b)(6) Adams, (b)(6)
(HHS/OASH) <Jerome.Adams@hhs.gov>; (b)(6) (b)(6) (b)(6) Fantinato,
Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>;
(b)(6) (b)(6) (b)(6) (b)(6) (b)(
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Kellermann (b)(6) Taylor, Justin (b)(
(b)(6) (b)(6) (b)(W. EOP/OMB (b)(6)
Subject: Re: Red Dawn Responding, Start 16 March

https://www.cdc.gov/mmwr/volumes/69/wr/mm6912e3.htm

Surfaces of cruise ship positive after 17 days

Also, what about that study out of China on infected doctors who, after 14 day quarantine were released only to be found positive later?
On what is our 14 day quarantine based and should it be amended?
Tracey

Get Outlook for Android

From: Caneva, Duane (b)(6)
Sent: Thursday, March 19, 2020 11:33:40 AM
To: (b)(6) (b)(6) <cmecher@charter.net>; Tracey (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) (b)((b)(6) Dr. (b) (b) (b)(6)
(b)(6)
Cc: Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) Brian Benson
(b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b) (b)(6) MD
(b)(6) Dr. (b) (b) (b)(6) (b)(6)
(b)(6) eric.mcdonald@sdcounty.ca.gov <eric.mcdonald@sdcounty.ca.gov>; (b)(6)
(b)((b)(6) (b)(6) (b)(6) (VA.GOV) <carter.mecher@va.gov>; (b)((b)(6)
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(b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR)
<Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally
(OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6)
(b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6)
(b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA)
<Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; D isbrow, Gary (OS/ASPR/BARDA)
<Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris)
(OS/ASPR/IO) <David.Hassell@hhs.gov>; (b)(6 (b)((b)(6) TARANTINO, (b)(6 A
(b)(6) KAUSHIK, SANGEETA (b)(6) (b)(Scott
(OS/ASPR/EMMO) <Scott.Lee@hhs.gov>; Larry G (b)(6) (b)((b)(6)
(b)(6) (b)(6) (b)(6)) (b)(6) Adams, Jerome
(HHS/OASH) (b)(6) (b)(6) (b)(6) (b)(6) Fantinato,
Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>;
(b)(6) (b)(6) (b)(6) (b)(6) (b)(
(b)(6) (b)(6) (b) (b)(6) Ignacio, Joselito
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(b)(6) (b)(6) Jim (b)(6) (b)(6)
(b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6)
Kellermann (b)(6) Taylor, Justin (b)(
(b)(6) (b)(6) (b)(W. EOP/OMB (b)(6)
Subject: RE: Red Dawn Responding, Start 16 March

Reposting to Reflux string.
Please post replies there.

From: (b)(6) (b)(6) (b)(6)
Sent: Thursday, March 19, 2020 2:28 PM
To: Tracey (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) (b)((b)(6) Dr. (b) (b) (b)(6)
Cc: Caneva, Duane (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO)
(b)(6) Brian Benson (b)(6) Hamel, Joseph (OS/ASPR/IO)
<Joseph.Hamel@hhs.gov>; (b) (b)(6) MD (b)(6) Dr. (b) (b)
(b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(
(b)(6) (b)(6) (b)(6) (VA.GOV) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) ((b)(6) W
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(b)(6) (b)((b)(S (b)(6) WILKINSON, THOMAS

(b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>; D isbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(6) Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>; Larry G (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH) (b)(6) (b)(6) (b)(6) (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Ignacio, Joselito (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Ronny Jackson (b)(6) (b)(6) (b)(6) MD (b)(6) (b)(6) (b)(6) (b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Kellermann (b)(6) Taylor, Justin (b)(6) (b)(6) (b)(6) (b)(6) W. EOP/OMB (b)(6)

Subject: RE: Red Dawn Responding, Start 16 March

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

See attached.

Sent from Mail for Windows 10

From: Tracey (b)(6)
Sent: Thursday, March 19, 2020 2:13 PM
To: (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dr. (b) (b)
Cc: Caneva, Duane; Hunt, (b)(6) (OS/ASPR/EMMO); Brian Benson; Hamel, Joseph (OS/ASPR/IO); (b) (b)(6) MD; Dr. (b) (b) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) (b)(6) (b)(6) (VA.GOV); (b)(6) (b)(6) (b)(6) (b)(6) V; (b)(6) (b)(6) W; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6), (b)(6) S; WILKINSON, THOMAS; (b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6)

(b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; D isbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)((Chris) (OS/ASPR/IO); (b)(6 (b)(6 TARANTINO, (b)(6 A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; (b)((b)(6) (b)(6) (b)(6)); Adams, (b)(6) (HHS/OASH); (b)(6) (b)(6) (Fantinato, Jessica (USDA.GOV); DC; (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b)((Ignacio, Joselito; (b)((b)(6) (b)((b)(6) (b)(6 (b)((LLogandakar; (b)(6) (b)(6) Ronny Jackson; (b)((b)(6) MD; (b)((b)(6) Jim (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) Kellermann; Taylor, Justin (b)(6 (b)(6) (b)(W. EOP/OMB

Subject: RE: Red Dawn Responding, Start 16 March

Russian?
Tracey

From: (b)(6) (b)(6) (b)(6)
Sent: Thursday, March 19, 2020 5:24 AM
To: (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) Dr. (b) ((b) (b)(6)
Cc: Caneva, Duane (b)(6) Tracey (b)(6) (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) Brian Benson (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b) (b)(6) MD (b)(6) Dr. (b) (b) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)((b)(6) (b)(6) (b)(6) (VA.GOV) (b)(6) (b)((b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) ((b)(6) W (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(S (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)((b)(6) D isbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)((Chris) (OS/ASPR/IO) (b)(6) (b)(6) (b)((b)(6) TARANTINO, (b)(6) A (b)(6) KAUSHIK, SANGEETA (b)(6) (b) Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>; Larry G (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH) (b)(6) (b)(6) (b)(6) ((b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b) ((b)(6) Ignacio, Joselito (b)(6) (b) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6 (b)(((b)(6) (b)(6)

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Subject: RE: Red Dawn Responding, Start 16 March

I've had this guidance, not with this attribution, passed to me through private e-mail channels. Misinformation, clearly.

On an unrelated note, a good thread, retweeted by Helen Branswell –

https://twitter.com/HelenBranswell/status/1240501848227880960?cn=ZmxleGlibGVfcmVjc18y&refsrc=email

---

From: (b)(6) (b)(6) (b)(6)
Sent: 19 March 2020 12:07
To: (b)(6) (b)((b)(6) Dr. (b) (b)(6)
Cc: Caneva, Duane (b)(6) Tracey (b)(6) (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) Brian Benson (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b) (b)(6) MD (b)(6) Dr. (b) (b) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)((b)(6) (b)(6) (b)(6) (VA.GOV) <carter.mecher@va.gov>; (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) ((b)(6) W (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) <chrisallen (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(S (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) (b)(6) (b)(6) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)((b)(6) D isbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)((Chris) (OS/ASPR/IO) (b)(6) (b)(6 (b)((b)(6) TARANTINO, (b)(6 A (b)(6) KAUSHIK, SANGEETA (b)(6) (b) Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>; Larry G (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH) (b)(6) (b)(6) (b)(6) ((b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6)

(b)((b)(6) (b)(6) (b) (b)(6) Ignacio, Joselito
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(b)(6) (b)(6) (b)(6) (b)(6) Ronny Jackson
(b)(6) (b)((b)(6) MD (b)(6) (b)(
(b)(6) (b)(6) Jim (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6)
Kellermann (b)(6) Taylor, Justin (b)(
(b)(6) (b)(6) (b)(W. EOP/OMB (b)(6)
Subject: RE: Red Dawn Responding, Start 16 March

Let me run this down—first I have seen. This looks like a scam. This same thing (not with the VA logo) is all over social media (gargling etc.).

Sent from Mail for Windows 10

From: (b)(6) (b)(
Sent: Thursday, March 19, 2020 7:49 AM
To: (b)(6) (b)(6) Dr. (b) (b)
Cc: Caneva, Duane; Tracey (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO); Brian Benson; Hamel, Joseph (OS/ASPR/IO); (b) (b)(6) MD; Dr. (b) (b) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6 (b)(6) (b)(6 (VA.GOV); (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6 V; (b)(6 (, (b)(6 W; (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b)((b)(S; WILKINSON, THOMAS; (b)(6) (b)(6 (b)(6) Martin, Greg (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; D isbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); (b)(6 (b)(6 TARANTINO, (b)(6 A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; (b)((b)(6) (b)(6) (b)(6)); Adams, (b)(6) (HHS/OASH); (b)(6) (b)(6) (Fantinato, Jessica (USDA.GOV); DC; (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b) (Ignacio, Joselito; (b) (b)(6) (b)((b)(6) (b)(6 (b)((LLogandakar; (b)(6) (b)(6) Ronny Jackson; (b)((b)(6) MD; (b)((b)(6) Jim (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) Kellermann; Taylor, Justin (b)(6 (b)(6) (b)(W. EOP/OMB
Subject: RE: Red Dawn Responding, Start 16 March

Since many active government people on this thread, thought you might be interested in a note I've now been forwarded by 2 different Fortune 100 HR directors citing this as "Government Guidance" that they received yesterday. I've told them that a small VA Clinic in Oregon does not count as "Government Guidance," but this is floating around.

<image001.jpg>

-Bill

(b)(6) MD, MHA
Medical Director

WorldClinic | Continuous Connected Care
tel: 603.526.9003 | fax: 781.998.7954
direct (admin and non-urgent patient care): 603.526.1900

From: (b)(6)
Sent: Thursday, March 19, 2020 7:31 AM
To: Dr. (b)(6)
Cc: Caneva, Duane (b)(6) Tracey (b)(6)
Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) Brian Benson (b)(6)
Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b)(6) MD
(b)(6) Dr. (b)(6)
eric.mcdonald@sdcounty.ca.gov; (b)(6) (VA.GOV)
(b)(6) W
(b)(6) <chrisallen (b)(6)
<LBorio@iqt.org>; (b)(6) S (b)(6) WILKINSON, THOMAS
(b)(6) Martin, Greg
(b)(6) Walters, (b)(6) Dodgen, Daniel (OS/ASPR/SPPR)
<Daniel.Dodgen@hhs.gov>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally
(OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6)
(b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6)
(b)(6) MARIEFRED (b)(6)
(b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)(6)
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(OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)(6) (Chris) (OS/ASPR/IO) (b)(6)
(b)(6) TARANTINO, (b)(6) A (b)(6)
KAUSHIK, SANGEETA (b)(6) (b)(6) Scott (OS/ASPR/EMMO)
<Scott.Lee@hhs.gov>; Larry G (b)(6)
(b)(6) (b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH) (b)(6)
(b)(6) Fantinato, Jessica (USDA.GOV)
<jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6)
(b)(6) Ignacio, Joselito
(b)(6) LLogandakar
(b)(6) Ronny Jackson
(b)(6) MD (b)(6)
(b)(6) Jim (b)(6)
Kellermann (b)(6) Taylor, Justin (b)(6)

(b)(6) (b)(6) (b)(W. EOP/OMB (b)(6)
Subject: RE: Red Dawn Responding, Start 16 March

The JAMA article referenced below noted on March 7 (Lombardy Region)
Current total number of patients with COVID-19 occupying an ICU bed (n = 359)
ICU admissions (n = 556)
[Total cumulative deaths in all of Italy on March 7 reported to be 233; sum of ICU census + deaths > ICU admissions—591 vs. 556] I don't have a breakdown of deaths by region in Italy

Data for all of Italy on March 7
Current total number of patients with COVID-19 occupying an ICU bed (n = 567)
Total cumulative deaths (233)
Sum (800)

Sent from Mail for Windows 10

From: (b)(6) (b)(6)
Sent: Thursday, March 19, 2020 7:07 AM
To: Dr. (b) (b) (b)(6) (b)(
Cc: Caneva, Duane; (b)(6) (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO); Brian Benson; Hamel, Joseph (OS/ASPR/IO); (b) (b)(6) MD; Dr. (b) (b) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6 (b)(6) (b)(6 (VA.GOV); (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6 V; (b)(6 (, (b)(6 W; (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b)((b)(S; WILKINSON, THOMAS; (b)(6) (b)(6 (b)(6) Martin, Greg (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); (b) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6 D isbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); (b)(6 (b)(6 TARANTINO, (b)(6 A; KAUSHIK, SANGEETA; (b) Scott (OS/ASPR/EMMO); Larry G; (b)((b)(6) (b)(6) (b)(6)); Adams, (b)(6) (HHS/OASH); (b)(6) (b)(6) (Fantinato, Jessica (USDA.GOV); DC; (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b) (Ignacio, Joselito; (b) (b)(6) (b)((b)(6) (b)(6 (b)((LLogandakar; (b)(6) (b)(6) Ronny Jackson; (b)((b)(6) MD; (b)((b)(6) Jim (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) Kellermann; Taylor, Justin (b)(6 (b)(6) (b)(W. EOP/OMB
Subject: RE: Red Dawn Responding, Start 16 March

Have been curious about projected demand in ICU care and how well initial forecasts projected the increase in actual demand. Italy recently published their experience thru March 7 with projections to March 20 (about 2 weeks later)

Italy published a paper in JAMA
March 13, 2020

Critical Care Utilization for the COVID-19 Outbreak in Lombardy, Italy Early Experience and Forecast During an Emergency Response

Giacomo Grasselli, MD[1,2]; Antonio Pesenti, MD[1,2]; Maurizio Cecconi, MD[3]

Forecasting ICU Demand Over the Next 2 Weeks

During the first 3 days of the outbreak, starting from February 22, the ICU admissions were 11, 15, and 20 in the COVID-19 Lombardy ICU Network. ICU admissions have increased continuously and exponentially over the first 2 weeks. Based on data to March 7, when 556 COVID-19–positive ICU patients had been admitted to hospitals over the previous 15 days, linear and exponential models were created to estimate further ICU demand (eFigure in the Supplement).

<image002.png>

They had data thru March 7 and extrapolated ICU demand (admissions) thru March 20. They projected linear growth and exponential growth. We have been tracking the daily updates from Italy and following the reported number of patients in the ICU. [China reported current census of hospitalized patients and critically ill patients; we assumed that the data from Italy was similar (census and not cumulative admissions.] On the March 7, that number reported by Italy was 567, In the JAMA article, the authors state that 556 C19 ICU patients had been admitted. So the numbers are close. If the numbers reported are ICU census numbers (a snapshot), then these numbers are an underestimate of ICU admissions. No data is available on ICU discharges/transfers. If we assumed that the majority of deaths occurred in the ICU, then a high end approximation of ICU admissions would equal the sum of ICU census and deaths (this would assume all deaths occurred in the ICU). On March 7, that sum was 800. On March 18, that sum was 5,235 (2,257 in ICU).

Below are the numbers of what actually occurred thru March 18.

Italy				
Date	Cum Deaths	Cum Confirmed	Critical Condition (ICU)	Sum Deaths + ICU
30-Jan	0	2		0
31-Jan	0	2		0
7-Feb	0	3		0
20-Feb	0	3	2	2
21-Feb	1	20	6	7
22-Feb	2	63	7	9
23-Feb	3	155	26	29
24-Feb	7	229	23	30
25-Feb	11	322	19	30
26-Feb	12	453		12
27-Feb	17	655		17
28-Feb	21	889	64	85
29-Feb	29	1,128	105	134
1-Mar	34	1,694	140	174

2-Mar	52	2,036	166	218
3-Mar	79	2,502		
4-Mar	107	3,089	295	402
5-Mar	148	3,858	351	499
6-Mar	197	4,636	462	659
7-Mar	233	5,833	567	800
8-Mar	366	7,375	650	1,016
9-Mar	463	9,172	733	1,196
10-Mar	631	10,149	877	1,508
11-Mar	827	12,264	1,028	1,855
12-Mar	1,016	15,113	1,153	2,169
13-Mar	1,266	17,660	1,328	2,594
14-Mar	1,441	21,157	1,518	2,959
15-Mar	1,809	24,747	1,672	3,481
16-Mar	2,158	27,980	1,851	4,009
17-Mar	2,503	31,506	2,060	4,563
18-Mar	2,978	35,713	2,257	5,235

So here is where Italy is as of March 18. Given that a significant % of deaths (but not all) would be expected to have occurred in the ICU, the ICU admission curve lies between these two points.
<image003.png>
Graph of daily data reported by Italy (daily number of patients in ICU and sum of ICU patients + deaths). ICU admission curve lies between these two curves.
<image004.png>

Sent from Mail for Windows 10

From: Dr. (b)(6)
Sent: Thursday, March 19, 2020 12:59 AM
To: (b)(6) (b)(6)
Cc: (b)(6) (b)(6) Caneva, Duane; Tracey (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO); Brian Benson; Hamel, Joseph (OS/ASPR/IO); (b)(6) (b)(6) MD; Dr. (b)(6) (b)(6) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) (b)(6) (b)(6) (VA.GOV); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V; (b)(6) (b)(6) W; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) S; WILKINSON, THOMAS; (b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) CIV USARMY (USA); (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; D isbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); (b)(6) (b)(6) TARANTINO, (b)(6) A; KAUSHIK, SANGEETA; (b)(6) Scott (OS/ASPR/EMMO); Larry G; (b)(6) (b)(6) (b)(6) (b)(6)); Adams, (b)(6) (HHS/OASH); (b)(6) (b)(6) Fantinato, Jessica (USDA.GOV); DC; (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(Ignacio, Joselito; (b)((b)(6) (b)((b)(6) (b)(6 (b)(((b)(6)
(b)(6) (b)(6) Ronny Jackson; (b)((b)(6) MD; (b)((b)(6) Jim (b)(6) (b)(6)
(b)(6) (b)((b)(6) (b)(6) Kellermann; Taylor, Justin (b)(6 (b)(6) (b)(W. EOP/OMB
Subject: Re: Red Dawn Responding, Start 16 March

This is a study from CDC

CDC analysis shows coronavirus poses serious risk for younger people

https://thehill.com/policy/healthcare/488325-cdc-data-show-coronavirus-poses-serious-risk-for-younger-people

I am not sure if this group has adopted the notion that younger people are protected. I don't think so. China's younger generation is conspiciously smaller due to the one-child policy for so many years. Hence I maintain they have a disporportional (smaller) number of younger population.than in US or other countries in order for us to compare their disease status.

The Diamond Princess shows similar attack rate of young vs the elderly. So we cannot tell if indeed the young fares better. This CDC study supports that the younger generation can be seriously affected by covid-19. And I do believe it remains a serious health risk to those with co-existing health conditions, any age. We simply don't know much detail.

We can't let the herd immunity to play out -- many people will die. I will share some graphs tonight.

(b)(6)
https://newton.isye.gatech.edu/DrLee/
mobile: (b)(6)

Sent with ProtonMail Secure Email.

------- Original Message -------
On Thursday, March 19, 2020 12:26 AM, (b)(6) (b)((b)(6) wrote:

Can anyone comment on the NYT article today noting a higher than expected number of hospitalizations in younger people? The article acknowledges that there is no information on comorbidities in the data, but still a huge question and if true and not related to comorbidities, undermines much of what many have been communicating to groups. Could it be that our message is getting out to the at-risk groups and they are self protecting much more effectively, so what we are seeing is not a change in hospitalization rates by age group, but just higher infection rates in younger ages because they are not being as cautious (maybe too much to hope).

Thanks

-Bill

(b)(6) **L.** (b)(6) **MD, MHA**
Medical Director
email: (b)(6)

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On Mar 18, 2020, at 9:54 PM, (b)(6) (b)(6) (b)(6) wrote:

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hotspots—NY, WA, and CA

	NYC State (19.4M)		NYC (8.6M)
Date	Cum Cases	Cum Deaths	Cum Cases
29-Feb	0		0
1-Mar	1		1
2-Mar	1		1
3-Mar	2		2
4-Mar	10		2
5-Mar	19		4
6-Mar	40		7
7-Mar	78		12
8-Mar	105		14
9-Mar	142		25
10-Mar	173		32
11-Mar	216		53
12-Mar	325		88
13-Mar	524		137
14-Mar	613	1	185

15-Mar	729	5	269
16-Mar	950	7	464
17-Mar	1,374	12	923
18-Mar	2,382	20	1,871

	WA State (7.8M)		King County (2.2M)		Snohomish County (0.8M)	
Date	Cum Cases	Cum Deaths	Cum Cases	Cum Deaths	Cum Cases	Cum Deaths
21-Jan	1				1	
29-Feb	3		1		2	
1-Mar	6		4	1	2	
2-Mar	18	5	14	5	4	
3-Mar	27	9	21	8	6	1
4-Mar	39	10	31	9	8	1
5-Mar	70	10	51	9	18	1
6-Mar	79	11	58	10	19	1
7-Mar	102	16	71	15	27	1
8-Mar	136	18	83	17	31	1
9-Mar	162	21	116	20	37	1
10-Mar	267	24	190	22	54	1
11-Mar	366	29	234	26	68	2
12-Mar	457	31	270	27	108	3
13-Mar	568	37	328	32	166	4
14-Mar	642	40	387	35	154	4
15-Mar	769	42	420	37	176	4
16-Mar	904	48	488	43	200	4
17-Mar	1,012	52	569	43	254	6
18-Mar	1,187	66	562	56	310	6

	WA State (7.8M)		NYC State (19.4M)		CA State (40M)		U	
Date	Cum Cases	Cum Deaths	Cum Cases	Cum Deaths	Cum Cases	Cum Deaths	Cum Cases	Cum De
29-Feb	3		0				68	1
1-Mar	6		1				73	1
2-Mar	18	5	1		43		99	6
3-Mar	27	9	2		43		103	6
4-Mar	39	10	10				154	11
5-Mar	70	10	19		60	1	197	12

6-Mar	79	11	40		69	1	309	15
7-Mar	102	16	78		88	1	434	19
8-Mar	136	18	105		114	1	544	22
9-Mar	162	21	142		133	1	728	27
10-Mar	267	24	173		157	2	1,010	31
11-Mar	366	29	216		177	3	1,311	38
12-Mar	457	31	325		198	4	1,701	40
13-Mar	568	37	524		247	5	2,110	48
14-Mar	642	40	613	1	288	5	2,952	58
15-Mar	769	42	729	5	335	6	3,774	69
16-Mar	904	48	950	7	392	6	4,661	87
17-Mar	1,012	52	1,374	12	598	13	6,423	108
18-Mar	1,187	66	2,382	20	757	13	8,715	138

Sent from Mail for Windows 10

From: Dr. (b) (b)
Sent: Wednesday, March 18, 2020 5:16 PM
To: Caneva, Duane
Cc: (b)(6) (b)(6) (b)(6) (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO); Brian Benson; Hamel, Joseph (OS/ASPR/IO); (b) (b)(6) MD; Dr. (b) (b) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6 (b)(6) (b)((b)(6) , (b)(6) (VA.GOV); (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V; (b)(6) (, (b)(6) W; (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6) (b)((b)(S; WILKINSON, THOMAS; (b)(6) (b)(6 (b)(6) Martin, Greg (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR);

Phillips, Sally (OS/ASPR/SPPR); (b)(6)
(b)(6) (b)(6)
(b)(6) (b)(6) WOLFE, HERBERT;
Eastman, (b)(6) (b)(6),
(b)(6) (b)(6)
Johnson, Robert (OS/ASPR/BARDA);
Yeskey, (b)(6) D isbrow, Gary
(OS/ASPR/BARDA); Redd, John
(OS/ASPR/SPPR); Hassell, (b)((Chris)
(OS/ASPR/IO); (b)(6 (b)(6
TARANTINO, (b)(6 A; KAUSHIK,
SANGEETA; (b), Scott
(OS/ASPR/EMMO); Larry G; (b)(
(b)(6) (b)(6) (b)(6));
Adams, (b)(6) (HHS/OASH); (b)(6),
(b)(6) (Fantinato, Jessica
(USDA.GOV); DC;
(b)(6) (b)(6),
(b)(6) (b)(6 (b)(6) (b) (Ignacio,
Joselito; (b) (b)(6) (b)(
(b)(6) (b)(6 (b)((
LLogandakar; (b)(6) (b)(6) Ronny
Jackson; (b)((b)(6) MD; (b)(
(b)(6) Jim (b)(6) (b)(6)
(b)(6) (b)((b)(6) (b)(6)
Kellermann; Taylor, Justin (b)(6
(b)(6) (b)(W. EOP/OMB
Subject: RE: Red Dawn Responding, Start 16 March

Duane, thanks for sending this article. I suppose John is on this group since he talked about many things we have talked about:

0. Diamond Princess as in (b)(6) analysis (I like (b)(6) :-)).

1. The 1% infection in US population that I and (b)(6) have been talking about for a long time.

2. Sampling testing within communities (which we have discussed since day 1)

3. He doesn't know or he questions if closing schools works (Ok. I do not agree with him)

4. the flattening of the curve. The famous one shown on all the media is not quite right. It is not theoretically correct. The flattening looks different, but ok.

5. It's true current hospital patients are vulnerable, we all agree and hence we advocate pre-emptive **early** NPI implementation

6. Worrying about kids in the malsl -- I don't think this is like H1N1 anymore. Malls are closing also.

7. Herd immunity. From the analysis, it seems that we will need to get to 49% to 89% among different communities to get herd immunity. In that case, many people will die. The clinicians I talked to today say that the lungs of patients are severely damaged -- not immediately, ususally late in the treatment period, like day 10. And they remain badly damaged even when recovered.

8 This statement --
"That's another reason we need data about the exact level of the epidemic activity." Really what data? Every data in such type of pandemic will have noise, will not be perfect, and will never be perfect. Even if we are done now, a year from now, we sill won't have perfect data. That is just a fact. if we need perfect date to operate, we won't be operating most of the time. We need to be able to develop robust models that can describe the situation using partial information. It needs not perfect, but **it should provide useful insights to act.**

That's why (b)(6) Richard's graphs putting side-by-side on how Italy's data matches China's are so important. Those curves -- they truly do not lie. James said we're 6-8 weeks behind China, we're indeed, as (b)(6) reminds us everyday (almost) with those little graphs. That's why I advocate early intervention, because I assume when I see one case, we're 14 days behind, and we're, as I can see from the models.

That's also why the intervention graphs I show for each city, they need not be perfect, because we only want to see the patterns of changes, and how it changes.

9. Social distancing alone is not sufficient. We need screening, we need testing and we need to intercept new infection (put them in self-quarantine or isolation and contact trace), we need all of them so that we have maintain the infection at a rate to our healthcare systems to treat the sick patients properly.

(b)(6)

https://newton.isye.gatech.edu/DrLee/

mobile: (b)(6)

Sent with ProtonMail Secure Email.

------- Original Message -------

On Wednesday, March 18, 2020 4:34 PM, Caneva, Duane (b)(6) wrote:

https://www.statnews.com/2020/03/17/a-fiasco-in-the-making-as-the-coronavirus-pandemic-takes-hold-we-are-making-decisions-without-reliable-data/

From: Dr. (b)(6) (b)(6)

Sent: Wednesday, March 18, 2020 3:34 PM

To:

Subject: RE: Red Dawn Responding, Start 16 March

(b)(6) it is very hard to slam the brake for Italy unless they can pour in the extra beds/medical resources. I am still trying to untangle my thousands of graphs. Once I can select which ones to show, you can see immediatley why all these come together.

Singapore and Hobg Kong are seeing increase too, because now so many sources are coming in. So the global effect is felt to the greatest extent.

(b)(6)

https://newton.isye.gatech.edu/DrLee/

mobile: (b)(6)

Sent with ProtonMail Secure Email.

------- Original Message -------

On Wednesday, March 18, 2020 3:24 PM, (b)(6) (b)(6) (b)(6) wrote:

Italy is still accelerating.

<image001.png>

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Wednesday, March 18, 2020 2:33 PM

To: Caneva, Duane; (b)(6) (b)(6) Dr. (b)(6) (b)

Cc: Hunt, Richard (OS/ASPR/EMMO); Brian Benson; Hamel, Joseph (OS/ASPR/IO); (b)(6) MD; Dr. (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (VA.GOV); (b)(6) V; (b)(6) W; (b)(6) S; WILKINSON, THOMAS; Martin, Greg (b)(6) Walters, Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) CIV USARMY (USA); (b)(6) WOLFE, HERBERT; Eastman, (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); (b)(6) TARANTINO, (b)(6) A; KAUSHIK, SANGEETA; (b)(6) Scott (OS/ASPR/EMMO); Larry G; (b)(6)); Adams, (b)(6) (HHS/OASH); (b)(6) Fantinato, Jessica (USDA.GOV); DC; Ignacio, Joselito; (b)(6) LLogandakar; (b)(6) Ronny Jackson; (b)(6) MD; (b)(6) Jim (b)(6) Kellermann; Taylor, Justin (b)(6)

Subject: RE: Red Dawn Responding, Start 16 March

Here is preliminary data on the current state of some of the countries in Europe we are following. UK is really exploding. Spain and Italy numbers continue to climb. Italy is now at 2,978 deaths. Italy is now about to overtake Hubei (3,122 total deaths). Will add US and France data later.

Date of 1st Case	24-Jan		1-Feb		30-Jan		
Date of 1st Death	15-Feb		4-Mar		21-Feb		
	France (65M)		Spain (47M)		Italy (60M)		
	Cum Cases	Cum Deaths	Cum Cases	Cum Deaths	Cum Cases	Cum Deaths	Cum Cases
20-Feb	12	1	2		3	0	15
21-Feb	12	1	2		20	1	35
22-Feb	12	1	2		63	2	35
23-Feb	12	1	2		155	3	35
24-Feb	12	1	3		229	7	53
25-Feb	14	1	7		322	11	57
26-Feb	18	2	13		453	12	60
27-Feb	38	2	23		655	17	60
28-Feb	57	2	32		889	21	63
29-Feb	100	2	45		1,128	29	68

1-Mar	130	2	84		1,694	34	73
2-Mar	191	3	120		2,036	52	99
3-Mar	212	4	151		2,502	79	103
4-Mar	285	4	202		3,089	107	154
5-Mar	423	7	248	1	3,858	148	197
6-Mar	613	9	517	10	4,636	197	309
7-Mar	949	16	613	17	5,833	233	434
8-Mar	1,126	19	848	25	7,375	366	544
9-Mar	1,412	30	1,231	30	9,172	463	728
10-Mar	1,784	33	1,646	35	10,149	631	1,010
11-Mar	2,281	49	2,277	55	12,462	827	1,311
12-Mar	2,876	61	3,059	86	15,113	1,016	1,701
13-Mar	3,661	79	4,209	120	17,660	1,266	2,110
14-Mar	4,499	91	5,841	191	21,157	1,441	2,952
15-Mar	5,423	127	7,753	288	24,747	1,809	3,774
16-Mar	6,633	148	9,942	342	27,980	2,158	4,661
17-Mar	7,730	175	11,316	510	31,506	2,503	6,423
18-Mar			13,716	533	35,713	2,978	

Sent from Mail for Windows 10

From: (b)(6) (b)(6)

Sent: Wednesday, March 18, 2020 2:21 PM

To: Caneva, Duane; (b)(6) (b)(6) Dr. (b)((b)

Cc: Hunt, (b)(6) (OS/ASPR/EMMO); Brian Benson; Hamel, Joseph (OS/ASPR/IO); (b)((b)(6) MD; Dr. (b)((b)((b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6 (b)(6) (b)(6 (b)(6) (b)(6) (b)(6) (VA.GOV); (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V; (b)(6) (b (b)(6) W; (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) S; WILKINSON, THOMAS; (b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) CIV USARMY (USA); (b)((b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David

(Chris) (OS/ASPR/IO); (b)(6) (b)(6) TARANTINO, (b)(6) A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; (b)(6) (b)(6) (b)(6) (b)(6)); Adams, Jerome (HHS/OASH); (b)(6) (b)(6) (b Fantinato, Jessica (USDA.GOV); DC; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(Ignacio, Joselito; (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (LLogandakar; (b)(6) (b)(6) Ronny Jackson; (b)(6 (b)(6) MD; (b)((b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Kellermann; Taylor, Justin (b)(6)

Subject: RE: Red Dawn Responding, Start 16 March

Just some updates. First NYC. NYC seeing explosive growth in cases and deaths. See story below. Prevalence is much higher than numbers suggest to already have 20 deaths and have 5/1,300 attendees to a conference last week (0.4%) confirmed to have COVID.

5 doctors test positive for coronavirus after attending a meeting in NYC om March 8-11. Roughly 1,300 physicians and educators traveled from across the country and Canada for a Midtown assembly organized by the Council of Residency Directors (CORD) in Emergency Medicine, opening the possibility that hundreds of emergency room doctors have been exposed to the disease.

Below is a summary of NY State and NYC numbers

	NYC State (19.4M)		NYC (8.6M)
Date	Cum Cases	Cum Deaths	Cum Cases
29-Feb	0		0
1-Mar	1		1
2-Mar	1		1
3-Mar	1		1
4-Mar	10		1
5-Mar	19		3
6-Mar	40		4
7-Mar	78		11
8-Mar	105		12
9-Mar	142		19
10-Mar	173		36
11-Mar	216		52
12-Mar	325		95
13-Mar	524		213
14-Mar	613	1	269
15-Mar	729	5	329

16-Mar	950	7	453
17-Mar	1,374	12	644
18-Mar	2,382	20	1,339

Sent from Mail for Windows 10

From: Caneva, Duane

Sent: Wednesday, March 18, 2020 1:52 PM

To: Tracey (b)(6) Dr. (b)((b)((b)(6) (b)(6)

Cc: Hunt, (b)(6) (OS/ASPR/EMMO); Brian Benson; Hamel, Joseph (OS/ASPR/IO); (b)((b)(6) MD; Dr. (b)((b)((b)(6) ric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6 (b)(6) (b)(6 (b)(6) (b)(6) (VA.GOV); (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V; (b)(6) (b (b)(6) W; (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) S; WILKINSON, THOMAS; (b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b) CIV USARMY (USA); (b)((b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); (b)(6) (b)(6) TARANTINO, (b)(6) A; KAUSHIK, SANGEETA; (b)(Scott (OS/ASPR/EMMO); Larry G; (b)(6 (b)(6) (b)(6) (b)(6)); Adams, (b)(6) (HHS/OASH); (b)(6) (b)(6) (b Fantinato, Jessica (USDA.GOV); DC; (b)(6) (b)(6) (b)(6) (b)(6) (b) (Ignacio, Joselito; (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (LLogandakar; (b)(6) (b)(6) Ronny Jackson; (b)(6 (b)(6) MD; (b)((b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Kellermann; Taylor, Justin (b)(6)

Subject: RE: Red Dawn Responding, Start 16 March

DHS Science and Technology Master Question List most recent version attached and available here: https://www.dhs.gov/publication/st-master-question-list-covid-19

For questions you would like added, contact: (b)(6)

From: (b)(6)

Sent: Wednesday, March 18, 2020 1:21 PM

To: Subject: RE: Red Dawn Responding, Start 16 March

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

SPECIES SUSCEPTIBILITY

Colleagues from the European Association of Zoo and Wildlife Veterinarians' Infectious Disease Committee have put together a science-based fact sheet on what is known about SARS-COV-2. (as of today).

https://cdn.ymaws.com/www.aazv.org/resource/resmgr/protocols/covid19_faq_17march_2020.eaz.pdf

This is an excellent document that summarizes what is known from experimental trials. It alos let's us know who is doing what. If you scroll down to the table, you will see that cats are listed as LIKELY to be infected.

If you want a little microcosm of the human-animal interface, zoos would be a great place to run long-term studies of keepers and the species they work with. Zoos are a goldmine of data. I set up a nationwide network of zoos in the USA for WNV surveillance in 2002 and could do it again if there is interest.

Tracey

From: Dr. (b)(6)

Sent: Wednesday, March 18, 2020 10:09 AM

To: (b)(6) (b)(6) (b)(6)

Cc: Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) Brian Benson (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Tracey (b)(6) <tmcNamara@westernu.edu>; (b)((b)(6) MD (b)(6) Dr. (b)((b) (b)(6) (b)(6) Caneva, Duane (DHS.GOV) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6 (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (VA.GOV) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) (b (b)(6) W (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) <CHRISALLEN_1(b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 (b)(6 S (b)(6) WILKINSON, THOMAS (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) / CIV USARMY (USA) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)(6) (OS/ASPR/IO) (b)(6) Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)(6) (Chris) (OS/ASPR/IO) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(Scott (OS/ASPR/EMMO) (b)(6) Larry G (b)(6) (b)(6 (b)(6) (b)(6) (b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH) (b)(6) (b)(6) (b)(6) (b (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b) / (b)(6) Ignacio, Joselito (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) / (b)(6) LLogandakar (b)(6) (b)(6) (b)(6) (b)(6) Ronny Jackson (b)(6) (b)(6 (b)(6) MD (b)(6) (b)((b)(6) (b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)

Subject: RE: Red Dawn Responding, Start 16 March

Please protect the VA population seriously. I have finished the hospital analysis and bed/hospital resources are best used along with NPI implementation. I assume NPI is in good shape now. So we focus on the beds. Some of the covid-19 patients will need pretty long hospital stay. I still maintain it is very important to protect the healthcare providers and separate very carefully covid-19 patients and other ICU/ED hospitalized patients of other illnesses. We cannot cross-infected. The damage to the lungs is very serious and the virus attacks the weak point in the immune system. In that matter, anyone with underlying conditions will be vulnerable. We have so many people with coexisting chronic diseases in the US, they don't have to be necessarily 80 years-old. (b)(6) you should rapidly screen+test VA patients if needed. Please do.

(b)(6)

https://newton.isye.gatech.edu/DrLee/

mobile: (b)(6)

Sent with ProtonMail Secure Email.

------- Original Message -------

On Wednesday, March 18, 2020 12:50 PM, Dr. (b)(6) wrote:

I guess it is 400,000 test kits distributed based on places with >50 infected cases (from the WH briefinfs now).

I jjust talked to doctors who have treated these patients in Hong Kong. They said by (b) 10 of hospitalization, even if there is no coughing, the lung is seriously damaged and when patients recover (at all), the lung's damage remains.

(b)(6)

https://newton.isye.gatech.edu/DrLee/

mobile: (b)(6)

Sent with ProtonMail Secure Email.

------- Original Message -------

On Wednesday, March 18, 2020 12:42 PM, Dr. (b)(6) (b)(6) wrote:

Some update on screening and testing -

1. Stockpile said that 14,000 test kits have been sent to 37 sites. I do not know where but some of your locations should have them. I don't know who to ask for the exact distribution.

2. Attached is update on rapid risk-assessment screening and diagnostic testing. CDC asked that I included their website for references on the terms etc. Local public health can add other features as they see fit. I also add a combined screening + testing. That could work out very efficiently. I will be happy to optimize each local site's capabity.

Will have hospital resource analysis in my next email.

Best, (b)

(b)(6)

https://newton.isye.gatech.edu/DrLee/

mobile: (b)(6)

Sent with ProtonMail Secure Email.

Origin
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Messa

ge

On Wednesday, March 18, 2020 12:12 PM, (b)(6) (b)(6) (b)(6) wrote:

Agree Rick. Also think we need to move from NPIs and testing (current focus of leaders) to other challenges in anticipation of where we need to skate to including PPE and reducing background demand on the healthcare system, as much as is possible. We should exhaust everything we can do before crisis standards of care.

I am also watching flu surveillance (ILI in particular). Outpatient clinics ought to be pivoting immediately to virtual care (telephone care/IM/facetime) to care for patients. No patient with ILI ought to be now presenting to an outpatient clinic. Either they are mildly ill and can be managed at home with telephone care (home isolation and home quarantine of other household members) or they are sick enough to require ER care and hospitalization (so don't need an outpatient visit). ILI should go to 0. If it doesn't then we have failed in messaging. That is what I was concerned about when monitoring ILI in Washington state, Seattle, NYC, and Chicago, where ILI rose. That will be the best monitor of how well we are pivoting outpatient care to respond to this fight. I would think that CDC would broadcast this message thru the ILINet network of providers. I will watch the raw numbers that CDC reports. Need to doublecheck with CDC if telephone visits count in ILINet data. Does anyone know? I am pushing to shut it all down in VA except just a small amount of outpatient care for only those things that require F2F care (and only doing that to keep it out of the ER). The new ILI data comes out Friday. States monitor this daily so they should have an idea if total visits to ILINet sentinel providers are declining. Realize that the most recent data is only thru week 10 (week ending March 7). We have lots of HHS addresses, could someone from HHS check on ILINet about telephone visits—are they included in ILI numbers?

PERCENTAGE OF VISITS FOR INFLUENZA-LIKE-ILLNESS REPO										
YEAR	WEEK	AGE 0-4	AGE 5-24	AGE 25-49	AGE 25-64	AGE 50-64	AGE 65	ILITOTAL	TOTAL PATIENTS	NUM. OF PROVIDERS
2019	40	6,240	7,679	4,824	X	1,772	1,443	21,958	1,459,648	2,907
2019	41	6,573	7,672	5,152	X	2,021	1,601	23,019	1,438,128	2,938
2019	42	7,304	8,325	5,557	X	2,115	1,646	24,947	1,432,289	2,962
2019	43	7,894	9,400	6,076	X	2,310	1,793	27,473	1,474,953	2,992
2019	44	8,678	10,091	6,140	X	2,283	1,758	28,950	1,437,349	3,003
2019	45	10,560	12,535	7,160	X	2,464	1,839	34,558	1,464,287	3,018
2019	46	11,424	13,565	7,853	X	2,743	1,965	37,550	1,428,086	2,986
2019	47	12,659	16,901	9,064	X	3,103	2,135	43,862	1,486,041	2,981
2019	48	14,363	14,680	9,117	X	3,206	2,358	43,724	1,276,965	2,990
2019	49	13,795	16,270	11,857	X	3,940	2,774	48,636	1,474,436	2,986

2019	50	14,666	21,780	12,772	X	4,134	2,898	56,250	1,456,396	2,947
2019	51	17,984	29,085	16,217	X	4,845	3,348	71,479	1,421,322	2,917
2019	52	24,048	33,932	24,578	X	7,659	5,398	95,615	1,338,315	2,906
2020	1	21,576	23,388	27,619	X	9,227	6,862	88,672	1,423,566	2,949
2020	2	15,496	22,634	23,518	X	8,186	5,437	75,271	1,481,576	2,976
2020	3	16,468	29,466	21,311	X	7,364	4,714	79,323	1,476,265	2,967
2020	4	18,452	35,078	23,482	X	7,928	4,623	89,563	1,486,176	2,966
2020	5	20,133	43,742	28,605	X	9,461	5,406	107,347	1,556,326	2,956
2020	6	20,047	45,059	29,602	X	9,979	5,617	110,304	1,553,647	2,960
2020	7	17,158	36,481	26,168	X	9,158	5,366	94,331	1,514,910	2,916
2020	8	15,096	28,011	22,872	X	8,243	5,093	79,315	1,408,851	2,914
2020	9	13,430	24,663	21,632	X	8,076	4,923	72,724	1,419,047	2,826
2020	10	13,139	24,478	23,069	X	8,522	5,420	74,628	1,393,951	2,625

Sent from Mail for Windows 10

From: Hunt, Richard (OS/ASPR/EMMO)

Sent: Wednesday, March 18, 2020 11:27 AM

To: (b)(6) (b)(6) Brian Benson; Hamel, Joseph (OS/ASPR/IO)

Cc: Tracey (b)(6) Dr. (b)(6) (b)(6) (b)(6) MD; Dr. (b)(6) (b)(6) (b)(6) Caneva, Duane (DHS.GOV); eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6 (b)(6) (b)(6 (b)(6) (b)(6) (VA.GOV); (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V; (b)(6) (b (b)(6) W; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) S; WILKINSON, THOMAS; (b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) CIV USARMY (USA); (b)(6) (b)(6) (b)(6) (b)(6) Wolfe, Herbert (DHS.GOV); (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin (OS/ASPR/IO); Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; (b)(6 (b)(6) (b)(6) (b)(6)); Adams, Jerome (HHS/OASH); (b)(6) (b)(6) (b Fantinato, Jessica (USDA.GOV); DC; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Ignacio, Joselito (b)(6) (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) ((b)(6) (b)(6) (b)(6) Ronny Jackson; (b)(6) (b)(6) MD; (b)((b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)

Subject: RE: Red Dawn Responding, Start 16 March

"Skate to where the puck ~~is going~~ has already gone. "

Crisis care, crisis care, crisis care.

For a couple decades. many have recoiled against, been in denial of need, and said no to crisis standards of care.

So we're left w/ clinicians being confronted w/ Sophie's choice decisions - crisis care.

Hoping all (government by the people, for the people) can get behind clinicians making decisions on behalf of the greater good.

From: (b)(6) (b)(6) (b)(6)

Sent: Tuesday, March 17, 2020 7:42 PM

To: Brian Benson (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>

Cc: Tracey (b)(6) (b)(6) Dr. (b)(((b) (b)(6) (b)((b)(6) MD (b)(6) Dr. (b) (b) (b)(6) (b)(6) Caneva, Duane (DHS.GOV)

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(b)(6) Ronny Jackson (b)(6) (b)(6
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(b)(6) Jim (b)(6) (b)(6)
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Subject: RE: Red Dawn Responding, Start 16 March

March 17

Date of 1st Case	24-Jan	1-Feb	30-Jan	

Date of 1st Death	15-Feb		4-Mar		21-Feb		
	France (65M)		Spain (47M)		Italy (60M)		
	Cum Cases	Cum Deaths	Cum Cases	Cum Deaths	Cum Cases	Cum Deaths	Cum Cases
20-Feb	12	1	2		3	0	15
21-Feb	12	1	2		20	1	35
22-Feb	12	1	2		63	2	35
23-Feb	12	1	2		155	3	35
24-Feb	12	1	3		229	7	53
25-Feb	14	1	7		322	11	57
26-Feb	18	2	13		453	12	60
27-Feb	38	2	23		655	17	60
28-Feb	57	2	32		889	21	63
29-Feb	100	2	45		1,128	29	68
1-Mar	130	2	84		1,694	34	73
2-Mar	191	3	120		2,036	52	99
3-Mar	212	4	151		2,502	79	103
4-Mar	285	4	202		3,089	107	154
5-Mar	423	7	248	1	3,858	148	197
6-Mar	613	9	517	10	4,636	197	309
7-Mar	949	16	613	17	5,833	233	434
8-Mar	1,126	19	848	25	7,375	366	544
9-Mar	1,412	30	1,231	30	9,172	463	728
10-Mar	1,784	33	1,646	35	10,149	631	1,010
11-Mar	2,281	49	2,277	55	12,462	827	1,311
12-Mar	2,876	61	3,059	86	15,113	1,016	1,701
13-Mar	3,661	79	4,209	120	17,660	1,266	2,110
14-Mar	4,499	91	5,841	191	21,157	1,441	2,952
15-Mar	5,423	127	7,753	288	24,747	1,809	3,774
16-Mar	6,633	148	9,942	342	27,980	2,158	4,661
17-Mar	7,730	175	11,316	510	31,506	2,503	*6,244*

Sent from Mail for Windows 10

From: Brian Benson

Sent: Tuesday, March 17, 2020 3:10 PM

To: Hamel, Joseph (OS/ASPR/IO)

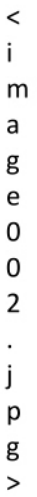
Cc: (b)(6) (b)(6) Dr. (b)((b)((b)((b)(6) MD; (b)(6) (b)(6) Dr. (b) (b)((b)(6) Caneva, Duane (DHS.GOV); eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6 (b)(6) (b)(6 (b)(6) (b)(6) (b)(6) (VA.GOV); (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V; (b)(6) (b (b)(6) W; (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6 S; Hunt, (b)(6) (OS/ASPR/EMMO); WILKINSON, THOMAS; (b)(6) (b)(6) (b)(6) Martin, Greg (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)((b)(6) (b)(6) , (b)(6) Wolfe, Herbert (DHS.GOV); (b)(6) (b)(6) , (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin (OS/ASPR/IO); Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); (b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA; (b)(Scott (OS/ASPR/EMMO); Larry G; (b)(6 (b)(6) (b)(6) (b)(6)); Adams, (b)(6) (HHS/OASH); (b)(6) (b)(6) (b Fantinato, Jessica (USDA.GOV); DC; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(Ignacio, Joselito (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6 ((b)(6) (b)(6) (b)(6) Ronny Jackson; (b)(6 (b)(6) MD; (b)((b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)

Subject: Re: Red Dawn Responding, Start 16 March

Germano (Italian ICU doc) just updated me.....things still bad. He sent CT a week ago, with lung images being worse than clinical picture, in young patients. In my urgent care, Pt comes in and if concerns for COVID, I send to car for team to flu and RSV (that's what we've got POC). As an aside I was reading I think IL-2 and 4 higher early in viral infections and procalcitonin higher in bacterial....can we get the folks at i-STAT to get other inflammatory markers up ASAP and go door to door for other forms of testingPRN.

Anyway after flu and RSV negative, I bring in back door for Xchest v/s and exam. If all ok, send out with albuterol and Doxy (if chronic medical conditions, 2/2 anti inflammatory properties and MRSA efficacy) and isolation instructions. I still don't have results from when I started testing for COVID last Thursday. Thoughts please?

See Germano article he sent below.



Channels

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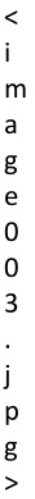
[ ][]

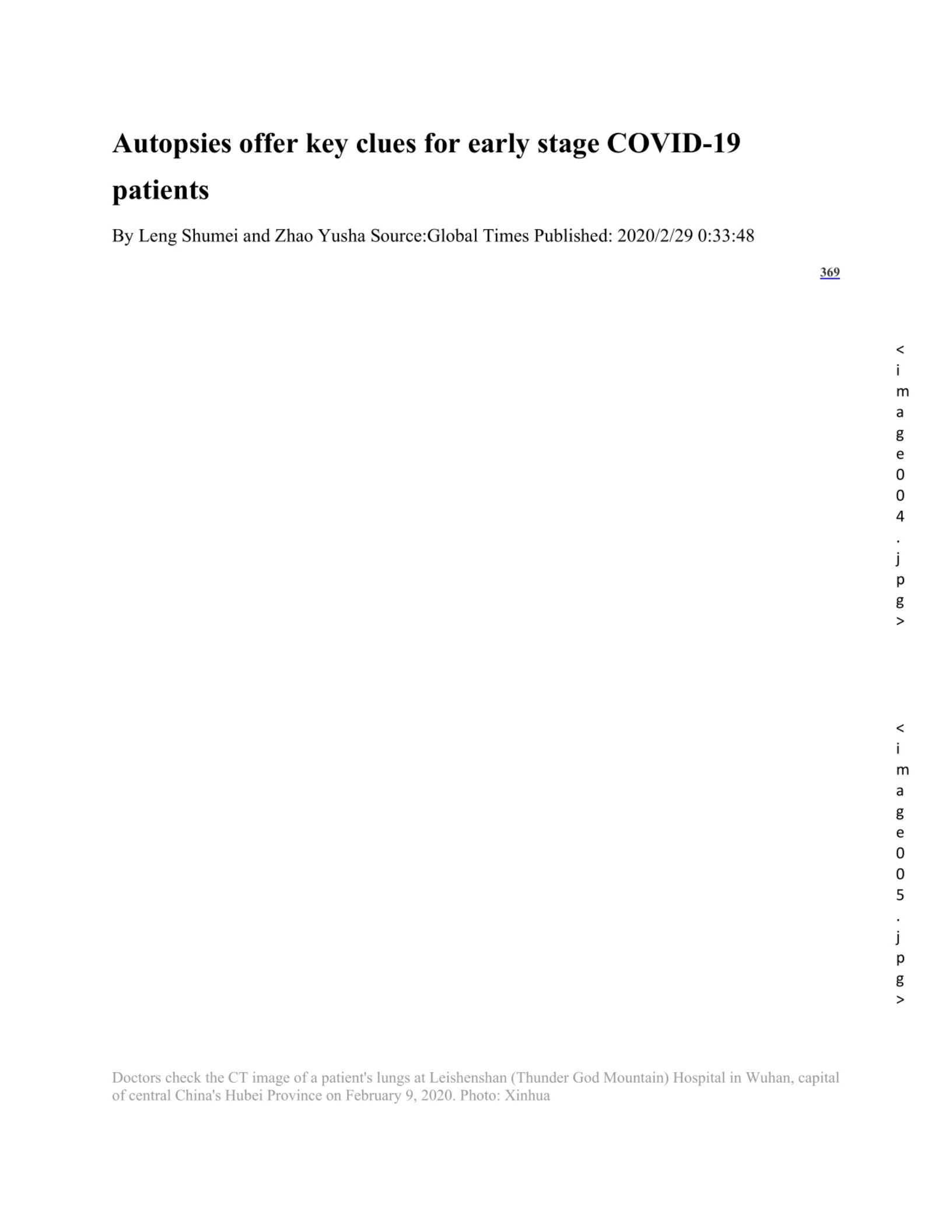


HOME >> **CHINA**,**SPECIAL-COVERAGE**

Autopsies offer key clues for early stage COVID-19 patients

By Leng Shumei and Zhao Yusha Source:Global Times Published: 2020/2/29 0:33:48

369



Doctors check the CT image of a patient's lungs at Leishenshan (Thunder God Mountain) Hospital in Wuhan, capital of central China's Hubei Province on February 9, 2020. Photo: Xinhua

Autopsies show severe damage to COVID-19 patients' lungs and immune system, according to a doctor in Wuhan reached by the Global Times, who called for measures to prevent fibrosis of the lungs at an early stage of the disease.

Evaluation Only. Created with Aspose.HTML. Copyright 2013-2020 Aspose Pty Ltd.d AIDS as it damages both the lungs and immune systems," Peng Zhiyong, director of the intensive care unit of the Zhongnan Hospital of Wuhan University in Wuhan, told the Global Times on Friday

On Mar 17, 2020, at 1:27 PM, Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov> wrote:

Or have the critical care staff to support the patient… That's currently being overlooked.

Strategic Innovation and Emerging Technology Manager

Assistant Secretary for Preparedness and Response

Office: (b)(6)

Cell: (b)(6)

From: Tracey (b)(6) (b)(6)

Sent: Tuesday, March 17, 2020 1:41 PM

To: Dr. (b)(6) (b)(6) MD
(b)(6)

Cc: Brian Benson (b)(6) (b)(6) (b)(6) (b)(6) Dr. (b)(6) (b)(6) (b)(6) Caneva, Duane (DHS.GOV) (b)(6) eric.mcdonald@sdcounty.ca.gov; (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (VA.GOV) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) (b (b)(6) W (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)

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(OS/ASPR/EMMO) (b)(6) WILKINSON, THOMAS
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Greg (b)(6) (b)(6) Walters, (b)(6) (b)(6)
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Dodgen, Daniel (OS/ASPR/SPPR) <Daniel.Dodgen@HHS.GOV>; DeBord, Kristin
(OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR)
<Sally.Phillips@hhs.gov>; (b)(6) CIV USARMY (USA)
(b)(6) (b)((b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) Wolfe, Herbert (DHS.GOV)
(b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) jwleduc@utmb.edu; Johnson, Robert
(OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin (OS/ASPR/IO)
<Kevin.Yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>;
Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO)
<David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; Wade,
(b)(6) (b)(6) (b)(6) KAUSHIK, SANGEETA
(b)(6) (b)(Scott (OS/ASPR/EMMO) (b)(6) Larry
G (b)(6) (b)(6 (b)(6) (b)(6) (b)(6)
(b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH)
(b)(6) (b)(6) (b)(6) (b) (b)(6) Fantinato,
Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>;
(b)(6) (b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) (b) <jschnitzer@mitre.org>; Ignacio, Joselito (b)(6)
(b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6)
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(b)(6) (b)(6) (b)(6) MD (b)(6)
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(b)(6) (b)(6)

Subject: Re: Red Dawn Responding, Start 16 March

I would be careful with the number of ventilators. Numbers are one thing, wether they work, have been tested, is another thing altogether.

Tracey

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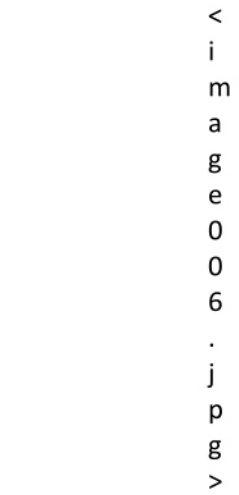

From: (b)((b)(6) MD (b)(6)
Sent: Tuesday, March 17, 2020 10:21:53 AM
To: Dr. (b)(((b) (b)(6)
Cc: Brian Benson (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) <(b)(6) Dr. (b)((b)
(b)(6) (b)(6) <(b)(6) Caneva,
Duane (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>;
(b)(6) (b)((b)(6) (b)(6) (b)((b)(6)
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(b)(6) W (b)(6) (b)(6) (b)((b)(6) (b)(6)
(DSHS) (b)(6) (b)(6) (b)(6)
<CHRISALLEN_ (b)(6) (b)(6) (b)(6) (b)(6)
(b)(6) <LBorio@iqt.org>; (b)(6 (b)(6 S (b)(6) Hunt, (b)(6)
(OS/ASPR/EMMO) (b)(6) WILKINSON, THOMAS
(b)(6) M.D. (b)(6) (b)(6)
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((b)(6) Walters, (b)(6) (b)(6) (b)(6)
(b)(6) (b)(6) (b)(6)
Dodgen,tDanielt(OS/ASPR/SPPR) <daniel.dodgen@hhs.gov>; DeBord,Kristin
(OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR)
<Sally.Phillips@hhs.gov>; (b)(6) ((b)(6)
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(b)(6) Eastman, (b)(6) (b)(6)
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(b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, (b)(6) (b)(6) Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)(6) (Chris) (OS/ASPR/IO) (b)(6) Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(Scott (OS/ASPR/EMMO) (b)(6) Larry G (b)(6) (b)(6 (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH) (b)(6) (b)(6) (b)(6) (b (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b) ((b)(6) Ignacio, Joselito (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) <kevin@collaborate.org>; (b)(6) (b)(6 (<llogan@cvm.tamu.edu>;(b)(6) b)(6) (b)(6) (b)(6) Ronny Jackson (b)(6) (b)(6 (b)(6) MD (b)(6) (b)((b)(6) (b)(6) Jim (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6)

Subject: Re: Red Dawn Responding, Start 16 March

Adding a few colleagues.

(b)(6) b)(6) **MD, FACEP, FFSEM**
Founder, Chief Medical Officer
Patronus Medical
San Diego / Washington DC / Los Angeles

Office: 866.870.1577
Fax: 703.738.7605
Mobile: (b)(6)

https://protect2.fireeye.com/url?k=5f8c1e2d-03d917fd-5f8c2f12-0cc47a6a52de-7ffbd1865fa25e35&u=https://protect2.fireeye.com/url?k=bb1df19b-e748f888-bb1dc0a4-0cc47adb5650-e7e5a3a6fc182949&u=https://protect2.fireeye.com/url?k=d1ed9cb6-8db985ca-d1edad89-0cc47adc5fa2-d2905c2d6444c751&u=http://www.patronusmedical.com/
rdarling@patronusmedical.com
https://protect2.fireeye.com/url?k=4ae02f68-16b526b8-4ae01e57-0cc47a6a52de-72ec93bd5b879549&u=https://protect2.fireeye.com/url?k=e4e30baa-b8b602b9-e4e33a95-0cc47adb5650-a852491b127cbe73&u=https://protect2.fireeye.com/url?k=17778e33-4b23974f-1777bf0c-0cc47adc5fa2-6b8ef5753e83490b&u=http://www.linkedin.com/in/robertgdarling/

On Tue, Mar 17, 2020 at 12:55 PM Dr. (b)(6) (b)(6) wrote:

> We must optimize strategically the federal resources,s because it is not about just on state, there are at least 3 big fire now, if not more. So every step we are going to take on resource allocation is going to be very critical. As mentioned NYP took out all medical students from their care team now. That could be an excellent reserve when they need them. Elective procedures are being canceled already so that care is more focused on covid-19 cases. We will see more of these as it mushrooms out to multiple communities. And at some point, yes federal resources have to come in. Medical tents remain an important options for those big cluster locations. We need to optimize what is needed to set them up and who will mend the tents etc. I will talk to Stockpile today. We had a discussion last September and they had concerns at that time regarding not sufficient ventilators (750K at that time that they have). I want to calculate some of the few items to get a sense where we are now.
>
> (b)(6) I have no doubt community transmission began ealier, and I won't wait for the first death, since CFR is only 3-14%, first death took us back at least 14 days priot, and earlier still there must be some non-death ones already.
>
> (b)(6)
>
> https://newton.isye.gatech.edu/DrLee/
>
> mobile: (b)(6)
>
> Sent with ProtonMail Secure Email.

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On Tuesday, March 17, 2020 12:42 PM, Brian Benson (b)(6) wrote:

> Group, is it wise to stop all Non-essential medical personnel from reporting to work. Including outpatient clinics urgent cares, etc. In Wuhan, as healthcare workers got sick, they mobilized providers from other regions. In the US, where is that other region? It may need to be from outpatient staff that can take the place of hospital folks as they get sick. Any thoughts?
>
> > On Mar 17, 2020, at 11:34 AM, Tracey (b)(6) (b)(6) wrote:
> >
> > When do we call in the cavalry? The governor of NY has asked for help from the Army Corps of Engineers. Why aren't other governors doing the same?
> >
> > What is the capacity of DoD to help in this crisis??? If ever therewas a time to bring all assets to the table, this is it.
> >
> > (b)(6)
>
> Get Outlook for Android

From: Dr. (b)(6)
Sent: Tuesday, March 17, 2020 7:03:58 AM
To: (b)(6)
Cc: (b)(6); Caneva, Duane (b)(6) McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; (b)(6) MD (b)(6) V (b)(6) W (b)(6) <DHanfling@iqt.org>; (b)(6) (DSHS) (b)(6) <CHRISALLEN (b)(6) <LBorio@iqt.org>; Tracey (b)(6) S (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) WILKINSON, THOMAS (b)(6) M.D. (b)(6) (b)(6) (b)(6) Walters, (b)(6) Dodgen,tDanielt(OS/ASPR/SPPR) <daniel.dodgen@hhs.gov>; DeBord,Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR)

<Sally.Phillips@hhs.gov>; (b)(6) (b)(6)
(b)(6) (b)((b)(6) (b)(6)
(b)(6) (b)(6) (b)(6) WOLFE, HERBERT
(b)(6) Eastman, (b)(6)
(b)(6) (b)(6) (b)(6)
(b)(6) (b)(6)
(b)(6) Johnson, Robert (OS/ASPR/BARDA)
<Robert.Johnson@hhs.gov>; Yeskey, Kevin <kevin.yeskey@hhs.gov>;
Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John
(OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, (b)(6) (Chris)
(OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO)
<Joseph.Hamel@hhs.gov>; (b)(6) (b)(6) (b)(6)
TARANTINO, (b)(6) A (b)(6) KAUSHIK,
SANGEETA (b)(6) (b)(Scott (OS/ASPR/EMMO)
<Scott.Lee@hhs.gov>; Larry G (b)(6) (b)(6 (b)(6)
(b)(6) (b)(6) (b)(6))
(b)(6) Adams, Jerome (HHS/OASH)
(b)(6) (b)(6) (b)(6) (b <(b)(6) b)(6)
Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC
<michelle.colby@usda.gov>; (b)(6)
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(b)(6) (b)(6) (b) (
(b)(6) Ignacio, Joselito <(b)(6)
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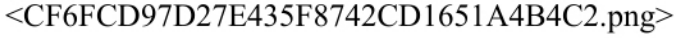
LLogandakar (b)(6) (b)(6) (b)(6)
(b)(6) Ronny Jackson
(b)(6) Brian Benson (b)(6)
Dr. (b)(((b) (b)(6)
Subject: Re: Red Dawn Responding, Start 16 March

(b)(6) this truly frightens me. one case is one too many, **I hope political leaders can act and act quickly.** TWe must do so or else we can't help these other cities that are escalated so rapidly. And globally, every country has to tighten, because we are running out of resources to do proper quarantine. We are already running out of healthcare resources, NYP has already canceled all elective procedures March 16. And many other hospitals who need care for covid-19 are facing the same issue. The medical tents appendices are needed and must be planned. I don't know what medical reserve we have and we have multiple fires burning simultaneously!

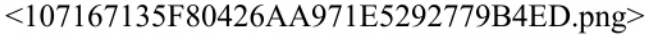
On Tue, Mar 17, 2020 at 9:53 AM (b)(6) (b)(6) (b)(6)
wrote:

(b)((b)(6) said on GMA this morning that like 1918, this will be a tale of many cities. What happens in the cities impacted the earliest in the US including Seattle, San Francisco, and NYC will likely be very different from what we see in other cities (just like 1918, timing of implementing TLC in individual cities in their individual epi curves will matter). The hardest message to convey to political leaders, public health leaders, and the public was the need to take action before the storm arrived and when the sun was shining.

Interesting to look at the regional variation in Italy.



It is looking just like what we observed in Hubei (including Wuhan) vs. Wuhan.



It will be important to look a little more closely inside the US—the aggregate numbers miss the real story. The storyline of the articles written about the variation in outcomes in US cities in 1918, is now unfolding and writing itself in real time before our very eyes.

Sent from Mail for Windows 10

From: Dr. (b)((b)

Sent: Tuesday, March 17, 2020 9:09 AM

To: (b)(6) (b)(6)

Cc: (b)(6) Caneva, Duane; McDonald, Eric; (b)(6) (b)(6 (b)((b)(6) MD; (b)(6) (b)(6 (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V; (b)(6) (b (b)(6) W; (b)(6) (b)((b)(6) (DSHS); (b)(6) (b)(6) (b)(6)

(b)(6) (b)(6) (b)(6) b)(6) (b)(6 (b)(6) S; Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; (b)(6) (b)(6) (b)(6) (Walters, (b)(6) (b)(6) (b)(6) (b)(6) Dodgen,tDanielt(OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) WOLFE, HERBERT; Eastman, (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA); Yeskey, (b)(6) Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, (b)(6) (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); (b)(6) (b)(6) TARANTINO, (b)(6) A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; (b)(6 (b)(6) (b)(6) (b)(6)); Adams, Jerome (HHS/OASH); (b)(6) (b)(6) (b Fantinato, Jessica (USDA.GOV); DC; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b) (Ignacio, Joselito; (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6 ((b)(6) (b)(6) (b)(6) Ronny Jackson; Brian Benson; Dr. (b)(((b)

Subject: Re: Red Dawn Responding, Start 16 March

Containing covid-19 -- direct info from news -- See how Europe+US affecting the covid-19 counts - from 100 to 157 -

https://www.reuters.com/article/us-health-coronavirus-hongkong-lam/hong-kong-to-quarantine-all-visitors-to-preserve-success-of-coronavirus-efforts-idUSKBN2140A4

"If we don't adopt some strict measures ... I'm afraid all precaution efforts done in the past two months would be wasted. It will affect the public health of Hong Kong."

Four of the 157 confirmed coronavirus patients in Hong Kong have died. **Fifty of the latest 57 cases** were people with recent travel history, Lam said.

Hong Kong had previously designated three public housing blocs for quarantine, but those will be reserved for the high-risk cases.

The lower-risk cases will be asked to stay under home quarantine or be placed under surveillance, which can include electronic wristbands with movement trackers, irregular landline phone calls and other means.

(b)(6)

https://newton.isye.gatech.edu/DrLee/

mobile: (b)(6)

Sent with ProtonMail Secure Email.

On Tue, Mar 17, 2020 at 8:28 AM (b)(6) (b)(6) (b)(6) wrote:

Worth the read.

https://osf.io/fd4rh/?view_only=c2f00dfe3677493faa421fc2ea38e295

Sent from Mail for Windows 10

From: (b)(6)

Sent: Monday, March 16, 2020 11:58 PM

To: 'Caneva, Duane'; 'McDonald, Eric'; (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) MD'; (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) V'; (b)(6) (b) (b)(6) W'; (b)(6) (b)(6 (b)(6) (DSHS)'; 'Dr. (b)((b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) 'Baric, (b)(6 S'; 'Hunt, (b)(6) (OS/ASPR/EMMO)'; 'WILKINSON, THOMAS'; 'M.D.'; (b)(6) (b)(6) (b)(6) ('Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) 'Dodgen,tDanielt(OS/ASPR/SPPR)'; 'DeBord,Kristin (OS/ASPR/SPPR)'; 'Phillips, Sally (OS/ASPR/SPPR)'; (b)(6) (b)(6) USA)'; (b)((b)(6) (b)(6) (b)(6) (b)(6) 'WOLFE, HERBERT'; 'Eastman, (b)(6) (b)(6) (b)(6) (b)(6) 'Johnson, Robert (OS/ASPR/BARDA)'; 'Yeskey, Kevin'; 'Disbrow, Gary (OS/ASPR/BARDA)'; 'Redd, John (OS/ASPR/SPPR)'; 'Hassell, (b)(6) (Chris) (OS/ASPR/IO)'; 'Hamel, Joseph (OS/ASPR/IO)'; (b)(6) (b)(6) 'TARANTINO, DAVID A'; 'KAUSHIK, SANGEETA'; 'Lee, Scott (OS/ASPR/EMMO)'; 'Larry G'; (b)(6 (b)(6) (b)(6) (b)(6))'; 'Adams, Jerome (HHS/OASH)'; (b)(6) (b)(6) (b) 'Fantinato, Jessica (USDA.GOV)'; 'DC'; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b) (b 'Ignacio, Joselito'; (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)6 (b 'LLogandakar'; (b)(6) (b)(6) 'Ronny Jackson'; 'Brian Benson'; 'Dr. (b) ((b)(

Subject: RE: Red Dawn Responding, Start 16 March

Looks like my attachments did not make it through for some reason

From: Caneva, Duane (b)(6)

Sent: Monday, March 16, 2020 10:54 PM

To: McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) MD (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) V (b)(6) (b)(6) (b (b)(6) W (b)(6) (b)(6) (b)((b)(6) (b)(6) (DSHS) (b)(6) Dr. (b) (b) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) <LBorio@iqt.org>; Tracey (b)(6) (b)(6) (b)(6 (b)(6 S (b)(6) Hunt, (b)(6) (OS/ASPR/EMMO) (b)(6) WILKINSON, THOMAS (b)(6) M.D. (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Walters, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Dodgen,tDanielt(OS/ASPR/SPPR) <daniel.dodgen@hhs.gov>; DeBord,Kristin (OS/ASPR/SPPR) <Kristin.DeBord@hhs.gov>; Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>; (b)(6) CIV USARMY (USA) (b)(6) (b)((b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) WOLFE, HERBERT (b)(6) Eastman, (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>; Yeskey, Kevin (b)(6) Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>; Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>; (b)(6) (b)(6) (b)(6) TARANTINO, (b)(6) A (b)(6) KAUSHIK, SANGEETA (b)(6) (b)(Scott (OS/ASPR/EMMO) (b)(6) Larry G (b)(6) (b)(6 (b)(6) (b)(6) (b)(6) (b)(6)) (b)(6) Adams, (b)(6) (HHS/OASH) (b)(6) (b)(6) (b)(6) (b

(b)(6) (b)(6) Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>; (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b) (b)(6) Ignacio, Joselito (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) (b)(6) LLogandakar (b)(6) (b)(6) (b)(6) (b)(6) Ronny Jackson (b)(6) MothersheadtJerry (b)(6) Brian Benson (b)(6) Dr. (b) (b) (b) (b)(6)

Subject: Red Dawn Responding, Start 16 March

New string. Please use this going forward.

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