



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health  
Freedom of Information Office  
Building 31, Room 5B-35  
31 Center Drive, MSC 2107  
Bethesda, Maryland 20892-2107  
phone: (301) 496-5633  
fax: (301) 402-4541

Via Email: [chuck@dcnf.org](mailto:chuck@dcnf.org)

November 23, 2020

Chuck Ross  
The Daily Caller  
22110 W. 52<sup>nd</sup> Street  
Shawnee, KS 66226

Re: NIH FOIA Case No.: 53853; Daily Caller v. HHS, Case No. 20-cv-1149 (DLF) (D.D.C.)

Dear Mr. Ross:

This is a partial response to the Freedom of Information Act (FOIA) request that is the subject of the complaint filed in *Daily Caller v. HHS*, 20-cv-1149, now pending in the U.S. District Court for the District of Columbia. Your FOIA request, dated April 1, 2020, was received by the National Institutes of Allergy and Infectious Diseases (NIAID) on the same day.

You requested communications of Dr. Anthony Fauci and Dr. H. Clifford Lane that either 1) include a World Health Organization official and concern the novel coronavirus, or 2) discuss the World Health Organization or certain of its officials, as well as China and the novel coronavirus. You requested these communications from January 1, 2020 to April 1, 2020.

In accordance with the Court's order dated September 22, 2020, we have processed 301 pages of responsive records this month, in addition to 300 pages that were processed last month. We are producing them to you, with certain information withheld pursuant to FOIA Exemptions 4 and 6 of the FOIA, 5 U.S.C. 552(b)(4), 5 U.S.C. 552 (b)(6) and sections 5.65 and 5.67 of the HHS FOIA Regulations, 45 C.F.R. Part 5. Exemption 4 protects from disclosure trade secrets and commercial or financial information that is privileged and confidential. Exemption 6 exempts from disclosure records the release of which would cause a clearly unwarranted invasion of personal privacy.

Please direct any questions regarding this response to James Bickford of the Department of Justice, who can be reached at [James.Bickford@usdoj.gov](mailto:James.Bickford@usdoj.gov), or (202) 305-7632.

Sincerely,

Gorka Garcia-Malene  
Freedom of Information Act Officer, NIH

**From:** Ilona Kickbusch  
**Sent:** Wed, 4 Mar 2020 16:06:55 +0100  
**To:** Amelie RIOUX  
**Cc:** Dzau, Victor J.; (b) (6); (b) (6); Fauci, Anthony (NIH/NIAID) [E]; Fore Henrietta; Gao Fu; Gashumba Diane; (b) (6); Suzuki Yasuhiro; (b) (6); Vega Morales Jeanette; VijayRaghavan Krishnaswamy; Skvortsova Veronika; Gro Brundtland; As Sy; Elhadj SY; Tore Godal; Godal, Tore; (b) (6); SCHWARTLANDER, Bernhard F.; RYAN, Michael J.; Pate Muhamed; Kanarek, Morgan; (b) (6); (b) (6); Conrad, Patricia (NIH/NIAID) [E]; (b) (6); (b) (6); Sheila Austria; (b) (6); (b) (6); Teresa Miller de Vega; Marston, Hilary (NIH/NIAID) [E]; Steven T. Smith; (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); Zacharie Gahungu; (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); Toomas Palu  
**Subject:** Re: GPMB: MESSAGE ON BEHALF OF THE CO-CHAIRS: UPDATE: CONFIRMING 4 MARCH TELECONFERENCE

Dear all - I had an awful flight mess up but since I was involved in the support group you know my positions. Let me know if I can help with something ILona

Sent from my iPhone

On 2 Mar 2020, at 11:28, Amelie RIOUX (b) (6) wrote:

Dear Board members,

We are confirming the Board teleconference on **Wednesday, 4 March at 14:00 Geneva time**.

Please find attached the agenda (also copied below) and the call-in numbers. The Access code is (b) (4), (b) (6)

Please let us know if you have any questions.

Thank you very much,

Amélie Rioux  
On behalf of the Co-Chairs

#### Participant access

<image001.png> (b) (4), (b) (6)  
Access code (b) (4), (b) (6)

<image005.png>

Optional dial-in numbers  
International  
(b) (6) (English) (b) (6)

Security code: For this conference a Security code is not necessary.

(b) (6) (Italiano) (b) (6)  
(b) (6) (Deutsch) (b) (6)  
(b) (6) (Français)  
[Local Access](#)

<image004.png> Access via [Web](#)

## Global Preparedness Monitoring Board Teleconference

4 March 2020, 14:00-15:00 CET

### Agenda

1. Welcome and Roll call
2. Updates and stock taking on the COVID-19 outbreak
  - Update from George Fu Gao (TBC)
  - Update and Proposal from Jeremy Farrar
3. Discussion: Actions from the Board on the COVID-19 outbreak (30 minutes)
4. Adjourn

**From:** Amelie RIOUX

**Sent:** Tuesday, 25 February 2020 10:18

**To:** Dzau, Victor J. (b) (6); (b) (6); (b) (6);  
Anthony Fauci (b) (6); Fore Henrietta (b) (6); Gao Fu  
(b) (6); Gashumba Diane (b) (6); (b) (6); Ilona Kickbusch  
(b) (6); Suzuki Yasuhiro (b) (6)  
(b) (6); Vega Morales Jeanette (b) (6); VijayRaghavan  
Krishnaswamy (b) (6); Skvortsova Veronika (b) (6)  
**Cc:** Gro Brundtland (b) (6); As Sy (b) (6); Elhadj SY  
(b) (6); Tore Godal (b) (6); Godal, Tore (b) (6);  
(b) (6); SCHWARTLANDER, Bernhard F. (b) (6); RYAN,  
Michael J. (b) (6); Pate Muhamed (b) (6); Kanarek, Morgan  
(b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); 'Sheila  
Austria' (b) (6); (b) (6); (b) (6);  
Teresa Miller de Vega (b) (6); 'Marston Hilary' (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); Zacharie Gahungu  
(b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); Toomas Palu

(b) (6)

**Subject:** GPMB: MESSAGE ON BEHALF OF THE CO-CHAIRS: UPDATE

MESSAGE ON BEHALF OF THE GPMB CO-CHAIRS DR BRUNDTLAND AND MR SY

Dear Board members,

Thank you to those of you who joined the call on Thursday on short notice.

In light of our discussion, we would like to update you on a few matters:

- **Functioning of the Secretariat.** Over the last few months, there have been some issues with the functioning of the Secretariat. We had an initial discussion with the director of the Secretariat in December to share our concerns with the speed of progress, and clarified our expectations. Unfortunately, although there was some initial progress, we felt it was insufficient and could jeopardize the Board's work. We therefore asked the WHO Director-General to replace the director of the Secretariat. The co-Chairs are working with WHO to ensure the position is filled rapidly and to maintain continuity of service. Amélie Rioux (b) (6) will serve as the focal point during the interim period. We would also appreciate if the Board's Informal Support Group could be activated and provide additional support in the coming weeks.
- **Coronavirus outbreak.** We have asked Jeremy Farrar to act as the Board's focal point on the COVID-19 outbreak, to represent and advise the Board on the science of the outbreak and the financing of the response. We thank Jeremy for agreeing to take on this role.
- **Follow-up Board teleconference call.** Since many of you were unable to attend Thursday's call, we wish to propose to hold a follow-up Board teleconference call on **4 March at 14:00 Geneva time**. The purpose of the call will be to discuss the coronavirus outbreak, including Jeremy's proposal for Board action on financing. We would appreciate if you could confirm your participation to Amélie Rioux (b) (6). A more detailed agenda and call-in details will be shared shortly.
- **In-person Board meeting.** We wish to confirm that the next in-person Board meeting will take place **Tuesday-Wednesday, 5-6 May 2020, in Geneva**. The meeting will be an important opportunity to further discuss strategic issues as well as a draft of the annual report. We will communicate further on logistical details.

As always, thank you for your support and continued engagement.

With kind regards,

Gro and As

<Agenda Board telcon 4 Mar Fnl.pdf>

<Local\_Access\_en.pdf>



**From:** Wieler, Lothar  
**Sent:** Wed, 4 Mar 2020 13:35:41 +0000  
**To:** KABIR, Sophia; SHOC; Office of the Director-General; Redfield, Robert R. (CDC/OD) (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); David Heymann; Felicity Harvey (b) (6); Chris. Elias (b) (6); Jeremy Farrar; (b) (6); (b) (6); Fauci, Anthony (NIH/NIAID) [E]; (b) (6); (b) (6); (b) (6); GREIN, Thomas; COX, Paul Michael; SCHWARTLANDER, Bernhard F.; MINHAS, (b) (6); Conrad, Patricia (NIH/NIAID) [E]; MAHJOUR, Jaouad; FALL, Ibrahima Soce; Thomas R. Frieden; elhadj.sy; Lynn Banks; President | Resolve to Save Lives; (b) (6); (b) (6); AL-SHORBAJI, Farah; (b) (6); Robynn Leidig; DRURY, Patrick Anthony; Dr VAN KERKHOVE, Maria; (b) (6); (b) (6); (b) (6); (b) (6); cherylc; GRAAFF, Peter Jan; POOLE, Marcia; Tarik Mohammed (b) (6); (SPmig) Carlos Navarro Colorado; (b) (6); Ryan Morhard; BRIAND, Sylvie; MORGAN, Oliver; Harries, Jenny; Awwad, David (NIH/NIAID) [C]; SIMONSON, Stewart; SINGER, Peter Alexander; (SPmig) Carlos Navarro Colorado  
**Cc:** RYAN, Michael J.; FARES, Christine Youssef; BOKO, Ivana  
**Subject:** AW: Informal coronavirus teleconference: agenda + background documents  
**Attachments:** image001.png

Dear All,

Sorry for being so Brief today but I had to leave for a meeting.

We will slow down the coming epidemic in our country by containment as much as possible to stretch it in time. Contact tracing and Quarantine as well as Isolation seems to come to a limit in a shorter time Span in certain regions than anticipated. It boils down to HCW and Medical Doctors that get infected or are contact of category 1, and this obviously diminishes medical Ressourcen. IPE in hospital and ambulatory is one KEY!! We have to protect them.

Best

Lothar

Gesendet von meinem BlackBerry 10-Smartphone.

Von: KABIR, Sophia

Gesendet: Mittwoch, 4. März 2020 14:20

An: SHOC; Office of the Director-General; (b) (6); (b) (6); (b) (6);

(b) (6); Wieler, Lothar; (b) (6); (b) (6); (b) (6); (b) (6); David Heymann; Felicity Harvey (b) (6); Chris. Elias;

(b) (6); Jeremy Farrar; (b) (6); (b) (6); (b) (6); (b) (6); GREIN, Thomas; COX, Paul Michael; SCHWARTLANDER, Bernhard F.; MINHAS, Raman; (b) (6);

(b) (6); MAHJOUR, Jaouad; FALL, Ibrahima Soce; Thomas R. Frieden; elhadj.sy; Lynn Banks; President | Resolve to Save Lives; (b) (6); (b) (6); AL-SHORBAJI, Farah;

(b) (6); Robynn Leidig; DRURY, Patrick Anthony; Dr VAN KERKHOVE, Maria; (b) (6); (b) (6); (b) (6); (b) (6); cherylc; GRAAFF, Peter Jan; POOLE, Marcia; Tarik Mohammed; (b) (6); (SPmig) Carlos Navarro Colorado;

(b) (6); Ryan Morhard; BRIAND, Sylvie; MORGAN, Oliver; Harries, Jenny; Awwad, David

(NIH/NIAID) [C]; SIMONSON, Stewart; SINGER, Peter Alexander; (SPmig) Carlos Navarro Colorado  
Cc: RYAN, Michael J.; FARES, Christine Youssef; BOKO, Ivana  
Betreff: Informal coronavirus teleconference: agenda + background documents

Dear colleagues,

Please find the latest EPI WIN update attached, which Mike Ryan just mentioned during the call.

Kind regards,

Sophia

From: KABIR, Sophia

Sent: Tuesday, March 3, 2020 7:34 PM

To: SHOC (b) (6); Office of the Director-General (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);

Felicity Harvey (b) (6); Chris Elias

(b) (6); (b) (6); (b) (6); Jeremy Farrar (b) (6); (b) (6);

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

(b) (6); (b) (6); GREIN, Thomas (b) (6); COX, Paul Michael

(b) (6); SCHWARTLANDER, Bernhard F. (b) (6); MINHAS, Raman

(b) (6); (b) (6); (b) (6); MAHJOUR, Jaouad (b) (6); (b) (6);

FALL, Ibrahima Soce (b) (6); Thomas R. Frieden (b) (6); Elhadj SY

(b) (6); Lynn Banks (b) (6); President | Resolve to Save Lives

(b) (6); (b) (6); (b) (6); (b) (6); AL-SHORBAJI, Farah

(b) (6); (b) (6); Robynn Leidig (b) (6); DRURY,

Patrick Anthony (b) (6); Dr VAN KERKHOVE, Maria (b) (6);

(b) (6); (b) (6); (b) (6); (b) (6); Cheryl Cohen

(b) (6); GRAAFF, Peter Jan (b) (6); POOLE, Marcia (b) (6); Tarik

Mohammed (b) (6); (b) (6); (b) (6); (b) (6);

(b) (6); Ryan Morhard (b) (6); BRIAND, Sylvie (b) (6);

MORGAN, Oliver (b) (6); Harries, Jenny (b) (6); Awwad, David

(NIH/NIAID) [C] (b) (6); SIMONSON, Stewart (b) (6); SINGER, Peter

Alexander (b) (6); (b) (6);

Cc: RYAN, Michael J. (b) (6); FARES, Christine Youssef (b) (6); BOKO, Ivana

(b) (6)

Subject: Informal coronavirus teleconference: agenda + background documents

Dear colleagues,

On behalf of Mike Ryan, allow me to share with you the following background documents ahead of the informal coronavirus teleconference tomorrow at 13.00 CET:

- \* Draft chapeau document: "Critical preparedness, readiness and response actions for COVID-19"
- \* Draft document: "Prevention and Control: Preparing for Widespread Community Transmission of COVID-19"
- \* Draft table of COVID-19 response scenarios: 1. no cases or first cases, 2. clusters of cases, 3. community spread
- \* (The latest epidemiological update and analysis will be shared tomorrow morning)

Please find below, the key questions for your consideration and input tomorrow. We do not expect you all to address/speak on all the questions but just as a guide to your thinking and the ones you have views/advice/ideas.

1. What is your view on the latest epidemiology on virus transmission and severity in affected countries?

2. What is your view on the appropriate use of the "3 Cs" scenarios approach, i.e. first Case, Clusters and Community transmission?
3. On this basis do you believe that containment is still the primary strategy?
4. What is your view on describing the current globally distributed outbreak as a pandemic?
5. What are the emerging issues/challenges across domains that you see as important ?
6. What should be the priorities for the 1-2 weeks?
7. Any other issues you see as important?

The dial-in number and passcode are attached.

If you experience any technical difficulties joining this conference call, please contact the WHO HQ EOC operator at: +41 227 912 490

Best,

Sophia

-----Original Appointment-----

From: RYAN, Michael J.

Sent: Tuesday, February 25, 2020 10:07 AM

To: RYAN, Michael J.; SHOC; Office of the Director-General;

(b) (6);

(b) (6); J

(b) (6);

(b) (6);

(b) (6);

(b) (6);

(b) (6);

(b) (6);

(b) (6); Felicity Harvey

(b) (6); Chris Elias;

richard.hatchett@cepi.net

(b) (6); Jeremy Farrar;

(b) (6);

(b) (6);

(b) (6);

(b) (6);

(b) (6)

(b) (6)

(b) (6); GREIN, Thomas; COX, Paul

Michael; SCHWARTLANDER, Bernhard F.; MINHAS, Raman;

(b) (6);

(b) (6); MAHJOUR, Jaouad; FALL, Ibrahima Socé; Thomas R.

Frieden; Elhadj SY; Lynn Banks; President | Resolve to Save Lives;

(b) (6);

(b) (6); AL-SHORBAJI, Farah;

(b) (6); Robynn Leidig; DRURY, Patrick Anthony; Dr

VAN KERKHOVE, Maria;

(b) (6);

(b) (6);

(b) (6);

(b) (6); Cheryl Cohen;

GRAAFF, Peter Jan; POOLE, Marcia; Tarik Mohammed;

(b) (6);

(b) (6);

(b) (6); Ryan Morhard; BRIAND, Sylvie; MORGAN, Oliver;

Harries, Jenny; Awwad, David (NIH/NIAID) [C]; SIMONSON, Stewart

Cc: SINGER, Peter Alexander

Subject: Informal coronavirus teleconference

When: Wednesday, February 26, 2020 1:00 PM-2:00 PM (UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna.

Where: Upper SHOC (For Call in: please see dial in details attached)

Dear colleagues,

Dr Tedros would like to invite you to the next informal discussion about the ongoing 2019 novel coronavirus.

The teleconference will be hosted tomorrow Wednesday, 26 February at 13:00 CET and the dial-in number with a passcode is attached.

If you experience any technical difficulties joining this conference call, please contact the WHO HQ EOC operator at: +41227912490

It would be appreciated if you could kindly confirm your participation to Ms Sophia Kabir, email:

(b) (6) ; mobile no. (b) (6)

Best,

Mike

Sophia Kabir  
Executive Officer  
Office of the Executive Director  
WHO Health Emergencies Programme (WHE)  
Tel. (b) (6)  
Mobile (b) (6)

Website: WHO in emergencies<<http://www.who.int/emergencies>> | WHO

Facebook<<https://www.facebook.com/WHO/>> | WHO

Twitter<[https://twitter.com/WHO?ref\\_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor](https://twitter.com/WHO?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor)>

[cid:image001.png@01D29CB9.E23BAC10]





**From:** FALL, Ibrahima Soce  
**Sent:** Wed, 1 Apr 2020 11:10:58 +0000  
**To:** Njoo, Howard (PHAC/ASPC)  
**Cc:** KABIR, Sophia;SHOC;Office of the Director-General;Redfield, Robert R.  
(CDC/OD) (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
David Heymann;Felicity Harvey  
(b) (6);Chris.Elias; (b) (6);J.Farrar;Tam, Dr Theresa  
(PHAC/ASPC); (b) (6);Fauci, Anthony (NIH/NIAID)  
[E]; (b) (6); (b) (6); (b) (6);GREIN, Thomas;COX,  
Paul Michael;SCHWARTLANDER, Bernhard F.;MINHAS, Raman; (b) (6);Conrad, Patricia  
(NIH/NIAID) [E];MAHJOUR, Jaouad;Thomas R. Frieden;elhadj.sy;Lynn Banks;President | Resolve to Save  
Lives; (b) (6);AL-SHORBAJI, Farah; (b) (6);Robynn Leidig;DRURY,  
Patrick Anthony;Dr VAN KERKHOVE,  
Maria; (b) (6); (b) (6); (b) (6); (b) (6);cherylc;G  
RAAFF, Peter Jan;POOLE, Marcia;Tarik Mohammed; (b) (6);Carlos Navarro  
Colorado; (b) (6);Ryan Morhard;BRIAND, Sylvie;MORGAN, Oliver;Harries,  
Jenny;Awwad, David (NIH/NIAID) [C];SIMONSDN, Stewart;SINGER, Peter Alexander;Jayatunga,  
Wikum; (b) (6); (b) (6);Julie.HALL;Amelie  
RIOUX; (b) (6); (b) (6); (b) (6);rosesper;SHIN,  
Young-Soo; (b) (6);Feng  
Ding; (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6);SMITH, Ian Michael;AYLWARD, Raymond Bruce  
J.; (b) (6); (b) (6);FARES, Christine Youssef  
**Subject:** Re: [EXT] RE: Global health leaders call, Wednesday, 1 April at 13:00 CET  
**Attachments:** image001.png

Mike and Tedros coming now  
Thanks  
Socé

Sent from my iPad

On 1 Apr 2020, at 13:09, Njoo, Howard (PHAC/ASPC) (b) (6) wrote:

No one from WHO appears to be on the call right now.....

Howard Njoo MD, MHSc, FRCPC

Sous-administrateur en chef de la santé publique

et Conseiller médical en chef, Direction générale de la prévention et du contrôle des maladies infectieuses

Agence de la santé publique du Canada

Deputy Chief Public Health Officer

and Chief Medical Advisor, Infectious Disease Prevention and Control Branch

Public Health Agency of Canada

(b) (6)

tel: (b) (6)



cell: (b) (6)

Sent from my Bell Samsung device over Canada's largest network.

----- Original message -----

From: "KABIR, Sophia" (b) (6)

Date: 2020-04-01 06:03 (GMT-05:00)

To: SHOC (b) (6), Office of the Director-General (b) (6),  
(b) (6), (b) (6), (b) (6), (b) (6),  
(b) (6), (b) (6),  
(b) (6), David Heymann (b) (6), "Felicity  
Harvey" (b) (6), "Chris.Elias"  
(b) (6), "J.Farrar"  
(b) (6), "Tam, Dr Theresa (PHAC/ASPC)" (b) (6),  
(b) (6), (b) (6), (b) (6),  
(b) (6), "GREIN, Thomas" (b) (6), "COX, Paul  
Michael" (b) (6), "SCHWARTLANDER, Bernhard F." (b) (6),  
"MINHAS, Raman" (b) (6), (b) (6), (b) (6),  
"MAHJOUR, Jaouad" (b) (6), "FALL, Ibrahima Soce" (b) (6),  
"Thomas R. Frieden" (b) (6), "elhadj.sy" (b) (6),  
Lynn Banks (b) (6), President | Resolve to Save Lives  
(b) (6), "Njoo, Howard (PHAC/ASPC)"  
(b) (6), "AL-SHORBAJI, Farah" (b) (6),  
(b) (6), Robynn Leidig (b) (6), "DRURY,  
Patrick Anthony" (b) (6), "Dr VAN KERKHOVE, Maria"  
(b) (6), (b) (6), (b) (6),  
(b) (6), cherylc (b) (6), "GRAAFF, Peter Jan"  
(b) (6), "POOLE, Marcia" (b) (6), Tarik Mohammed  
(b) (6), Carlos Navarro Colorado  
(b) (6), Ryan Morhard  
(b) (6), "BRIAND, Sylvie" (b) (6), "MORGAN, Oliver"  
(b) (6), "Harries, Jenny" (b) (6), "Awwad, David  
(NIH/NIAID) [C]" (b) (6), "SIMONSON, Stewart" (b) (6),  
"SINGER, Peter Alexander" (b) (6), "Jayatunga, Wikum"  
(b) (6), (b) (6), (b) (6),  
"Julie.HALL" (b) (6), Amelie RIOUX (b) (6),  
(b) (6), (b) (6), (b) (6), rosesper  
(b) (6), "SHIN, Young-Soo" (b) (6), (b) (6), Feng  
Ding (b) (6), (b) (6), (b) (6),  
(b) (6), "SMITH, Ian Michael"  
(b) (6), "AYLWARD, Raymond Bruce J." (b) (6),  
(b) (6), (b) (6)  
Cc: SHOC (b) (6), Office of the Director-General (b) (6),  
"SCHWARTLANDER, Bernhard F." (b) (6), "MAHJOUR, Jaouad"  
(b) (6), "FALL, Ibrahima Soce" (b) (6), "GREIN, Thomas"  
(b) (6), "MINHAS, Raman" (b) (6), "COX, Paul Michael"  
(b) (6), "AL-SHORBAJI, Farah" (b) (6), "POOLE, Marcia"  
(b) (6), "DRURY, Patrick Anthony" (b) (6), "GRAAFF, Peter Jan"

(b) (6), "Dr VAN KERKHOVE, Maria" (b) (6), "FARES, Christine Youssef" (b) (6)

Subject: Global health leaders call, Wednesday, 1 April at 13:00 CET

Dear colleagues,

On behalf of Mike Ryan, allow me to share with you today's COVID-19 update and analysis ahead of the informal coronavirus teleconference today at 13.00 CET.

Please find below, the key questions for your consideration and input today. We do not expect you all to address/speak on all the questions but just as a guide to your thinking and the ones you have views/advice/ideas.

1. What is your view on the latest epidemiology, virus transmission and severity in affected countries ?
2. What are the emerging issues/challenges that you see as important ?
3. What should be the priorities for the 1-2 weeks?
4. Any other issues you see as important?

The dial-in number and passcode are attached.

If you experience any technical difficulties joining this conference call, please contact the WHO HQ EOC operator at: **+41 227 912 490**

Kind regards,

Sophia

**Sophia Kabir**  
Executive Officer  
Office of the Executive Director  
WHO Health Emergencies Programme (WHE)  
Tel. (b) (6)  
Mobile (b) (6)

Website: [WHO in emergencies](#) | [WHO Facebook](#) | [WHO Twitter](#)

<image001.png>

**From:** tbhiv  
**Sent:** Fri, 27 Mar 2020 08:46:25 +0000  
**To:** TB\_HIV@LISTSERV.WHO.INT  
**Subject:** COVID-19: Operational guidance for maintaining essential health services during an outbreak (WHO)  
**Attachments:** WHO-2019-nCoV-essential\_health\_services-2020.1-eng.pdf  
**Importance:** High

Apologies for cross-posting but important WHO COVID-19 guidance just out on maintaining essential health services during an outbreak.

## COVID-19: Operational guidance for maintaining essential health services during an outbreak

25 March 2020

| Publication



[Download \(419.8 KB\)](#)

### Overview

When health systems are overwhelmed, both direct mortality from an outbreak and indirect mortality from vaccine-preventable and treatable conditions increase dramatically. Countries will need to make difficult decisions to balance the demands of responding directly to COVID-19, while simultaneously engaging in strategic planning and coordinated action to maintain essential health service delivery, mitigating the risk of system collapse. This document expands on the content of the *Operational planning guidelines to support country preparedness and response*, and provides guidance on a set of targeted immediate actions that countries should consider at national, regional,

and local level to reorganize and maintain access to high-quality essential health services for all.

#### WHO TEAM

Department of Communications

#### REFERENCE NUMBERS

**WHO REFERENCE NUMBER:** WHO/2019-nCoV/essential\_health\_services/2020.1

Geneva, 15 February 2020  
World Health Organization  
20 Avenue Appia, CH-1211 Geneva 27 | Switzerland

Tel: +41 (0)22 791 1374 | Email: [tb@who.int](mailto:tb@who.int) | [https://twitter.com/who\\_tbtb](https://twitter.com/who_tbtb)  
<http://www.who.int/tb/areas-of-work/tb-hiv/en/>



---

To unsubscribe from the TB\_HIV list, click the following link:  
[Bad URL Removed - see why - https://ees.sps.nih.gov/services/Pages/Anti-Virus.aspx?TICKET=NzM3NTQxIEFGQVVDSUBOSUFJRC5OSUguR09WIFRCX0hJVife0s5yIFH6&c=SIGNOFF](https://ees.sps.nih.gov/services/Pages/Anti-Virus.aspx?TICKET=NzM3NTQxIEFGQVVDSUBOSUFJRC5OSUguR09WIFRCX0hJVife0s5yIFH6&c=SIGNOFF)



**From:** RYAN, Michael J.  
**Sent:** Tue, 17 Mar 2020 09:07:28 +0000  
**To:** SHOC;Office of the Director-General;Redfield, Robert R.  
(CDC/OD); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
David Heymann;Felicity Harvey  
(b) (6);Chris.Elias (b) (6);Jeremy  
Farrar; (b) (6); (b) (6);Fauci, Anthony (NIH/NIAID)  
[E]; (b) (6); (b) (6); (b) (6);GREIN, Thomas;COX,  
Paul Michael;SCHWARTLANDER, Bernhard F.;MINHAS, Raman; (b) (6);Conrad, Patricia  
(NIH/NIAID) [E];MAHJOUR, Jaouad;FALL, Ibrahima Soce;Thomas R. Frieden;elhadj.sy;Lynn  
Banks;President | Resolve to Save Lives (b) (6); (b) (6);AL-  
SHORBAJI, Farah; (b) (6);Robynn Leidig;DRURY, Patrick Anthony;Dr VAN  
KERKHOVE,  
Maria; (b) (6); (b) (6); (b) (6); (b) (6);cherylc;G  
RAAFF, Peter Jan;POOLE, Marcia;Tarik Mohammed; (b) (6);(SPmig) Carlos Navarro  
Colorado; (b) (6);Ryan Morhard;BRIAND, Sylvie;MORGAN, Oliver;Harries,  
Jenny;Awwad, David (NIH/NIAID) [C];SIMONSON, Stewart;SINGER, Peter Alexander;Jayatunga,  
Wikum; (b) (6); (b) (6);Julie.HALL;Amelie RIOUX  
**Subject:** Informal coronavirus teleconference  
**Attachments:** (b) (6) Swisscom Call code.pdf

Dear colleagues,

Dr Tedros would like to invite you to the next informal discussion about the ongoing 2019 novel coronavirus.

The teleconference will be hosted on Wednesday, 4 March at 13:00 CET and the dial-in number with a passcode is attached.

If you experience any technical difficulties joining this conference call, please contact the WHO HQ EOC operator at: +41227912490

It would be appreciated if you could kindly confirm your participation to Ms Sophia Kabir, email:

(b) (6) ; mobile no. (b) (6)

Best,

Mike





**From:** KABIR, Sophia  
**Sent:** Wed, 11 Mar 2020 10:44:12 +0000  
**To:** SHOC;Office of the Director-General;Redfield, Robert R.  
(CDC/OD) (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
David Heymann;Felicity Harvey  
(b) (6);Chris.Elias; (b) (6);Jeremy  
Farrar; (b) (6); (b) (6);Fauci, Anthony (NIH/NIAID)  
[E]; (b) (6); (b) (6); (b) (6);GREIN, Thomas;COX,  
Paul Michael;SCHWARTLANDER, Bernhard F.;MINHAS, Raman; (b) (6);Conrad, Patricia  
(NIH/NIAID) [E];MAHJOUR, Jaouad;FALL, Ibrahima Soce;Thomas R. Frieden;elhadj.sy;Lynn  
Banks;President | Resolve to Save Lives (b) (6); (b) (6);AL-  
SHORBAJI, Farah; (b) (6);Robynn Leidig;DRURY, Patrick Anthony;Dr VAN  
KERKHOVE,  
Maria; (b) (6); (b) (6); (b) (6); (b) (6);cherylc;G  
RAAFF, Peter Jan;POOLE, Marcia;Tarik Mohammed; (b) (6);(SPmig) Carlos Navarro  
Colorado; (b) (6);Ryan Morhard;BRIAND, Sylvie;MORGAN, Oliver;Harries,  
Jenny;Awwad, David (NIH/NIAID) [C];SIMONSON, Stewart;SINGER, Peter Alexander;Jayatunga,  
Wikum; (b) (6); (b) (6);Julie.HALL;Amelie  
RIOUX; (b) (6); (b) (6); (b) (6);rosesper;SHIN,  
Young-Soo; (b) (6);Feng  
Ding; (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6)  
**Cc:** SHOC;Office of the Director-General;SCHWARTLANDER, Bernhard F.;MAHJOUR,  
Jaouad;FALL, Ibrahima Soce;GREIN, Thomas;MINHAS, Raman;COX, Paul Michael;AL-SHORBAJI,  
Farah;POOLE, Marcia;DRURY, Patrick Anthony;GRAAFF, Peter Jan;Dr VAN KERKHOVE, Maria;FARES,  
Christine Youssef  
**Subject:** CANCELLED: The global health leaders call, Wednesday 11 March at 13:00 CET

Dear colleagues,

Please note, that we will unfortunately have to cancel today's teleconference.

Sincere apologies for any inconvenience.

Kind regards,

Sophia

---

**From:** KABIR, Sophia  
**Sent:** Wednesday, March 11, 2020 10:29 AM  
**To:** SHOC (b) (6); Office of the Director-General (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6);  
(b) (6); Felicity Harvey (b) (6)  
(b) (6); Chris Elias (b) (6);

(b) (6); Jeremy Farrar (b) (6); (b) (6);  
 (b) (6); (b) (6); (b) (6); (b) (6);  
 (b) (6); GREIN, Thomas (b) (6); COX, Paul Michael (b) (6);  
 SCHWARTLANDER, Bernhard F. (b) (6); MINHAS, Raman (b) (6);  
 (b) (6); (b) (6); MAHJOUR, Jaouad (b) (6); FALL, Ibrahima  
 Soce (b) (6); Thomas R. Frieden (b) (6); Elhadj SY  
 (b) (6); Lynn Banks (b) (6); President | Resolve to Save Lives  
 (b) (6); (b) (6); (b) (6); AL-SHORBAJI,  
 Farah (b) (6); (b) (6); Robynn Leidig  
 (b) (6); DRURY, Patrick Anthony (b) (6); Dr VAN KERKHOVE,  
 Maria (b) (6); (b) (6); (b) (6);  
 (b) (6); (b) (6); Cheryl Cohen (b) (6); GRAAFF, Peter Jan  
 (b) (6); POOLE, Marcia (b) (6); Tarik Mohammed  
 (b) (6); (b) (6); (b) (6);  
 (b) (6); Ryan Morhard (b) (6); BRIAND, Sylvie  
 (b) (6); MORGAN, Oliver (b) (6); Harries, Jenny  
 (b) (6); Awwad, David (NIH/NIAID) [C] (b) (6); SIMONSON,  
 Stewart (b) (6); SINGER, Peter Alexander (b) (6); Jayatunga, Wikum  
 (b) (6); (b) (6); (b) (6);  
 (b) (6); (b) (6); KABIR, Sophia (b) (6);  
 (b) (6); (b) (6); (b) (6); (b) (6);  
 SHIN, Young-Soo (b) (6); (b) (6); Feng Ding  
 (b) (6); (b) (6); (b) (6);  
 (b) (6); (b) (6); (b) (6);  
**Cc:** SHOC (b) (6); Office of the Director-General (b) (6); SCHWARTLANDER,  
 Bernhard F. (b) (6); MAHJOUR, Jaouad (b) (6); FALL, Ibrahima Soce  
 (b) (6); GREIN, Thomas (b) (6); MINHAS, Raman (b) (6); COX, Paul  
 Michael (b) (6); AL-SHORBAJI, Farah (b) (6); POOLE, Marcia  
 (b) (6); DRURY, Patrick Anthony (b) (6); GRAAFF, Peter Jan  
 (b) (6); Dr VAN KERKHOVE, Maria (b) (6); KABIR, Sophia  
 (b) (6); FARES, Christine Youssef (b) (6)

**Subject:** The global health leaders call, Wednesday 11 March at 13:00 CET

Dear colleagues,

On behalf of Mike Ryan, allow me to share with you the following background documents ahead of the informal coronavirus teleconference today at 13.00 CET:

- The latest epidemiological update and analysis (attached)
- [Critical preparedness, readiness and response actions for COVID-19](#) document, which includes the "4 Cs" scenarios table
- [Responding to community spread of COVID-19](#) document
- [A coordinated Global Research Roadmap](#)

Please find below, the key questions for your consideration and input tomorrow. We do not expect you all to address/speak on all the questions but just as a guide to your thinking and the ones you have views/advice/ideas.



1. What is your view on the latest epidemiology on virus transmission and severity in affected countries ?
2. What is your view on describing the current globally distributed outbreak as a pandemic?
3. How can we define a comprehensive and inclusive Strategy for Control of COVID 19 that avoids the polarization that has emerged over "Containment" Vs "Mitigation" strategies
4. What are the emerging issues/challenges that you see as important ?
5. What should be the priorities for the 1-2 weeks?
6. Any other issues you see as important?

The dial-in number and passcode are attached.

If you experience any technical difficulties joining this conference call, please contact the WHO HQ EOC operator at: **+41 227 912 490**

Kind regards,

Sophia

**Sophia Kabir**

Executive Officer

Office of the Executive Director

WHO Health Emergencies Programme (WHE)

Tel. (b) (6)

Mobile (b) (6)

Website: [WHO in emergencies](#) | [WHO Facebook](#) | [WHO Twitter](#)



**From:** Devesh Kanjarpane  
**Sent:** Sat, 14 Mar 2020 09:14:01 -0400  
**To:** (b) (6); (b) (6); (b) (6); Fauci, Anthony (NIH/NIAID) [E]; (b) (6); (b) (6)  
**Cc:** (b) (6)  
**Subject:** My reach out to Dr. Gao...from Dr Kanjarpane - THIS IS NOT SPAM / MEDIA INQUIRY

Drs. Inglesby, Lipkin, Osterholm, Fauci, Yao, Ryan:

---

["http://sourcedb.im.cas.cn/english/zjrck/fs/201007/t20100720\\_2907503.html](http://sourcedb.im.cas.cn/english/zjrck/fs/201007/t20100720_2907503.html)  
[http://www.chinacdc.cn/en/aboutus/leadership/201603/t20160324\\_128015.html](http://www.chinacdc.cn/en/aboutus/leadership/201603/t20160324_128015.html)

*Dr. Gao:*

*I am a physician in the United States, and advise patients on COVID19. As I strive to learn about this novel illness, I realize that testing is important.*

*As I search for testing in China, I am unable to find any figures. I see that there is information on, cases, and deaths, but not testing.*

*Do you have any figures on testing?*

*Given the great reality that asymptomatic people can be infected, and also transmit, the risk to Public Health is great.*

*I appreciate any guidance you can provide, and I am this is not a media inquiry.*

*Very Respectfully,*

*Dr K"*

---

If either of you have any information on testing for COVID19 in China, and are at liberty to disclose, I would appreciate it.

Appreciate the steady hands and erudite communications.

Very Sincerely,

Devesh



**Dr K**

**P & S '88**

**JHU SHPH '90**

--

Devesh D. Kanjarpane, MD MPH FACPM FASAM FACOEM

President, OccuSave, Inc.

Medical Directors & Senior Physician Consultants

Medical Director - NIST - Ctr - Since 2016

Senior Physicians to the Smithsonian Institution - Since 1996

CBRNE Experts - Since 1990 - US Army

Infectious Disease Response - Bacillus Anthracis, SARS,

Smallpox, Ebola

BSL4 Lab - Workplace Surveillance / Safety

Service Disabled Veteran Owned Business (SDVOB)

Minority Small Business

Federal Contractors Since 1995

PH: (b)(6) / FAX: 443-535-0773

**From:** LORCAN KILROY  
**Sent:** Sun, 22 Mar 2020 17:47:03 -0700  
**To:** (b) (6); Fauci, Anthony (NIH/NIAID) [E]; Hahn, Stephen (FDA); (b) (6)  
**Cc:** (b) (6); (b) (6); (b) (6)  
**Subject:** URGENT, Re: COVID -19 (b) (4)  
(b) (4)  
(b) (4)  
**Attachments:** Piot re. covid-19.pdf

Peter Piot

Director, London School of Hygiene and Tropical Medicine

Keppel St, Bloomsbury, London WC1E 7HT, United Kingdom

(b) (6)

Dear Dr. Piot,  
Please find attached in re. the above subject. I have copied US health officials.  
Thank you,  
Lorcan T. Kilroy M.F.A.  
Los Angeles

**From:** Sin Lee  
**Sent:** Sun, 22 Mar 2020 20:02:16 +0000 (UTC)  
**To:** (b) (6); Fauci, Anthony (NIH/NIAID) [E]  
**Cc:** Milford Molecular Diagnostics  
**Subject:** Extremely sensitive, no false-positive tests needed for SARS-CoV-2  
**Attachments:** Letter to WHO and Dr. Fauci.pdf

Dear Drs. Harris, Guerrero and Fauci:

It has been widely reported in the social media that the RT-qPCR test kits used to detect SARS-CoV-2 RNA in human specimens are generating many false positive results and are not sensitive enough to detect some real positive cases, especially during convalescence.

In the attached letter, I propose (b) (4)  
(b) (4). Without a reliable laboratory diagnostic test, we are flying blind.

Thank you for your time to consider this option.

Sincerely,

Sin Hang Lee, MD, F.R.C.P.(C), FCAP  
Director  
Milford Molecular Diagnostics Laboratory

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

**Sent:** Sun, 22 Mar 2020 18:46:53 +0000 (UTC)

**To:**

(b) (6); (b) (6); (b) (6); Fauci,  
Anthony (NIH/NIAID)

[E]; (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)

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

(b) (6); (b) (6); (b) (6); Fauci, Anthony (NIH/NIAID) [E]

**Subject:** DISCOVERY OF A DETECTOR FOR COVID-19 EASY TO ASSEMBLE FROM EXISTING  
DEVICES IN HOSPITALS AND CLINICS block 1 of 6

**Attachments:** c0 INFECTED BUT NOONE COULD SEE WASH STATE XRAY FIRST CASE.jpg, c0  
INFECTED BUT NOW YOU CAN SEE W TCSCAN APPLIED FRONTAL VIEW XRAY FIRST CASE.jpg, c1  
INFECTED BUT NOONE COULD SEE VIETNAM .jpg, c1 INFECTED BUT NOW YOU CAN SEE W TCSCAN .jpg,

c2 INFECTED BUT NOONE COULD SEE Wuhan First Palestinian Arab .jpg, c2 INFECTED BUT NOW YOU CAN SEE Wuhan First Palestinian Arab .jpg, c3 seen by tcscan red yellow mix Human-to-Human Transmission of a Novel Coronavirus in Vietnamnejmc2001272\_f1 (2).jpg, c3 seen by typical imaging Human-to-Human Transmission Novel Coronavirus Vietnamnejmc2001272\_f1.jpg, c4 NORMAL AFTER TCSCAN USING C-ARM .jpg, c4 NORMAL BEFORE TCSCAN USING C-ARM .jpg, c6 BM NORMAL C-ARM TCSCAN YELLOW 3 17 2020 20200317\_081417 (2).jpg, c6 BM-1 NORMAL C-ARM 3 17 2020 .jpg, c7 c7 NORMAL PRE TCSAN ON C-ARM 3 17 2020 20200317\_162400 .jpg, c7 NORMAL AND LOW INFLAMMATION TO THE RIGHT DIRECTED YELLOW GREEN BLUE TCSCAN C-ARM JN 3 17 2020 20200317\_162400 .jpg, PATENT INFO DETECTION OF COVID-19 CJ40-12 COVID-19.docx, HSFINAL latest tpc FINAL FINAL latest tpc READY TO GO LETTER TO THE WORLD - Copy (2).docx

**DISCOVERY !**  
**OF A DETECTOR FOR**  
**COVID-19**  
**\*SURVEILLANCE**  
**IT IS READY NOW !**  
**IT IS NECESSARY TO KEEP US**  
**ALIVE.**  
**READ AND INSTITUTE TODAY!**  
**NO COST TO YOU**  
**A GIFT TO MANKIND**  
**JUST GET THE WORD OUT**



**From:** Ralph Claypool II  
**Sent:** Mon, 23 Mar 2020 23:36:11 -0400  
**To:** Fauci, Anthony (NIH/NIAID)  
**[E]:** (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); Redfield, Robert R. (CDC/OD)  
**Subject:** URGENT: COVID-19 TREATMENT  
**Attachments:** COVID-19 TREATMENT (CLAYPOOL).pdf

To Whom It May Concern,

I was a (b) (6). I spent years researching the potential weapon capabilities of our enemies and ways to decontaminate/treat following exposure. I specialized in "field expedient" solutions and have firsthand knowledge of medicinal compounds being used in "unconventional" ways with varying results. Due to the recent COVID-19 pandemic, I have put in hours of research trying to consider alternative methods of treatment not being considered by mainstream medical science.

Nerve agents function in the human body in similar ways to viruses before the onset of their debilitating effect. Right now, no one is looking at the genetic science that was developed in creating insecticides and from that, nerve agents. There is considerable scientific data from several countries supporting the gene and protein-level functionality of insects going back decades because global food production has received both the institutional focus as well as the monetary advancements. I have tapped into that data and attached is a treatment for COVID-19 that can be implemented immediately.

Respectfully,

Ralph Claypool II

### COVID-19 TREATMENT

Due to the COVID-19 pandemic and the lack of any approved/effective antiviral cure, additional countermeasures must be considered. The below treatment outlines a method to combat the acute respiratory failure caused by COVID-19 as well as a method for removing the virus both pre- and post-lysogenic cycle. The treatment outlined below does not limit the potential use of any experimental "options" now being considered. In fact, this treatment would increase the effectiveness of any additionally prescribed medications by allowing increased uptake and reducing systematic strain and any potential adverse response by the immune system. Furthermore, stockpiles of the medications are already available at both the state and federal level and could be implemented immediately without delay as this countermeasure does not require additional approval for use.

**From:** WHO Global TB Programme  
**Sent:** Tue, 24 Mar 2020 23:11:55 +0000  
**To:** Fouci, Anthony (NIH/NIAID) [E]  
**Subject:** World TB Day Newsletter: Special Edition

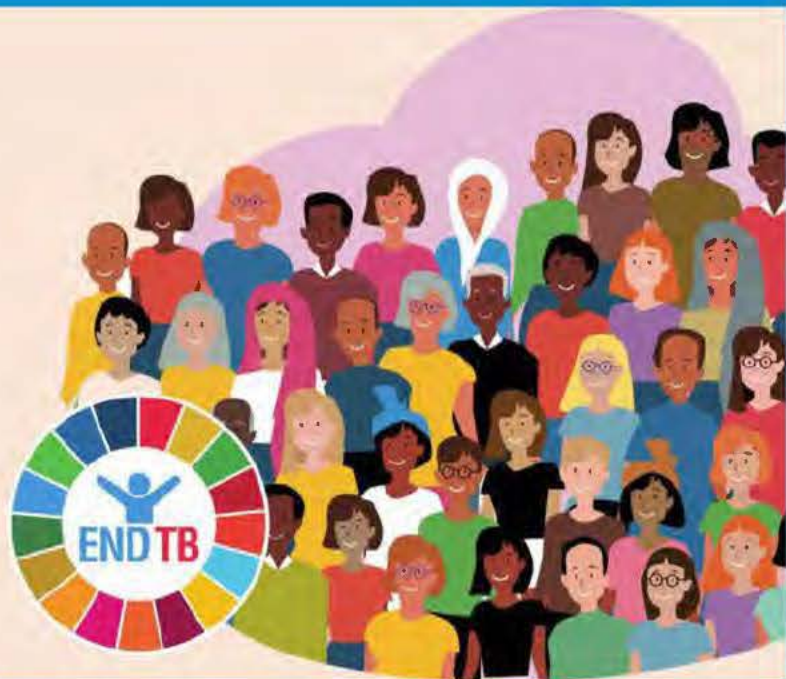
[view this email in your browser](#)

## World Tuberculosis Day Newsletter

*Special edition*

24 March 2020

It's time to **End TB**



## World TB Day 2020 Newsletter

*Latest news and updates from WHO*

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Dear colleagues and friends,



World TB Day, this year, comes at a sobering time – as the world grapples with the COVID-19 pandemic. We stand in solidarity with those affected, those at the frontlines of the fight to combat COVID-19, as well as those who continue efforts to support those ill with longstanding health problems like TB, HIV and other diseases. However, we cannot forget the millions and their families who battle TB every day and lose their lives to this ancient disease – which remains the world's top infectious killer.

As eloquently emphasized by WHO Director-General Dr Tedros Adhanom Ghebreyesus in his press briefing on COVID-19 yesterday, "I'd like to remind everyone that although COVID-19 is dominating the world's attention–there is another respiratory disease that is both preventable and treatable, but kills 1.5 million people every year – that disease is tuberculosis"

"It's Time", the focus for World TB Day this year is therefore on urgently accelerating the TB response to save lives and end suffering, even in times of crisis. This will be essential if we are to reach the targets and commitments made by Heads of State at the 2018 UN High Level Meeting on TB.

We have made important strides against the TB epidemic to date.

We announced last year, that more people received life-saving treatment for tuberculosis in 2018 than ever before, largely due to improved detection and diagnosis. Globally, 7 million people were diagnosed and treated for TB – up from 6.4 million in 2017 – enabling the world to meet one of the milestones towards the United Nations political declaration targets on TB and the WHO Director-General Flagship Initiative Find.Treat.All End TB jointly with Stop TB Partnership and the Global



Fund. This has been a big win for the TB community.

WHO is working with countries to roll out important guidelines, including a comprehensive package on TB preventive treatment released today, and updated MDR TB guidelines to promote the use of all-oral regimens for patients with drug-resistant TB which would be helpful – particularly at this point, when visiting health centers is a challenge. Furthermore, WHO has developed a note to guide and urge countries to ensure continuity of TB services during the COVID-19 pandemic.

We are strengthening our collaboration with civil society – more information is highlighted in the WHO Civil Society Taskforce Progress Review released today.

Youth mobilization is being ramped up through the WHO 1+1 Youth Initiative to end TB and the Global Youth Declaration to End TB. Multisectoral accountability is being promoted in countries through our framework and we have finalized a new global strategy on TB research and innovation, that will be reviewed by the World Health Assembly.

Yet, the gains we have made are at risk – if there is any slackening of commitment and action, especially in times of crisis.

We are at a crossroads and we need to unite forces to take the path of success that will save lives and end suffering.

I was especially heartened today, to see the TB community coming together like never before. We all took our events to the virtual realm due to COVID-19 lockdowns. The WHO Online Talk Show held this afternoon, had a powerful line up of speakers that included, TB survivors and advocates, civil society, high level government representatives, heads of agencies, researchers and partners. As of this evening we



have surpassed 10,000 views on YouTube. I also participated in townhalls organized by Stop TB Partnership. Our joint efforts have indeed ensured a continuing spotlight on those affected by TB, and clearly shows that no matter what the barrier, we can surpass it if we work together.

I am proud to stand shoulder-to-shoulder with you all virtually – and recommit to champion End TB efforts till we reach the finish line.

It's time to deliver on our promises and ensure no one is left behind.

It's time to End TB!

A handwritten signature in white ink on a blue background. The signature is stylized and appears to read 'T. Kasaeva'.

**Dr Tereza Kasaeva**

Director

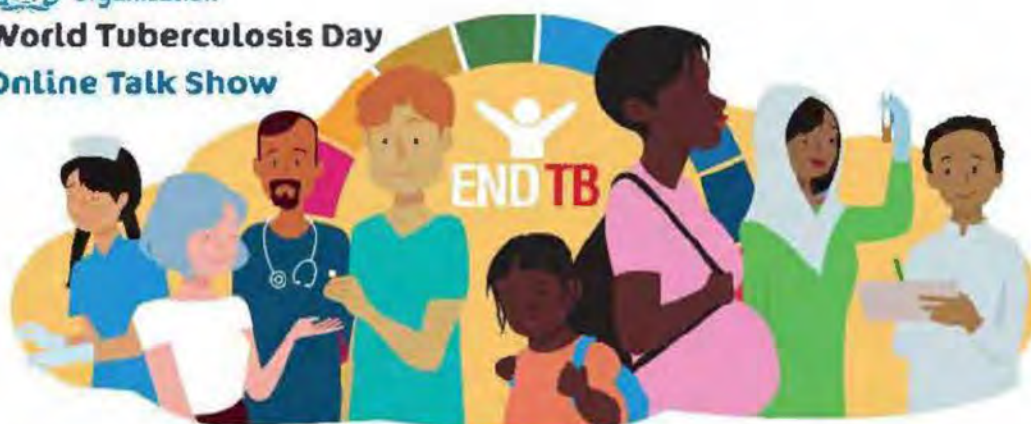
Global TB Programme

World Health Organization

**WHO World TB Day Talk Show**



## **World Tuberculosis Day Online Talk Show**



In the backdrop of the global battle against COVID-19, WHO organized a special online talk show to mark World TB Day 2020. The talk show had a powerful line up of speakers from among TB survivors and advocates, civil society, high-level government representatives, heads of agencies, researchers and partners. The video was streamed live on WHO's Youtube channel crossing over 10,000 views in a few hours.

**Watch the talk show  
video**

## **Spotlight on TB Preventive Treatment**

**New WHO recommendations to prevent tuberculosis aim to save millions of lives**

24 March 2020 [News release](#)

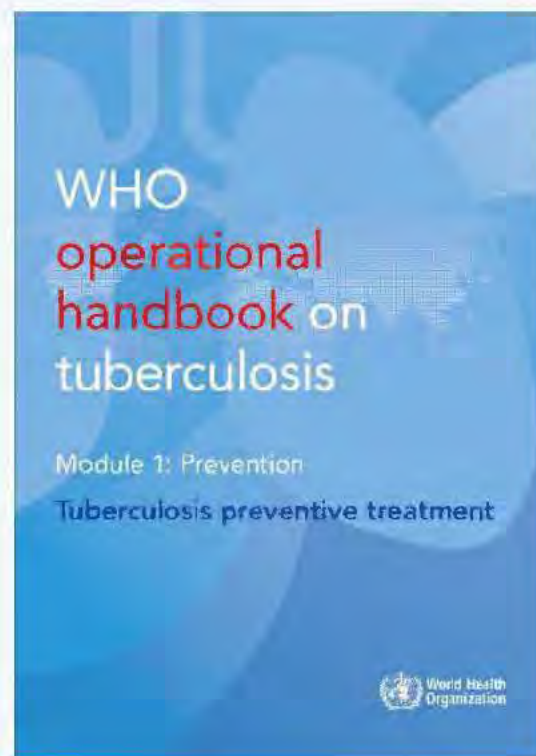
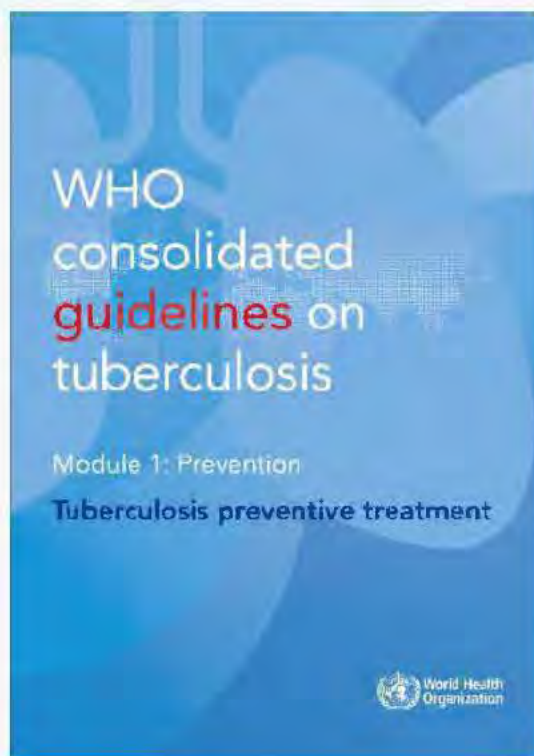
Geneva – New World Health Organization (WHO) guidance will help countries accelerate efforts to

stop people with tuberculosis (TB) infection becoming sick with TB by giving them preventive treatment.

A quarter of the world's population is estimated to be infected with TB bacteria. These people are neither sick nor contagious. However, they are at greater risk of developing TB disease, especially those with weakened immunity. Offering them TB preventive treatment will not only protect them from becoming sick but also cut down on the risk of transmission in the community.

[Read more](#)

The full package is available below and at our [World TB Day Campaign Page](#)





## Preventive treatment for tuberculosis infection



TB preventive treatment can stop infection from turning into disease.

### What is TB infection?

Tuberculosis (TB) is a disease caused by a bacterium called *Mycobacterium tuberculosis*. It can spread from one person to another through the air when they cough, sneeze or spit. TB can also be passed from a mother to her baby during pregnancy or at birth.



### Am I at risk?

You are at risk of TB infection if you have been in contact with someone who has TB, or if you have been in a crowded place where many people live or work together.



### Do I need TB preventive treatment?

Yes, if you are at risk of TB infection and have not been treated for TB before. TB preventive treatment can help stop TB infection from turning into disease.



### What are the treatment options?

There are two main treatment options for TB preventive treatment. One is a daily pill called isoniazid, and the other is a daily injection called rifampin.



Protect yourself and your loved ones!



WHO Civil Society Taskforce on TB: Progress Review

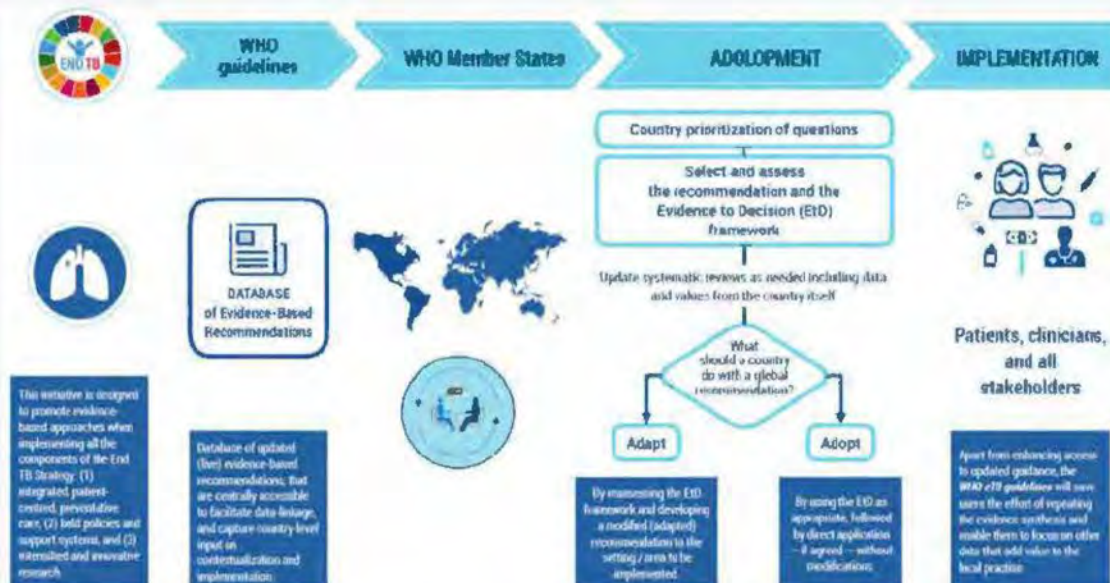




The WHO Civil Society Task Force provides a platform for meaningful engagement of civil society, building on the commitment of the Director-General, with emphasis on harnessing the untapped potential in engagement with civil society and affected communities at all levels. To mark World TB Day 2020, the Task Force has released a Progress Review highlighting key achievements since its formation in 2018.

Access the link [here](#)

## WHO eTB guidelines: A digital platform to promote adoption of TB recommendations



The WHO Global Tuberculosis (TB) Programme, in collaboration with McMaster University,

Canada, is developing a smart platform to improve access to and use of all WHO recommendations on TB prevention and care. The WHO eTB guidelines platform will facilitate the adoption, adaptation and implementation ("adoption") by countries of recommendations across the continuum of care. This digital platform will provide a variety of users – TB programme managers, healthcare workers including nurses, researchers, patients and affected communities - with easy access to all essential information about WHO's current policy guidance on TB.

The first set of recommendations on TB preventive treatment were released on this new platform on World TB Day.

[WHO eTB guidelines platform](#)

[Infographic](#)

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## TB and COVID-19

### Ensuring continuity of TB services during the COVID-19 pandemic

24 March 2020 [News release](#)

Geneva – As the world comes together to tackle the COVID-19 pandemic, it is important to ensure that essential health services and operations are continued to protect the lives of people with TB and other diseases or health conditions. Health services, including national programmes to combat TB, need to be actively engaged in ensuring an effective and rapid response to COVID-19 while ensuring that TB services are maintained.

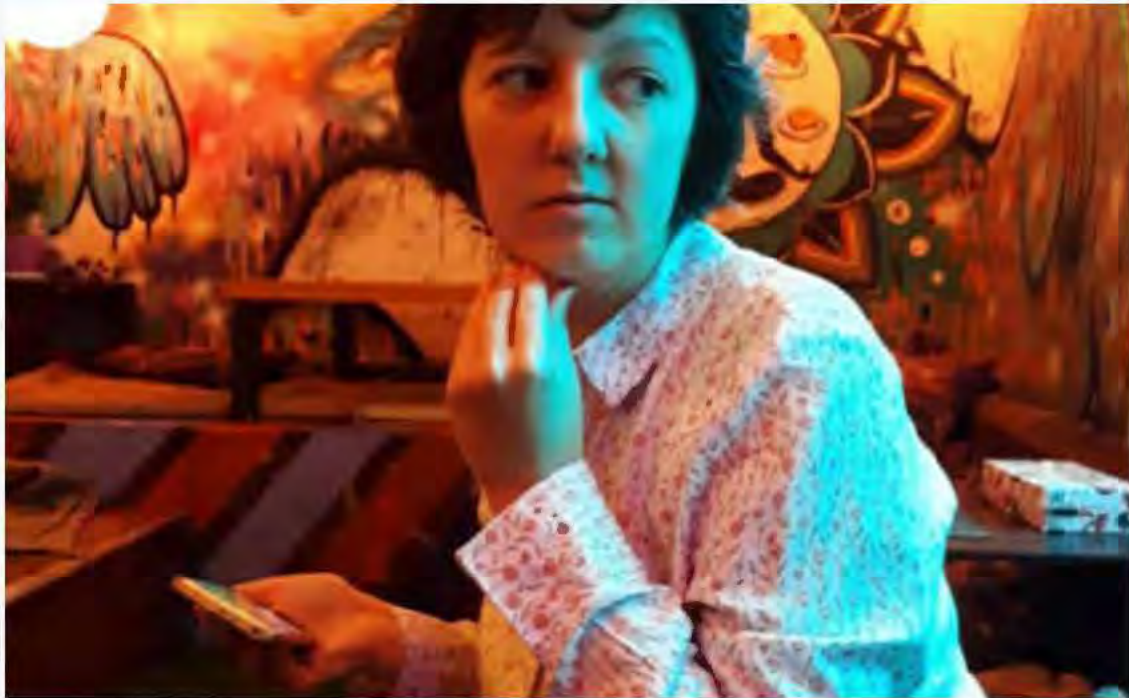
[Read more](#)

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## Let's never forget: It's time to end TB

Ksenia Schenina



24 March 2020 [Photo Story](#)

On World TB Day 2020, the theme - "It's time" - stresses the urgency to end the TB epidemic. TB survivor and advocate, Ksenia Schenina, talks about her struggle with the disease, the persistence of stigma and the role that remembrance can play in fighting it.

Through her TB memorial project, she aims to remember those who passed away from this terrible and ancient disease. "We do it to show what kind of people they were – what kind of things they liked, what kind of music they listened to and what their favorite movies were; if they liked fishing or dreamt of a flight to space," she says.

[Read more](#)

**Commentary**

## To end TB, we must invest in research and innovation

24 March 2020 [Commentary](#)

*If the world is to get anywhere near ending TB, a disease that killed more than 1.5 million people in 2018, something significant needs to change.*

TB remains the world's leading infectious killer and yet, in the last 50 years, only three new drugs and regimes have been developed to combat the disease.

"What we need is more research and more tools in the pipeline; better diagnostics, more effective vaccines, and safer, shorter drug regimes," explains Dr Tereza Kasaeva, Director of the World Health Organization Global Tuberculosis Programme.

[Read more](#)

### Emily: A Day in the Life of a TB Nurse





Watch this story of Emily, a nurse managing the tuberculosis (TB) program of the City Health Office in Tuguegarao City. Her dream for Tuguegarao is to one day see zero TB cases and that no one dies from this infectious disease.

Nurses and healthcare workers play a critical role in TB prevention and care. It's time to invest in them to improve healthcare for all.

We thank all the nurses, midwives and healthcare workers working to #EndTB!

Watch the  
video

## Updates and messages

### New research tool supports scale-up of digital technologies to End TB

24 March 2020 [TDR news item](#)

National anti-tuberculosis efforts are increasingly involving digital technologies, such as mobile applications to support treatment adherence and electronic surveillance systems that enable real-time monitoring of a country's TB situation.

[Read more](#)

## World TB Day 2020: It's Time for solidarity

24 March 2020 [HIV/TB news item](#)

At this unique time in history when the world is grappling with the COVID-19 pandemic, the WHO Department of Global HIV, Hepatitis and STI Programmes stands in solidarity with governments and communities as they seek to maintain health services and continue to address the needs of patients suffering from HIV and tuberculosis (TB).

[Read more](#)

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## New, shorter treatment to prevent TB to be rolled out in five high TB burden countries

24 March 2020 [news item](#)

*Three-month regimen expected to prevent TB in those at highest risk of developing the disease, including people living with HIV and children under the age of five*

Today, the Aurum Institute and its partners, as part of the IMPAACT4TB project, announced that five high-burden TB countries will roll out a new, shorter drug regimen (known as 3HP) to prevent TB. The announcement comes as countries around the world mark World TB Day, which takes place every year on March 24th. Countries that will initially provide the new regimen with funding from Unitaid, U.S. PEPFAR and the Global Fund include Cambodia, Ethiopia, Kenya, Malawi, South Africa and Zimbabwe. More than 120,000 patient courses of 3HP will be delivered by the project to 12 countries in 2020. An additional 1 million patient courses are expected to reach low- and middle-income countries by the end of the year, through the combined support of Unitaid, Global Fund, the Stop TB Partnership's Global Drug Facility (GDF) and PEPFAR.

[Read more](#)

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World Health Organization, Global TB Programme  
20, Avenue Appia, CH-1211, Geneva, Switzerland  
Tel: (+41) 22 791 4695. Email: [gtbprogramme@who.int](mailto:gtbprogramme@who.int)  
For more information please go to [www.who.int/tb](http://www.who.int/tb)



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**From:** Global Malaria Programme  
**Sent:** Wed, 25 Mar 2020 05:24:30 -0400  
**To:** Fauci, Anthony (NIH/NIAID) [E]  
**Subject:** WHO urges countries to ensure the continuity of malaria services in the context of the COVID-19 pandemic



*25 March 2020*

## **WHO urges countries to ensure the continuity of malaria services in the context of the COVID-19 pandemic**

### ***Safety of front-line health workers a primary concern***

The COVID-19 pandemic is testing the resilience of robust health systems around the world. Recognizing the heavy toll that malaria exacts on vulnerable populations in sub-Saharan Africa, as well as the region's fragile health infrastructure, WHO underlines the critical importance of sustaining efforts to prevent, detect and treat malaria.

"As COVID-19 continues its rapid spread, WHO would like to send a clear message to malaria-affected countries in Africa," said Dr Pedro Alonso, Director of the WHO Global Malaria Programme. "Do not scale back your planned malaria prevention, diagnostic and treatment activities. If someone living in a place with malaria develops a fever, he or she



should seek diagnosis and care as soon as possible."

Ensuring access to core malaria prevention measures is an important strategy for reducing the strain on health systems; these include vector control measures, such as insecticide-treated nets and indoor residual spraying, as well as chemoprevention for pregnant women and young children (intermittent preventive treatment in pregnancy, intermittent preventive treatment in infants and seasonal malaria chemoprevention). Additional special measures could ease the burden on health systems in the context of COVID-19, such as presumptive malaria treatment and mass drug administration.

Any interventions must consider the importance of both lowering malaria-related mortality and ensuring the safety of communities and health workers. WHO will provide guidance for countries to safely maintain essential health services in the context of the COVID-19 response.

### About COVID-19

COVID-19 is the infectious disease caused by the most recently discovered coronavirus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019. Essential information on the COVID-19 pandemic can be found in a [dedicated WHO site](#).

### About malaria

Malaria is a preventable and treatable disease caused by parasites that are transmitted to people through the bites of infected female *Anopheles* mosquitoes. In 2018, there were an estimated 228 million cases of malaria worldwide and 405 000 malaria-related deaths. For more on malaria, visit: [www.who.int/malaria](http://www.who.int/malaria)



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This message was sent to [afauci@NIAID.NIH.GOV](mailto:afauci@NIAID.NIH.GOV) from [gmpnews@who.int](mailto:gmpnews@who.int)

Global Malaria Programme

World Health Organization  
Avenue Appia 20  
1211, Geneva 27, Switzerland

**iContact**  
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**From:** WHO Global TB Programme  
**Sent:** Wed, 25 Mar 2020 17:58:50 +0000  
**To:** Fauci, Anthony (NIH/NIAID) [E]  
**Subject:** New WHO recommendations to prevent tuberculosis aim to save millions of lives

Latest news from the WHO Global TB Programme

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# GLOBAL TB PROGRAMME

## *NewsFlash*

### **New WHO recommendations to prevent tuberculosis aim to save millions of lives**

**GENEVA** - New World Health Organization (WHO) guidance will help countries accelerate efforts to stop people with tuberculosis (TB) infection becoming sick with TB by giving them preventive treatment.

A quarter of the world's population is estimated to be infected with TB bacteria. These people are neither sick nor contagious. However, they are at greater risk of developing TB disease, especially those with weakened immunity. Offering them TB preventive treatment will not only protect them from becoming sick but also cut down on the risk of transmission in the community.

As we mark World TB Day 2020, the disease remains the world's top infectious killer. In 2018, 10 million people fell ill with TB worldwide and 1.5 million people lost their lives to this disease.



"COVID-19 is highlighting just how vulnerable people with lung diseases and weakened immune systems can be," said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. "The world committed to end TB by 2030; improving prevention is key to making this happen. Millions of people need to be able to take TB preventive treatment to stop the onset of disease, avert suffering and save lives".

Dr Tedros highlighted the importance to continue efforts to tackle longstanding health problems, including TB during global outbreaks such as COVID-19. At the same time, programmes already in place to combat TB and other major infectious diseases can be leveraged to make the response to COVID-19 more effective and rapid.

Although some progress has been made towards targets set at the UN high-level meeting on TB in 2018, TB preventive treatment has been largely neglected. Global leaders committed to ensuring access to TB preventive treatment to at least 24 million contacts of people with active TB and 6 million people living with HIV by 2022. To date only a small fraction of that target has been reached, with countries putting less than 430,000 household contacts and 1.8 million people living with HIV on TB preventive treatment in 2018".

TB remains the top cause of death among people with HIV. TB preventive treatment works synergistically with antiretroviral therapy to prevent TB and save lives. Invigorated efforts by governments, health services, partners, donors and civil society will be needed to increase access to TB preventive treatment to the levels targeted.

The new consolidated guidelines recommend a range of innovative approaches to scale up access to TB preventive treatment:

- **WHO recommends a scale-up of TB preventive treatment among populations at highest risk including household contacts of TB patients, people living with HIV and other people at risk with lowered immunity or living in crowded settings.**
- **WHO recommends an integration of TB preventive treatment services into ongoing case finding efforts for active TB.** All household contacts of TB patients and people living with HIV are recommended to be screened for active TB. If active TB is ruled out, they should be initiated on TB preventive treatment.

- **WHO recommends that either a tuberculin skin test or interferon-gamma release assay (IGRA) be used to test for TB infection.** Both tests are helpful to find people more likely to benefit from TB preventive treatment but should not become a barrier to scale-up access. Testing for TB infection is not required before starting TB preventive treatment in people living with HIV, and children under 5 years who are contacts of people with active TB.
- **WHO recommends new shorter options for preventive treatment** in addition to the widely used 6 months of daily isoniazid. The shorter options that are now recommended range from a 1 month daily regimen of rifapentine plus isoniazid to 3 months weekly rifapentine plus isoniazid, 3 months daily rifampicin plus isoniazid, or 4 months of daily rifampicin alone.

"As people around the globe come together to commemorate World TB Day, WHO is calling on governments, affected communities, civil society organizations, health-care providers, donors, partners and the industry to unite forces and step up the TB response - notably for TB preventive treatment - to ensure no one is left behind," said Dr Tereza Kasaeva, Director of WHO's Global TB Programme. "The new WHO guidance shows the way forward for millions to rapidly access new tools and shorter, safer options for preventive treatment. The time for action is now."

[Read more](#)

**COMPREHENSIVE PACKAGE:  
TB PREVENTIVE TREATMENT**

# WHO consolidated guidelines on tuberculosis

Module 1: Prevention

**Tuberculosis preventive treatment**



WHO consolidated  
guidelines  
on tuberculosis

# WHO operational handbook on tuberculosis

Module 1: Prevention

**Tuberculosis preventive treatment**



WHO  
operational handbook  
on tuberculosis





## Preventive treatment for tuberculosis infection

TB preventive treatment can stop infection from turning into disease.



### What is TB infection?

Tuberculosis (Tb) is a contagious disease that can be spread from one person to another. It is caused by a bacterium called Mycobacterium tuberculosis. Most people who are infected with Tb do not get sick, but the bacteria can stay in their bodies for many years. If the bacteria become active, they can cause TB disease, which can be fatal if not treated.

### Am I at risk?

You are at risk of getting TB if you have been in contact with someone who has TB, or if you have been in a crowded place where many people live together. You are also at risk if you have a weak immune system, such as if you are taking medicines that suppress your immune system.

### Do I need TB preventive treatment?

Yes, you do need TB preventive treatment if you are at risk of getting TB. This treatment can help prevent TB disease from developing in your body.

### What are the treatment options?

There are two main treatment options for TB preventive treatment. The first is a single tablet called isoniazid, which is taken once a week. The second is a combination of two tablets, isoniazid and rifampin, which are taken once a week.

Protect yourself and your loved ones!



## Visual Q & A

## How to Protect Ourselves from TB

### About TB Preventive Treatment



## TB Preventive Treatment Flyer

## Frequently Asked Questions on TB preventive treatment

## MULTIMEDIA

1 in 4 people have tuberculosis (TB) infection. People in close contact with TB patients and those living with HIV are at high risk of developing TB. TB preventive treatment can stop TB infection from turning into disease.



2019 UN High Level Meeting target: >30 million people receive TB preventive treatment 2030



**It's time** to prevent TB to end TB

Social media title

## Expanded access to tuberculosis preventive treatment

IN 2018  
49% OF PEOPLE RECOMMENDED  
TO HIV CASES WERE STARTED  
ON TB PREVENTIVE TREATMENT  
(OF 19.5M 2015-17 2018)

ONLY 27% OF CHILDREN  
(4.4M 5-14YRS) RECOMMENDED FOR TB  
PREVENTIVE TREATMENT  
(OF 16.2M 2015-17 2018)

WHO recommends preventive treatment  
for people living with HIV and all contacts  
(living in households with TB (including  
children under 5 years))



Infographic



Animated gif

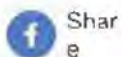


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For more information please go  
to [www.who.int/tb](http://www.who.int/tb)



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**From:** tbhiv  
**Sent:** Thu, 26 Mar 2020 08:42:30 +0000  
**To:** TB\_HIV@LISTSERV.WHO.INT  
**Subject:** New WHO recommendations to prevent tuberculosis aim to save millions of lives

Latest news from the WHO Global TB Programme

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# GLOBAL TB PROGRAMME

## *NewsFlash*

### **New WHO recommendations to prevent tuberculosis aim to save millions of lives**

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A quarter of the world's population is estimated to be infected with TB bacteria. These people are neither sick nor contagious. However, they are at greater risk of developing TB disease, especially those with weakened immunity. Offering them TB preventive treatment will not only protect them from becoming sick but also cut down on the risk of transmission in the community.

As we mark World TB Day 2020, the disease remains the world's top infectious killer. In 2018, 10 million people fell ill with TB worldwide and 1.5 million people lost their lives to this disease.

"COVID-19 is highlighting just how vulnerable people with lung diseases and weakened immune systems can be," said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. "The world committed to end TB by 2030; improving prevention is key to making this happen. Millions of people need to be able to take TB preventive treatment to stop the onset of disease, avert suffering and save lives".

Dr Tedros highlighted the importance to continue efforts to tackle longstanding health problems, including TB during global outbreaks such as COVID-19. At the same time, programmes already in place to combat TB and other major infectious diseases can be leveraged to make the response to COVID-19 more effective and rapid.

Although some progress has been made towards targets set at the UN high-level meeting on TB in 2018, TB preventive treatment has been largely neglected. Global leaders committed to ensuring access to TB preventive treatment to at least 24 million contacts of people with active TB and 6 million people living with HIV by 2022. To date only a small fraction of that target has been reached, with countries putting less than 430,000 household contacts and 1.8 million people living with HIV on TB preventive treatment in 2018".

TB remains the top cause of death among people with HIV. TB preventive treatment works synergistically with antiretroviral therapy to prevent TB and save lives. Invigorated efforts by governments, health services, partners, donors and civil society will be needed to increase access to TB preventive treatment to the levels targeted.

The new consolidated guidelines recommend a range of innovative approaches to scale up access to TB preventive treatment:

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"As people around the globe come together to commemorate World TB Day, WHO is calling on governments, affected communities, civil society organizations, health-care providers, donors, partners and the industry to unite forces and step up the TB response - notably for TB preventive treatment - to ensure no one is left behind," said Dr Tereza Kasaeva, Director of WHO's Global TB Programme. "The new WHO guidance shows the way forward for millions to rapidly access new tools and shorter, safer options for preventive treatment. The time for action is now."

[Read more](#)

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TB PREVENTIVE TREATMENT**

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Module 1: Prevention

Tuberculosis preventive treatment



WHO consolidated  
guidelines  
on tuberculosis

# WHO operational handbook on tuberculosis

Module 1: Prevention

Tuberculosis preventive treatment



WHO  
operational handbook  
on tuberculosis



It's time to scale up access to TB preventive treatment (TbPT) for people at risk of TB. Although the need for people at risk of TB is growing, access to TbPT is still limited. Around 1.4 billion people are at risk of TB, but only about 10 million are receiving TbPT. This means that 1.3 billion people are not getting the protection they need.



The fact is, people at risk of TB are not getting the protection they need. This is because of many reasons, including lack of knowledge, stigma, and limited access to health services. People at risk of TB need to know about the risks and how to protect themselves. They also need to have access to health services that can provide them with the support they need.



Using TB preventive treatment (TbPT) is one of the best ways to prevent TB. It's a simple, safe, and effective way to protect yourself and your loved ones. People at risk of TB should talk to their healthcare provider about getting TbPT. It's a simple step that can make a big difference.



Getting support and advice is an important part of getting TbPT. People at risk of TB should talk to their healthcare provider, a community health worker, or a TB specialist. They can help them understand the risks and how to get TbPT. They can also help them with any questions or concerns they have.



It's important to know that getting TbPT is not just for people with TB. It's for everyone at risk of TB. This includes people who have been in contact with someone who has TB, people who have traveled to a country where TB is common, and people who have a weakened immune system. Everyone at risk of TB should get TbPT.



In 2020, WHO called for governments to scale up access to TbPT for everyone at risk of TB. This is because TB is a leading cause of death and disability worldwide. It's a preventable disease, and everyone at risk of TB should get the protection they need. Governments should make sure that everyone at risk of TB has access to TbPT. This is a simple step that can make a big difference.

Source: WHO, 2020. The global burden of TB and the impact of scaling up access to TB preventive treatment (TbPT).

## Factsheet



## Prevent TB Digital Platform



## Preventive treatment for tuberculosis infection

TB preventive treatment can stop infection from turning into disease.



### What is TB infection?

Most people who are infected by TB bacteria do not develop TB disease. The bacteria stay in the body and can be active for many years. However, if the immune system becomes weak, the bacteria can multiply and cause TB disease. This is why it is important to know if you are at risk of TB infection and to get preventive treatment if you are.

### Am I at risk?

You are at risk of TB infection if you have been in contact with someone who has TB disease, or if you have been in a high-risk environment, such as a prison, a hospital, or a care home. You are also at risk if you have a weak immune system, such as if you are taking medicines that suppress the immune system.

### Do I need TB preventive treatment?

Yes, if you are at risk of TB infection. Preventive treatment can stop TB infection from turning into TB disease. It is a short course of medicines that you take for 3 to 6 months.

### What are the treatment options?

There are two main options for TB preventive treatment. The first is a short course of medicines that you take for 3 to 6 months. The second is a longer course of medicines that you take for 9 to 12 months. Your doctor will decide which option is best for you.



Protect yourself and your loved ones!



## Visual Q & A

## How to Protect Ourselves from TB

### About TB Preventive Treatment



## TB Preventive Treatment Flyer

## Frequently Asked Questions on TB preventive treatment

## MULTIMEDIA

1 in 4 people have tuberculosis (TB) infection. People in close contact with TB patients and those living with HIV are at high risk of developing TB. TB preventive treatment can stop TB infection from turning into disease.



WHO High Level Meeting target:  
+30 million people receive TB preventive treatment



**It's time** to prevent TB to end TB

Social media title

## Expanded access to tuberculosis preventive treatment

By 2018

85% OF PEOPLE WHO ARE EXPOSED TO NEW CASES SHOULD RECEIVE TB PREVENTIVE TREATMENT  
(WHO 2015, WHO 2017)

OR 37% OF CHILDREN WHO ARE EXPOSED TO TB SHOULD RECEIVE TB PREVENTIVE TREATMENT  
(WHO 2015, WHO 2017)



WHO recommends preventive treatment for people living with HIV and all contacts living in households with TB (including children under 5 years)



Infographic



[Animated gif](#)

---

**World Health Organization**  
**Global TB Programme**  
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**From:** RYAN, Michael J.  
**Sent:** Mon, 30 Mar 2020 09:05:35 +0000  
**To:** SHOC;Office of the Director-General;Redfield, Robert R.  
(CDC/OD) (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
David Heymann;Felicity Harvey  
(b) (6);Chris.Elias (b) (6);J.Farrar; (b) (6);  
(b) (6);Fauci, Anthony (NIH/NIAID) [E]; (b) (6); (b) (6);  
(b) (6); (b) (6);GREIN, Thomas;COX, Paul Michael;SCHWARTLANDER,  
Bernhard F.;MINHAS, Raman; (b) (6);Conrad, Patricia (NIH/NIAID) [E];MAHJOUR,  
Jaouad;FALL, Ibrahima Soce;Thomas R. Frieden;elhadj.sy;Lynn Banks;President | Resolve to Save  
Lives (b) (6); (b) (6);AL-SHORBAJI,  
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Maria; (b) (6); (b) (6); (b) (6); (b) (6);cherylc;G  
RAAFF, Peter Jan;POOLE, Marcia;Tarik Mohammed; (b) (6);Carlos Navarro  
Colorado; (b) (6);Ryan Morhard;BRIAND, Sylvie;MORGAN, Oliver;Harries,  
Jenny;Awwad, David (NIH/NIAID) [C];SIMONSON, Stewart;SINGER, Peter Alexander;Jayatunga,  
Wikum (b) (6); (b) (6);Julie.HALL;Amelie RIOUX;KABIR,  
Sophia; (b) (6); (b) (6); (b) (6);rosesper;SHIN,  
Young-Soo; (b) (6);Feng  
Ding; (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6);  
**Cc:** SHOC;Office of the Director-General;SCHWARTLANDER, Bernhard F.;MAHJOUR,  
Jaouad;FALL, Ibrahima Soce;GREIN, Thomas;MINHAS, Raman;COX, Paul Michael;AL-SHORBAJI,  
Farah;POOLE, Marcia;DRURY, Patrick Anthony;GRAAFF, Peter Jan;Dr VAN KERKHOVE, Maria;KABIR,  
Sophia;FARES, Christine Youssef;AYLWARD, Raymond Bruce J.;SMITH, Ian Michael  
**Subject:** The global health leaders call, Wednesday 1st April at 13:00 CET  
**Attachments:** (b) (6); Swisscom Call code.pdf

Dear colleagues,

Dr Tedros would like to invite you to the next informal discussion about the ongoing 2019 novel coronavirus.

The teleconference will be hosted on Wednesday, 1<sup>st</sup> April at 13:00 CET and the dial-in number with a passcode is attached.

If you experience any technical difficulties joining this conference call, please contact the WHO HQ EOC operator at: +41227912490

It would be appreciated if you could kindly confirm your participation to Ms Sophia Kabir, email: (b) (6); mobile no. (b) (6)

The agenda and background documents will be shared ahead of the call.

Best,

Mike





Dial by your location

- (b) (6) Switzerland
- (b) (6) Switzerland Toll-free
- (b) (6) Switzerland Toll-free
- (b) (6) US
- (b) (6) US Toll-free
- (b) (6) US Toll-free
- (b) (6) France Toll-free
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By [Lena H. Sun](#) National reporter focusing on health [Email](#) [Follow](#) *January 21 at 1:48pm ET*

A man in Washington state has been diagnosed with the mysterious virus, the first case confirmed in the United States of an illness that began in China last month and **has killed at least six people** and sickened hundreds more, according to people familiar with the investigation.

The man is in **stable condition**. He arrived in the United States **last week**, before federal health officials began [screening travelers](#) from the central Chinese city of Wuhan at Los Angeles, San Francisco and New York's John F. Kennedy international airports.

The outbreak **has grown rapidly in recent days**, with authorities in China reporting confirmed cases in multiple cities as hundreds of millions of people in China and elsewhere in Asia are on the move in the run-up to the Lunar New Year, the biggest migration event in the world.

The World Health Organization **is meeting Wednesday to decide whether to declare** the outbreak an international public health emergency.

The CDC is expected to announce details about the U.S. case **in a 2 p.m. news conference**. Neither his identity, nor his travel route have been publicly released.

Coronaviruses are a large family of viruses ranging from the common cold to much more serious diseases, which can infect both humans and animals, according to WHO. The strain spreading in China is related to two other coronaviruses that have caused major outbreaks in recent years: Middle East respiratory syndrome, also known as **MERS**, and Severe Acute Respiratory Syndrome, or **SARS**.

Symptoms of a coronavirus infection include respiratory problems, difficulties breathing, fever and cough, and can lead to severe cases of **pneumonia, kidney failure**, acute respiratory syndrome (**when fluid builds up in the lungs**) and **death**.

The elderly, young and those with an already weakened immune system are at a higher risk of developing severe lower-respiratory tract diseases, like bronchitis and pneumonia, [according to the Centers for Disease Control and Prevention](#).

**Read more:** [What we know about the coronavirus spreading in China and elsewhere](#)

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From: <http://www.cidrap.umn.edu/news-perspective/2020/01/new-coronavirus-infects-health-workers-spreads-korea>

New coronavirus infects health workers, spreads to Korea ... *Jan 20, 2020 ... 3:20pm ET*

A Chinese health official said today that **14 healthcare workers** have been infected with the Wuhan-linked novel coronavirus (2019-nCoV), **bolstering evidence of human-to-human spread** and spurring new questions about virus circulation against a backdrop of other winter respiratory illnesses.



In addition, **South Korea** early this morning reported its first 2019-nCoV case, as the number of outbreak-related cases grew in other Chinese cities, including Beijing and Shanghai, pushing the nation's total to **218**.

The **quickly evolving outbreak** prompted the World Health Organization (WHO) to announce that it will convene an emergency committee **on Jan 22** to see if developments warrant a public health emergency of international concern under International Health Regulations. ....  
MORE AT THIS LINK ABOVE ...

-----  
PLEASE DIRECT YOUR **nCoV** VACCINE TECHNICAL QUESTIONS TO:

Ashok Kumar Chopra, CSc, PhD (b) (6) CELL Phone: (b) (6)  
Professor (Tenured), Microbiology & Immunology - Department of Microbiology & Immunology  
Scientific Staff Member - Shriners Burns Institute, Galveston, TX  
Member UTMB Center for Tropical Diseases - Senior Scientist, Sealy Center for Vaccine Development  
Member, Center for Biodefense and Emerging Infectious Diseases  
Phone: (b) (6) Lab: (b) (6) Fax: (409) 747-6869  
Ref: <https://microbiology.utmb.edu/faculty/ashok-chopra-phd-csc>  
PubMed: <https://www.ncbi.nlm.nih.gov/pubmed/?term=Chopra+AK>

-----  
Dr. Stephen Howard Leppla, PhD (b) (6)  
BG 33 RM 1W20B4, 33 NORTH DR, BETHESDA MD 20814 ... 3202  
Phone: (b) (6) Fax: 301-480-0326  
NIH ... MICROBIAL PATHOGENESIS SECTION (HNM25N)

-----  
Sankar Adhya, PhD (b) (6) ; (b) (6)  
Senior Investigator - Laboratory of Molecular Biology  
Head, Developmental Genetics Section ... Ph: (b) (6)

Clark Tibbs, CEO  
PhageVax, Inc. [www.PhageVax.com](http://www.PhageVax.com)  
CAGE CODE: (b) (6)  
Phone: (b) (6) Fax: (b) (6) Cell: (b) (6)  
E-mail: (b) (6) -or- (b) (6) -or- (b) (6)  
General Offices & HQ: 855 Sharon Valley Road, Suite 101 Newark, Ohio 43055-2860 USA

**From:** Clark Tibbs PhageVax-VHO  
**Sent:** Tue, 21 Jan 2020 16:33:48 -0500  
**To:**

(b) (6); (b) (6); (b) (6); Kadlec, Robert (OS/ASPR/IO); Armstrong, Kimberly (OS/ASPR/BARDA); Fauci, Anthony (NIH/NIAID) [E]; Conrad, Patricia (NIH/NIAID) [E]; CDC Lauren Peel JD Contracting Officer Office of the Chief Operating Officer; Perry, Wendy (AHRQ/OC); Khanna, Gopal (AHRQ/IOD); Meyers, David (AHRQ/IOD); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); Leppla, Stephen (NIH/NIAID) [E]; Adhya, Sankar (NCI); Adhya, Sankar (NIH/NCI) [E]; Armstrong, Kimberly (OS/ASPR/BARDA); Adams, Peter (OS/ASPR/BARDA); Erlandson, Karl (OS/ASPR/BARDA); (b) (6); (b) (6); Leppla, Stephen (NIH/NIAID) [E]  
**Subject:** To WSJ and WashPost :: VACCINE OFFER :: T-4 Lambda Phage Head Vaccine Platform vs. the 2019-nCoV Virus ... Today is Jan 21  
**Attachments:** To ALL ~ FULL (Leppla Chopra Rao) PHAGE T4 -Based Dual Vaccine vs Anthrax Plague (Oct 2018).pdf

Hello WSJ and WashPost ... please call these people and ask them if and when they plan to fund this nVoC Vaccine Offer?

-  
Special Assistant to (b) (6) ... Patty Conrad at (b) (6)  
(b) (6)

-  
Hello Ms. Conrad, I hope that NIH is funding several nCoV vaccine candidates that include a few vaccine candidates that use this T-4 Phage Head Vaccine Platform ... ??? Please see this Attachment.

-  
Question: Can ... BARDA and/or AHRQ assist with some of the Emergency Funding?

-  
**AND TO:** CDC ... Lauren Peel JD Contracting Officer Office of COO (b) (6)  
(b) (6)

-  
**AND TO:** Kimberly Armstrong, Ph.D., MT (ASCP) (b) (6)  
Branch Chief, Therapeutics (Acting) ... Influenza and Emerging Diseases Division  
Biomedical Advanced Research and Development Authority (BARDA)  
Office of the Assistant Secretary for Preparedness and Response (ASPR)  
Department of Health and Human Services (DHHS)  
Phone: (b) (6) Cell: (b) (6)  
~AND~ Peter Adams (b) (6) Karl Erlandson (b) (6)

-  
**AND TO:**  
Wendy Perry ... AHRQ Exec Sec  
(b) (6) Fax-301-427-1873  
(b) (6)

5600 Fishers Lane, Room 07N90C, Rockville, MD 20857  
Examples of FUNDING:



<https://www.ahrq.gov/funding/fund-opps/index.html>  
<https://www.ahrq.gov/funding/policies/foaguidance/index.html>

-  
Thank you, Call Clark Tibbs with questions: (b) (6)  
-

**FOR TECHNICAL QUESTIONS:**

Ashok Kumar Chopra, CSc, PhD (b) (6) CELL Phone: (b) (6)  
Professor (Tenured), Microbiology & Immunology  
Department of Microbiology & Immunology  
Scientific Staff Member - Shriners Burns Institute, Galveston, TX  
Member UTMB Center for Tropical Diseases  
Senior Scientist, Sealy Center for Vaccine Development  
Member, Center for Biodefense and Emerging Infectious Diseases  
Phone: (b) (6) Lab: (b) (6) Fax: (409) 747-6869  
Ref: <https://microbiology.utmb.edu/faculty/ashok-chopra-phd-csc>  
PubMed: <https://www.ncbi.nlm.nih.gov/pubmed/?term=Chopra+AK>  
-  
-

---

**From:** Clark Tibbs PhageVax-VHO [mailto:(b) (6)]  
**Sent:** Monday, January 20, 2020 4:38 PM  
**To:** (b) (6)  
**Subject:** TO (b) (6) :: T-4 Lambda Phage Head Vaccine Platform vs. the 2019-nCoV Virus ... Today is Jan 20

TO (b) (6) Please scan over then call me for more information?

*Thank you for your excellent reporting!*

---

**From:**  
<http://www.cidrap.umn.edu/news-perspective/2020/01/new-coronavirus-infects-health-workers-spreads-korea>

**New coronavirus infects health workers, spreads to Korea ... Jan 20, 2020 ... 3:20pm ET**  
A Chinese health official said today that **14 healthcare workers** have been infected with the Wuhan-linked novel coronavirus (2019-nCoV), **bolstering evidence of human-to-human spread** and spurring new questions about virus circulation against a backdrop of other winter respiratory illnesses.

---

I can put WHO in contact with **at least three (3) of the Authors** from this important Attached Document.

Clark Tibbs, CEO  
PhageVax, Inc. [www.PhageVax.com](http://www.PhageVax.com)  
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Phone: (b) (6) Fax: [740.366.5230](tel:740.366.5230) Cell: (b) (6)



E-mail: (b) (6) -or- (b) (6) -or- (b) (6)  
General Offices & HQ: 855 Sharon Valley Road, Suite 101 Newark, Ohio 43055-2860 USA

---

**From:** Clark Tibbs PhageVax-VHO [mailto:(b) (6)]  
**Sent:** Tuesday, January 14, 2020 2:28 PM  
**To:** (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6)  
**Cc:** (b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
**Subject:** To Drs. Leppla & Adhya & Takeda at NIH :: T-4 Phage Head Vaccine Platform for > China releases genetic data on nCoV ... Jan 11, 2020 ... Today is Jan 14

To:  
Dr. Stephen Howard Leppla, PhD (b) (6)  
BG 33 RM 1W20B4, 33 NORTH DR, BETHESDA MD 20814 ... 3202  
Phone: (b) (6) Fax: 301-480-0326  
NIH ... MICROBIAL PATHOGENESIS SECTION (HNM25N)  
-and-

Sankar Adhya, PhD (b) (6); (b) (6)  
Senior Investigator - Laboratory of Molecular Biology  
Head, Developmental Genetics Section  
Ph: (b) (6)

-and-  
David Takeda, M.D., Ph.D. (b) (6) ...  
Center for Cancer Research - National Cancer Institute, Building 37, Room 1066, Bethesda, MD 20892 USA  
Ph: (b) (6)  
Ref: <https://ccr.cancer.gov/Laboratory-of-Genitourinary-Cancer-Pathogenesis/david-takeda>

Gentlemen,

I hope that NIH is funding several **nCoV vaccine candidates** that include a few vaccine candidates that use this T-4 Phage Head Vaccine Platform ... ??? This could get out-of-control, like SARS and MERS.

---

**From:** Clark Tibbs PhageVax-VHO [mailto:(b) (6)]  
**Sent:** Saturday, January 11, 2020 5:04 PM  
**To:** (b) (6); (b) (6)  
**Subject:** To Drs. Chopra & Rao China releases genetic data on new coronavirus, now deadly via CIDRAP ... Jan 11, 2020

Gentlemen, I hope you will use the T-4 Phage Head Platform for this. Good luck, Clark

=====

AT <http://virological.org> ...

then click on <http://virological.org/t/initial-genome-release-of-novel-coronavirus/319>

### **Initial genome release of novel coronavirus**

#### **Novel 2019 coronavirus**

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[arambaut](#) ARTIC Network

2

[21h](#)

10th January 2020

This posting is communicated by Edward C. Holmes, University of Sydney on behalf of the consortium led by Professor Yong-Zhen Zhang, Fudan University, Shanghai

The Shanghai Public Health Clinical Center & School of Public Health, in collaboration with the Central Hospital of Wuhan, Huazhong University of Science and Technology, the Wuhan Center for Disease Control and Prevention, the National Institute for Communicable Disease Control and Prevention, Chinese Center for Disease Control, and the University of Sydney, Sydney, Australia is releasing a coronavirus genome from a case of a respiratory disease from the Wuhan outbreak. The sequence has also been deposited on [GenBank \(accession MN908947\)](#) and will be released as soon as possible.

The sequence can be downloaded here:

[WH-Human\\_1.fasta.gz](#) (8.9 KB – this is a fasta file compressed using gzip. Uncompress using `gzip -d WH-Human_1.fasta.gz`)

#### **Disclaimer:**

Please feel free to download, share, use, and analyze this data. We ask that you communicate with us if you wish to publish results that use these data in a journal. If you have any other questions –then please also contact us directly.

Professor Yong-Zhen Zhang,  
Shanghai Public Health Clinical Center & School of Public Health,  
Fudan University,  
Shanghai, China.

[zhangyongzhen@shphc.org.cn](mailto:zhangyongzhen@shphc.org.cn)



=====

Below is from:

<http://www.cidrap.umn.edu/news-perspective/2020/01/china-releases-genetic-data-new-coronavirus-now-deadly>

### **China releases genetic data on new coronavirus, now deadly ... Jan 11, 2020**

In quickly moving developments last night, health officials from Wuhan, China, posted a novel coronavirus (nCoV) pneumonia outbreak update, which scaled back the number of cases to 41 and **noted the first death**, and **researchers from China released the genetic sequence of the nCoV**.

And this morning the World Health Organization (WHO) released several interim guidance documents, including advice on travel, lab testing, and medical evaluation.

Michael T. Osterholm, PhD, MPH, said he's pleased to see that health officials and scientists in China have released as much information as they have. He said the main focus now turns toward identifying the animal species that transmitted nCoV to humans and determining whether exposure to those animals poses a threat of outbreaks in other areas.

Osterholm is director of the University of Minnesota's Center for Infectious Disease Research and Policy, which publishes CIDRAP News.

The patient who died is apparently a 61-year-old man who had chronic liver disease and was a frequent customer at the market at the center of the investigation, according to a translation of a Chinese media report posted on Twitter by Hayes Luk, PhD, a microbiologist at the University of Hong Kong.

So far 739 close contacts have been identified for monitoring, 419 of them medical staff. No related cases have been detected.

Investigators haven't found any clear evidence of human-to-human spread, and no infections have been found in healthcare workers. Most of the patients were workers at the **seafood market** at the center of the outbreak, which also sold **live animals** and **meat** from **wildlife**. The most recent illness was reported on Jan 3.

### **Genetic findings, search for more clues**

Chinese scientists submitted the gene sequencing data for posting on ... **www.Virological.org** ... a hub for prepublication data designed to assist with public health activities and research. Earlier this week, they announced that they had isolated and fully sequenced the virus, setting off calls for full release of the details. The post was communicated by Edward Holmes, PhD, with the University of Sydney, on behalf of a Chinese group led by Yong-Zhen Zhang, PhD, with Fudan University in Shanghai.



Since the release of the gene sequences, coronavirus experts have been pouring over them looking for clues on where the Wuhan nCoV came from, how lab officials might test for it, and how it might behave.

**Vineet Menachery, PhD, with the University of Texas Medical Branch (UTMB)** said on Twitter that nCoV appears to be a group 2B coronavirus, which puts it in the same family as the SARS (severe acute respiratory syndrome) virus.

Andrew Rambaut, PhD, administrator of Virological.org and professor of molecular evolution at the University of Edinburgh, said on Twitter that nCoV is 89% similar to SARS-related bat coronavirus in the *Sarbecovirus* group of betacoronaviruses. "But that doesn't mean it comes from bats. MERS-CoV is 88% identical to the nearest known bat virus, and MERS is endemic in camels."

He said though bat viruses span coronavirus diversity and bats are a dominant host in much of the evolutionary history, the link to bats was a distraction when looking for the source of human MERS-CoV (Middle East respiratory syndrome coronavirus) cases.

Another question that the gene sequences could shed light on is the size of the animal source population, Rambaut said. For example, if the 10 genomes so far are nearly identical, then all patients were probably exposed to the same few animals.

Regarding early prospects for testing, **Menachery** noted that the nucleocapsid protein for coronaviruses is highly conserved across coronavirus families, and the N protein of nCoV is about 90% conserved with the SARS N protein. Though less than some other coronaviruses, the similarity may signal nCoV cross-reactivity with the SARS N protein. If there is cross-reactivity, commercially available SARS N protein might allow screening of patient sera.

In a follow-up, **Menachery** said testing for the antibody for the N protein may be effective, but it would need to be tested and verified. Though it's not clear if there are commercial tests that look for the N protein, the N protein is available and could be used to look for exposure in human blood samples. "It is not as good as making N protein specific to the new virus, but a quick and dirty way to test for exposure," he said.

### **WHO travel, medical guidance**

This morning the WHO on Twitter acknowledged the new information from Wuhan health officials and added that Chinese authorities narrowed the number of cases from the earlier 59 illnesses with the use of a genomic test kit.

It also provided preliminary guidance to help countries prepare for nCoV cases, including travel and trade advice. The WHO urges international travelers to practice usual precautions and calls for no restriction on international travel.

On its coronavirus page, the agency posted several interim technical documents for nCoV, which cover the case definition, laboratory guidance, infection prevention and control, risk communications, a readiness checklist, and a disease commodity package.

See also:

**Virological.net** [post](#)

Clark Tibbs, CEO

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USA

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**From:** Jeanette Vega Morales  
**Sent:** Fri, 24 Jan 2020 16:40:21 +0000  
**To:** GPMB Secretariat; As Sy Elhadj; Brundtland Gro Harlem; Dzau Victor; Chris. Elias; Farrar Jeremy; Fauci, Anthony (NIH/NIAID) [E]; Fore Henrietta; Gao Fu; Gashumba Diane; Kaag Sigrid; Ilona Kickbusch; Skvortsova Veronika; Suzuki Yasuhiro; Vega Morales Jeanette; Vega Morales Jeanette; VijayRaghavan Krishnaswamy  
**Cc:** MAHJOUR, Jaouad; MINHAS, Raman; Toomas Palu; Pate Muhamed; RYAN, Michael J.; SCHWARTLANDER, Bernhard F.; Alex Harris; Alveberg, Benedikte Louise; Chiaki NOGUCHI; Esveld Marja; Esveld Marja; Esveld Marja; Gonggrijp Mette; Julie. HALL; Kanarek Morgan; Marston, Hilary (NIH/NIAID) [E]; Oleg Sonin; Omar Abdi; Amelie RIOUX; Tore Godal; GABEDAVA, Tsira; ROSS, Alex; Banks Lynn; Block Bruce; Conrad Jane; Conrad, Patricia (NIH/NIAID) [E]; Del Sol Dinia; Diaoy Fay; Elena Kirsanova; Gahungu Zacharie; Harikumar M K; Harikumar M K; Kabagire Christine; KITA Yosuke; Miller de Vega Teresa; MURIUKI, Hilda Wairimu; Muzenda Sindiso; Sarah Belmir; YU Bai  
**Subject:** Re: URGENT TIME CORRECTION -- GPMB: Message on behalf of the Co-Chairs: Proposed Board teleconference THIS MONDAY

Thanks Will gladly attend

Jeanette

Enviado desde mi Huawei

----- Mensaje original -----

Asunto: RE: URGENT TIME CORRECTION -- GPMB: Message on behalf of the Co-Chairs: Proposed Board teleconference THIS MONDAY

De: GPMB Secretariat

Para: As Sy Elhadj ,Brundtland Gro Harlem ,Dzau Victor , "Chris.Elias" ,Farrar Jeremy ,Fauci Anthony ,Fore Henrietta ,Gao Fu ,Gashumba Diane ,Kaag Sigrid ,Ilona Kickbusch ,Skvortsova Veronika ,Suzuki Yasuhiro ,Vega Morales Jeanette ,Vega Morales Jeanette ,VijayRaghavan Krishnaswamy

CC: "MAHJOUR, Jaouad" , "MINHAS, Raman" ,Toomas Palu ,Pate Muhamed , "RYAN, Michael J." , "SCHWARTLANDER, Bernhard F." ,Alex Harris , "Alveberg, Benedikte Louise" ,Chiaki NOGUCHI ,Esveld Marja ,Esveld Marja ,Esveld Marja ,Gonggrijp Mette , "Julie.HALL" ,Kanarek Morgan ,Marston Hilary ,Oleg Sonin ,Omar Abdi ,Amelie RIOUX ,Tore Godal , "GABEDAVA, Tsira" , "ROSS, Alex" ,Banks Lynn ,Block Bruce ,Conrad Jane ,Conrad Patricia ,Del Sol Dinia ,Diaoy Fay ,Elena Kirsanova ,Gahungu Zacharie ,Harikumar M K ,Harikumar M K ,Kabagire Christine ,KITA Yosuke ,Miller de Vega Teresa , "MURIUKI, Hilda Wairimu" ,Muzenda Sindiso ,Sarah Belmir ,YU Bai

Dear GPMB Board members

We apologize -- please note there is a **TIME CORRECTION** for the call this **Monday 27 January. The call is at 1500-1600 Geneva time**

The call in details remain the same.



Thank you very much  
GPMB Secretariat

**From:** GPMB Secretariat

**Sent:** Friday, January 24, 2020 3:39 PM

**To:** 'As Sy Elhadj' (b) (6); 'Brundtland Gro Harlem' (b) (6); 'Dzau Victor'

(b) (6); 'Elias Chris' (b) (6); 'Farrar Jeremy'

(b) (6); 'Fauci Anthony' (b) (6); 'Fore Henrietta'

(b) (6); 'Gao Fu' (b) (6); 'Gashumba Diane' (b) (6); 'Kaag

Sigrid' (b) (6); 'Kickbusch Ilona' (b) (6); 'Skvortsova Veronika'

(b) (6); 'Suzuki Yasuhiro' (b) (6); 'Vega Morales Jeanette'

(b) (6); 'Vega Morales Jeanette' (b) (6); 'VijayRaghavan

Krishnaswamy' (b) (6)

**Cc:** MAHJOUR, Jaouad (b) (6); 'Minhas Raman' (b) (6); 'Palu Toomas'

(b) (6); 'Pate Muhamed' (b) (6); RYAN, Michael J.

(b) (6); 'Schwartlander Bernhard' (b) (6); 'Alex Harris'

(b) (6); 'Alveberg Benedikte L.' (b) (6); 'Chiaki

NOGUCHI' (b) (6); 'Esveld Marja' (b) (6); 'Esveld Marja'

(b) (6); 'Esveld Marja' (b) (6); 'Gonggrijp Mette'

(b) (6); 'Hall Julie' (b) (6); 'Kanarek Morgan'

(b) (6); 'Marston Hilary' (b) (6); 'Oleg Sonin'

(b) (6); 'Omar Abdi' (b) (6); 'Rioux Amelie'

(b) (6); 'Tore Godal' (b) (6); GABEDAVA, Tsira (b) (6);

'ROSS, Alex' (b) (6); 'Banks Lynn' (b) (6); 'Block Bruce'

(b) (6); 'Conrad Jane' (b) (6); 'Conrad Patricia' (b) (6);

'Del Sol Dinia' (b) (6); 'Diao Fay' (b) (6); 'Elena Kirsanova'

(b) (6); 'Gahungu Zacharie' (b) (6); 'Harikumar M K'

(b) (6); 'Harikumar M K' (b) (6); 'Kabagire Christine'

(b) (6); 'KITA Yosuke' (b) (6); 'Miller de Vega Teresa'

(b) (6); 'Muriuki Hilda Wairimu' (b) (6); 'Muzenda Sindiso'

(b) (6); 'Sarah Belmir' (b) (6); 'YU Bai' (b) (6)

**Subject:** URGENT GPMB: Message on behalf of the Co-Chairs: Proposed Board teleconference THIS MONDAY

**Importance:** High

Dear Board members,

As many of you, we are concerned about the Novel 2019-Coronavirus outbreak. We believe the Board has a role to play in supporting the response and encouraging countries to step up their preparedness activities, as well as to support WHO in their efforts.

As co-chairs of the GPMB we therefore suggest to hold a **teleconference** of the Board to discuss the outbreak.

An outcome of the call could be a GPMB statement supporting the response and highlighting crucial preparedness activities that should be undertaken, or other suggestions to be discussed.

We would suggest to hold the teleconference call on **Monday 27 January at 1400-1500 Geneva time**. This is the only time next week the Co-Chairs are available.

Attached is information for a telephone bridge for the call. We would appreciate it if you could please confirm your participation.

We will share with you shortly a more detailed agenda.

We look forward to hearing from you on this and thank you for your continued engagement.

Kinds regards,

Gro and As

**From:** GPMB Secretariat  
**Sent:** Mon, 27 Jan 2020 14:10:33 +0000  
**To:** As Sy Elhadj;Brundtland Gro Harlem;Dzau Victor;Chris.Elias;Farrar Jeremy;Fauci, Anthony (NIH/NIAID) [E];Fore Henrietta;Gao Fu;Gashumba Diane;Kaag Sigrid;Ilona Kickbusch;Suzuki Yasuhiro;Vega Morales Jeanette;Vega Morales Jeanette;VijayRaghavan Krishnaswamy  
**Cc:** MAHJOUR, Jaouad;MINHAS, Raman;Toomas Palu;Pate Muhamed;RYAN, Michael J.;SCHWARTLANDER, Bernhard F.;Alex Harris;Alveberg, Benedikte Louise;Chiaki NOGUCHI;Esveld Marja;Esveld Marja;Esveld Marja;Gonggrijp Mette;Julie.HALL;Kanarek Morgan;Marston, Hilary (NIH/NIAID) [E];Omar Abdi;Amelie RIOUX;Tore Godal;GABEDAVA, Tsira;ROSS, Alex;Banks Lynn;Block Bruce;Conrad Jane;Conrad, Patricia (NIH/NIAID) [E];Del Sol Dinia;Diao Fay;Gahungu Zacharie;Harikumar M K;Harikumar M K;Kabagire Christine;KITA Yosuke;Miller de Vega Teresa;MURIUKI, Hilda Wairimu;Muzenda Sindiso;Sarah Belmir;YU Bai  
**Subject:** RE: CONFIRMNG GPMB Board Teleconference, Monday, 27 January, re: novel coronavirus  
**Attachments:** GPMB\_nCoV\_20200127\_WHO briefing.pdf  
**Importance:** High

All  
The WHO update

**From:** GPMB Secretariat  
**Sent:** Monday, January 27, 2020 12:13 AM  
**To:** As Sy Elhadj (b) (6); Brundtland Gro Harlem (b) (6); Dzau Victor (b) (6); Elias Chris (b) (6); Farrar Jeremy (b) (6); Fauci Anthony (b) (6); Fore Henrietta (b) (6); Gao Fu (b) (6); Gashumba Diane (b) (6); Kaag Sigrid (b) (6); Kickbusch Ilona (b) (6); Suzuki Yasuhiro (b) (6); Vega Morales Jeanette (b) (6); Vega Morales Jeanette (b) (6); VijayRaghavan Krishnaswamy (b) (6)  
**Cc:** MAHJOUR, Jaouad (b) (6); Minhas Raman (b) (6); Palu Toomas (b) (6); Pate Muhamed (b) (6); RYAN, Michael J. (b) (6); Schwartlander Bernhard (b) (6); Alex Harris (b) (6); Alveberg Benedikte L. (b) (6); Chiaki NOGUCHI (b) (6); Esveld Marja (b) (6); Esveld Marja (b) (6); Esveld Marja (b) (6); Gonggrijp Mette (b) (6); Hall Julie (b) (6); Kanarek Morgan (b) (6); Marston Hilary (b) (6); Omar Abdi (b) (6); Rioux Amelie (b) (6); Tore Godal (b) (6); GABEDAVA, Tsira (b) (6); ROSS, Alex (b) (6); Banks Lynn (b) (6); Block Bruce (b) (6); Conrad Jane (b) (6); Conrad Patricia (b) (6); Del Sol Dinia (b) (6); Diao Fay (b) (6); Gahungu Zacharie (b) (6); Harikumar M K (b) (6); Harikumar M K (b) (6); Kabagire Christine (b) (6); KITA Yosuke (b) (6); Miller de Vega Teresa (b) (6); Muriuki Hilda Wairimu (b) (6); Muzenda Sindiso (b) (6); Sarah Belmir (b) (6); YU Bai (b) (6)



**Subject:** CONFIRMING GPMB Board Teleconference, Monday, 27 January, re: novel coronavirus  
**Importance:** High

Dear GPMB Board Members,

We are confirming the teleconference tomorrow, **Monday 27 January 2020, 1500-1600 Geneva Time.**

Please find attached the agenda (replicated below) and for ease of reference the call-in numbers and participant code.

Please let us know if you have any questions

Thank you very much  
GPMB Secretariat (on behalf of the co-Chairs)

***GPMB Teleconference on the 2019-novel Coronavirus outbreak***

**Monday, 27 January 2020**

**15.00-16.00 Geneva time**<sup>[\[1\]](#)</sup>

**15.00 – 15.10     1. Welcome and Roll call**

**15.10 – 15.30     Updates on the Novel 2019-Coronavirus outbreak**

**2. Prof George Gao, Director, China CDC (10 min)**

**3. Dr. Mike Ryan, Executive Director, WHO/WHE (10 minutes)**

**15.30 – 16.00     4. Discussion/Actions from the Board (30 minutes)**

- Possible statement

**16.00             Adjourn**

**From:** GPMB Secretariat

**Sent:** Friday, January 24, 2020 4:44 PM

**Subject:** RE: URGENT TIME CORRECTION -- GPMB: Message on behalf of the Co-Chairs: Proposed Board teleconference THIS MONDAY

**Importance:** High

Dear GPMB Board members

We apologize -- please note there is a **TIME CORRECTION** for the call this **Monday 27 January. The call is at 1500-1600 Geneva time**

The call in details remain the same.

Thank you very much  
GPMB Secretariat

**From:** GPMB Secretariat

**Sent:** Friday, January 24, 2020 3:39 PM

**To:** 'As Sy Elhadj' (b) (6); 'Brundtland Gro Harlem' (b) (6); 'Dzau Victor'

(b) (6); 'Elias Chris' (b) (6); 'Farrar Jeremy'

(b) (6); 'Fauci Anthony' (b) (6); 'Fore Henrietta'

(b) (6); 'Gao Fu' (b) (6); 'Gashumba Diane' (b) (6); 'Kaag

Sigrid' (b) (6); 'Kickbusch Ilona' (b) (6); 'Skvortsova Veronika'

(b) (6); 'Suzuki Yasuhiro' (b) (6); 'Vega Morales Jeanette'

(b) (6); 'Vega Morales Jeanette' (b) (6); 'VijayRaghavan

Krishnaswamy' (b) (6)

**Cc:** MAHJOUR, Jaouad (b) (6); 'Minhas Raman' (b) (6); 'Palu Toomas'

(b) (6); 'Pate Muhamed' (b) (6); RYAN, Michael J.

(b) (6); 'Schwartlander Bernhard' (b) (6); 'Alex Harris'

(b) (6); 'Alveberg Benedikte L.' (b) (6); 'Chiaki

NOGUCHI' (b) (6); 'Esveld Marja' (b) (6); 'Esveld Marja'

(b) (6); 'Esveld Marja ' (b) (6); 'Gonggrijp Mette '

(b) (6); 'Hall Julie' (b) (6); 'Kanarek Morgan'

(b) (6); 'Marston Hilary' (b) (6); 'Oleg Sonin '

(b) (6); 'Omar Abdi' (b) (6); 'Rioux Amelie'

(b) (6); 'Tore Godal' (b) (6); GABEDAVA, Tsira (b) (6);

'ROSS, Alex' (b) (6); 'Banks Lynn' (b) (6); 'Block Bruce'

(b) (6); 'Conrad Jane' (b) (6); 'Conrad Patricia' (b) (6);

'Del Sol Dinia' (b) (6); 'Diao Fay' (b) (6); 'Elena Kirsanova '

(b) (6); 'Gahungu Zacharie' (b) (6); 'Harikumar M K'

(b) (6); 'Harikumar M K' (b) (6); 'Kabagire Christine'

(b) (6); 'KITA Yosuke' (b) (6); 'Miller de Vega Teresa'

(b) (6); 'Muriuki Hilda Wairimu' (b) (6); 'Muzenda Sindiso'

(b) (6); 'Sarah Belmir' (b) (6); 'YU Bai' (b) (6)

**Subject:** URGENT GPMB: Message on behalf of the Co-Chairs: Proposed Board teleconference THIS MONDAY

**Importance:** High

Dear Board members,

As many of you, we are concerned about the Novel 2019-Coronavirus outbreak. We believe the Board has a role to play in supporting the response and encouraging countries to step up their preparedness activities, as well as to support WHO in their efforts.

As co-chairs of the GPMB we therefore suggest to hold a **teleconference** of the Board to discuss the outbreak.

An outcome of the call could be a GPMB statement supporting the response and highlighting crucial preparedness activities that should be undertaken, or other suggestions to be discussed.

We would suggest to hold the teleconference call on **Monday 27 January at 1400-1500 Geneva time**. This is the only time next week the Co-Chairs are available.


Attached is information for a telephone bridge for the call. We would appreciate it if you could please confirm your participation.

We will share with you shortly a more detailed agenda.

We look forward to hearing from you on this and thank you for your continued engagement.

Kinds regards,

Gro and As

 Please refer to email planning for the call to find call-in information.



Schumer: CDC needs to access funding to fight coronavirus ... Posted Jan 26, 1:40 PM

**Subject:** To US SENATE & CDC & BARDA & AHRQ & NIH & VHA :: 56+ DEAD+2,000+ CASES :: Re-send VACCINE OFFER :: T-4 Lambda Phage Head Vaccine Platform vs. the 2019-nCoV Virus ... Jan 26



Hello Selected **US Senate** Staff Members and CDC and BARDA and AHRQ and NIH and VHA,

-  
**Sen. Schumer:** CDC needs to access funding to fight coronavirus ... Jan., 26, 2020 at 1:40pm ET  
<https://www.silive.com/news/2020/01/schumer-cdc-needs-to-access-funding-to-fight-coronavirus.html>

-  
STATEN ISLAND, N.Y. -- Senator Charles Schumer (D-New York) wants the Centers for Disease Control (CDC) to use funding he allocated to fight the spread of the deadly coronavirus, for which there are three confirmed cases in the United States.

-  
Schumer recently negotiated a budget deal that put **\$85 million** in the CDC **Infectious Disease Rapid Response Reserve Fund** to ward off serious public health threats. He wants the CDC to be able to access these funds now. But for that to happen, a **“public health emergency”** must be declared by the U.S.

Department of Health and Human Services (HHS).

- Our Team of Experts will need **\$2 million** of this **\$85 million** - All of the vaccine-protection money will go directly to these Authors.

-  
My name is Clark Tibbs in Ohio. I hope to hear from you and your Team with any questions and how you and/or any PhDs, MDs, DOs or MBBSs can participate in this **Vaccine Development and Clinical Trial**.

=====

Hello [Whistleblower.Coordinator@oig.hhs.gov](mailto:Whistleblower.Coordinator@oig.hhs.gov) and **ALL US Senators**

... I think this is an Emergency ....



..... please call these people and ask them **if and when** they plan to fund this  
**nVoC Vaccine Offer?**

-  
Special Assistant to (b) (6) ... Patty Conrad at (b) (6)  
(b) (6)

-  
I hope that NIH is funding several **nCoV vaccine candidates** that include a few vaccine candidates that use this T-4 Phage Head Vaccine Platform ... ??? Please see this Attachment.

-  
**Question:** Can ... **BARDA** and/or **AHRQ** assist with some of the Emergency Funding?

-  
**AND TO:** CDC ... Lauren Peel JD Contracting Officer Office of COO (b) (6)  
(b) (6)

-  
**AND TO:** Kimberly Armstrong, Ph.D., MT (ASCP) (b) (6)  
Branch Chief, Therapeutics (Acting) ... Influenza and Emerging Diseases Division  
**Biomedical Advanced Research and Development Authority (BARDA)**  
Office of the Assistant Secretary for Preparedness and Response (ASPR)  
Department of Health and Human Services (DHHS)  
Phone: (b) (6) **Cell:** (b) (6)  
-AND- Peter Adams (b) (6) Karl Erlandson (b) (6)

-  
**AND TO:**  
Wendy Perry ... **AHRQ** Exec Sec  
(b) (6) Fax-301-427-1873 (b) (6)  
5600 Fishers Lane, Room 07N90C, Rockville, MD 20857  
Examples of FUNDING: <https://www.ahrq.gov/funding/fund-ops/index.html> ;  
<https://www.ahrq.gov/funding/policies/foaguidance/index.html>

=====  
Clark Tibbs, CEO  
PhageVax, Inc. [www.PhageVax.com](http://www.PhageVax.com)  
CAGE CODE: (b) (6)  
Phone: (b) (6) Fax: [740.366.5230](tel:740.366.5230) Cell: (b) (6)  
E-mail: (b) (6) -or- (b) (6) -or- (b) (6)  
General Offices & HQ: 855 Sharon Valley Road, Suite 101 Newark, Ohio 43055-2860 USA

**FOR TECHNICAL QUESTIONS:**

Ashok Kumar Chopra, CSc, PhD (b) (6) CELL Phone: (b) (6)  
Professor (Tenured), Microbiology & Immunology  
Department of Microbiology & Immunology  
Scientific Staff Member - Shriners Burns Institute, Galveston, TX  
Member UTMB Center for Tropical Diseases  
Senior Scientist, Sealy Center for Vaccine Development

Member, Center for Biodefense and Emerging Infectious Diseases  
Phone: (b) (6) Lab: (b) (6) Fax: (409) 747-6869  
Ref: <https://microbiology.utmb.edu/faculty/ashok-chopra-phd-csc>  
PubMed: <https://www.ncbi.nlm.nih.gov/pubmed/?term=Chopra+AK>

..... AND .....

Dr. Stephen Howard Leppla, PhD (b) (6)  
BG 33 RM 1W20B4, 33 NORTH DR, BETHESDA MD 20814 ... 3202  
Phone: (b) (6) Fax: 301-480-0326  
NIH ... MICROBIAL PATHOGENESIS SECTION (HNM25N)  
-and-

Sankar Adhya, PhD (b) (6) ; (b) (6)  
Senior Investigator - [Laboratory of Molecular Biology](#)  
Head, Developmental Genetics Section  
Ph: (b) (6)

---

AT <http://virological.org> ...

then click on <http://virological.org/t/initial-genome-release-of-novel-coronavirus/319>

**Initial genome release of novel coronavirus**

**Novel 2019 coronavirus**

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[21h](#)

**10th January 2020**

This posting is communicated by Edward C. Holmes, University of Sydney on behalf of the consortium led by Professor Yong-Zhen Zhang, Fudan University, Shanghai

The Shanghai Public Health Clinical Center & School of Public Health, in collaboration with the Central Hospital of Wuhan, Huazhong University of Science and Technology, the Wuhan Center for Disease Control and Prevention, the National Institute for Communicable Disease Control and Prevention, Chinese Center for Disease Control, and the University of Sydney, Sydney, Australia is releasing a coronavirus genome from a case of a respiratory disease from the Wuhan outbreak. The sequence has also been deposited on **GenBank (accession MN908947)** and will be released as soon as possible.



The sequence can be downloaded here:

[WH-Human\\_1.fasta.gz](#) (8.9 KB – this is a fasta file compressed using gzip. Uncompress using gzip -d WH-Human\_1.fasta.gz)

**Disclaimer:**

Please feel free to download, share, use, and analyze this data. We ask that you communicate with us if you wish to publish results that use these data in a journal. If you have any other questions –then please also contact us directly.

Professor Yong-Zhen Zhang,  
Shanghai Public Health Clinical Center & School of Public Health,  
Fudan University, Shanghai, China.

[zhangyongzhen@shphc.org.cn](mailto:zhangyongzhen@shphc.org.cn)    See also: [Virological.net](#) post

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Look at this ... '**dreadful**' ... and globally-important Report:

Report 2: Estimating the *potential total number* of novel Coronavirus cases in Wuhan City, China

<https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/news--wuhan-coronavirus>

-

**Imperial College London** today in a new estimate of 2019-nCoV activity in Wuhan said the city probably now has **4,000 symptomatic cases**. The report's **95% confidence interval ranges from 1,000 to 9,700**.

-

From: <https://www.imperial.ac.uk/news/194815/coronavirus-outbreak-china-have-infected-thousands>

-

Calculations:

The report estimates that a total of **1,723 cases** of 2019-nCoV in Wuhan City had onset of symptoms by **12th January 2020** (the last reported onset date of any case before the report's publication).

This estimate is based on the following assumptions:

- Wuhan International Airport has a catchment population of **19 million individuals**.
- There is a mean **10-day delay between infection and detection**, comprising a 5-6 day incubation period and a 4-5 day delay from symptom onset to detection/hospitalisation of a case (the cases detected in Thailand and Japan were hospitalised 3 and 7 days after onset, respectively).
- Total volume of international travel from Wuhan over the last two months has been **3,301 passengers per day**. This estimate is derived from the 3,418 foreign passengers per day in the top 20 country destinations based on 2018 IATA data, and uses 2016 IATA data held by Imperial College to correct for the travel surge at Chinese New Year present in the latter data (which has not happened yet this year) and for travel to countries **outside the top 20 destination list**.

The report concludes **it is likely that the Wuhan outbreak of a novel coronavirus has caused substantially more cases of moderate or severe respiratory illness than currently reported**.

---

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Clark Tibbs, CEO

PhageVax, Inc.

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General Offices & HQ: 855 Sharon Valley Road, Suite 101 Newark, Ohio 43055-2860 USA

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-

**Sent:** Wed, 29 Jan 2020 16:43:36 +0000  
**To:** RYAN, Michael J.; Redfield, Robert R.  
(CDC/OD); (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
David  
Heymann; (b) (6); Chris.Elias (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); COX, Paul Michael; SHOC; GREIN, Thomas; Conrad, Patricia  
(NIH/NIAID) [E]; Marston, Hilary (NIH/NIAID) [E]  
**Cc:** GHEBREYESUS, Tedros Adhanom; SCHWARTLANDER, Bernhard F.; MINHAS,  
Raman  
**Subject:** RE: Informal coronavirus teleconference, 29 January, 19.00 CET

Mike:

I am sorry but I have an important meeting with Secretary Azar that is a prep meeting for another important meeting at the White House. These overlap with the 19:00 CET time frame of your call. Unless something changes I cannot be on the call. If that is the case, I will ask Hilary Marston from my staff to fill in for me and report back to me. Please send the call in information to my Special Assistant, Patty Conrad, and Hilary

Anthony S. Fauci, MD  
Director  
National Institute of Allergy and Infectious Diseases



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---

**From:** RYAN, Michael J. (b) (6)  
**Sent:** Wednesday, January 29, 2020 10:45 AM  
**To:** Redfield, Robert R. (CDC/OD) (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); David Heymann (b) (6);  
(b) (6); Chris.Elias (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); Fauci, Anthony  
(NIH/NIAID) [E] (b) (6); (b) (6); (b) (6); (b) (6);

(b) (6); COX, Paul Michael (b) (6); SHOC (b) (6); GREIN, Thomas  
(b) (6)

Cc: GHEBREYESUS, Tedros Adhanom (b) (6); SCHWARTLANDER, Bernhard F.

(b) (6); MINHAS, Raman (b) (6)

**Subject:** Informal coronavirus teleconference, 29 January, 19.00 CET

Dear colleagues,

Dr Tedros would like to take the opportunity to informally discuss with you the ongoing 2019 novel coronavirus.

We are planning to host a teleconference today at 19.00 CET and will provide a dial-in number with a passcode.

If you face any difficulties with the dial-in number, please provide us with a contact number and we will attempt to dial you in.

Best,

Mike



**From:** Dale Fisher  
**Sent:** Wed, 29 Jan 2020 16:01:40 +0000  
**To:** RYAN, Michael J.; Redfield, Robert R.  
(CDC/OD); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
David  
Heymann; (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); Fauci, Anthony (NIH/NIAID)  
[E]; (b) (6); (b) (6); (b) (6); COX, Paul  
Michael; SHOC; GREIN, Thomas  
**Cc:** GHEBREYESUS, Tedros Adhanom; SCHWARTLANDER, Bernhard F.; MINHAS,  
Raman  
**Subject:** RE: Informal coronavirus teleconference, 29 January, 19.00 CET

Thanks Mike; that's 2 am in Singapore in 2 hours. I'll stay up.....an excuse to catch up on emails ☺

For the record my number is (b) (6) but will plan to dial in

Cheers

Dale

---

**From:** RYAN, Michael J. (b) (6)  
**Sent:** Wednesday, 29 January 2020 11:45 PM  
**To:** (b) (6); Dale Fisher (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); David Heymann (b) (6);  
(b) (6); Chris.Elias (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); COX, Paul Michael  
(b) (6); SHOC (b) (6); GREIN, Thomas (b) (6)  
**Cc:** GHEBREYESUS, Tedros Adhanom (b) (6); SCHWARTLANDER, Bernhard F.  
(b) (6); MINHAS, Raman (b) (6)  
**Subject:** Informal coronavirus teleconference, 29 January, 19.00 CET

- External Email -

Dear colleagues,

Dr Tedros would like to take the opportunity to informally discuss with you the ongoing 2019 novel coronavirus.

We are planning to host a teleconference today at 19.00 CET and will provide a dial-in number with a passcode.

If you face any difficulties with the dial-in number, please provide us with a contact number and we will attempt to dial you in.

Best,

Mike

---

Important: This email is confidential and may be privileged. If you are not the intended recipient, please delete it and notify us immediately; you should not copy or use it for any purpose, nor disclose its contents to any other person. Thank you.





Dr Tedros would like to take the opportunity to informally discuss with you the ongoing 2019 novel coronavirus.

We are planning to host a teleconference today at 19.00 CET and will provide a dial-in number with a passcode.

If you face any difficulties with the dial-in number, please provide us with a contact number and we will attempt to dial you in.

Best,

Mike

**From:** SHOC  
**Sent:** Fri, 7 Feb 2020 12:25:33 +0000  
**To:** RYAN, Michael J.; SHOC; Office of the Director-General; Redfield, Robert R. (CDC/OD) (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
David Heymann; Felicity Harvey (b) (6); Chris. Elias; (b) (6); Jeremy Farrar; (b) (6); (b) (6); Fauci, Anthony (NIH/NIAID) [E]; (b) (6); (b) (6); (b) (6); GREIN, Thomas; COX, Paul Michael; SCHWARTLANDER, Bernhard F.; MINHAS, Raman; (b) (6); Conrad, Patricia (NIH/NIAID) [E]; MAHJOUR, Jaouad; FALL, Ibrahima Soce; Thomas R. Frieden; elhadj.sy; Lynn Banks; President | Resolve to Save Lives; (b) (6); (b) (6); AL-SHORBAJI, Farah; (b) (6); Robynn Leidig; DRURY, Patrick Anthony; Dr VAN KERKHOVE, Maria; (b) (6); (b) (6); (b) (6); cheryl; G RAAFF, Peter Jan; POOLE, Marcia; Jane Conrad (b) (6)  
**Cc:** MORGAN, Oliver; KABIR, Sophia  
**Subject:** RE: Informal coronavirus teleconference

Dear participants,

If you experience any technical difficulties joining this conference call, please contact the WHO HQ EOC operator at:

+41227912490

Thank you.

---

**From:** RYAN, Michael J.  
**Sent:** 07 February 2020 13:17  
**To:** SHOC (b) (6); Office of the Director-General (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); David Heymann (b) (6); Felicity Harvey (b) (6); (b) (6); Chris. Elias (b) (6); (b) (6); Jeremy Farrar (b) (6); (b) (6); (b) (6); (b) (6); (b) (6); GREIN, Thomas (b) (6); COX, Paul Michael (b) (6); SCHWARTLANDER, Bernhard F. (b) (6); MINHAS, Raman (b) (6); (b) (6); (b) (6); MAHJOUR, Jaouad (b) (6); FALL, Ibrahima Soce (b) (6); Thomas R. Frieden (b) (6); elhadj.sy (b) (6); Lynn Banks (b) (6); President | Resolve to Save Lives (b) (6); (b) (6); (b) (6); AL-SHORBAJI, Farah (b) (6); (b) (6); Robynn Leidig (b) (6); DRURY, Patrick Anthony (b) (6); Dr VAN KERKHOVE, Maria (b) (6); (b) (6); (b) (6);

(b) (6); (b) (6); cheryl (b) (6); GRAAFF, Peter Jan  
(b) (6); POOLE, Marcia (b) (6); Jane Conrad (b) (6)  
(b) (6)

**Cc:** MORGAN, Oliver (b) (6); KABIR, Sophia (b) (6)

**Subject:** Informal coronavirus teleconference

Dear Participants,

Please find attached the presentation for the call scheduled today at 13:00 Geneva time.

With best regards.

<< File: 20200207\_Global\_Leaders\_OLIVER\_MORGAN.PDF >>

Office of Dr Mike Ryan | Executive Director, WHO Health Emergencies Programme | World Health Organization

20 Avenue Appia | CH-1211 Geneva 27, Switzerland | Tel (b) (6)



**From:** RYAN, Michael J.  
**Sent:** Fri, 7 Feb 2020 12:16:49 +0000  
**To:** SHOC;Office of the Director-General;Redfield, Robert R.  
(CDC/OD); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
David Heymann;Felicity Harvey  
(b) (6);Chris.Elias (b) (6);Jeremy  
Farrar (b) (6);Fauci, Anthony (NIH/NIAID)  
[E]; (b) (6); (b) (6); (b) (6);GREIN, Thomas;COX,  
Paul Michael;SCHWARTLANDER, Bernhard F.;MINHAS, Raman; (b) (6);Conrad, Patricia  
(NIH/NIAID) [E];MAHJOUR, Jaouad;FALL, Ibrahima Soce;Thomas R. Frieden;elhadj.sy;Lynn  
Banks;President | Resolve to Save Lives (b) (6) (b) (6);AL-  
SHORBAJI, Farah; (b) (6);Robynn Leidig;DRURY, Patrick Anthony;Dr VAN  
KERKHOVE,  
Maria; (b) (6); (b) (6); (b) (6); (b) (6);cheryl;c;  
RAAFF, Peter Jan;POOLE, Marcia;Jane Conrad (b) (6)  
**Cc:** MORGAN, Oliver;KABIR, Sophia  
**Subject:** Informal coronavirus teleconference  
**Attachments:** 20200207\_Global\_Leaders\_OLIVER\_MORGAN.PDF

Dear Participants,

Please find attached the presentation for the call scheduled today at 13:00 Geneva time.

With best regards.

Office of Dr Mike Ryan | Executive Director, WHO Health Emergencies Programme | World Health  
Organization  
20 Avenue Appia | CH-1211 Geneva 27, Switzerland | Tel (b) (6)

**From:** vinu arumugham  
**Sent:** Sat, 1 Feb 2020 22:51:30 -0800  
**To:** (b) (6); (b) (6)  
**Cc:**

(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
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(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); Slater, Jay (FDA/CBER); Woo, Jane (FDA/CBER); Hess, Maureen  
(FDA/CBER); Forshee, Richard (FDA/CBER); Walderhaug, Mark O (FDA/CBER); CBER OCOD Consumer  
Account; Destefano, Frank (CDC/DDID/NCEZID/DHQP); Thompson, Mark  
(CDC/DDID/NCIRD/ID); Messonnier, Nancy (CDC/DDID/NCIRD/OD); Walker, Tanja Y.  
(CDC/DDID/NCIRD/ISD); (b) (6); (b) (6); Redfield, Robert R.  
(CDC/OD); (b) (6); Collins, Francis (NIH/OD) [E]; (b) (6); Doyle, Joshua  
(CDC/DDID/NCIRD/ID); Blanton, Lenee (CDC/DDID/NCIRD/ID); Jernigan, Daniel B.  
(CDC/DDID/NCIRD/ID); Katz, Jackie M. (CDC/DDID/NCIRD/ID); Tumpey, Terrence  
(CDC/DDID/NCIRD/ID); Wentworth, David E. (CDC/DDID/NCIRD/ID); Sharpless, Norman (NIH/NCI)  
[E]; Clark, Thomas A. (CDC/DDID/NCIRD/DVD); Kretsinger, Katrina (CDC/DDPHSIS/CGH/GID); Linkins,  
Robert (CDC/DDPHSIS/CGH/GID); Epperson, Scott (CDC/DDID/NCIRD/ID); Andes, Linda  
(CDC/DDNID/NCCDPHP/DDT); McSeveney, Megan (FDA/OC); Fauci, Anthony (NIH/NIAID)  
[E]; (b) (6)  
**Subject:** Shuanghuanglian for Wuhan 2019-nCoV treatment

Hi,

I have been recommending antihistamines and mast cell stabilizers for Wuhan 2019-nCoV treatment (please see forwarded email below).

I read about your recommendation of Shuanghuanglian (SHL) for Wuhan 2019-nCoV treatment. It makes sense.

*Shuang-Huang-Lian Attenuates Airway Hyperresponsiveness and Inflammation in a Shrimp Protein-Induced Murine Asthma Model.*

<https://www.ncbi.nlm.nih.gov/pubmed/30713573>

I read in the above article that SHL can act as a mast cell stabilizer so it is understandable that it will help in 2019-nCoV infection as detailed in my email below.

Thanks,

Vinu

----- Forwarded Message -----

**Subject:** The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health -  
: The latest 2019 novel coronavirus outbreak in Wuhan, China.

**Date:** Wed, 22 Jan 2020 20:32:52 -0800

**From:** vinu arumugham

**To:**

Dr. Hui,

IgE mediated sensitization to peptides that have homology to 2019-nCoV peptides may contribute to disease severity. In that case, antihistamines and other allergy treatments such as mast cell stabilizers may help reduce infection severity.

A BLASTP analysis of 2019-nCoV proteome against common vaccine antigens was performed. Preliminary results suggest that IgE mediated sensitization to common vaccine antigens can result in cross reactive immune responses to 2019-nCoV.

Please see details of the mechanisms here:

Influenza vaccines and dengue-like disease

<https://www.bmj.com/content/360/bmj.k1378/rr-15>

<https://www.quora.com/Why-was-the-flu-so-deadly-in-outbreaks-in-the-past-And-what-made-the-flu-become-less-deadly/answers/86456279>

Thanks,

Vinu



[illegible]

**Hello US Congress:**

Will you please contact these US Government people and ask them how soon that can fund this **Petition?**

-  
-

Sen. Schumer: CDC needs to access funding to fight coronavirus ... Jan., 26, 2020 at 1:40pm ET  
<https://www.silive.com/news/2020/01/schumer-cdc-needs-to-access-funding-to-fight-coronavirus.html>

-  
STATEN ISLAND, N.Y. -- Senator Charles Schumer (D-New York) wants the Centers for Disease Control (CDC) to use funding he allocated to fight the spread of the deadly coronavirus, for which there are three confirmed cases in the United States.

-  
Schumer recently negotiated a budget deal that put **\$85 million** in the CDC **Infectious Disease Rapid**

**Response Reserve Fund** to ward off serious public health threats. He wants the CDC to be able to

access these funds now. But for that to happen, a "public health emergency" must be declared by the

U.S. Department of Health and Human Services (HHS).

---

**From:** Clark Tibbs PhageVax-VHO [mailto: (b) (6)]  
**Sent:** Monday, February 3, 2020 5:11 PM  
**To:** (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6)  
**Cc:** (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6)  
**Subject:** To **ASPR Dr. Kadlec & BARDA Drs. Bright & Armstrong** :: VACCINE OFFER :: ANTIVIRAL OFFER Mod vs. nCoV :: T-4 Lambda Phage Head Vaccine Platform vs. the 2019-nCoV Virus ... 2-3-20

To:

**Dr. ROBERT KADLEC** (b) (6) ... << **ASPR**

... and ...

**Kimberly Armstrong, Ph.D., MT (ASCP)** (b) (6)

Branch Chief, Therapeutics (Acting)

Influenza and Emerging Diseases Division

Biomedical Advanced Research and Development Authority (**BARDA**)

Office of the Assistant Secretary for Preparedness and Response (**ASPR**)

Department of Health and Human Services (DHHS)

Phone: (b) (6) **Cell** (b) (6)

~AND~

Peter Adams (b) (6) ... Karl Erlandson (b) (6)

- (b) (6)

( US Rep. Troy Balderson [OH-12] ) (b) (6)

Timothy Schneider - Constituent Caseworker



---

**PETITION:** PhageVax, Inc. is hereby requesting funding from **BARDA** under "**other transaction authority**" of **\$4 million** (initial funding amount) to move these attached technologies forward to FDA's Investigational New Drug (IND) Status.

---

**BARDA Example** (from): "other transaction authority"  
<https://www.hhs.gov/about/news/2018/10/10/hhs-expands-corporate-partnership-to-protect-against-health-security-threats.html>

October 10, 2018

-  
Under the agreement, **BARDA** will provide more than **\$28 million** over **two years** and up to **\$200 million** over **six years**. The **Johnson & Johnson** Family of Companies also will provide a significant portion of the funding needed to bring products in the portfolio to the market.

-  
*Rather than a standard contract*, **BARDA** entered into the agreement using "**other transaction authority**" granted to ASPR under the Pandemic and All Hazards Preparedness Act of 2006. Although not a contract, grant or cooperative agreement, "**other transaction authority**" provides a funding and collaboration vehicle to **promote innovation** in technology for **advanced research and development**.

**Question:** Why does Johnson & Johnson (J&J) need scarce US Taxpayer Dollars for this?

---

-  
JUST FOR USA ... WE WILL NEED ... **700 MILLION DOSES**.

It seems that the US Federal Government is funding a few **quality** vaccine platform-types (vs. the 2019-nCoV), however ... **how many doses** can be made in time to protect us? ... (we will need 2 doses; 1 week apart) and **how fast** can these quantities of doses get to the US Citizens?

-  
This is an Emergency. **Do you have Emergency Funding?**

---

### **WHO declares nCoV public health emergency amid virus spread**

Lisa Schnirring | News Editor | CIDRAP News | Jan 30, 2020

The main worry is the possible affect on weaker nations.

[More »](#)

---

**Data suggest nCoV more infectious than 1918 flu, but what does that mean?**

Stephanie Soucheray | News Reporter | CIDRAP News | Jan 30, 2020

The  $R_0$  was found to be 2.2, the number of people each patient might infect.

[More »](#)

---

**First human-to-human nCoV spread reported in US**

Lisa Schnirring | News Editor | CIDRAP News | Jan 30, 2020

The husband of Chicago's first case-patient has contracted the novel coronavirus, marking the 6th US case.

[More »](#)

-  
=====

AT <http://virological.org> ...

then click on <http://virological.org/t/initial-genome-release-of-novel-coronavirus/319>

**Initial genome release of novel coronavirus**

**Novel 2019 coronavirus**

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[cancel selecting](#)



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2

[21h](#)

[10th January 2020](#)

This posting is communicated by Edward C. Holmes, University of Sydney on behalf of the consortium led by Professor Yong-Zhen Zhang, Fudan University, Shanghai



The Shanghai Public Health Clinical Center & School of Public Health, in collaboration with the Central Hospital of Wuhan, Huazhong University of Science and Technology, the Wuhan Center for Disease Control and Prevention, the National Institute for Communicable Disease Control and Prevention, Chinese Center for Disease Control, and the University of Sydney, Sydney, Australia is releasing a coronavirus genome from a case of a respiratory disease from the Wuhan outbreak. The sequence has also been deposited on [GenBank \(accession MN908947\)](#) and will be released as soon as possible.

The sequence can be downloaded here:

[WH-Human\\_1.fasta.gz](#) (8.9 KB – this is a fasta file compressed using gzip. Uncompress using gzip -d WH-Human\_1.fasta.gz)

**Disclaimer:**

Please feel free to download, share, use, and analyze this data. We ask that you communicate with us if you wish to publish results that use these data in a journal. If you have any other questions –then please also contact us directly.

Professor Yong-Zhen Zhang,  
Shanghai Public Health Clinical Center & School of Public Health,  
Fudan University, Shanghai, China.

[zhangyongzhen@shphc.org.cn](mailto:zhangyongzhen@shphc.org.cn)    See also: [Virological.net post](#)

Look at this ... '**dreadful**' ... and globally-important Report: *(from 17 Jan to 22 Jan 2020)*  
Report 2: Estimating the *potential total number* of novel Coronavirus cases in Wuhan City, China  
<https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/news--wuhan-coronavirus>

**Imperial College London** today in a new estimate of 2019-nCoV activity in Wuhan said the city probably now has 4,000 symptomatic cases. The report's 95% confidence interval ranges from 1,000 to 9,700.

Clark Tibbs, CEO

PhageVax, Inc.

CAGE CODE:

Phone:

E-mail:

General Offices & HQ: 855 Sharon Valley Road, Suite 101 Newark, Ohio 43055-2860 USA

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**From:** tbhiv  
**Sent:** Fri, 17 Jan 2020 17:43:49 +0000  
**To:** TB\_HIV@LISTSERV.WHO.INT  
**Subject:** CROI 2020-affiliated HIV/TB Research Frontiers Meeting - TB drugs for Pregnant Women, Infants and Children Living with HIV; Sunday 8 March 2020, 11:30-13:30, Boston, Massachusetts, USA

**TB Drugs for Pregnant Women, Infants, and Children  
Living with HIV**  
**HIV/TB Research Frontiers Meeting held in conjunction  
with the  
Conference on Retroviruses and Opportunistic  
Infections  
(CROI 2020)**

**Sunday March 8, 2020, 11:30-13:30**  
*Boston, Massachusetts, USA, Venue to be advised*  
*Organized by the World Health Organization*

**Background and objective:** WHO has been organising CROI-affiliated HIV/TB Research meetings in collaboration with partners since 2007. These data-driven meetings serve as a platform of networking to discuss novel research ideas and controversies, and have played a crucial role in catalysing policies and programmes. The meeting this year aims to stimulate high level scientific debate on the opportunities, challenges and research priorities in the development of new drugs and regimens for the treatment and prevention of TB in pregnant women, infants, and children living with HIV. A light lunch will be served during the meeting. An agenda will be sent out in due course.

**Participants:** HIV and TB researchers, clinicians and HIV-TB implementers.

*If you are interested in participating please notify us by email ([tbhiv@who.int](mailto:tbhiv@who.int)) at your earliest convenience and no later than **close of business on 21 February 2020. Registration is on a first come,***

***first serve basis.*** For the reports of research meetings from previous years please see the following [link](#).

---

To unsubscribe from the TB\_HIV list, click the following link:

[Bad URL Removed - see why - https://ees.sps.nih.gov/services/Pages/Anti-Virus.aspx?TICKET=NzM3NDcxIEFGQVVDSUBOSUFJRC5OSUguR09WIFRCX0hJVrpAJB3Kgbqt&c=SIGNOFF](https://ees.sps.nih.gov/services/Pages/Anti-Virus.aspx?TICKET=NzM3NDcxIEFGQVVDSUBOSUFJRC5OSUguR09WIFRCX0hJVrpAJB3Kgbqt&c=SIGNOFF)







-  
Question: Can ... **BARDA** and/or **AHRQ** assist with some of the **Emergency Funding**?  
-

**AND TO:** CDC ... Lauren Peel JD Contracting Officer Office of COO (b) (6)  
(b) (6)

-  
**AND TO:** Kimberly Armstrong, Ph.D., MT (ASCP) (b) (6)  
Branch Chief, Therapeutics (Acting) ... Influenza and Emerging Diseases Division  
**Biomedical Advanced Research and Development Authority (BARDA)**  
Office of the Assistant Secretary for Preparedness and Response (ASPR)  
Department of Health and Human Services (DHHS)  
Phone: (b) (6) Cell: (b) (6)  
~AND~ Peter Adams (b) (6) Karl Erlandson (b) (6)

-  
**AND TO:**  
Wendy Perry ... **AHRQ** Exec Sec  
(b) (6) Fax-301-427-1873  
(b) (6)

5600 Fishers Lane, Room 07N90C, Rockville, MD 20857

Examples of FUNDING:

<https://www.ahrq.gov/funding/fund-opps/index.html>

<https://www.ahrq.gov/funding/policies/foaguidance/index.html>

-  
Thank you, Call Clark Tibbs with questions: (b) (6)  
-

**FOR TECHNICAL QUESTIONS:**

Ashok Kumar Chopra, CSc, PhD (b) (6) CELL Phone: (b) (6)  
Professor (Tenured), Microbiology & Immunology  
Department of Microbiology & Immunology  
Scientific Staff Member - Shriners Burns Institute, Galveston, TX  
Member UTMB Center for Tropical Diseases  
Senior Scientist, Sealy Center for Vaccine Development  
Member, Center for Biodefense and Emerging Infectious Diseases  
Phone: (b) (6) Lab: (b) (6) Fax: (409) 747-6869  
Ref: <https://microbiology.utmb.edu/faculty/ashok-chopra-phd-csc>  
PubMed: <https://www.ncbi.nlm.nih.gov/pubmed/?term=Chopra+AK>

-  
-----  
From:  
<http://www.cidrap.umn.edu/news-perspective/2020/01/new-coronavirus-infects-health-workers-spreads-korea>

**New coronavirus infects health workers, spreads to Korea** ... Jan 20, 2020 ... 3:20pm ET  
A Chinese health official said today that **14 healthcare workers** have been infected with the  
Wuhan-linked novel coronavirus (2019-nCoV), **bolstering evidence of human-to-human spread**





=====

AT <http://virological.org> ...

then click on <http://virological.org/t/initial-genome-release-of-novel-coronavirus/319>

### **Initial genome release of novel coronavirus**

#### **Novel 2019 coronavirus**

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[2](#)

[21h](#)

10th January 2020

This posting is communicated by Edward C. Holmes, University of Sydney on behalf of the consortium led by Professor Yong-Zhen Zhang, Fudan University, Shanghai

The Shanghai Public Health Clinical Center & School of Public Health, in collaboration with the Central Hospital of Wuhan, Huazhong University of Science and Technology, the Wuhan Center for Disease Control and Prevention, the National Institute for Communicable Disease Control and Prevention, Chinese Center for Disease Control, and the University of Sydney, Sydney, Australia is releasing a coronavirus genome from a case of a respiratory disease from the Wuhan outbreak. The sequence has also been deposited on **GenBank (accession MN908947)** and will be released as soon as possible.

The sequence can be downloaded here:

[WH-Human\\_1.fasta.gz](#) (8.9 KB – this is a fasta file compressed using gzip. Uncompress using `gzip -d WH-Human_1.fasta.gz`)

#### **Disclaimer:**

Please feel free to download, share, use, and analyze this data. We ask that you communicate with us if you wish to publish results that use these data in a journal. If you have any other questions –then please also contact us directly.

Professor Yong-Zhen Zhang,  
Shanghai Public Health Clinical Center & School of Public Health,  
Fudan University, Shanghai, China. [zhangyongzhen@shphc.org.cn](mailto:zhangyongzhen@shphc.org.cn)



---

<http://www.cidrap.umn.edu/news-perspective/2020/01/us-detects-first-novel-coronavirus-case-traveler>

## **US detects first novel coronavirus case, in traveler *Jan 21, 2020***

In **rapidly escalating** developments with the spread of the Wuhan-linked novel coronavirus (2019-nCoV), the US Centers for Disease Control and Prevention (CDC) today announced the first US case, involving a man who got sick after returning to Washington state from Wuhan and contacted medical authorities.

At a CDC media briefing today, health officials said the man, who is reported to be in stable condition, **didn't visit any markets** or have **any contact with sick patients during his stay** in Wuhan.

The CDC said it is expanding health checks in travelers from Wuhan to more US airports. (See today's other [CIDRAP News story](#) on international 2019-nCoV developments.)

### **Man stable, took **indirect** flight from Wuhan**

The man, who is a resident of Snohomish County, arrived at Seattle-Tacoma International Airport on Jan 15, before screening began at three other US airports. Sea-Tac doesn't receive direct flights from Wuhan and doesn't receive large numbers of indirect flights.

Health officials said the man had been following 2019-nCoV developments online and reached out to health providers on Jan 19 when he started feeling sick. His medical team obtained samples and shipped them overnight to the CDC, where tests **were positive** for the new virus yesterday. The CDC's lab used its real-time reverse transcriptase polymerase chain reaction (rRT-PCR) test to confirm the result.

The man is currently hospitalized at Providence Medical Center, where he is in isolation and under monitoring. He is in good condition and receiving supportive care. Contact tracing is under way.

Health officials said there is little risk to the hospital staff or to the general public.

**Scott Lindquist, MD, MPH, Washington's state epidemiologist**, said health systems are aware of the new virus and are prepared to detect it early and minimize ongoing exposure. He added that the hospital recently had a drill to handle high-risk patients. "We were well prepared," he said.

### **Monitoring expands at US airports**

**Nancy Messonnier, MD**, director of the CDC's National Center for Immunization and Respiratory Diseases, said that, on Jan 19 as the nCoV situation was evolving in China and in the



Asian region, federal officials decided to expand traveler health checks in people arriving from Wuhan at two more US airports: Atlanta and Chicago.

Also, health officials **will funnel all Wuhan air travelers into the five US airports** doing enhanced screening, which also includes JFK Airport in New York and international airports in San Francisco and Los Angeles. US officials used a similar strategy to screen people arriving from West Africa during the 2014 Ebola outbreak. The funneling process is complex, requiring air passengers to be rerouted and reticketed.

**Martin Cetron, MD**, who directs the CDC's Division of Global Migration and Quarantine, said traveler screening is just one part of a multipart system to help slow the spread of the virus.

=====

<http://www.cidrap.umn.edu/news-perspective/2020/01/who-eyes-possible-sustained-ncov-spread-china>

### **WHO eyes possible **sustained** nCoV spread in China Jan 21, 2020**

In major developments surrounding the novel coronavirus (2019-nCoV) outbreak centered in China, the World Health Organization (WHO) said it sees possible evidence of sustained transmission—meaning the virus is spreading beyond just clusters of patients.

In addition, China today reported **another spike in cases—to more than 300—plus two more deaths**, with more newly affected provinces, while Taiwan reported its first 2019-nCoV case in a traveler from Wuhan. (See today's other [CIDRAP News story](#) on US developments.)

### **Health worker infections closely eyed**

Ahead of tomorrow's emergency committee to assess of the 2019-nCoV developments warrant a public health emergency of international concern, the WHO said last night in a Tweet from its Western Pacific regional office that it's now clear that human-to-human transmission is occurring.

It said the virus has infected **15 healthcare workers** in Wuhan and noted that some of newly reported cases suggest that sustained transmission may be occurring. "But more information and analysis are needed on this new virus to understand the full extent of human-to-human transmission and other important details."

Healthcare worker infections are a closely watched marker for not only virus transmissibility, but also **"super spreader" events** that can amplify outbreaks, a feature seen in SARS (severe acute respiratory syndrome) and MERS-CoV (Middle East respiratory syndrome coronavirus) events.

### **China outbreak tops 300 cases**

China's outbreak **total has now topped 300, led by 60 more cases, 2 of them fatal**, officials reported today from Wuhan, the outbreak epicenter. According to China's National Health



Commission (NHC), as of earlier today it has received reports of 291 cases, most of them from Hubei province where Wuhan is located. It said the latest cases were reported from Hubei province, plus 2 more in Shanghai and 3 in Beijing.

Later in the day, more Chinese provinces reported their first cases. For example Zhejiang, which reported five, and the cities of Tianjin and Chongqing, reported their first illnesses. Previously affected areas reported additional cases, such as Guangdong province and the cities of Beijing and Shanghai.

A Chinese medical community tracking the developments in real time put the country's **current total at 321 cases**.

Wuhan's health commission said in a statement today that the 60 latest case-patients range in age from 15 to 88 and that the latest illness onset was Jan 18. Twenty of the patients are seriously ill. The report was translated and posted by FluTrackers, an infectious disease news message board.

The two deaths, which push the **outbreak fatality count to six**, were reported in a 66-year-old man and a 48-year-old woman, both of whom had underlying health conditions.

#### **Taiwan reports first case**

Taiwan's first imported case involves a woman in her 50s who worked in Wuhan. The Taiwan Centers for Disease Control (Taiwan CDC) didn't specify her exposure but said she got sick in Wuhan. The agency added that officials are monitoring 46 contacts.

Also today, the WHO posted more information on **South Korea's imported case-patient**, a 35-year-old Chinese woman from Wuhan who got sick in that city on Jan 18 and was diagnosed there with a cold before flying to South Korea the next day. Her fever was detected when she arrived at the Seoul airport, and tests yesterday on her samples were positive for 2019-nCoV.

She said **she hadn't visited any markets**, did not have contact with any wild animals, and did not have contact with any known 2019-nCoV patients.

---

**See also:** [Virological.net post](#)

Clark Tibbs, CEO

PhageVax, Inc. [www.PhageVax.com](http://www.PhageVax.com)

CAGE CODE: (b) (6)

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Hello Ms. Conrad, I hope that NIH is funding several nCoV vaccine candidates that include a few vaccine candidates that use this T-4 Phage Head Vaccine Platform ... ??? Please see this Attachment.

Question: Can ... **BARDA** and/or **AHRQ** assist with some of the **Emergency Funding**?

**AND TO:** CDC ... Lauren Peel JD Contracting Officer Office of COO (b) (6)

**AND TO:** Kimberly Armstrong, Ph.D., MT (ASCP) (b) (6)  
Branch Chief, Therapeutics (Acting) ... Influenza and Emerging Diseases Division  
**Biomedical Advanced Research and Development Authority (BARDA)**  
Office of the Assistant Secretary for Preparedness and Response (ASPR)  
Department of Health and Human Services (DHHS)  
Phone: (b) (6) Cell: (b) (6)  
~AND~ Peter Adams (b) (6) Karl Erlandson (b) (6)

**AND TO:**  
Wendy Perry ... **AHRQ** Exec Sec  
(b) (6) Fax-301-427-1873  
(b) (6)

5600 Fishers Lane, Room 07N90C, Rockville, MD 20857

Examples of FUNDING:

<https://www.ahrq.gov/funding/fund-ops/index.html>

<https://www.ahrq.gov/funding/policies/foaguidance/index.html>

Thank you, Call Clark Tibbs with questions: (b) (6)

**FOR TECHNICAL QUESTIONS:**

Ashok Kumar Chopra, CSc, PhD (b) (6) CELL Phone: (b) (6)  
Professor (Tenured), Microbiology & Immunology  
Department of Microbiology & Immunology  
Scientific Staff Member - Shriners Burns Institute, Galveston, TX  
Member UTMB Center for Tropical Diseases  
Senior Scientist, Sealy Center for Vaccine Development  
Member, Center for Biodefense and Emerging Infectious Diseases  
Phone (b) (6) Lab: (b) (6) Fax: (409) 747-6869  
Ref: <https://microbiology.utmb.edu/faculty/ashok-chopra-phd-csc>  
PubMed: <https://www.ncbi.nlm.nih.gov/pubmed/?term=Chopra+AK>

From:

<http://www.cidrap.umn.edu/news-perspective/2020/01/new-coronavirus-infects-health-workers-spreads-korea>

**New coronavirus infects health workers, spreads to Korea ... Jan 20, 2020 ... 3:20pm ET**



A Chinese health official said today that **14 healthcare workers** have been infected with the Wuhan-linked novel coronavirus (2019-nCoV), **bolstering evidence of human-to-human spread** and spurring new questions about virus circulation against a backdrop of other winter respiratory illnesses.

I can put WHO in contact with **at least three (3) of the Authors** from this important Attached Document.

Clark Tibbs, CEO

PhageVax, Inc. [www.PhageVax.com](http://www.PhageVax.com)

CAGE CODE: (b) (6)

Phone: (b) (6) Fax: [740.366.5230](tel:740.366.5230) Cell: (b) (6)

E-mail: (b) (6) -or- (b) (6) -or- (b) (6)

General Offices & HQ: 855 Sharon Valley Road, Suite 101 Newark, Ohio 43055-2860 USA

**From:** Clark Tibbs PhageVax-VHO [mailto:(b) (6)]

**Sent:** Tuesday, January 14, 2020 2:28 PM

**To:** (b) (6); (b) (6); (b) (6); (b) (6);

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

**Subject:** To Drs. Leppla & Adhya & Takeda at NIH :: T-4 Phage Head Vaccine Platform for > China releases genetic data on nCoV ... Jan 11, 2020 ... Today is Jan 14

To:

Dr. Stephen Howard Leppla, PhD (b) (6)

BG 33 RM 1W20B4, 33 NORTH DR, BETHESDA MD 20814 ... 3202

Phone: (b) (6) Fax: 301-480-0326

NIH ... MICROBIAL PATHOGENESIS SECTION (HNM25N)

-and-

Sankar Adhya, PhD (b) (6) (b) (6)

Senior Investigator - [Laboratory of Molecular Biology](#)

Head, Developmental Genetics Section

Ph: (b) (6)

-and-

[David Takeda, M.D., Ph.D.](#) (b) (6)...

[Center for Cancer Research - National Cancer Institute, Building 37, Room 1066, Bethesda, MD 20892 USA](#)

[Ph:](#) (b) (6)

[Ref: https://ccr.cancer.gov/Laboratory-of-Genitourinary-Cancer-Pathogenesis/david-takeda](https://ccr.cancer.gov/Laboratory-of-Genitourinary-Cancer-Pathogenesis/david-takeda)

Gentlemen, I hope that NIH is funding several **nCoV vaccine candidates** that include a few vaccine candidates that use this T-4 Phage Head Vaccine Platform ... ??? This could get out-of-control, like SARS and MERS.



=====

AT <http://virological.org> ...

then click on <http://virological.org/t/initial-genome-release-of-novel-coronavirus/319>

### **Initial genome release of novel coronavirus**

#### **Novel 2019 coronavirus**

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10th January 2020

This posting is communicated by Edward C. Holmes, University of Sydney on behalf of the consortium led by Professor Yong-Zhen Zhang, Fudan University, Shanghai

The Shanghai Public Health Clinical Center & School of Public Health, in collaboration with the Central Hospital of Wuhan, Huazhong University of Science and Technology, the Wuhan Center for Disease Control and Prevention, the National Institute for Communicable Disease Control and Prevention, Chinese Center for Disease Control, and the University of Sydney, Sydney, Australia is releasing a coronavirus genome from a case of a respiratory disease from the Wuhan outbreak. The sequence has also been deposited on [GenBank \(accession MN908947\)](#) and will be released as soon as possible.

The sequence can be downloaded here:

[WH-Human\\_1.fasta.gz](#) (8.9 KB – this is a fasta file compressed using gzip. Uncompress using `gzip -d WH-Human_1.fasta.gz`)

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Please feel free to download, share, use, and analyze this data. We ask that you communicate with us if you wish to publish results that use these data in a journal. If you have any other questions –then please also contact us directly.

Professor Yong-Zhen Zhang,  
Shanghai Public Health Clinical Center & School of Public Health,  
Fudan University, Shanghai, China. [zhangyongzhen@shphc.org.cn](mailto:zhangyongzhen@shphc.org.cn)

---

**See Jan 21, 2020 UPDATES (6:30pm+ ET)**

<http://www.cidrap.umn.edu/news-perspective/2020/01/us-detects-first-novel-coronavirus-case-traveler>

### **US detects first novel coronavirus case, in traveler Jan 21, 2020**

In **rapidly escalating** developments with the spread of the Wuhan-linked novel coronavirus (2019-nCoV), the US Centers for Disease Control and Prevention (CDC) today announced the first US case, involving a man who got sick after returning to Washington state from Wuhan and contacted medical authorities.

At a CDC media briefing today, health officials said the man, who is reported to be in stable condition, **didn't visit any markets** or have **any contact with sick patients during his stay** in Wuhan.

The CDC said it is expanding health checks in travelers from Wuhan to more US airports. (See today's other [CIDRAP News story](#) on international 2019-nCoV developments.)

### **Man stable, took **indirect** flight from Wuhan**

The man, who is a resident of Snohomish County, arrived at Seattle-Tacoma International Airport on Jan 15, before screening began at three other US airports. Sea-Tac doesn't receive direct flights from Wuhan and doesn't receive large numbers of indirect flights.

Health officials said the man had been following 2019-nCoV developments online and reached out to health providers on Jan 19 when he started feeling sick. His medical team obtained samples and shipped them overnight to the CDC, where tests **were positive** for the new virus yesterday. The CDC's lab used its real-time reverse transcriptase polymerase chain reaction (rRT-PCR) test to confirm the result.

The man is currently hospitalized at Providence Medical Center, where he is in isolation and under monitoring. He is in good condition and receiving supportive care. Contact tracing is under way.

Health officials said there is little risk to the hospital staff or to the general public.

**Scott Lindquist, MD, MPH, Washington's state epidemiologist**, said health systems are aware of the new virus and are prepared to detect it early and minimize ongoing exposure. He added that the hospital recently had a drill to handle high-risk patients. "We were well prepared," he said.

### **Monitoring expands at US airports**

**Nancy Messonnier, MD**, director of the CDC's National Center for Immunization and Respiratory Diseases, said that, on Jan 19 as the nCoV situation was evolving in China and in the Asian region, federal officials decided to expand traveler health checks in people arriving from Wuhan at two more US airports: Atlanta and Chicago.



Also, health officials **will funnel all Wuhan air travelers into the five US airports** doing enhanced screening, which also includes JFK Airport in New York and international airports in San Francisco and Los Angeles. US officials used a similar strategy to screen people arriving from West Africa during the 2014 Ebola outbreak. The funneling process is complex, requiring air passengers to be rerouted and reticketed.

**Martin Cetron, MD**, who directs the CDC's Division of Global Migration and Quarantine, said traveler screening is just one part of a multipart system to help slow the spread of the virus.

**See also:** Jan 21 CDC [press release](#)

=====

<http://www.cidrap.umn.edu/news-perspective/2020/01/who-eyes-possible-sustained-ncov-spread-china>

### **WHO eyes possible **sustained** nCoV spread in China Jan 21, 2020**

In major developments surrounding the novel coronavirus (2019-nCoV) outbreak centered in China, the World Health Organization (WHO) said it sees possible evidence of sustained transmission—meaning the virus is spreading beyond just clusters of patients.

In addition, China today reported **another spike in cases—to more than 300**—plus **two more deaths**, with more newly affected provinces, while Taiwan reported its first 2019-nCoV case in a traveler from Wuhan. (See today's other [CIDRAP News story](#) on US developments.)

### **Health worker infections closely eyed**

Ahead of tomorrow's emergency committee to assess of the 2019-nCoV developments warrant a public health emergency of international concern, the WHO said last night in a Tweet from its Western Pacific regional office that it's now clear that human-to-human transmission is occurring.

It said the virus has infected **15 healthcare workers** in Wuhan and noted that some of newly reported cases suggest that sustained transmission may be occurring. "But more information and analysis are needed on this new virus to understand the full extent of human-to-human transmission and other important details."

Healthcare worker infections are a closely watched marker for not only virus transmissibility, but also **"super spreader" events** that can amplify outbreaks, a feature seen in SARS (severe acute respiratory syndrome) and MERS-CoV (Middle East respiratory syndrome coronavirus) events.

### **China outbreak tops 300 cases**

China's outbreak **total has now topped 300, led by 60 more cases, 2 of them fatal**, officials reported today from Wuhan, the outbreak epicenter. According to China's National Health Commission (NHC), as of earlier today it has received reports of 291 cases, most of them from Hubei province where Wuhan is located. It said the latest cases were reported from Hubei province, plus 2 more in Shanghai and 3 in Beijing.



Later in the day, more Chinese provinces reported their first cases. For example Zhejiang, which reported five, and the cities of Tianjin and Chongqing, reported their first illnesses. Previously affected areas reported additional cases, such as Guangdong province and the cities of Beijing and Shanghai.

A Chinese medical community tracking the developments in real time put the country's **current total at 321 cases**.

Wuhan's health commission said in a statement today that the 60 latest case-patients range in age from 15 to 88 and that the latest illness onset was Jan 18. Twenty of the patients are seriously ill. The report was translated and posted by FluTrackers, an infectious disease news message board.

The two deaths, which push the **outbreak fatality count to six**, were reported in a 66-year-old man and a 48-year-old woman, both of whom had underlying health conditions.

### **Taiwan reports first case**

Taiwan's first imported case involves a woman in her 50s who worked in Wuhan. The Taiwan Centers for Disease Control (Taiwan CDC) didn't specify her exposure but said she got sick in Wuhan. The agency added that officials are monitoring 46 contacts.

Also today, the WHO posted more information on **South Korea's imported case-patient**, a 35-year-old Chinese woman from Wuhan who got sick in that city on Jan 18 and was diagnosed there with a cold before flying to South Korea the next day. Her fever was detected when she arrived at the Seoul airport, and tests yesterday on her samples were positive for 2019-nCoV.

She said **she hadn't visited any markets**, did not have contact with any wild animals, and did not have contact with any known 2019-nCoV patients.

---

Clark Tibbs, CEO

PhageVax, Inc. [www.PhageVax.com](http://www.PhageVax.com)

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blower.Coordinator;Stecker, Judy (OS/IOS) (b) (6);Flick, Heather  
(OS/OGC); (b) (6);Kadlec, Robert  
(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);Otohor, Tammy (CDC/DDID/NCIRD/ISD)  
(CTR); (b) (6)  
(b) (6); (b) (6); (b) (6)  
**Subject:** To US HOUSE and SENATE & CDC & BARDA & AHRQ & NIH & VHA :: VACCINE  
OFFER :: T-4 Lambda Phage Head Vaccine Platform vs. the 2019-nCoV Virus ... Jan 29 rrrbl vh  
**Attachments:** To ALL ~ FULL (Leppla Chopra Rao) PHAGE T4 -Based Dual Vaccine vs Anthrax  
Plague (Oct 2018).pdf

To:  
(Judiciary) [Shadawn Reddick-Smith](#) (b) (6)  
(Judiciary) [Daniel Schwarz](#) (b) (6)  
(Oversight) [Aryele Bradford](#) (b) (6)  
(Homeland Security) [Adam Comis](#) (b) (6)

-  
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(b) (6); (b) (6)

-  
Judiciary Cmte. (202) 225-3951, Oversight Cmte. (202) 225-5051, Cmte. on Homeland Security  
(202) 226-2616.

-  
To: Adam Comis (Asst. to Chair) with US House DHS Cmte: (b) (6) or (b) (6)

-  
To: (b) (6) ( US Rep. Troy Balderson [OH-12] ) (b) (6)  
(b) (6)

**Timothy Schneider**  
**Constituent Caseworker**  
Congressman Troy Balderson | OH-12

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

To:  
Robert Kadlec, MD (b) (6)  
Assistant Secretary for Preparedness and Response (ASPR)  
Ref: <https://www.hhs.gov/about/leadership/robert-kadlec/index.html>

-and-

Other Emails: (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6)

-  
Ref: <https://oig.hhs.gov/fraud/whistleblower> ; <https://oig.hhs.gov>



HHS OIG Hotline ... 1-800-HHS-TIPS (800-447-8477)

Please FORWARD this Information to: **HHS Secretary - Alex M. Azar**  
HHS Headquarters, U.S. Department of Health & Human Services, 200 Independence Avenue,  
S.W., Washington, D.C. 20201

(b) (6)

To:

Tracey Porpora (b) (6)

Ref: <https://connect.silive.com/staff/tporpora/posts.html>

Thank you for your report:

Schumer: CDC needs to access funding to fight coronavirus ... Posted Jan 26, 1:40 PM  
<https://www.silive.com/news/2020/01/schumer-cdc-needs-to-access-funding-to-fight-coronavirus.html>

I have received **ZERO cooperation** on this request (below):

Let's talk? (b) (6) Clark Tibbs

Just for the USA alone, we will need **700 MILLION DOSES**. We claim, Quality, Speed and Volume compared to other Vaccine claims.

Hello Selected **US HOUSE and Senate** Staff Members and CDC and BARDA and AHRQ and NIH and VHA,

**Sen. Schumer:** CDC needs to access funding to fight coronavirus ... Jan., 26, 2020 at 1:40pm ET  
<https://www.silive.com/news/2020/01/schumer-cdc-needs-to-access-funding-to-fight-coronavirus.html>

STATEN ISLAND, N.Y. -- Senator Charles Schumer (D-New York) wants the Centers for Disease Control (CDC) to use funding he allocated to fight the spread of the deadly coronavirus, for which there are three confirmed cases in the United States.

Schumer recently negotiated a budget deal that put **\$85 million** in the CDC **Infectious Disease Rapid Response Reserve Fund** to ward off serious public health threats. He wants the CDC to be able to access

these funds now. But for that to happen, a “public health emergency” must be declared by the U.S.

Department of Health and Human Services (HHS).

**NOTE:** Our Team of Experts will need \$2 million of this \$85 million - All of the vaccine-protection money will go directly to these Authors.

-  
My name is Clark Tibbs in Ohio. I hope to hear from you and your Team with any questions and how you and/or any PhDs, MDs, DOs or MBBSs can participate in this **Vaccine Development and Clinical Trial**.

=====

Hello (b) (6) and **ALL US Senators & House Members**

... I think this is an Emergency ....

..... please call these people and ask them **if and when** they plan to fund this **nVoC Vaccine Offer?**

-  
Special Assistant to (b) (6) ... **Patty Conrad** at (b) (6)  
(b) (6)

-  
I hope that NIH is funding several **nCoV vaccine candidates** that include a few vaccine candidates that use this T-4 Phage Head Vaccine Platform ... ??? Please see this Attachment.

-  
**Question:** Can ... **BARDA** and/or **AHRQ** assist with some of the Emergency Funding?

-  
**AND TO:** CDC ... Lauren Peel JD Contracting Officer Office of COO (b) (6)  
(b) (6)

-  
**AND TO:** Kimberly Armstrong, Ph.D., MT (ASCP) (b) (6)  
Branch Chief, Therapeutics (Acting) ... Influenza and Emerging Diseases Division  
**Biomedical Advanced Research and Development Authority (BARDA)**  
Office of the Assistant Secretary for Preparedness and Response (ASPR)  
Department of Health and Human Services (DHHS)

Phone: (b) (6) **Cell:** (b) (6)

~AND~ Peter Adams (b) (6) Karl Erlandson (b) (6)

-  
AND TO:  
Wendy Perry ... **AHRQ** Exec Sec



(b) (6) Fax-301-427-1873 (b) (6)

5600 Fishers Lane, Room 07N90C, Rockville, MD 20857

Examples of FUNDING: <https://www.ahrq.gov/funding/fund-ops/index.html> ;  
<https://www.ahrq.gov/funding/policies/foaguidance/index.html>

=====  
Clark Tibbs, CEO

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**FOR TECHNICAL QUESTIONS:**

Ashok Kumar Chopra, CSc, PhD (b) (6) CELL Phone: (b) (6)

Professor (Tenured), Microbiology & Immunology

Department of Microbiology & Immunology

Scientific Staff Member - Shriners Burns Institute, Galveston, TX

Member UTMB Center for Tropical Diseases

Senior Scientist, Sealy Center for Vaccine Development

Member, Center for Biodefense and Emerging Infectious Diseases

Phone: (b) (6) Lab: (b) (6) Fax: (409) 747-6869

Ref: <https://microbiology.utmb.edu/faculty/ashok-chopra-phd-csc>

PubMed: <https://www.ncbi.nlm.nih.gov/pubmed/?term=Chopra+AK>

..... AND .....

Dr. Stephen Howard Leppla, PhD (b) (6)

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-and-

Sankar Adhya, PhD (b) (6) : (b) (6)

Senior Investigator - [Laboratory of Molecular Biology](#)

Head, Developmental Genetics Section

Ph: (b) (6)

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**[Initial genome release of novel coronavirus](#)**

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This posting is communicated by Edward C. Holmes, University of Sydney on behalf of the consortium led by Professor Yong-Zhen Zhang, Fudan University, Shanghai

The Shanghai Public Health Clinical Center & School of Public Health, in collaboration with the Central Hospital of Wuhan, Huazhong University of Science and Technology, the Wuhan Center for Disease Control and Prevention, the National Institute for Communicable Disease Control and Prevention, Chinese Center for Disease Control, and the University of Sydney, Sydney, Australia is releasing a coronavirus genome from a case of a respiratory disease from the Wuhan outbreak. The sequence has also been deposited on [GenBank \(accession MN908947\)](#) and will be released as soon as possible.

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Please feel free to download, share, use, and analyze this data. We ask that you communicate with us if you wish to publish results that use these data in a journal. If you have any other questions –then please also contact us directly.

Professor Yong-Zhen Zhang,  
Shanghai Public Health Clinical Center & School of Public Health,  
Fudan University, Shanghai, China.

[zhangyongzhen@shphc.org.cn](mailto:zhangyongzhen@shphc.org.cn)    **See also:** [Virological.net post](#)

---

---

Look at this ... '**dreadful**' ... and globally-important Report:

Report 2: Estimating the *potential total number* of novel Coronavirus cases in Wuhan City, China  
<https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/news--wuhan-coronavirus>

-

-

**Imperial College London** today in a new estimate of 2019-nCoV activity in Wuhan said the city probably now has 4,000 symptomatic cases. The report's 95% confidence interval ranges from 1,000 to 9,700.

From: <https://www.imperial.ac.uk/news/194815/coronavirus-outbreak-china-have-infected-thousands>

Also to:

(b) (6) ; (b) (6)  
Military Infectious Diseases – Research Program (MIDRP)  
U. S. Army Medical Research and Materiel Command (Code: MCMR-RTI)  
504 Scott St., Fort Detrick, MD 21702-5012  
Email: (b) (6)  
**Comm:** (b) (6) DSN: (b) (6) FAX: (301) 619-2416

-AND- Dr. Vivien Dugan (b) (6) ; (b) (6)  
Direct: (b) (6)

Clark Tibbs, CEO

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[illegible]

**Subject:** RE-SEND to States of OH & CT & To US Rep Rosa DeLauro (CT) :: VACCINE OFFER  
:: T-4 Lambda Phage Head Vaccine Platform vs. the 2019-nCoV Virus ... Jan 31  
**Attachments:** To ALL 1-31-20 ~ FULL (Can make Vaccine vs. 2019-nCoV) PHAGE T4 -Based Dual  
Vaccine vs Anthrax Plague (Oct 2018).pdf, Goal for 2019-nCoV Vaccines (EARLY-VACCINE-BENEFITS from



[www.PhageVax.com](http://www.PhageVax.com)

—

TO:

My name is Clark Tibbs in Newark, Ohio.

CAGE CODE: (b) (6)  
Phone: (b) (6) Fax: 740.366.5230 Cell: (b) (6)

To:

Atty. Matt Donahue - Chief Legal Counsel - (b) (6) - (b) (6)  
Atty. John Danish - Chief Deputy Legal Counsel - (b) (6) - (b) (6)  
(b) (6)

-  
Bridget Harrison, Assist. Policy Director, **Health & Human Services** -

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

Sandy Ringer, **Exec. Assistant** to the Governor - (b) (6) - (b) (6)

(b) (6)

Michael Murry, **Deputy Chief of Staff** - (b) (6) - (b) (6)

Karine Hray, **Director**, Business Advocacy, **Common Sense Initiative**, Lt. Gov. -

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

Carolyn Kuruc, **Director**, **Common Sense Initiative** - (b) (6) - (b) (6)

(b) (6)

-  
Hello Mike DeWine, My name is Clark Tibbs in Newark, Ohio. Let's talk this evening and this weekend, please?

-  
Please scan over this attached document and then forward to your Scientists in Infection and Immunity?

-  
This is an Emergency. **Do you have Emergency Funding?**

We would be interested in their prompt assessment, please?

Regards,

Clark Tibbs, CEO

PhageVax, Inc. [www.PhageVax.com](http://www.PhageVax.com)

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### **WHO declares nCoV public health emergency amid virus spread**

Lisa Schnirring | News Editor | CIDRAP News | Jan 30, 2020

The main worry is the possible affect on weaker nations.

**More »**





### Data suggest nCoV more infectious than 1918 flu, but what does that mean?

Stephanie Soucheray | News Reporter | CIDRAP News | Jan 30, 2020

The  $R_0$  was found to be 2.2, the number of people each patient might infect.

[More »](#)



### First human-to-human nCoV spread reported in US

Lisa Schnirring | News Editor | CIDRAP News | Jan 30, 2020

The husband of Chicago's first case-patient has contracted the novel coronavirus, marking the 6th US case.

[More »](#)

Coronavirus: What it does to the body - BBC News - 1-30-20

<https://www.bbc.com/news/health-51214864>

-

AT <http://virological.org> ...

then click on <http://virological.org/t/initial-genome-release-of-novel-coronavirus/319>

Initial genome release of novel coronavirus

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10th January 2020

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Professor Yong-Zhen Zhang,  
Shanghai Public Health Clinical Center & School of Public Health,  
Fudan University, Shanghai, China.

[zhangyongzhen@shphc.org.cn](mailto:zhangyongzhen@shphc.org.cn) See also: [Virological.net post](#)

Look at this ... 'dreadful' ... and globally-important Report: *(from 17 Jan to 22 Jan 2020)*  
Report 2: Estimating the *potential total number* of novel Coronavirus cases in Wuhan City, China  
<https://www.imperial.ac.uk/mrc-global-infectious-disease-analysis/news--wuhan-coronavirus>

**Imperial College London** today in a new estimate of 2019-nCoV activity in Wuhan said the city probably now has 4,000 symptomatic cases. The report's 95% confidence interval ranges from 1,000 to 9,700.

... AND TO ...

**Ms. Lydia Mihalik** (b) (6) ... Director of the Development Services  
Agency  
... via ... Mr. Dan Bowerman (b) (6) (b) (6) [Option: 2]



Ref: <https://governor.ohio.gov/wps/portal/gov/governor/administration/cabinet/development-services-agency>

ALSO TO THE FOLLOWING PEOPLE IN THE STATE OF OHIO:

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

(b) (6)  
Infectious Disease Unit: (b) (6) ... Attn: Michelle

..... For the Attention of ..... **Ohio Department of Health** Director **Amy Acton, M.D., MPH** ... via ...

(1) (b) (6) Direct: (b) (6) ... Environmental (2) J.C. Benton, (b) (6)  
(b) (6)

Ohio Department of Health ... MAIN: (b) (6)

Ref: <https://odh.ohio.gov/wps/portal/gov/odh/media-center/odh-news-releases/director-health-issues-adjudication-order-to-protect-public-health>

And To:

Financial Incentives [financialincentives@development.ohio.gov](mailto:financialincentives@development.ohio.gov)

John Werkman, Grants ... (b) (6)

Rasheda Hansard, Manager, Tax Incentives ... (b) (6)

Business Response Line: (b) (6)

Ohio Development Services Agency, **Office of Strategic Business Investments**, 77 S. High Street, 28th Floor, Columbus, OH 43215-6130

Ref: [https://development.ohio.gov/bs/bs\\_busgrantsloans.htm](https://development.ohio.gov/bs/bs_busgrantsloans.htm)

Ref: [https://development.ohio.gov/files/bs/Loan%20Action%20Request%20Form\\_final-editable.pdf](https://development.ohio.gov/files/bs/Loan%20Action%20Request%20Form_final-editable.pdf)

Please **discuss this promptly** with: <http://www.ohiosenate.gov> and the **Governor of the State of Ohio**, please?

List: (b) (6) ; (b) (6) ;  
(b) (6) ; (b) (6) ;  
(b) (6) ; (b) (6) ;  
(b) (6) ; (b) (6) ;

Clark Tibbs, CEO

PhageVax, Inc. [www.PhageVax.com](http://www.PhageVax.com)

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E-mail: (b) (6) -or- (b) (6) -or- (b) (6)

General Offices & HQ: 855 Sharon Valley Road, Suite 101 Newark, Ohio 43055-2860 USA

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**From:** RYAN, Michael J.  
**Sent:** Tue, 18 Feb 2020 12:11:53 +0000  
**To:** RYAN, Michael J.; SHOC; Office of the Director-General; Redfield, Robert R.  
(CDC/OD) (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6);  
David Heymann; Felicity Harvey  
(b) (6); Chris Elias; (b) (6); Jeremy  
Farrar; (b) (6); (b) (6); Fauci, Anthony (NIH/NIAID)  
[E]; (b) (6); (b) (6); (b) (6); GREIN, Thomas; COX,  
Paul Michael; SCHWARTLANDER, Bernhard F.; MINHAS, Raman; (b) (6); Conrad, Patricia  
(NIH/NIAID) [E]; MAHJOUR, Jaouad; FALL, Ibrahima Soce; Thomas R. Frieden; elhadj.sy; Lynn  
Banks; President | Resolve to Save Lives; (b) (6); (b) (6); AL-  
SHORBAJI, Farah; (b) (6); Robynn Leidig; DRURY, Patrick Anthony; Dr VAN  
KERKHOVE,  
Maria; (b) (6); (b) (6); (b) (6); (b) (6); cheryl.c; G  
RAAFF, Peter Jan; POOLE, Marcia; Tarik Mohammed; (b) (6); (SPmig) Carlos Navarro  
Colorado; (b) (6); Ryan Morhard; BRIAND, Sylvie; MORGAN, Oliver; Harries,  
Jenny; Awwad, David (NIH/NIAID) [C]  
**Subject:** Informal coronavirus teleconference (confirmed with DG's agenda)  
**Attachments:** (b) (6), (b) (6), (b) (6) Swisscom Call code.pdf

It is of urgent importance that we move quickly to finance the development of the appropriate countermeasures for a disease that risks becoming endemic across the globe. Two critical issues are necessary to address: i) immediate financing for the development and scale-up of a diversified portfolio of vaccines, and ii) financing the manufacturing and procurement of vaccine for global distribution.

In this context, we take this opportunity to share with you pertinent information regarding some logistics for the meeting; please see below for further details. We note that logistical information is also provided in the attached document for your convenience.

Please find in the attached a background note as well as the agenda for the meeting.

Finally, we thank all participants who have so far RSVP'd to the meeting. For those who have not yet RSVP'd, kindly confirm your participation to Ms. Gabrielle Williams, Health, Nutrition and Population Global Practice, World Bank ([wbhealthevents@worldbank.org](mailto:wbhealthevents@worldbank.org)).

Please do not hesitate to reach out with any questions.

Many thanks,  
Gabrielle  
WBG Health Team

#### **LOGISTICS NOTE**

It is our distinct pleasure to host you on the occasion of **Thursday, February 20, 2020 from 9:30am – 1:30pm** at the **World Bank Headquarters in Washington, DC**. Please find in the below pertinent information regarding logistics (including instructions for connecting remotely as needed):

#### **Venue & Location**

The meeting will be held at the **World Bank Headquarters (Main Complex) in Washington, DC, USA** (located at 1818 H Street NW, 20433) on the **Floor C2**, in conference room number **MC C2-125**. Please see map below for building location and nearest Metro stations:





### Security Clearance & Building Access

Please enter the building through the **WB visitor's entrance located on the 18<sup>th</sup> street side of the building**. Please **bring a valid form of photo identification**, such as a passport or a Government issued ID. Upon entering, please go through the security checkpoint. A member of our team will be waiting for you to provide you with your building pass and to escort you to the room. Please note that you will need to show your building pass every time you enter or exit the building.

### Transportation

- **Arrival in Washington, DC:** A one-way taxi fare from Dulles International Airport (IAD) to downtown Washington, DC costs approximately US\$75. The trip takes about 45 minutes depending on traffic. A one-way taxi fare from Reagan National Airport (DCA) costs approximately US\$25, and the trip takes about 20 minutes.
- **To the airport:** Taxis are readily available from the World Bank Headquarters or from your hotel, whichever is most conducive to your travel arrangements.
- **For more information on public transportation:** please visit [WMATA – Metro/Bus/Train andService Near Me](#)

### Coffee & Lunch

- Coffee and tea will be available upon arrival
- Lunch will be provided; vegetarian options will be available

### **Connecting Remotely**

For those who will be connecting remotely, please find instructions on how to connect via Webex in the below:

#### **To join via computer or electronic device:**

- Kindly select the 'join meeting' button below
- Meeting number (access code): (b) (4), (b) (6)
- Meeting password: (b) (4), (b) (6)



#### **To join via phone, please use the following dial-in and access code:**

- Dial in: (b) (4), (b) (6) (Call-in toll number (US/Canada)) or click here for [Global call-in numbers](#)
- Meeting number (access code): (b) (4), (b) (6)

### **Enquires or questions**

If you have any further questions or enquiries regarding the meeting, please do not hesitate to contact the World Bank Health Team directly at [Wbhealthevents@worldbank.org](mailto:Wbhealthevents@worldbank.org).

**From:** STAG IH Secretariat  
**Sent:** Mon, 20 Jan 2020 10:00:22 +0000  
**To:** STAG IH Secretariat; David Heymann; (SPmig) DELIA ENRIA; Delia Enria  
(b) (6); (b) (6); (b) (6); Schuchat, Anne  
MD (CDC/OD); 'Dr Amadou Alpha SALL (b) (6)'; Gary Kobinger; 'Johan Giesecke  
(b) (6)'; (SPmig) Juliet Bedford; (b) (6); Lane, Cliff (NIH/NIAID)  
[E]; Ziad Memish; Wieler, Lothar; (b) (6); SHINDO, Nahoko; MATHIS, Margaux Manoua  
**Subject:** STAG-IH - nCoV2019 update  
**Attachments:** WHO Internal Summary\_nCoV\_China\_20200118\_final.pdf

Dear STAG-IH,

Prior to the call, we are sharing a **strictly confidential** epi analysis of the situation. It is only for STAG-IH members' information and should not be further disseminated.

You will find WebEx details below.

We look forward to the call.

Best regards,  
Secretariat

### WEBEX details

#### **Join by computer**

[LINK](#)

Meeting access code: (b) (4), (b) (6)

#### **Join by phone**

Tap to call in from a mobile device (optional)

(b) (6) SWITZERLAND Toll

(b) (6) US Toll

[Global call-in numbers](#)

#### **Join from a video system or application**

Dial (b) (6)

You can also dial (b) (6) and enter your meeting number.

#### **Join using Microsoft Lync or Microsoft Skype for Business**

Dial (b) (6)



**From:** STAG IH Secretariat  
**Sent:** Wed, 5 Feb 2020 10:49:11 +0000  
**To:** STAG IH Secretariat; (b) (6); David Heymann; (SPmig)  
DELIA ENRIA; Delia Enria (b) (6); (b) (6); Dr Amadou Alpha SALL  
(b) (6); Gary Kobinger; Johan Giesecke; (SPmig) Juliet  
Bedford; (b) (6); Lane, Cliff (NIH/NIAID) [E]; (b) (6); President\_RKI  
(b) (6); Schuchat, Anne MD (CDC/OD); Wieler, Lothar; Ziad Memish; SHINDO, Nahoko; TWAL,  
Hanan; MATHIS, Margaux Manoua; LEWIS, Rosamund F. (Felicity)  
**Subject:** !!STAG-IH!!- Update on Ebola and COVID-19

Dear colleagues,  
Please find below the agenda for the call.

### **Agenda**

Roll call – Secretariat  
Opening – Chair  
Ebola update – Relapse in survivor - Pierre Formenty  
COVID-19 update – Oliver Morgan (TBC)  
Q&A  
STAG advice  
Closure - chair

Please find below WebEx details for the STAG-IH call, **Thursday, 1pm Geneva time**.  
Please forward to those we have missed.

Best regards,  
Secretariat

When it's time, start your Webex meeting here.

Meeting number (access code): (b) (4), (b) (6)

Meeting password:

(b) (4), (b) (6)

Host key: (b) (4), (b) (6)

Thursday, February 20, 2020

1:00 pm | (UTC+01:00) Brussels, Copenhagen, Madrid, Paris | 1 hr

[Start meeting](#)

**Join by phone**

Tap to call in from a mobile device (attendees only)

(b) (6) SWITZERLAND Toll

(b) (6) US Toll

[Global call-in numbers](#)

**Join from a video system or application**

Dial (b) (6)

You can also dial (b) (6) and enter your meeting number.

**Join using Microsoft Lync or Microsoft Skype for Business**

Dial (b) (6)

Need help? Go to <http://help.webex.com>

[illegible]





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(b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); Takada, Ayato; (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); FALERO CUSANO, Maria Fernanda; (b) (6);  
Andrinopoulos, Katherine M; Murphy, Stephen A; Do, Mai P; [bergerii@who.int](mailto:bergerii@who.int); [creddy@tephinet.org](mailto:creddy@tephinet.org);  
(b) (6); Habrun, Caroline A; (b) (6); Jensen, Lisa  
(PHAC/ASPC); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6)

**Subject:** COVID-19 GOARN Research Response Call

**When:** Monday, February 17, 2020 10:00 AM-11:00 AM (UTC+01:00) Brussels, Copenhagen, Madrid, Paris.

**Where:** WebEx

Dear Colleagues:

As you are aware, the GOARN Research workgroup has been actively engaging the research capacities of partners in the network over the past 5 years. The ongoing COVID-19 outbreak has presented us with the challenge of working even more rapidly alongside WHO and other UN Partners to address the knowledge gaps the public health community is grappling with in order to stop this outbreak.

On behalf of the steering committee and the research working group I would like to invite you to a webex conference call on Monday 17 February 2020 at 1000 CET to explore the scope of the work ahead of us and the opportunity to work together to support the response. We realise this will be a time constraint for many colleagues in the Western Hemisphere, but we are hoping to accommodate many of our colleagues in the Western Pacific Region.

The objective of the call is to:

1. Update you on the key research challenges in the COVID-19 response
2. Discuss the scope of our involvement as a network
3. Explore ways of working

Please see details of the webex dial in below

Monday, Feb 17, 2020 10:00 am | 1 hour | (UTC+01:00) Brussels, Copenhagen, Madrid, Paris

Meeting number: (b) (4), (b) (6)

Password: (b) (4), (b) (6)

(b) (4), (b) (6)

Join by video system

Dial (b) (4), (b) (6)

You can also dial (b) (4), (b) (6) and enter your meeting number.

Join by phone

(b) (4), (b) (6) Switzerland toll

(b) (4), (b) (6) USA/Canada toll

Access code: (b) (4), (b) (6)

Finally, you can refer to the GOARN COVID-19 operations page at the following link for the latest updates on the response .

(b) (4), (b) (6)

We invite you to share your institutional involvement in the response on this platform to optimise what GOARN can offer as a network.

Best regards,  
Lina

**Lina M. Moses, PhD MSPH**

GOARN-Research Lead

Mobile/WhatsApp: (b) (6)

Twitter: @linamichi

<https://extranet.who.int/goarn/>





**From:** Raghunathan, Pratima (CDC/DDPHSIS/CGH/OD)  
**Sent:** Sat, 22 Feb 2020 07:48:56 +0000  
**To:** Raghunathan, Pratima (CDC/DDPHSIS/CGH/OD); Beach, Michael J. (CDC/DDID/NCEZID/DFWED); GUEYE, Abdou Salam (b) (6); steve ahuka; Aboulhab, Jamila (NIH/NIAID) [E]; Lane, Cliff (NIH/NIAID) [E]; Christie, Athalia (CDC/DDPHSIS/CGH/OD); (b) (6); DEDE NDUNGI; Gisèle Mbuyi; Kaiser, Reinhard (CDC/DDPHSIS/CGH/DGHP); Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP)  
**Subject:** discussion about ASTMH symposium proposal on Ebola response innovations in DRC  
**Attachments:** 2020\_02\_20 ASTMH Ebola symposium proposal v2.docx

For those who are able to join today at 8am ET/ 2pm Kinshasa / 3pm Goma (time preferred by INRB colleagues). We will hold another call on Monday as well to finalize the ASTMH symposium proposal. The phone numbers are: (b) (4), (b) (6), code (b) (4), (b) (6). You can use the Skype link below to connect via the internet. Thanks in advance, Pratima

---

## [Join Skype Meeting](#)

Trouble Joining? [Try Skype Web App](#)

### Join by phone

(b) (4), (b) (6) (Atlanta Dial-in Conference Region)  
(b) (4), (b) (6) (Atlanta Dial-in Conference Region)

English (United States)  
English (United States)

[Find a local number](#)

Conference ID: (b) (4), (b) (6)

[Forgot your dial-in PIN?](#) | [Help](#)

---

**From:** Simone Jacoby  
**Sent:** Sun, 22 Mar 2020 06:48:14 +0000  
**To:** Simone Jacoby;mlosso;Richard Kaplan;James Hakim;James Hakim; (b) (6);Kiat Ruxrungtham;Eriobu Nnakelu;Dao, Sounkalo (b) (6);Muhammad Karyana; (b) (6); (b) (6);Matthew Law;Anchalee Avihingsanon;Lane, Cliff (NIH/NIAID) [E];Leo Perelis; (b) (6);Carver, Trea (NIH) [C];kumarasamy;FAFA ADDO BOATENG [JACLB];Sean Emery;Anthony Kelleher;PEREZ CASAS, Carmen;Mark Polizzotto  
**Subject:** D2EFT extraordinary PSC teleconference

Dear Colleagues,

I am pleased to confirm that the D<sup>2</sup>EFT extraordinary teleconference will proceed on Monday 23 March.

**Agenda:**

1. Overview of likely coronavirus-2 impact on sites and study
2. Recruitment and follow-up
3. Safety testing
4. Drug provision to PIDs
5. PPE
6. CAB response
7. Substudy

**Dial in details:**

(b) (4), (b) (6)

**Meeting ID:** (b) (4), (b) (6)

Dial in (toll numbers):

(b) (6) US (New York)  
(b) (6) US  
(b) (6) US  
(b) (6) Australia

Dial by your location (toll numbers) : (b) (6)

Looking forward to speaking to you on Monday.

Kind regards,

Simone

**From:** STAG IH Secretariat  
**Sent:** Mon, 23 Mar 2020 10:40:57 +0000  
**To:** STAG IH Secretariat; (b) (6); David Heymann; (SPmig) DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL (b) (6); Gary Kobinger; Johan Giesecke; (SPmig) Juliet Bedford; (b) (6); Lane, Cliff (NIH/NIAID) [E]; (b) (6); President\_RKI (b) (6); Schuchat, Anne MD (CDC/OD); Wieler, Lothar; Ziad Memish; MATHIS, Margaux Manoua; TWAL, Hanan; (b) (6); vernonljm; Hitoshi Oshitani; gmleung; Maya Arij; BARBESCHI, Maurizio; MORGAN, Oliver; BRIAND, Sylvie; RYAN, Michael J.; AYLWARD, Raymond Bruce J.; Dr VAN KERKHOVE, Maria; GREIN, Thomas; Adam Kucharski; SHAMSELDIN, Khaled; LEWIS, Rosamund F. (Felicity)  
**Cc:** VANDEMAELE, Katelijn A.h.; MAHJOUR, Jaouad; BALLER, April; DIAZ, Janet Victoria; PERKINS, Mark; FALL, Ibrahima Soce; DRURY, Patrick Anthony; DOLEA, Carmen Mihaela; PARK, Munjoo; PENDERGAST, Scott Douglas; leunggm; HENAO RESTREPO, Ana Maria; Carver, Trea (NIH) [C]; SHIDEED, Olla  
**Subject:** !!STAG-IH!! COVID-19 technical discussion\_exiting lockdown  
**Attachments:** COVID-19 Transition Criteria & Process - STAG Discussion Paper - 23Mar2020.pdf, Slides for STAG-IH VC 24032020.pdf, Lancet mass gathering.pdf, Minutes\_STAG\_IH\_2020\_03\_19.pdf

Dear All, With presentation slides from WHO.

and Bruce's Transition from lockdown discussion paper, mass gathering paper.

STAG-IH and Invited panel members, please call in advance, we will open the line 10 minutes before the meeting start time

HQ participants, in order to ensure enough space between staff, we changed the venue to Salle A.

Dear STAG-IH, Invited panel members,

As indicated during the last VC, we will have a follow up discussion on transition/exit from lockdown.

Agenda:

1. Update from secretariat and pending questions from previous meeting for discussion – Maria van Kerkhove, Oliver Morgan, STAG-IH Secretariat
2. Report from Lothar (Germany) and Italy (Giuseppe Ippolito) (five minutes each)
3. Ethics related to COVID-19 – Juliet



4. Discussion on factors to consider for exiting lockdown using Bruce's document (I will send you my comments on it in a forwarded mail)

Heads up - we plan to organize the next call on Friday to have update on clinical research collaboration, research activities from NIAID, vaccine development (CEPI), and ethics discussion.

### CALL IN INFO

WHO HQ EOC3 COVID-19 is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting

(b) (4), (b) (6)

Meeting ID: (b) (6), (b) (6)

One tap mobile

(b) (6) Switzerland

(b) (6) Switzerland Toll-free

Dial by your location

(b) (6) Switzerland

(b) (6) Switzerland Toll-free

(b) (6) Switzerland Toll-free

(b) (6) US

(b) (6) US Toll-free

(b) (6) US Toll-free

(b) (6) France Toll-free

(b) (6) France Toll-free

Meeting ID: (b) (4), (b) (6)

Find your local number: (b) (6)

Join by SIP

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

Join by H.323

(b) (6) (US West)

(b) (6) (US East)

(b) (6) (China)

(b) (6) (India Mumbai)

(b) (6) (India Hyderabad)

(b) (6) (EMEA)

(b) (6) (Australia)

(b) (6) (Hong Kong)

(b) (6) (Brazil)  
(b) (6) (Canada)  
(b) (6) (Japan)

Meeting ID: (b) (4), (b) (6)

Join by Skype for Business

(b) (4), (b) (6)

**From:** STAG IH Secretariat  
**Sent:** Thu, 26 Mar 2020 16:48:22 +0000  
**To:** STAG IH Secretariat; (b) (6); David Heymann; (SPmig) DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL (b) (6); Gary Kobinger; Johan Giesecke; (SPmig) Juliet Bedford; (b) (6); Lane, Cliff (NIH/NIAID) [E]; (b) (6); President\_RKI (b) (6); Schuchat, Anne MD (CDC/OD); Wieler, Lothar; Ziad Memish; MORGAN, Oliver; RYAN, Michael J.; AYLWARD, Raymond Bruce J.; BRIAND, Sylvie; Dr VAN KERKHOVE, Maria; GREIN, Thomas; LITTLER, Katherine; LEWIS, Rosamund F. (Felicity); MATHIS, Margaux Manoua; TWAL, Hanan; FALL, Ibrahima Soce; LINDBLADE, Kimberly Ann; BRUNI, Emanuele; BARBESCHI, Maurizio; SHOC; SHAMSELDIN, Khaled  
**Cc:** VANDEMAELE, Katelijn A.h.; PARK, Munjoo; DOLEA, Carmen Mihaela; DRURY, Patrick Anthony; SHIDEED, Olla; MAHJOUR, Jaouad; DIAZ, Janet Victoria; PERKINS, Mark; BALLER, April; bltwoo  
**Subject:** STAG-IH focused call on COVID-19 lockdown exit/transition  
**Attachments:** COVID-19 Transition Criteria Process - STAG Discussion Paper - 23Mar2020.docx, Glossary of COVID-related PHSM\_7.docx, PHSM presentation STAG.pptx

DG requested that this meeting to start at 2pm Geneva time so he can join the discussion. Hope Members can adjust your schedule.

With two discussion documents,  
Salle A for HQ participants  
Secretariat

#### Agenda

Opening – chair

Grocery of Public Health Measures – Oliver Morgan (for action, 5min)

Ethics related to COVID-19 – Katherine Littler (for information, 5min)

Facilitated discussion on transition/exit strategy based on the discussion paper – Chair and all  
Conclusions, action points -chair

#### Call in info

WHO HQ EOC4 COVID-19 is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting

(b) (4), (b) (6)

Meeting ID: (b) (4), (b) (6)

Dial by your location

(b) (6) Switzerland  
(b) (6) Switzerland Toll-free  
(b) (6) Switzerland Toll-free



(b) (6) US

(b) (6) US Toll-free

(b) (6) US Toll-free

(b) (6) France Toll-free

(b) (6) France Toll-free

Meeting ID: (b) (4), (b) (6)

Find your local number: (b) (6)

Join by SIP

(b) (4), (b) (6)

Join by Skype for Business

(b) (4), (b) (6)

**From:** Miranda, Alejandra (NIH) [C]  
**Sent:** Thu, 26 Mar 2020 20:38:35 +0000  
**To:** Miranda, Alejandra (NIH) [C]; Gulati, Iman (NIH/NIAID) [C]; Albert, Sara (NIH) [C]; Higgs, Elizabeth (NIH/NIAID) [E]; Hensley, Lisa (NIH/NIAID) [E]; Dodd, Lori (NIH/NIAID) [E]; Steve AHUKA; Olivier Tshiani, (b) (6); Aboulhab, Jamila (NIH/NIAID) [E]; Lane, Cliff (NIH/NIAID) [E]; Placide Mbala; Dighero-Kemp, Bonnie (NIH/NIAID) [C]; McNay, Laura (NIH/NIAID) [E]; Anu Osinusi (b) (6); Huyen Cao; Cavan Reilly; Nason, Martha (NIH/NIAID) [E]; Proschan, Michael (NIH/NIAID) [E]; Proffitt, Calvin (NIH) [C]; Lambert, Laurie (NIH) [C]; Baseler, Beth (NIH) [C]; Pierre Formenty, (b) (6); Stavale, Eric (NIH) [C]; Marchand, Jonathan (NIH) [C]; (b) (6); (b) (6); Antoine Tshomba; Richard KOJAN; Eric Delaporte; YAZDANPANAH Yazdan; Eckes, Risa (NIH/NIAID) [V]; Pierson, Jerome (NIH/NIAID) [C]; Tierney, John (NIH/NIAID) [E]; Vallee, David; Bonnett, Tyler (NIH) [C]; Weyers, Shera (NIH/NIAID) [C]; Francis, Alyson (NIH/NIAID) [C]; Kopka, Stacy (NIH) [C]; Bera, Victoria (NIH/NIAID) [C]; 'Jacquie Nordwall'; Miller, Tracey (NIH) [C]; Crozier, Ian (NIH) [C]; Vogel, Susan (NIH/NIAID) [E]; Newell, Kevin (NIH) [C]; Hoopengardner, Lisa (NIH) [C]; Herpin, Betsey (NIH/NIAID) [E]; Barrett, Kevin (NIH/NIAID) [E]; Cahill, Kelly (NIH/NIAID) [E]; Teitelbaum, Marc (NIH) [C]; Sow, Ydrissa (NIH/NIAID) [E]; Cone, Katherine (NIH/NIAID) [E]; Simpson, Shelly (NIH) [C]; Yearwood, Alida (NIH) [C]; Chaitt, Doreen (NIH/NIAID) [E]; (b) (6); Eccard-Koons, Vanessa (NIH) [C]; Weyers, Shera (TMG-DRC); Esaie Kindombe luzolo; Esaie Kindombe; Augustin Ibanda; (b) (6); Sivahera, Billy; Buehn, Molly (NIH) [C]; Elliott, Elizabeth (NIH/NIAID) [C]; Akpa, Esther (NIH/NIAID) [E]; (b) (6); (b) (6); Tshiani Mbaya, Olivier (NIH) [C]; Brady, Tyler (NIH/NIAID) [C]; Bozman, Courtney (NIH/NIAID) [C]; Gichini, Harrison (NIH/NIAID) [C]; Gross, Robin (NIH/NIAID) [C]; Marron, Lindsay (NIH/NIAID) [C]; Randunu, Nadeeka (NIH) [C]; Sharma, Heema (NIH/NIAID) [C]; Crew, Page (NIH/NIAID) [E]; Sinare; Basika, Michael; Camara, Josephine; Smolskis, Mary (NIH/NIAID) [E]; Duvenhage, Michael (NIH) [C]; Doepel, Laurie (NIH/NIAID) [E]  
**Cc:** Singh, IP; Kumalah, Lans  
**Subject:** Impact of COVID-19 on PALM 2 Study

#### Impact of COVID-19 on PALM 2 Study

Friday, March 27 at 11am EDT/4pm Kinshasa/5pm North Kivu

Please join my meeting from your computer, tablet or smartphone.

(b) (4), (b) (6)

You can also dial in using your phone.

United States: (b) (4), (b) (6)

Access Code: (b) (4), (b) (6)

New to GoToMeeting? Get the app now and be ready when your first meeting starts:

(b) (6)

**From:** STAG IH Secretariat  
**Sent:** Mon, 30 Mar 2020 10:17:05 +0000  
**To:** STAG IH Secretariat; (b) (6); David Heymann; (SPmig) DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL (b) (6); Gary Kobinger; Johan Giesecke; (SPmig) Juliet Bedford; kum.ungchusak; Lane, Cliff (NIH/NIAID) [E]; mdohmd; President\_RKI (b) (6); Schuchat, Anne MD (CDC/OD); Wieler, Lothar; Ziad Memish; Dr VAN KERKHOVE, Maria; BRIAND, Sylvie; MATHIS, Margaux Manoua; TWAL, Hanan; Rebeka Yasmin; Shanni Dhoofer; Oyeronke Oyebanji; Haja Bally; Richard Hatchett; FARES, Christine Youssef; BOKO, Ivana; KABIR, Sophia  
**Cc:** Steven T. Smith; J. Farrar; Teresa Miller de Vega; SWAMINATHAN, Soumya; LITTLER, Katherine  
**Subject:** !!STAG-IH!! COVID-19 information session on Research / closed discussion on other business

For HQ participants >> Yellow Room, above the Open cafeteria in the main building.

Dear STAG-IH,

Here's the agenda for tomorrow's STAG-IH Zoom call.

#### Agenda

(Information Session)

Focus on COVID-19 Research

1. NIAID (WHOC for Emerging Infectious Disease Response Research and Preparedness) – Overview of ongoing research
2. CEPI (Melanie Saville, CEPI's Director of Research and Development) - Vaccine development update
3. Jeremy Farrar (Wellcome, Chair of WHO R&D Blueprint SAG) – Update on clinical research collaboration

#### Q&A

(STAG-IH Closed Session)

Presenter – Johan Giesecke

End

#### Call in info

WHO HQ EOC1 COVID-19 is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting

(b) (4), (b) (6)

Meeting ID: (b) (4), (b) (6)

Dial by your location

(b) (6) Switzerland

(b) (6) Switzerland Toll-free



(b) (6) Switzerland Toll-free

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(b) (6) France Toll-free

(b) (6) France Toll-free

Meeting ID: (b) (4), (b) (6)

Find your local number: (b) (4), (b) (6)

Join by SIP

(b) (4), (b) (6)

Join by Skype for Business

(b) (4), (b) (6)

**From:** STAG IH Secretariat  
**Sent:** Wed, 1 Apr 2020 22:16:41 +0000  
**To:** STAG IH Secretariat; (b) (6); David Heymann; (SPmig) DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL (b) (6); Gary Kobinger; Johan Giesecke; (SPmig) Juliet Bedford; kum.ungchusak; Lane, Cliff (NIH/NIAID) [E]; mdohmd; President\_RKI (b) (6); Schuchat, Anne MD (CDC/OD); Wieler, Lothar; Ziad Memish; PENDERGAST, Scott Douglas; AYLWARD, Raymond Bruce J.; BRIAND, Sylvie; RYAN, Michael J.  
**Cc:** FALL, Ibrahima Soce; GREIN, Thomas; MAHJOUR, Jaouad  
**Subject:** !!STAG-IH!! VC on COVID-19 Transition  
**Attachments:** COVID19 SPRP2 V2.2 docx

Dear STAG-IH,  
Here are the agenda and call-in info for the VC tomorrow.  
Secretariat

#### Agenda

1. (For your inputs) COVID-19 WHO strategy update (Scott Pendergast) – STAG-IH is invited to provide input/comments before being shared with Member States
2. (For discussion) Transition from confinement/Stay-at-home order (Bruce Aylward)

#### Call-in Info

##### Join Zoom Meeting

(b) (4), (b) (6)  
Meeting ID: (b) (4), (b) (6)  
Password: (b) (4), (b) (6)

##### Dial by your location

(b) (6) Switzerland  
(b) (6) Switzerland  
(b) (6) Switzerland Toll-free  
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(b) (6) US  
(b) (6) US (Los Angeles)  
(b) (6) US Toll-free  
(b) (6) US Toll-free  
(b) (6) France  
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Meeting ID: (b) (4), (b) (6)  
Find your local number: (b) (6)

Join by SIP

(b) (4), (b) (6)

Join by Skype for Business

(b) (4), (b) (6)



**From:** STAG IH Secretariat  
**Sent:** Wed, 1 Apr 2020 22:18:10 +0000  
**To:** STAG IH Secretariat; (b) (6); David Heymann; (SPmig) DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL (b) (6); Gary Kobinger; Johan Giesecke; (SPmig) Juliet Bedford; kum.ungchusak; Lane, Cliff (NIH/NIAID) [E]; mdohmd; President\_RKI (b) (6); PERKINS, Mark; Schuchat, Anne MD (CDC/OD); Wieler, Lothar; Ziad Memish; LEWIS, Rosamund F. (Felicity); Dr VAN KERKHOVE, Maria; BRIAND, Sylvie; RYAN, Michael J.; MATHIS, Margaux Manoua; TWAL, Hanan  
**Subject:** !!STAG-IH!! VC on COVID-19 Dx and Serology  
**Attachments:** FINAL - WHO COVID-19 Transition Principles Process - 9Apr2020.docx, STAG-IH\_recurrent PCR (+)\_10 Apr2020\_MD Oh.pdf, COVID-19 SEROLOGY.pptx

Dear STAG-IH, please find attached 1) updated Transition Principles paper, 2) Myoung don's presentation on recurrent PCR+, 3) Delia's serology discussion slides for the VC later today.

#### Agenda

1. (Finalization and Endorsement) Transition strategy paper – Bruce
2. (Information and action) SAGE COVID-19 Working Group STAG-IH member participation
3. (update) Diagnostics – testing strategy, RDT, serology
  - a. Mark Perkins
  - b. Maria van Kerkhove (overview of serological studies)
4. (Brainstorming)
  - a. Recrudescence of SARS-CoV-2 infection – Myoung don, follow up comment from Lothar
  - b. MERS CoV serology and serological studies challenges – Ziad
  - c. Serology and way forward – Delia
  - d. Animal models – Cliff

Q&A

Actions

END

#### Call-in info

WHO HQ EOC 2 COVID-19 is inviting you to a scheduled Zoom meeting.

#### Join Zoom Meeting

Meeting ID: (b) (4), (b) (6)

Password: (b) (4), (b) (6)

#### Dial by your location

(b) (6) Switzerland

(b) (6) Switzerland

(b) (6) Switzerland Toll-free

(b) (6) Switzerland Toll-free

(b) (6) US

(b) (6) US (Los Angeles)  
(b) (6) US Toll-free  
(b) (6) US Toll-free  
(b) (6) France  
(b) (6) France  
(b) (6) France Toll-free  
(b) (6) France Toll-free

Meeting ID: (b) (4), (b) (6)

Find your local number: (b) (4), (b) (6)

Join by SIP

(b) (4), (b) (6)

Join by Skype for Business

(b) (4), (b) (6)

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Fri, 14 Feb 2020 22:24:57 +0000  
**To:** HAN, Mansuk Daniel  
**Subject:** Re: [URGENT] COVID-19: DOI & Confidentiality forms

Unfortunately the business center does not open until 0900 Tokyo. I will get things to you as soon as possible. If helpful I could forward the unsigned documents.

Cliff

On Feb 15, 2020, at 6:11 AM, HAN, Mansuk Daniel [REDACTED] (b) (6) wrote:

Understood, please send as soon as you can. The forms this time are tailored to China's terms so we cannot use the ones from before. Thank you for your patience.

Sent from my iPhone

On Feb 14, 2020, at 21:22, Lane, Cliff (NIH/NIAID) [E] [REDACTED] (b) (6) wrote:

They are done and on my computer. I need to print them at the hotel to sign them and send them back. If helpful, you have similar forms from me for my participation on STAG-IH.

On Feb 15, 2020, at 4:49 AM, HAN, Mansuk Daniel [REDACTED] (b) (6) wrote:

Dear Cliff, could you please complete the DOI and confidentiality forms and return them to me ASAP?

Understand you are incredibly busy busy and I hate to burden you with paperwork, but the forms need to be done...

Thank you for your patience,

Dan

**Mansuk Daniel HAN**

Technical Officer

WHO HQ, Geneva, Switzerland

Office: [REDACTED] (b) (6)

Mobile: [REDACTED] (b) (6)

Email: [REDACTED] (b) (6)

Skype: dan.han3

<image001.gif>

<(final) DOI\_EN\_Form\_WHO\_China Joint mission COVID19.docx>

<Confidentiality Undertaking for WHO\_China Joint Mission.pdf>



**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Mon, 17 Feb 2020 17:56:36 +0000  
**To:** HAN, Mansuk Daniel  
**Subject:** Re: Two DOI questions  
**Attachments:** image001.gif

1. Gilead will provide the drug remdesivir free of charge to the study team that is developing a protocol to test that drug. The protocol team is multi-national and this is done in coordination with the R and D blueprint team. This drug is also being tested by the Chinese in Wujan.
2. All my travel expenses are covered by the US government (NIH) in accordance with standard travel policy.

Cliff

On Feb 18, 2020, at 12:38 AM, HAN, Mansuk Daniel (b) (6) wrote:

Dear Cliff,

Sorry to bother you during a very busy mission but DGO requested to clear two questions from your DOI:

1. Research support from Gilead: is there any relationship between the present mission to China and any of your ongoing research regarding COVID-19?
2. Travel costs: could you please tell us who contributed toward your mission travel costs, and the amount contributed?

Thank you,  
Dan

**Mansuk Daniel HAN**  
Technical Officer  
WHO HQ, Geneva, Switzerland  
Office: (b) (6)  
Mobile: (b) (6)  
Email: (b) (6)  
Skype: dan.han3  
<image001.gif>

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Tue, 18 Feb 2020 12:10:43 +0000  
**To:** HAN, Mansuk Daniel  
**Subject:** Re: Two DOI questions

I honestly do not know. The study is being developed in cooperation with the R and D Blueprint. The only arrangement with Gilead is for provision of drug.

On Feb 18, 2020, at 5:22 PM, HAN, Mansuk Daniel (b) (6) wrote:

We assume this is the case, but just for the sake of legality - Is WHO aware of the clinical trial arrangements for remdesivir and related protocol?

Best, Dan

---

**From:** Lane, Cliff (NIH/NIAID) [E] (b) (6)  
**Sent:** Monday, February 17, 2020 6:57 PM  
**To:** HAN, Mansuk Daniel (b) (6)  
**Subject:** Re: Two DOI questions

1. Gilead will provide the drug remdesivir free of charge to the study team that is developing a protocol to test that drug. The protocol team is multi-national and this is done in coordination with the R and D blueprint team. This drug is also being tested by the Chinese in Wujan.
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2. Travel costs: could you please tell us who contributed toward your mission travel costs, and the amount contributed?

Thank you,  
Dan

**Mansuk Daniel HAN**

Technical Officer

WHO HQ, Geneva, Switzerland

Office: (b) (6)

Mobile: (b) (6)

Email: (b) (6)

Skype: dan.han3

<image001.gif>



**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Sun, 23 Feb 2020 12:09:18 +0800  
**To:** Maria VAN KERKHOVE  
**Subject:** Edits  
**Attachments:** WHO-China Joint Mission - DRAFT REPORT V2.3LaneEditsfinal.docx

Many are for clarification. The ones in the research section have some content that was felt to be important.

Cliff

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Sun, 23 Feb 2020 08:47:39 +0000  
**To:** Maria VAN KERKHOVE  
**Cc:** (b) (6)  
**Subject:** Fwd: COVID 19 References

Below are some of the key references regarding COVID 19. I pulled these from PubMed. There may be other documents (esp. governmental guidelines) we should add.

Cliff

Begin forwarded message:

**From:** NLM NCBI nobody (b) (6)  
**Date:** February 23, 2020 at 4:42:09 PM GMT+8  
**To:** "Lane, Cliff (NIH/NIAID) [E]" (b) (6)  
**Subject:** COVID 19 References

This message contains search results from the National Center for Biotechnology Information (NCBI) at the U.S. National Library of Medicine (NLM). Do not reply directly to this message

**Sent On:** Sun Feb 23 03:42:03 2020

30 selected items

#### PubMed Results

Items 1-30 of 30 ([Display the 30 citations in PubMed](#))

##### [A Novel Coronavirus From Patients With Pneumonia in China, 2019](#)

1. N Zhu et al. N Engl J Med 382 (8), 727-733. 2020. PMID 31978945.  
In December 2019, a cluster of patients with pneumonia of unknown cause was linked to a seafood wholesale market in Wuhan, China. A previously unknown betacoronavirus was ...

##### [Clinical Features of Patients Infected With 2019 Novel Coronavirus in Wuhan, China](#)

2. C Huang et al. Lancet 395 (10223), 497-506. 2020. PMID 31986264.  
Ministry of Science and Technology, Chinese Academy of Medical Sciences, National Natural Science Foundation of China, and Beijing Municipal Science

and Technology Commis ...

[Detection of 2019 Novel Coronavirus \(2019-nCoV\) by Real-Time RT-PCR](#)

3. VM Corman et al. Euro Surveill 25 (3). Jan 2020. PMID 31992387.  
BackgroundThe ongoing outbreak of the recently emerged novel coronavirus (2019-nCoV) poses a challenge for public health laboratories as virus isolates are unavailable wh ...

[Genomic Characterisation and Epidemiology of 2019 Novel Coronavirus: Implications for Virus Origins and Receptor Binding](#)

4. R Lu et al. Lancet. 2020. PMID 32007145.  
National Key Research and Development Program of China, National Major Project for Control and Prevention of Infectious Disease in China, Chinese Academy of Sciences, Sha ...

[Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia](#)

5. Q Li et al. N Engl J Med. 2020. PMID 31995857.  
On the basis of this information, there is evidence that human-to-human transmission has occurred among close contacts since the middle of December 2019. Considerable eff ...

[Genomic Characterization of the 2019 Novel Human-Pathogenic Coronavirus Isolated From a Patient With Atypical Pneumonia After Visiting Wuhan](#)

6. JF Chan et al. Emerg Microbes Infect 9 (1), 221-236. Dec 2020. PMID 31987001.  
A mysterious outbreak of atypical pneumonia in late 2019 was traced to a seafood wholesale market in Wuhan of China. Within a few weeks, a novel coronavirus tentatively n ...

[Epidemiological and Clinical Characteristics of 99 Cases of 2019 Novel Coronavirus Pneumonia in Wuhan, China: A Descriptive Study](#)

7. N Chen et al. Lancet 395 (10223), 507-513. 2020. PMID 32007143.  
National Key R&D Program of China.

[Preliminary Estimation of the Basic Reproduction Number of Novel Coronavirus \(2019-nCoV\) in China, From 2019 to 2020: A Data-Driven Analysis in the Early Phase of the Outbreak](#)

8. S Zhao et al. Int J Infect Dis 92, 214-217. 2020. PMID 32007643.  
The mean estimate of  $R_0$  for the 2019-nCoV ranges from 2.24 to 3.58, and is significantly larger than 1. Our findings indicate the potential of 2019-nCoV to



cau ...

[A Familial Cluster of Pneumonia Associated With the 2019 Novel Coronavirus Indicating Person-To-Person Transmission: A Study of a Family Cluster](#)

9. JF Chan et al. Lancet 395 (10223), 514-523. 2020. PMID 31986261.  
The Shaw Foundation Hong Kong, Michael Seak-Kan Tong, Respiratory Viral Research Foundation Limited, Hui Ming, Hui Hoy and Chow Sin Lan Charity Fund Limited, Marina Man-W ...

[CT Imaging Features of 2019 Novel Coronavirus \(2019-nCoV\)](#)

10. M Chung et al. Radiology 200230. 2020. PMID 32017661.  
In this retrospective case series, chest CT scans of 21 symptomatic patients from China infected with the 2019 novel coronavirus (2019-nCoV) were reviewed, with emphasis ...

11. [CT Imaging of the 2019 Novel Coronavirus \(2019-nCoV\) Pneumonia](#)

J Lei et al. Radiology 200236. 2020. PMID 32003646.

[Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China](#)

12. D Wang et al. JAMA. 2020. PMID 32031570.  
In this single-center case series of 138 hospitalized patients with confirmed NCIP in Wuhan, China, presumed hospital-related transmission of 2019-nCoV was suspected in 4 ...

[A Pneumonia Outbreak Associated With a New Coronavirus of Probable Bat Origin](#)

13. P Zhou et al. Nature. 2020. PMID 32015507.  
Since the SARS outbreak 18 years ago, a large number of severe acute respiratory syndrome-related coronaviruses (SARSr-CoV) have been discovered in their natural reservoir ...

[Molecular Diagnosis of a Novel Coronavirus \(2019-nCoV\) Causing an Outbreak of Pneumonia](#)

14. DKW Chu et al. Clin Chem. 2020. PMID 32031583.  
The established assays can achieve a rapid detection of 2019n-CoV in human samples, thereby allowing early identification of patients.

15. [Clinical Characteristics of Novel Coronavirus Cases in Tertiary Hospitals in Hubei Province](#)

L Kui et al. Chin Med J (Engl). 2020. PMID 32044814.



The majority of patients with 2019-nCoV coronavirus pneumonia present with fever as the first symptom, and most of them still showed typical manifestations of viral pneum ...

[RNA Based mNGS Approach Identifies a Novel Human Coronavirus From Two Individual Pneumonia Cases in 2019 Wuhan Outbreak](#)

16. L Chen et al. Emerg Microbes Infect 9 (1), 313-319. Dec 2020. PMID 32020836.

From December 2019, an outbreak of unusual pneumonia was reported in Wuhan with many cases linked to Huanan Seafood Market that sells seafood as well as live exotic anima ...

[Initial CT Findings and Temporal Changes in Patients With the Novel Coronavirus Pneumonia \(2019-nCoV\): A Study of 63 Patients in Wuhan, China](#)

17. Y Pan et al. Eur Radiol. 2020. PMID 32055945.

Imaging changes in novel viral pneumonia are rapid. The manifestations of the novel coronavirus pneumonia are diverse. Imaging changes of typical viral pneumonia and some ...

[Preliminary Prediction of the Basic Reproduction Number of the Wuhan Novel Coronavirus 2019-nCoV](#)

18. T Zhou et al. J Evid Based Med. 2020. PMID 32048815.

The early transmission ability of 2019-nCoV is close to or slightly higher than SARS. It is a controllable disease with moderate to high transmissibility. Timely and effe ...

[Measures for Diagnosing and Treating Infections by a Novel Coronavirus Responsible for a Pneumonia Outbreak Originating in Wuhan, China](#)

19. F Yu et al. Microbes Infect. 2020. PMID 32017984.

On 10 January 2020, a new coronavirus causing a pneumonia outbreak in Wuhan City in central China was denoted as 2019-nCoV by the World Health Organization (WHO). As of 2 ...

20. [Origin and Evolution of the 2019 Novel Coronavirus](#)

L Zhang et al. Clin Infect Dis. 2020. PMID 32011673.

[Consistent Detection of 2019 Novel Coronavirus in Saliva](#)

21. KK To et al. Clin Infect Dis. 2020. PMID 32047895.

The 2019-novel-coronavirus (2019-nCoV) was detected in the self-collected saliva of 91.7% (11/12) of patients. Serial saliva viral load monitoring



generally showed a decl ...

[Incubation Period of 2019 Novel Coronavirus \(2019-nCoV\) Infections Among Travellers From Wuhan, China, 20-28 January 2020](#)

22. JA Backer et al. Euro Surveill 25 (5). Feb 2020. PMID 32046819.  
A novel coronavirus (2019-nCoV) is causing an outbreak of viral pneumonia that started in Wuhan, China. Using the travel history and symptom onset of 88 confirmed cases t ...

[Initial Cluster of Novel Coronavirus \(2019-nCoV\) Infections in Wuhan, China Is Consistent With Substantial Human-to-Human Transmission](#)

23. H Nishiura et al. J Clin Med 9 (2). 2020. PMID 32054045.  
Reanalysis of the epidemic curve from the initial cluster of cases with novel coronavirus (2019-nCoV) in December 2019 indicates substantial human-to-human transmission. ...

[CT Manifestations of Two Cases of 2019 Novel Coronavirus \(2019-nCoV\) Pneumonia](#)

24. Y Fang et al. Radiology 200280. 2020. PMID 32031481.

[Emergence of a Novel Coronavirus Causing Respiratory Illness From Wuhan, China](#)

25. JW Tang et al. J Infect. 2020. PMID 32001309.

[Therapeutic and Triage Strategies for 2019 Novel Coronavirus Disease in Fever Clinics](#)

26. J Zhang et al. Lancet Respir Med. 2020. PMID 32061335.

[Molecular and Serological Investigation of 2019-nCoV Infected Patients: Implication of Multiple Shedding Routes](#)

27. W Zhang et al. Emerg Microbes Infect 9 (1), 386-389. Dec 2020. PMID 32065057.  
In December 2019, a novel coronavirus (2019-nCoV) caused an outbreak in Wuhan, China, and soon spread to other parts of the world. It was believed that 2019-nCoV was tran ...

[Estimation of the Transmission Risk of the 2019-nCoV and Its Implication for Public Health Interventions](#)

28. B Tang et al. J Clin Med 9 (2). 2020. PMID 32046137.  
Since the emergence of the first cases in Wuhan, China, the novel coronavirus (2019-nCoV) infection has been quickly spreading out to other provinces and



neighboring coun ...

[A Familial Cluster of Infection Associated With the 2019 Novel Coronavirus Indicating Potential Person-To-Person Transmission During the Incubation Period](#)

29. P Yu et al. J Infect Dis. 2020. PMID 32067043.  
An ongoing outbreak of pneumonia associated with 2019 novel coronavirus (2019-nCoV) was reported in China. It is unclear if the infectivity exists during the incubation p ...

[Abnormal Coagulation Parameters Are Associated With Poor Prognosis in Patients With Novel Coronavirus Pneumonia](#)

30. N Tang et al. J Thromb Haemost. 2020. PMID 32073213.  
The present study shows that abnormal coagulation results, especially markedly elevated D-dimer and FDP are common in deaths with NCP.

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Fri, 21 Feb 2020 02:26:02 +0800  
**To:** Maria VAN KERKHOVE  
**Subject:** Comments on research  
**Attachments:** WHO-China joint mission research.docx

Maria,

Attached (and pasted below) are some thoughts regarding research. I do not know how much, if any, of this is helpful for the report.

Comments for consideration on research activities

Strategic perspective/findings

There is an urgent need to answer a series of critical questions related to the current outbreak. Among them are what is the pathogenesis of COVID-19 infection; what are the long-term sequelae (if any) of COVID-19; what available therapies (licensed western products, investigational western products and traditional Chinese medicines) are most effective and are there new therapies and vaccines that can be developed. We repeatedly heard the comment that the medical community is busy saving lives and does not have time for research. This is a false choice and it is critical that additional resources be devoted to the effort such that this critical research can be conducted and science-based therapies identified. When asking about research we were often told that patients are dying and need to be given any medications that might be of benefit. When experimental agents were used the comment we received most often was that they were working, however there were no objective data to support those claims. Among the western medications being administered are chloroquine, favipiravir, inhaled interferon, lopinavir/ritonavir (kaletra), advera, ribavirin, convalescent plasma and remdesivir. The most promising traditional Chinese medicine was said to be Lianhu Qingwen and an additional 10 were also noted to be of value. It was not clear whether or not there was any centralized prioritization of the use or evaluation of these agents (western or traditional). While we did not review the precise protocols under which these are being administered we did hear that remdesivir is being studied in a randomized, controlled trial but that there were difficulties in enrolling that study. As was demonstrated in the early days of the HIV pandemic and during the West African Ebola outbreak the fastest way to get the most effective therapies to the greatest number of individuals is through rigorous, well-controlled clinical trials. Given the substantial research infrastructure and subject matter expertise present in China and critical unknowns to be addressed, the development of a substantial, centrally coordinated human subjects research program would seem possible. This infrastructure could support observational studies, treatment studies and vaccine trials.

Technical perspectives/recommendations





**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Sat, 22 Feb 2020 10:01:23 +0800  
**To:** Dr VAN KERKHOVE, Maria  
**Subject:** Re: Inputs needed

China has demonstrated this infection can be controlled, albeit at great cost. That is the bottom line of the report from my perspective.

The global community needs to decide the way forward. That room needs more than this group.

---

**From:** Maria VAN KERKHOVE (b) (6)  
**Date:** Saturday, February 22, 2020 at 9:59 AM  
**To:** "Lane, Cliff (NIH/NIAID) [E]" (b) (6)  
**Subject:** Re: Inputs needed

Agreed – I think we will start with China – first and foremost and then other areas – we can label this differently

---

**From:** Cliff Lane (b) (6)  
**Date:** Saturday, 22 February 2020 at 02:56  
**To:** Maria Van Kerkhove (b) (6)  
**Subject:** Re: Inputs needed

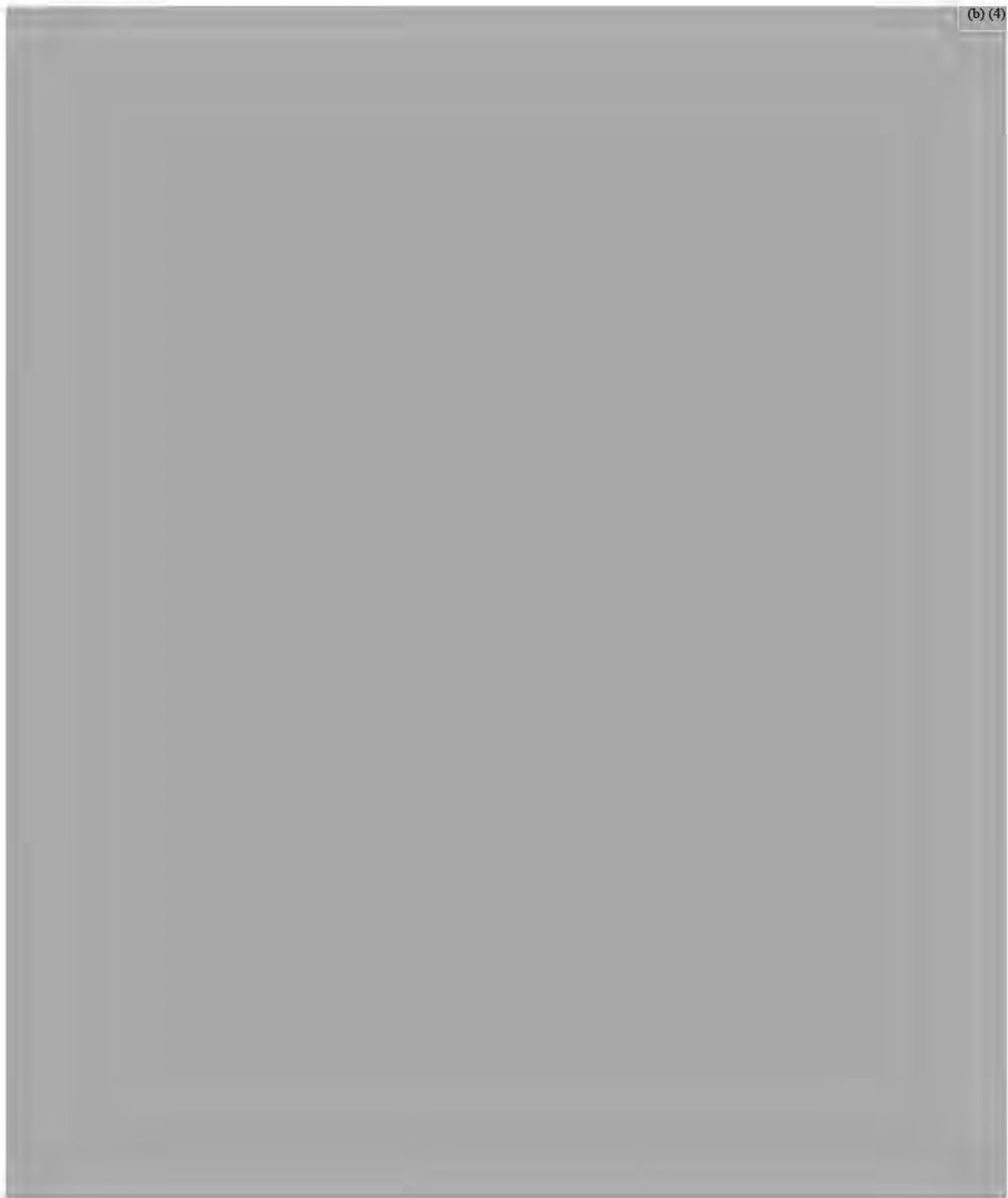
Initial reaction – we are getting out of scope. I agree with the comments from the China co-chair. We need to focus on the situation in China; perhaps indicate a lessons learned for others.

---

**From:** Maria VAN KERKHOVE (b) (6)  
**Date:** Saturday, February 22, 2020 at 9:40 AM  
**To:** "Lane, Cliff (NIH/NIAID) [E]" (b) (6)  
**Subject:** Inputs needed

As discussed, please have a look. Bruce will be revising this morning – so they will likely change a lot, but I need your views on the thinking (so far)...

16/10







Maria D Van Kerkhove, PhD

Head Emerging Diseases and Zoonoses Unit and MERS-CoV Technical Lead

Global Infectious Hazards Preparedness · Health Emergencies Program

World Health Organization · Geneva Switzerland

Mobile: (b) (6) · Office: (b) (6) · Email: (b) (6)

<http://who.int/emergencies/mers-cov/en/>

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Sun, 23 Feb 2020 19:39:48 +0800  
**To:** Dr VAN KERKHOVE, Maria  
**Cc:** (b) (6)  
**Subject:** COVID 19 References; second try!

Ref. 2 = 41 cases

Ref. 5 = 425 cases

The 1099 is still a pre-print. It is from Prof. Zhong's group.

I have deleted a few of the references but most of them contain one or more aspects of those things covered in the report.

Dr. Dong – please edit (add / subtract as appropriate)

Cliff

1. [A Novel Coronavirus From Patients With Pneumonia in China, 2019](#)  
N Zhu et al. N Engl J Med 382 (8), 727-733. 2020. PMID 31978945.  
In December 2019, a cluster of patients with pneumonia of unknown cause was linked to a seafood wholesale market in Wuhan, China. A previously unknown betacoronavirus was ...
2. [Clinical Features of Patients Infected With 2019 Novel Coronavirus in Wuhan, China](#)  
C Huang et al. Lancet 395 (10223), 497-506. 2020. PMID 31986264.  
Ministry of Science and Technology, Chinese Academy of Medical Sciences, National Natural Science Foundation of China, and Beijing Municipal Science and Technology Commis ...
3. [Detection of 2019 Novel Coronavirus \(2019-nCoV\) by Real-Time RT-PCR](#)  
VM Corman et al. Euro Surveill 25 (3). Jan 2020. PMID 31992387.  
BackgroundThe ongoing outbreak of the recently emerged novel coronavirus (2019-nCoV) poses a challenge for public health laboratories as virus isolates are unavailable wh ...
4. [Genomic Characterisation and Epidemiology of 2019 Novel Coronavirus: Implications for Virus Origins and Receptor Binding](#)  
R Lu et al. Lancet. 2020. PMID 32007145.  
National Key Research and Development Program of China, National Major Project for Control and Prevention of Infectious Disease in China, Chinese Academy of Sciences, Sha ...
5. [Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected](#)



## Pneumonia

Q Li et al. N Engl J Med. 2020. PMID 31995857.

On the basis of this information, there is evidence that human-to-human transmission has occurred among close contacts since the middle of December 2019. Considerable eff ...

6. [Genomic Characterization of the 2019 Novel Human-Pathogenic Coronavirus Isolated From a Patient With Atypical Pneumonia After Visiting Wuhan](#)  
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In this retrospective case series, chest CT scans of 21 symptomatic patients from China infected with the 2019 novel coronavirus (2019-nCoV) were reviewed, with emphasis ...
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In this single-center case series of 138 hospitalized patients with confirmed NCIP in Wuhan, China, presumed hospital-related transmission of 2019-nCoV was suspected in 4 ...



12. [A Pneumonia Outbreak Associated With a New Coronavirus of Probable Bat Origin](#)  
P Zhou et al. Nature. 2020. PMID 32015507.  
Since the SARS outbreak 18 years ago, a large number of severe acute respiratory syndrome-related coronaviruses (SARSr-CoV) have been discovered in their natural reservoir ...
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DKW Chu et al. Clin Chem. 2020. PMID 32031583.  
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16. [Initial CT Findings and Temporal Changes in Patients With the Novel Coronavirus Pneumonia \(2019-nCoV\): A Study of 63 Patients in Wuhan, China](#)  
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18. [Measures for Diagnosing and Treating Infections by a Novel Coronavirus Responsible for a Pneumonia Outbreak Originating in Wuhan, China](#)  
F Yu et al. Microbes Infect. 2020. PMID 32017984.  
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Wuhan City in central China was denoted as 2019-nCoV by the World Health Organization (WHO). As of 2 ...

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The 2019-novel-coronavirus (2019-nCoV) was detected in the self-collected saliva of 91.7% (11/12) of patients. Serial saliva viral load monitoring generally showed a decl ...

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J Zhang et al. Lancet Respir Med. 2020. PMID 32061335.

24. [Molecular and Serological Investigation of 2019-nCoV Infected Patients: Implication of Multiple Shedding Routes](#)

W Zhang et al. Emerg Microbes Infect 9 (1), 386-389. Dec 2020. PMID 32065057.

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25. [A Familial Cluster of Infection Associated With the 2019 Novel Coronavirus Indicating Potential Person-To-Person Transmission During the Incubation Period](#)

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An ongoing outbreak of pneumonia associated with 2019 novel coronavirus (2019-nCoV) was reported in China. It is unclear if the infectivity exists during the incubation p ...

26. [Abnormal Coagulation Parameters Are Associated With Poor Prognosis in Patients With Novel Coronavirus Pneumonia](#)

N Tang et al. J Thromb Haemost. 2020. PMID 32073213.

The present study shows that abnormal coagulation results, especially

markedly elevated D-dimer and FDP are common in deaths with NCP.

---

**From:** Maria VAN KERKHOVE [REDACTED] (b) (6)  
**Date:** Sunday, February 23, 2020 at 6:59 PM  
**To:** "Lane, Cliff (NIH/NIAID) [E]" [REDACTED] (b) (6)  
**Cc:** [REDACTED] (b) (6)  
**Subject:** Re: COVID 19 References

Hi Cliff,

I think we need to be more selective of the references that are identified. I would be grateful if we could pull some key ones from Zhong Nanshan's group, China CDC, the report of 41 cases, then of 425 cases, then 1099 cases – some on clinical features (as you have below), lab diagnostics and phylogenetics, clinical trial protocols, etc.

Thanks in advance for your work on this,  
Maria

---

**From:** Cliff Lane [REDACTED] (b) (6)  
**Date:** Sunday, 23 February 2020 at 09:47  
**To:** Maria Van Kerkhove [REDACTED] (b) (6)  
**Cc:** [REDACTED] (b) (6)  
**Subject:** Fwd: COVID 19 References

Below are some of the key references regarding COVID 19. I pulled these from PubMed. There may be other documents (esp. governmental guidelines) we should add.

Cliff

Begin forwarded message:

**From:** NLM NCBI nobody [REDACTED] (b) (6)  
**Date:** February 23, 2020 at 4:42:09 PM GMT+8  
**To:** "Lane, Cliff (NIH/NIAID) [E]" [REDACTED] (b) (6)  
**Subject:** COVID 19 References

This message contains search results from the National Center for Biotechnology Information ([NCBI](#)) at the U.S. National Library of Medicine ([NLM](#)). Do not reply directly to this message



Sent On: Sun Feb 23 03:42:03 2020

30 selected items

#### PubMed Results

Items 1-30 of 30 ([Display the 30 citations in PubMed](#))

1. [A Novel Coronavirus From Patients With Pneumonia in China, 2019](#)  
N Zhu et al. N Engl J Med 382 (8), 727-733. 2020. PMID 31978945.  
In December 2019, a cluster of patients with pneumonia of unknown cause was linked to a seafood wholesale market in Wuhan, China. A previously unknown betacoronavirus was ...
2. [Clinical Features of Patients Infected With 2019 Novel Coronavirus in Wuhan, China](#)  
C Huang et al. Lancet 395 (10223), 497-506. 2020. PMID 31986264.  
Ministry of Science and Technology, Chinese Academy of Medical Sciences, National Natural Science Foundation of China, and Beijing Municipal Science and Technology Commis ...
3. [Detection of 2019 Novel Coronavirus \(2019-nCoV\) by Real-Time RT-PCR](#)  
VM Corman et al. Euro Surveill 25 (3). Jan 2020. PMID 31992387.  
BackgroundThe ongoing outbreak of the recently emerged novel coronavirus (2019-nCoV) poses a challenge for public health laboratories as virus isolates are unavailable wh ...
4. [Genomic Characterisation and Epidemiology of 2019 Novel Coronavirus: Implications for Virus Origins and Receptor Binding](#)  
R Lu et al. Lancet. 2020. PMID 32007145.  
National Key Research and Development Program of China, National Major Project for Control and Prevention of Infectious Disease in China, Chinese Academy of Sciences, Sha ...
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J Lei et al. Radiology 200236. 2020. PMID 32003646.
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23. [Initial Cluster of Novel Coronavirus \(2019-nCoV\) Infections in Wuhan, China Is Consistent With Substantial Human-to-Human Transmission](#)

H Nishiura et al. J Clin Med 9 (2). 2020. PMID 32054045.

Reanalysis of the epidemic curve from the initial cluster of cases with novel coronavirus (2019-nCoV) in December 2019 indicates substantial human-to-human transmission. ...

24. [CT Manifestations of Two Cases of 2019 Novel Coronavirus \(2019-nCoV\) Pneumonia](#)

Y Fang et al. Radiology 200280. 2020. PMID 32031481.

25. [Emergence of a Novel Coronavirus Causing Respiratory Illness From Wuhan, China](#)

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W Zhang et al. Emerg Microbes Infect 9 (1), 386-389. Dec 2020. PMID 32065057.

In December 2019, a novel coronavirus (2019-nCoV) caused an outbreak in Wuhan, China, and soon spread to other parts of the world. It was believed that 2019-nCoV was tran ...

28. [Estimation of the Transmission Risk of the 2019-nCoV and Its Implication for Public Health Interventions](#)

B Tang et al. J Clin Med 9 (2). 2020. PMID 32046137.

Since the emergence of the first cases in Wuhan, China, the novel coronavirus (2019-nCoV) infection has been quickly spreading out to other provinces and neighboring coun ...

29. [A Familial Cluster of Infection Associated With the 2019 Novel Coronavirus Indicating Potential Person-To-Person Transmission During the Incubation Period](#)

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N Tang et al. J Thromb Haemost. 2020. PMID 32073213.

The present study shows that abnormal coagulation results, especially markedly elevated D-dimer and FDP are common in deaths with NCP.

**From:** (b) (6)  
**Sent:** Mon, 24 Feb 2020 11:54:47 +0800  
**To:** Maria VAN KERKHOVE  
**Subject:** Fwd: One more important correction!

Resending to be sure you received the final agreed to edits. Agreement to changes 1 and 3 initially requested and a modified 2.

Begin forwarded message:

**From:** HY (b) (6)  
**Date:** February 24, 2020 at 10:16:35 AM GMT+8  
**To:** "Lane, Cliff (NIH/NIAD) [E]" (b) (6)  
**Subject:** Re: One more important correction!

AGREE.

**From:** Lane, Cliff (NIH/NIAD) [E] (b) (6)  
**Sent:** Monday, February 24, 2020 2:04 AM  
**To:** HY (b) (6)  
**Cc:** Dr VAN KERKHOVE, Maria (b) (6)  
**Subject:** Re: One more important correction!

Could we change (instead of deleting 2) from:

(b) (6)

I am fine with the other changes.  
Cliff

On Feb 24, 2020, at 9:49 AM, HY (b) (6) wrote:

Dear Maria,  
Please consider a few comments on the 4.2 version, and mistakes as below.

(b) (6)



Thank you very much for your excellent work and pleased to have been working with you.  
Best wishes  
Haiying  
IPB, CAMS

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Wed, 25 Mar 2020 10:10:53 -0400  
**To:** SHINDO, Nahoko; Steven T. Smith  
**Cc:** David Heymann  
**Subject:** Re: [EXT] Re: NIAID research update for STAG-IH this Friday

Sigh of relief!!

Thanks,

---

**From:** "SHINDO, Nahoko" (b) (6)  
**Date:** Wednesday, March 25, 2020 at 8:55 AM  
**To:** "Lane, Cliff (NIH/NIAID) [E]" (b) (6), "Steven T. Smith" (b) (6)  
**Cc:** David Heymann (b) (6)  
**Subject:** RE: [EXT] Re: NIAID research update for STAG-IH this Friday

Dear Cliff, Steve,  
STAG-IH will have to focus on the exit strategy discussion during this Friday call therefore we would like to move the research focused call next to Tuesday, 31 march. We sincerely hope that this does not cause any problems to you.  
Thank you for understanding.  
Best wishes,  
Nikki

---

**From:** SHINDO, Nahoko  
**Sent:** Monday, March 23, 2020 4:38 PM  
**To:** Lane, Cliff (NIH/NIAID) [E] (b) (6)  
**Cc:** Steven T. Smith (b) (6); David Heymann (b) (6)  
**Subject:** RE: [EXT] Re: NIAID research update for STAG-IH this Friday

Thank you Cliff, yes, Geneva time, like usual STAG-IH call. And yes, to 5-10 min presentation.  
Best wishes, Nikki

---

**From:** Lane, Cliff (NIH/NIAID) [E] (b) (6)  
**Sent:** Monday, March 23, 2020 4:05 PM  
**To:** SHINDO, Nahoko (b) (6)  
**Cc:** Steven T. Smith (b) (6); David Heymann (b) (6)  
**Subject:** [EXT] Re: NIAID research update for STAG-IH this Friday

Assuming that time is Geneva. It should be fine. Please let me know duration. 5-10 minutes should be enough for a high-level look.

Cliff

---

**From:** "SHINDO, Nahoko" (b) (6)  
**Date:** Monday, March 23, 2020 at 10:53 AM  
**To:** "Lane, Cliff (NIH/NIAID) [E]" (b) (6)  
**Cc:** "Steven T. Smith" (b) (6) David Heymann (b) (6)  
**Subject:** NIAID research update for STAG-IH this Friday

Dear Cliff,

I would like to see if it is possible to have a presentation from NIAID, a WHO CC, summarizing its research activities on COVID-19. Does it sound like a good idea? David proposes to organize another STAG-IH call this Friday about research, therapeutics, vaccines and ethics around these. I just had a nice catch up call with Steve @ US mission in Geneva and he gave me a nice updates on the key areas of work.

Proposed timing is this Friday, 27 march 2020, from 13:30 - .

Best wishes,

Nikki



**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Sat, 14 Mar 2020 17:53:53 -0400  
**To:** TWAL, Hanan; 'Dr Amadou Alpha SALL' (b) (6)  
**Cc:** SHINDO, Nahoko; MATHIS, Margaux Manoua; David Heymann  
**Subject:** Re: the signed CMJE forms 1  
**Attachments:** COI form hcl.pdf, TL Authorsigs hcl.pdf

Attached – sorry for the delay.

Cliff

---

**From:** "TWAL, Hanan" (b) (6)  
**Date:** Friday, March 13, 2020 at 12:04 PM  
**To:** "Lane, Cliff (NIH/NIAID) [E]" (b) (6), "'Dr Amadou Alpha SALL' (b) (6)  
**Cc:** "SHINDO, Nahoko" (b) (6), "MATHIS, Margaux Manoua" (b) (6), David Heymann (b) (6)  
**Subject:** the signed CMJE forms 1

Dear all,  
This is a gentle reminder to send us your signed CMJE forms.  
Kind regards, Hanan

---

**From:** Palmer, Joanna (ELS-CAM) (b) (6)  
**Sent:** Friday, March 13, 2020 4:01 PM  
**To:** TWAL, Hanan (b) (6); David Heymann (b) (6)  
**Cc:** SHINDO, Nahoko (b) (6); MATHIS, Margaux Manoua (b) (6)  
**Subject:** RE: the signed CMJE forms 1

Dear Hanan and colleagues,

Many thanks for all the forms. The only outstanding forms are the signature and ICMJE forms for David, H Clifford Lane and Amadou Appha Sall please send me those forms as soon as possible.

Best wishes,  
Janna

Joanna Palmer  
Executive editor  
Editorial Office  
The Lancet  
125 London Wall  
London EC2Y 5AS  
UK  
T (b) (6)  
(b) (6)

**From:** TWAL, Hanan (b) (6)  
**Sent:** 13 March 2020 12:41  
**To:** Palmer, Joanna (ELS-CAM) (b) (6)  
**Cc:** SHINDO, Nahoko (b) (6); MATHIS, Margaux Manoua (b) (6)  
**Subject:** the signed CMJE forms 1

Dear Joanna,  
Kindly find attached the first group of the signed forms from the STAG-IH members.  
I will be sending them in several emails as some of them are very heavy.  
Kind regards, Hanan on behalf of the STAG-IH Secretariat

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**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Sun, 23 Feb 2020 00:38:31 +0800  
**To:** Dr VAN KERKHOVE, Maria  
**Cc:** (b) (6)  
**Subject:** Re: Draft report 22 Feb 1654 version; revised by research group  
**Attachments:** WHO-China Joint Mission - DRAFT REPORT V1.1research.docx

Updated draft attached.

---

**From:** Maria VAN KERKHOVE (b) (6)  
**Date:** Saturday, February 22, 2020 at 4:59 PM  
**To:** Alexander SEMENOV (b) (6), "Chikwe IHEKWEAZU  
(b) (6), "Lane, Cliff (NIH/NIAID)  
[E]" (b) (6), "Dale FISHER (b) (6), "Dr  
Hitoshi TAKAHASHI (b) (6), gmleung (b) (6),  
"LEE Jong-Koo (b) (6), "Natalia PSHENICHNAYA  
(b) (6), "Tim ECKMANNS  
(b) (6), "Zhou, Weigong (CDC/DDID/NCIRD/ID)"  
(b) (6), "Weigong ZHOU (b) (6), "XING, Jun"  
(b) (6)  
**Cc:** Bruce Aylward (b) (6)  
**Subject:** Draft report 22 Feb 1654 version

Dear colleagues,

Thank you for the tremendous work in drafting this together with our colleagues from China. It was a fascinating and productive day. Jun, can you please share this word document with Chinese colleagues?

As discussed, please use this version to update your technical sections (the narrative) adding in the discussed recommended text/tables/stats/figures. Please also revise your technical recommendations.

**I look forward to receiving your updated versions by 2200 tonight.**

Thank you!

Maria



**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Wed, 4 Mar 2020 09:44:59 -0500  
**To:** Foreign Language  
**Cc:** Maria VAN KERKHOVE  
**Subject:** Re: A Question from China's Caixin Media regarding WHO Joint Mission's Report

Thank-you for your note. Any information in the report would have been information provided by the authorities in China. I have copied Dr. Van Kerkhove from the WHO. She might be able to provide more detail.

Sincerely,

Cliff Lane

---

**From:** (b) (6)  
**Date:** Wednesday, March 4, 2020 at 9:40 AM  
**To:** "Lane, Cliff (NIH/NIAID) [E]" (b) (6)  
**Subject:** A Question from China's Caixin Media regarding WHO Joint Mission's Report

Dear Dr. Lane,

My name is ZENG Jia, and I'm a journalist from China's Caixin Media (caixin.com, caixinglobal.com). I'm writing to see if you would like to answer a question about the Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19), because you were among the members of this much anticipated joint mission.

Please allow me to give you a brief introduction of Caixin first: We're the leading independent media in China for investigative journalism, and we went on publishing reports about the coronavirus disease during the time when Chinese health authorities remained silent on the issue. The New York Times published an op-ed about how Chinese muckraker media tried to deliver truth to the Chinese public, and Caixin came on top (<https://www.nytimes.com/2020/02/05/opinion/coronavirus-china-news-journalism.html>). It's been over a month since the lockdown of the city Wuhan, in the past several weeks Caixin has devoted all its people and resources to the coronavirus outbreak and hope to improve the transparency in public discussion, and we will keep on doing it. By the end of 2019, Caixin has more than 300,000 subscribers, in terms of number of subscribers we're only second to the Japanese Nikkei News in Asia.

So my question is, in the Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19) (<https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>), it says on Page 6 that there was at least one clinically diagnosed case of coronavirus on December 2th, 2019 in Wuhan; and from Jan 11th to 17th there were new clinically diagnosed and confirmed cases every day in Wuhan, which is not consistent with Wuhan Public Health Committee's numbers (<http://wjw.wuhan.gov.cn/front/web/showDetail/2020011309038>). I wonder if you could share with us the data source of diagnosed cases of Wuhan in the WHO report. Also, has the joint mission team or WHO communicated with China about the differences in cases data?

Thank you very much for your time! I look forward to your reply.

Best regards,

ZENG Jia

Foreign  
Language

Reporter

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Foreign Language

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Floor 5, Building 5, Sanlitun SOHO, 8 Gongti Beilu  
Chaoyang District, Beijing 100027, China

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Wed, 4 Mar 2020 16:29:28 +0000  
**To:** Maria VAN KERKHOVE  
**Subject:** Science and COVID-19

Are there photos I can share?

Thanks

Begin forwarded message:

**From:** Jon Cohen (b) (6)  
**Date:** March 4, 2020 at 11:27:25 AM EST  
**To:** "Lane, Cliff (NIH/NIAID) [E]" (b) (6)  
**Subject:** Re: COVID-19

And do you by any chance have photos of you in China with the team doing your work? Higher the resolution the better...

Thanks,

Jon

On Mar 4, 2020, at 7:49 AM, Lane, Cliff (NIH/NIAID) [E] (b) (6) wrote:  
Jon,

I was cleared to speak. If still interested please call my cell (b) (6) whenever convenient.

Sorry for the delay.

Cliff

On 3/1/20, 1:42 PM, "Jon Cohen" (b) (6) wrote:

Jennifer,

Yes, as you might imagine, I have seen the report. Is Cliff forbidden from speaking or denying my request?

Thanks,

Jon

On Mar 1, 2020, at 10:38 AM, Routh, Jennifer (NIH/NIAID) [E] (b) (6) wrote:

Jon -

Please refer to the Report of the WHO-China Joint Mission on COVID-19, available here:  
<https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.who.int%2Fdocs%2Fdefault-source%2Fcoronaviruse%2Fwho-china-joint-mission-on-covid-19-final-report.pdf&data=01%7C01%7Cjcohen%40aaas.org%7C0b8332ada7bf487bc11d08d7c053b4f7%7C2eebd8ff9ed140f0a15638e5dfb3bc56%7C0&data=vBxnuA%2BmvlH2HyM0Pro>



031%2FNc4nOCjg7NW2mpJFSEQ%3D&reserved=0. At this time we defer inquiries about the mission to the WHO.

Thanks,

Jen

Jennifer Routh [E]

News and Science Writing Branch

Office of Communications and Government Relations

National Institute of Allergy and Infectious Diseases (NIAID)

NIH/HHS

31 Center Drive Room 7A17C

Bethesda, MD 20892

Direct: (b) (6)

(b) (6)

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

From: Jon Cohen (b) (6)

Sent: Tuesday, February 25, 2020 6:54 PM

To: Lane, Cliff (NIH/NIAID) [E] (b) (6)

Cc: Oplinger, Anne (NIH/NIAID) [E] (b) (6)

Subject: COVID-19

Hi Cliff,

I'd much like to speak with you tomorrow if possible about COVID-19, China trip, and specific science/clinical questions (children for example).

I'm available at your convenience.

Thanks,

Jon

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Mon, 10 Feb 2020 11:13:59 +0000  
**To:** Nahoko Shindo  
**Subject:** Fwd: !!STAG-IH!!\_TC minutes nCoV epi deep-dive  
**Attachments:** STAG commentary09feb20 JB hcl.docx, ATT00001.htm

Sorry - attachment sent to David yesterday as well.

Cliff

**From:** "Lane, Cliff (NIH/NIAID) [E]" (b) (6)  
**Date:** February 9, 2020 at 4:09:00 PM EST  
**To:** David Heymann (b) (6)  
**Subject:** Re: RE: FW: !!STAG-IH!!\_TC minutes nCoV epi deep-dive

Sorry - attached.

**From:** David Heymann (b) (6)  
**Sent:** Sunday, February 9, 2020 3:53 PM  
**To:** Lane, Cliff (NIH/NIAID) [E] (b) (6)  
**Subject:** RE: RE: FW: !!STAG-IH!!\_TC minutes nCoV epi deep-dive

Please attach.

---

**From:** David Heymann (b) (6)  
**Sent:** 09 February 2020 15:52  
**To:** (b) (6); (b) (6); "(SPmig) DELIA ENRIA"; "Delia Enria (b) (6); "Dr Amadou Alpha SALL (Amadou.S"; Gary Kobinger; Johan Giesecke; Juliet Bedford; (b) (6); "Lane Cliff (NIH/NIAID) [E"; "President\_RKI (b) (6)  
"Schuchat Anne MD (CDC/OD) (ac"; Wieler Lothar; Ziad Memish  
**Cc:** STAG IH Secretariat; SHINDO, Nahoko  
**Subject:** RE: RE: FW: !!STAG-IH!!\_TC minutes nCoV epi deep-dive

Dear Colleagues,

Attached is a first draft of a commentary that Nikki and I have worked on today for your review and comment – Pam Das and Richard Horton have seen this draft and would like to be able to have it sent directly to them by Monday evening London time latest for online publication in the Lancet. If possible please send any comments/changes in tracked mode. In particular Richard wants to know if there are any more recommendations to decrease panic and confusion, and are there any criticisms of what is going on because of the WHO recommendations ?

All comments received by 14h00 London time tomorrow will be incorporated. We will be listed as authors in alphabetical order unless there is concern about that from any of you.

Best wishes, and over to you with thanks,

DLH

---

**From:** David Heymann

**Sent:** 09 February 2020 11:16

**To:** (b) (6); STAG IH Secretariat (b) (6);  
(b) (6); "(SPmig) DELIA ENRIA"  
(b) (6); "Delia Enria (b) (6); "Dr Amadou  
Alpha SALL (Amadou.S" (b) (6); Gary Kobinger  
(b) (6); Johan Giesecke (b) (6); "(SPmig) Juliet  
Bedford" (b) (6); (b) (6)  
(b) (6); "Lane Cliff (NIH/NIAID) [E" (b) (6); "President\_RKI  
(b) (6); "Schuchat Anne MD (CDC/OD) (ac" (b) (6); Wieler  
Lothar (b) (6); Ziad Memish (b) (6)

**Subject:** RE: RE: FW: !!STAG-IH!!\_TC minutes nCoV epi deep-dive

Thanks for sharing so freely with us Myoung-don. The secretariat has suggested that STAG-IH prepare a commentary for a medical journal on the current and possible future control strategies – this information you have provided will of course not be used as it will be published by your groups but it gives us some ideas. I will take a try at laying out a commentary with input from the secretariat and get it out to you all for comment – hopefully later today.

DLH



**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Thu, 13 Feb 2020 10:03:00 +0000  
**To:** SHINDO, Nahoko  
**Cc:** David Heymann  
**Subject:** Re: Diamond Princess Coronavirus Outbreak  
**Attachments:** image003.jpg, image001.jpg

Nikki,

Thanks very much. I leave later today in followup of a discussion/request from Japan to explore rapid implementation of a remdesivir study. I am not sure anything is possible and hope this cluster is over soon. We will do our best to evaluate the possibilities.

Cliff

(b) (6)

On Feb 13, 2020, at 4:50 AM, SHINDO, Nahoko (b) (6) wrote:

Cliff, FYI.

Nikki

---

**From:** SHINDO, Nahoko  
**Sent:** 13 February 2020 10:48  
**To:** Tarling, Grant (PCL) (b) (6)  
**Cc:** Knust, Barbara (CDC/DDID/NCEID/DGMQ) (b) (6); Barnettson, Brenda (PCL) (b) (6); David Heymann (b) (6); Foreign Language (b) (6); kita-yousuke (b) (6); Dr VAN KERKHOVE, Maria (b) (6); Brian Doherty (b) (6); MORGAN, Oliver (b) (6); PAVLIN, Boris (b) (6); HUGONNET, Stéphane Alexandre Louis (b) (6); VANDEMAELE, Katelijn A.h. (b) (6)  
**Subject:** RE: Diamond Princess Coronavirus Outbreak

Dear Dr Tarling,

Thank you for connecting all of us. I am adding Dr Maria van Kerkhove, WHO COVID-19 technical lead and several other epi tech pillar colleagues at our HQ in Geneva in this communication.

I arrived in Haneda earlier today and went to visit Dr Kita directly at MoLHW around lunch time. He and his colleagues have been overwhelmed by so many things and perhaps not best positioned to answer our epi questions. It seems like the best person to ask epi questions is Dr Tamano Matsui at NIID, I also learned there will be a CDC technical person coming through WPRO to assist the situation.

I am staying in (b) (6) at the moment and from here I can see the cruise ship. It is enormous!!! It is an 18 - floor building worth structure.

According to Dr Kita, the priority operation at the moment is to transfer high-risk passengers (>80 yo) to some ground facilities. This is already 200 people. All essential medical supplies have been sent to the ship. Food supplies are abundant. The passengers are confined to their own rooms since the start of the quarantine period but the crews were not fully instructed about precautions and these might have been contributing to further spread. They have been of course serving to the passengers e.g. distribution of meals. However, the epi curve seems to have peaked (I haven't seen one). Currently, the nation-wide PCR testing capacity in Japan is about 1,200 samples per day. They prioritized symptomatic persons and their contacts, not swabbing everyone at the beginning. Now they are trying to swab as many as possible, but testing priority still remains symptomatic persons. IPC specialist team is on board, providing PPEs and providing IPC training / education.

At St. Luke's Hospital in Tsukiji, there is one patient presenting ARDS (not requiring intubation at the moment but poor oxygenation), a Canadian national. One US patient has been discharged by having two consecutive PCR negative within 48 hours for his throat swabs and his clinical symptoms have been fully resolved.

The Chinese national, who was diagnosed in HK after 2 days from his disembarkation from the ship, it is not clear where he got infection. Dr has an impression that the individual might have got the infection while he was in Japan before boarding but this has to be confirmed by NIID FETP team.

Shall we get together at some point to review epi information collected so far and public health intervention. There might be an opportunities for early antiviral intervention or PEP by candidate antivirals, too.

Best wishes,  
Nikki Shindo  
Senior Advisor,  
Global Infectious Hazard Preparedness  
WHO Health Emergencies Programme  
World Health Organization  
Geneva, Switzerland

---

**From:** Tarling, Grant (PCL) (b) (6)

**Sent:** 13 February 2020 07:16

**To:** SHINDO, Nahoko (b) (6); David Heymann (b) (6); Foreign Language

Foreign Language: kita-yousuke) (b) (6)



Cc: Knust, Barbara (CDC/DDID/NCEZID/DGMQ) (b) (6); Barnetson, Brenda (PCL) (b) (6)

**Subject:** RE: Diamond Princess Coronavirus Outbreak

Hi Doctors,

Thanks for the connection. We are unfortunately still facing challenges with obtaining any EPI information and a clear public health response plan, for both passengers and crew. We have been fortunate to now be working closely with the US CDC lead, in copy, Barbara Knust who is now also located to Tokyo. It would be hugely beneficial if you could all connect with MoLWH to provide the much needed clarity on the situation.

Barbara's details are below.

**Barbara Knust, DVM, MPH**

CDR U.S. Public Health Service  
Asia Field Program Director, Immigrant Refugee & Migrant Health  
Division of Global Migration and Quarantine, CDC

(b) (6)  
office (US): (b) (6)  
office (Thailand): (b) (6)  
mobile (US): (b) (6)  
mobile (Thailand) (b) (6)  
fax (US): +1 404 471 2582

I am based in Los Angeles and can be contacted on my mobile (b) (6)

Our Medical Lead Dr. Barnetson is also based in Carnival Japan office in Tokyo and copied on this email.

Thanks

<image001.jpg>

**Grant Tarling MD, MPH**  
Senior Vice President and Chief Medical Officer

Group Health Services  
Carnival Cruise Line, Princess Cruises, Holland America Line, Seabourn, P&O Australia, HAP Alaska  
T: (b) (6) | (b) (6)

---

**From:** SHINDO, Nahoko (b) (6)

**Sent:** Monday, February 10, 2020 9:12 AM

**To:** David Heymann (b) (6); Tarling, Grant (PCL) (b) (6); Foreign Language  
Foreign Language kita-yousuke) (b) (6)

**Cc:** Taylor, Keith (HA Group) (b) (6)

**Subject:** RE: Diamond Princess Coronavirus Outbreak

Thanks David for connecting us.



Dear Dr Tarling,

I am travelling Japan for an IPC conference in Yokohama and hope to touch base with my counterpart in MoLWH, Dr Kita (copied).

Your experience with cruise ship health event might be a useful input to the authorities.

Best wishes,

Nikki

---

**From:** David Heymann (b) (6)

**Sent:** 10 February 2020 12:08

**To:** Tarling, Grant (PCL) (b) (6)

**Cc:** Taylor, Keith (HA Group) (b) (6); SHINDO, Nahoko (b) (6)

**Subject:** RE: Diamond Princess Coronavirus Outbreak

Dear Grant,

Dr Nikki Shindo of the Emergencies programme at WHO is heading out to Japan on Wednesday, and she is copied and will contact you directly.

With best wishes and over to you and Nikki,

DLH

---

**From:** Tarling, Grant (PCL) (b) (6)

**Sent:** 10 February 2020 07:38

**To:** David Heymann (b) (6)

**Cc:** Taylor, Keith (HA Group) (b) (6)

**Subject:** Re: Diamond Princess Coronavirus Outbreak

Hi David. Unfortunately nobody is allowed to off the ship if they test negative. Positive cases are transferred to Tokyo hospitals. They have now informed us that those with no or mild symptoms may remain onboard until isolation facilities are available.

Hope this can get the attention it needs.

Thanks

---

Grant Tarling MD, MPH

Senior Vice President and Chief Medical Officer

Group Health Services

Carnival Cruise Line, Princess Cruises, Holland America Line, Seabourn, P&O Australia, HAP Alaska

---

**From:** David Heymann (b) (6)  
**Sent:** Sunday, February 9, 2020 9:24:48 PM  
**To:** Tarling, Grant (PCL) (b) (6)  
**Cc:** Taylor, Keith (HA Group) (b) (6)  
**Subject:** RE: Diamond Princess Coronavirus Outbreak

Thank you Grant – I believe Bill will have told you that I am at WHO tomorrow and the next day for meetings and will see what kind of answers I can get for you. AS I understand those passengers who test negative by PCR are being released from the ship – are you able to confirm that this is the case?

Many thanks – I will try to get you answers from WHO and be back in touch. If you do not hear back from me before Tuesday morning LA time please send a reminder.

With best wishes,

DLH

---

**From:** Tarling, Grant (PCL) (b) (6)  
**Sent:** 09 February 2020 23:13  
**To:** David Heymann (b) (6)  
**Cc:** Taylor, Keith (HA Group) (b) (6)  
**Subject:** Diamond Princess Coronavirus Outbreak

Dear David,

I appreciate Bill connecting us. We have worked many years together collaborating on cruise ship issues.

I am reaching out as the Diamond Princess berthed in Yokohama, Japan now has the highest number of confirmed nCov cases recorded outside mainland China. As of now, there are 69 confirmed cases; with 63 passengers and 6 crew. The ship has passengers: 2666 and crew: 1051. The Japanese Ministry of Health has assumed the complex public health emergency response for the vessel.

As we are not primary incident command, we have very limited information on the outbreak response strategy, testing methodology and EPI investigation of this very complex public health issue. As such, I believe it would be extremely beneficial to embed a WHO response team to work with Japanese authorities to understand and collaborate on these issues. This is a unique opportunity of global significance, to research disease transmission and clinical correlation. Most of the individuals who tested positive had minor illnesses, and some were asymptomatic. Most never reported illness symptoms to the ship's medical staff. This information may be of enormous help to direct the way to we respond to the illness globally.



We also have some broad based concerns with the health protocols and support. Below is a preliminary list of issues we would appreciate additional WHO support if possible:

1. Clarity of the quarantine protocols for the protection of passengers and crew, PPE needs etc.
2. The strategy and methods for testing additional individuals, data from the confirmed tests and associated information flow, and the end date for testing and quarantine
3. Supply and speed of distribution of N95 masks & other required PPE
4. Process for disembarkation of guests / crew with medical issues not linked to coronavirus due to insufficient medicine supply or urgent medical needs
5. Environmental sanitation protocols
6. Medical support for those in quarantine including mental health issues
7. Contingency planning in various scenarios:
  - a. severe illness onboard,
  - b. large numbers of crew test positive

Happy to speak through these if needed.

My Mobile is (b) (6). I am based in Los Angeles so your morning time is best for me.

Thanks

<image003.jpg>

Grant Tarling MD, MPH  
Senior Vice President and Chief Medical Officer

Group Health Services

Carnival Cruise Line, Princess Cruises, Holland America Line, Seabourn, P&O Australia, HAP Alaska

T: (b) (6) | (b) (6)

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To the extent that the matters contained in this email relate to services being provided by Princess Cruises and/or Holland America Line (together "HA Group") to Carnival Australia/P&O Cruises Australia, HA Group is providing these services under the terms of a Services Agreement between HA Group and Carnival Australia.

---

---

---



**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Mon, 9 Mar 2020 12:43:41 -0400  
**To:** David Heymann; STAG IH Secretariat; (b) (6); (SPmig)  
DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL  
(b) (6); Gary Kobinger; Johan Giesecke; (SPmig) Juliet  
Bedford; (b) (6) (b) (6); President\_RKI (b) (6); Schuchat,  
Anne MD (CDC/OD); Wieler, Lothar; Ziad Memish  
**Cc:** Dr VAN KERKHOVE, Maria; SHINDO, Nahoko  
**Subject:** Re: Lancet Comment  
**Attachments:** First draft\_ns2\_dlh2 as\_hcl.docx

Few comments tracked on top of Anne's.

Cliff

---

**From:** David Heymann (b) (6)  
**Date:** Monday, March 9, 2020 at 9:15 AM  
**To:** STAG IH Secretariat (b) (6), (b) (6)  
(b) (6), "(SPmig) DELIA ENRIA" (b) (6), "Delia  
Enria (b) (6), "Dr  
Amadou Alpha SALL (b) (6), Gary Kobinger  
(b) (6), Johan Giesecke (b) (6), "(SPmig)  
Juliet Bedford" (b) (6), (b) (6)  
(b) (6), "Lane, Cliff (NIH/NIAID) [E]" (b) (6), Foreign  
Language  
Myoung-don (b) (6), "President\_RKI (b) (6),  
Anne Schuchat (b) (6), "Wieler, Lothar" (b) (6), Ziad Memish  
(b) (6)  
**Cc:** Maria VAN KERKHOVE (b) (6), "SHINDO, Nahoko" (b) (6)  
**Subject:** Lancet Comment

Dear Colleagues,

Nikki and I have worked on this draft of a second comment to Lancet – apologies for the delay on my part since our last teleconference. There are some questions to Nikki that others may be able to answer, and we will then incorporate any of your changes and suggestions and submit tomorrow (Tuesday) evening London time. We have added some ideas and other parts (e.g. the research priorities from SAG at the request of Soumya and Jeremy Farrar) and hopefully you will be able to provide a consensus that you agree, but I realise that may be a stretch when you come to the part about PHEIC and pandemic.

I have also copied Maria who will see if she can add anything to increase clarity, especially on issues related to natural history of infection and transmissibility.

Please provide any comments as soon as you are able, with a cut-off time tomorrow (Tuesday) at noon London time.

With thanks and best wishes,

DLH

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Sat, 28 Mar 2020 18:27:05 -0400  
**To:** David Heymann; Bruce Aylward  
**Subject:** Tolbert Nyenswah  
**Attachments:** KOVID-19 algorithm 3282020.pdf

Bruce/David,

I think one or both of you know Tolbert Nyenswah, former DG of the National Public Health Institute of Liberia. He was the incident manager for the Liberian Ebola outbreak in 2014-6 and is currently at Johns Hopkins in Baltimore. He has expressed willingness to do anything he can to help with the COVID-19 response and provided the attached thoughts.

Take care,

Cliff

---

**From:** "Tolbert NYENSWAH, MPH" [REDACTED] (b) (6)  
**Date:** Saturday, March 28, 2020 at 11:44 AM  
**To:** "Lane, Cliff (NIH/NIAID) [E]" [REDACTED] (b) (6)  
**Subject:** Contact Tracing Proposal

Hi Cliff,

Thank you for the conversation yesterday. Please find attached the idea I told you about regarding contact tracing. I look forward to connecting with WHO folks.

Thank you for the support and commitment,

Keep safe!

Tolbert



**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Sun, 23 Feb 2020 00:41:53 +0800  
**To:** Dr VAN KERKHOVE, Maria  
**Subject:** Re: Do we have a start time for tomorrow?  
**Attachments:** WHO-China Joint Mission - DRAFT REPORT V1.1research.docx

Thanks - we sent it at 6:08 PM. Attached here as well.

Cliff

On 2/22/20, 9:54 PM, "Dr VAN KERKHOVE, Maria" (b) (6) wrote:

Thanks Cliff - this is kind of you to say, I really appreciate it.

Yes, we start at 9. Did you send me your section? I don't have it yet.

On 22.02.20, 11:15, "Lane, Cliff (NIH/NIAID) [E]" (b) (6) wrote:

Be sure you get some rest. Please let me know if I can help with anything.

I think you are doing a great job. After working with the groups I have an even better appreciation of the challenges faced by Bruce and you.

Cliff

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Mon, 30 Mar 2020 14:01:44 +0000  
**To:** STAG IH Secretariat  
**Subject:** Accepted: !!STAG-IH!! COVID-19 information session on Research / closed discussion on other business

Thanks – happy to present.

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Thu, 12 Mar 2020 13:33:58 +0000  
**To:** Nahoko SHINDO  
**Subject:** Fwd: COVID-19 declared a pandemic by WHO

FYI

Begin forwarded message:

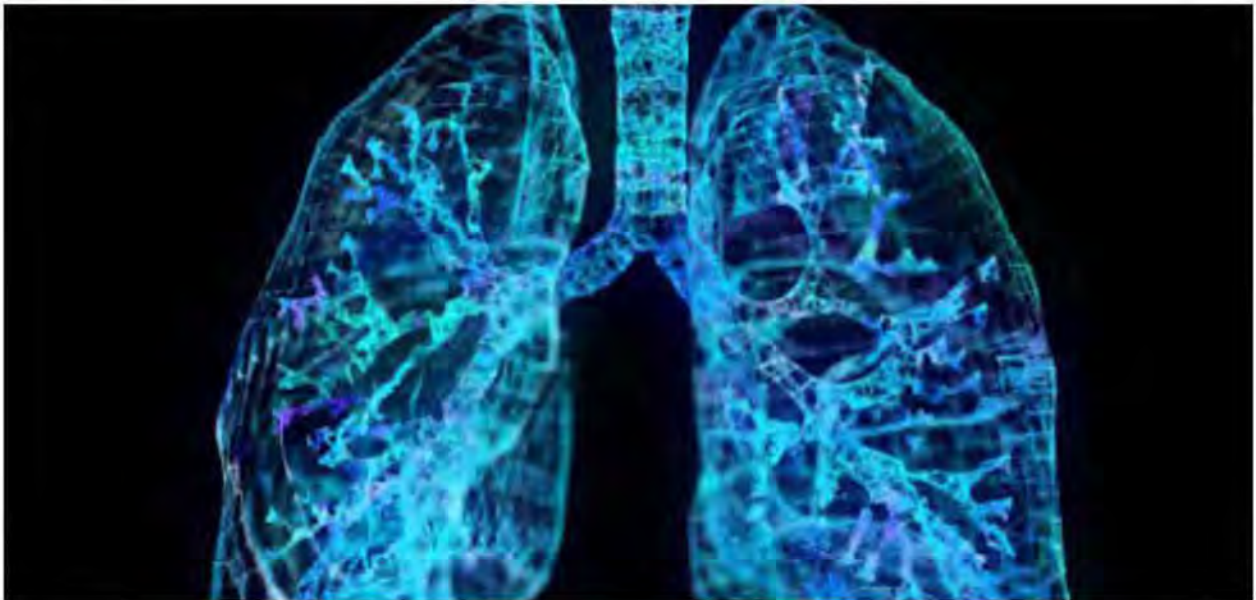
**From:** Infectious Diseases Hub (b) (6)  
**Date:** March 12, 2020 at 9:33:30 AM EDT  
**To:** "Lane, Cliff (NIH/NIAID) [E]" (b) (6)  
**Subject:** COVID-19 declared a pandemic by WHO  
**Reply-To:** Infectious Diseases Hub (b) (6)

As over 110,000 cases are reported in over 100 countries



## News Bulletin

12 March 2020



The WHO has declared that the COVID-19 outbreak can be characterized as a pandemic as new cases are reported globally, including a huge spike in cases in South Korea, Italy and Iran, and over 100 other countries reporting cases.





WHO has been assessing this outbreak around the clock and we are deeply concerned both by the alarming levels of spread and severity, and by the alarming levels of inaction. We have therefore made the assessment that COVID-19 can be characterized as a pandemic,

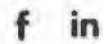


— Dr Tedros Adhanom Ghebreyesus, WHO Director-General.

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**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Mon, 23 Mar 2020 14:32:59 +0000  
**To:** STAG IH Secretariat  
**Subject:** Accepted: !!STAG-IH!! COVID-19 technical discussion\_exiting lockdown

**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Thu, 12 Mar 2020 13:55:19 -0400  
**To:** SHINDO, Nahoko; David Heymann  
**Subject:** Re: !!STAG-IH!! Next version for the Lancet Commentary  
**Attachments:** Third draf\_track changeshcl.docx

Just to the two of you.

I have tracked a few grammar edits and suggested adding back the recommendation (below). I am fine if it is not included.

[Redacted content] (b) (4)

---

**From:** "SHINDO, Nahoko" (b) (6)  
**Date:** Thursday, March 12, 2020 at 1:33 PM  
**To:** (b) (6), David Heymann  
(b) (6), "(SPmig) DELIA ENRIA" (b) (6), "Delia Enria"  
(b) (6), "Dr  
Amadou Alpha SALL (b) (6), Gary Kobinger  
(b) (6), Johan Giesecke (b) (6), "(SPmig)  
Juliet Bedford" (b) (6), (b) (6)  
(b) (6), "Lane, Cliff (NIH/NIAID) [E]" (b) (6), Foreign  
Language  
Myoung-don (b) (6), "President\_RKI (b) (6),  
Anne Schuchat (b) (6), "Wieler, Lothar" (b) (6), Ziad Memish  
(b) (6)  
**Cc:** STAG IH Secretariat (b) (6)  
**Subject:** !!STAG-IH!! Next version for the Lancet Commentary

Dear STAG-IH, please find the next version of the draft attached. Nikki



**From:** Lane, Cliff (NIH/NIAID) [E]  
**Sent:** Sat, 22 Feb 2020 17:34:36 +0000  
**To:** Dr VAN KERKHOVE, Maria  
**Subject:** Re: Evaluation of the Efficacy and Safety of Intravenous Remdesivir in Adult Patients with Severe Pneumonia caused by COVID-19 virus Infection: study protocol for a Phase 3 Randomized, Double-blind, Placebo-controlled, Multicentre trial | Research Square

Thanks- we had been led to believe this study had started sooner than indicated by this article. They anticipate full enrollment by April. Fingers crossed they are able to enroll. It will be interesting to see if Bruce is able to get an update. I know it is on the list you generated and I gave him a reminder as he was leaving.

> On Feb 23, 2020, at 1:26 AM, Dr VAN KERKHOVE, Maria  wrote:

>

> FYI

>

> <https://www.researchsquare.com/article/3920fcfc-b613-4355-b948-9b4d54a4f7e2/v1>

**From:** STAG IH Secretariat  
**Sent:** Mon, 23 Mar 2020 19:42:03 +0000  
**To:** Carver, Trea (NIH) [C]  
**Subject:** FW: !!STAG-IH!! COVID-19 technical discussion\_exiting lockdown

---

**From:** STAG IH Secretariat (b) (6)  
**Date:** Monday, March 23, 2020 at 3:35 PM  
**To:** (b) (6), David Heymann  
(b) (6), "(SPmig) DELIA ENRIA" (b) (6), "Delia Enria"  
(b) (6), "Dr  
Amadou Alpha SALL (b) (6), Gary Kobinger  
(b) (6), Johan Giesecke (b) (6), "(SPmig)  
Juliet Bedford" (b) (6), (b) (6)  
(b) (6), "Lane, Cliff (NIH/NIAID) [E]" (b) (6), Foreign  
Language  
Myoung-don (b) (6), "President\_RKI (b) (6),  
Anne Schuchat (b) (6), "Wieler, Lothar" (b) (6), Ziad Memish  
(b) (6), "MATHIS, Margaux Manoua" (b) (6), "TWAL, Hanan"  
(b) (6), (b) (6), vernonljm  
(b) (6), Hitoshi Oshitani (b) (6), gmleung  
(b) (6), Maya Arie (b) (6), "MORGAN, Oliver" (b) (6),  
"BRIAND, Sylvie" (b) (6), Mike Ryan (b) (6), Bruce Aylward  
(b) (6), Maria VAN KERKHOVE (b) (6), "GREIN, Thomas"  
(b) (6), Adam Kucharski (b) (6), "SHAMSELDIN, Khaled"  
(b) (6), "LEWIS, Rosamund F. (Felicity)" (b) (6)  
**Cc:** "VANDEMAELE, Katelijn A.h." (b) (6), "MAHJOUR, Jaouad"  
(b) (6), "BALLER, April" (b) (6), "DIAZ, Janet Victoria"  
(b) (6), "PERKINS, Mark" (b) (6), "FALL, Ibrahima Soce"  
(b) (6), "DRURY, Patrick Anthony" (b) (6), "DOLEA, Carmen Mihaela"  
(b) (6), "PARK, Munjoo" (b) (6), "PENDERGAST, Scott Douglas"  
(b) (6), leunggm (b) (6), "HENAO RESTREPO, Ana Maria"  
(b) (6)

**Subject:** !!STAG-IH!! COVID-19 technical discussion\_exiting lockdown

Dear STAG-IH and Invited panel members, please call in advance, we will open the line 10 minutes before the meeting start time

HQ participants, in order to ensure enough space between staff, we changed the venue to Salle A.

Dear STAG-IH, Invited panel members,

As indicated during the last VC, we will have a follow up discussion on transition/exit from lockdown.

Agenda:

1. Update from secretariat and pending questions from previous meeting for discussion – Maria van Kerkhove, Oliver Morgan, STAG-IH Secretariat
2. Report from Lothar (Germany) and Italy (Giuseppe Ippolito) (five minutes each)
3. Ethics related to COVID-19 – Juliet
4. Discussion on factors to consider for exiting lockdown using Bruce's document (I will send you my comments on it in a forwarded mail)

Heads up - we plan to organize the next call on Friday to have update on clinical research collaboration, research activities from NIAID, vaccine development (CEPI), and ethics discussion.

**CALL IN INFO**

WHO HQ EOC3 COVID-19 is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting

(b) (4), (b) (6)

Meeting ID: (b) (4), (b) (6)

One tap mobile

(b) (6), (b) (4), (b) (6) Switzerland  
(b) (6), (b) (4), (b) (6) Switzerland Toll-free

Dial by your location

(b) (6) Switzerland  
(b) (6) Switzerland Toll-free  
(b) (6) Switzerland Toll-free  
(b) (6) US  
(b) (6) US Toll-free  
(b) (6) US Toll-free  
(b) (6) France Toll-free  
(b) (6) France Toll-free

Meeting ID: (b) (4), (b) (6)

Find your local number: (b) (6)



Join by SIP

(b) (4), (b) (6)

Join by H.323

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

Meeting ID: (b) (4), (b) (6)

Join by Skype for Business

(b) (4), (b) (6)

**From:** Elvander, Erika (OS/OGA)  
**Sent:** Fri, 14 Feb 2020 15:29:55 +0000  
**To:** GALEA, Gauden  
**Cc:** SCHWARTLANDER, Bernhard F.; Handley, Gray (NIH/NIAID) [E]; NICHOLS, Phyllis Jane; UMALI DALANGIN, Khristeen; Lane, Cliff (NIH/NIAID) [E]; Arthur, Ray (CDC/DDPHSIS/CGH/DGHP); DRURY, Patrick Anthony; CAYABYAB, Ramoncito; Parrish-Fuentes, Adrienne (STATE.GOV); Stewart Simonson (b) (6); PANG, Xinxin  
**Subject:** Re: GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China | COVID-2019

Thank you everyone. I know there has been a lot of work in Geneva, Bethesda, Tokyo and Beijing to get Dr. Lane to Beijing and we all in Washington truly appreciate it.

Cheers.

Erika

Erika Elvander  
Director, Asia and the Pacific  
Office of Global Affairs, HHS  
Sent from my iPhone

On Feb 14, 2020, at 10:15 AM, GALEA, Gauden (b) (6) wrote:

Dear All  
Greetings.  
We are preparing an information pack and will send to all experts in the morning.  
Practical info: all experts will be met and will be housed in same hotel for ease of transport and meetings. More in the morning! See you soon.  
Warmly ~ Gauden

---

**Dr Gauden GALEA** Foreign Language WHO Representative  
World Health Organization, Beijing, China  
Office: (b) (6) | GPN: (b) (6) | Mobile: (b) (6)  
Email: (b) (6) | Web: <http://www.wpro.who.int/china>

On Feb 14, 2020, at 11:13 PM, SCHWARTLANDER, Bernhard F. (b) (6) wrote:

Dr Lane will be met by a driver and brought to the hotel.  
Our representative in China Dr Gauden Galea is copied into this exchange and shall provide further details.  
Warmest regards.

Dr Bernhard Schwartländer  
Chef de Cabinet

World Health Organization

On 14 Feb 2020, at 14:28, Handley, Gray (NIH/NIAID) [E] (b) (5) wrote:

Dear GOARN Colleagues,

Over the last 24 hours we have been in active communication with WHO and Chinese officials to assure that Dr. Lane is able to participate in the WHO/GOARN Mission in China. This has been complicated by the fact that Dr. Lane was in transit to Japan when he received the invitation to participate in this mission. Upon arrival in Tokyo, he has made special efforts to obtain a visa, which was facilitated by the Chinese Embassy in Washington, WHO and the U.S. Embassy in Beijing.

I apologize that we were unaware of the list you have provided of necessary actions. I have attached the requested itinerary, passport face page and CV. Also attached is the completed visa application form. Dr. Lane will complete the security training upon arrival in Beijing. As for his medical clearance, Dr. Lane is a full-time U.S. Federal employee who maintains full medical clearance to practice as a research clinician in U.S. Facilities including the NIH Clinical Research Center.

Please let us know if anything more is needed.

One urgent need we have is an assurance that Dr. Lane will be met at the airport upon arrival and transported to the hotel. We also need confirmation of the hotel arrangements WHO/GOARN has made for members of the mission. If you can help with these matters, we would much appreciate it.

Thank you.

F. Gray Handley  
Associate Director for International Research Affairs  
National Institute of Allergy and Infectious Diseases  
National Institute of Health  
U.S. Department of Health and Human Services

Tel: (b) (6) 5601 Fishers Lane, Room 1E50  
Fax: 301 480 2954 Bethesda, MD 20892-9802

(b) (6)

Disclaimer:

The information in this e-mail and any of its attachments is confidential and may contain sensitive information. It should not be used by anyone who is not the original intended recipient. If you have received this e-mail in error please inform the sender and delete it from your mailbox or any other storage devices. National Institute of Allergy and Infectious Diseases shall not accept liability for any statements made that are sender's own and not expressly made on behalf of the NIAID by one of its representatives.

---

**From:** Marston, Barbara J. (CDC/DDPHSIS/CGH/DPDM) (b) (6)

**Sent:** Friday, February 14, 2020 3:08 AM

**To:** NICHOLS, Phyllis Jane (b) (6); Lane, Cliff (NIH/NIAID) [E] (b) (6);



Handley, Gray (NIH/NIAID) [E] (b) (6); Lane, Cliff (NIH/NIAID) [E] (b) (6); Elvander, Erika (OS/OGA) (b) (6); Arthur, Ray (CDC/DDPHSIS/CGH/DGHP) (b) (6) >  
**Cc:** AZZIZ-BAUMGARTNER, Eduardo (b) (6); UMALI DALANGIN, Khristeen (b) (6); Simonds, R. J. (CDC/DDPHSIS/CGH/OD) (b) (6); Roberts, Nathalie A. (CDC/DDPHSIS/CGH/DGHP) (b) (6); DRURY, Patrick Anthony (b) (6); CAYABYAB, Ramoncito (b) (6)  
**Subject:** RE: GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China | COVID-2019

Hi Phyllis—including others from NIH in case they can help.  
Hello WHO friends.  
Barb

---

**From:** NICHOLS, Phyllis Jane (b) (6)  
**Sent:** Friday, February 14, 2020 2:48 AM  
**To:** (b) (6); ARTHUR, Ray Richard (b) (6)  
**Cc:** AZZIZ-BAUMGARTNER, Eduardo (b) (6); UMALI DALANGIN, Khristeen (b) (6); Bresee, Joseph (CDC/DDID/NCIRD/ID) (b) (6); Simonds, R. J. (CDC/DDPHSIS/CGH/OD) (b) (6); Roberts, Nathalie A. (CDC/DDPHSIS/CGH/DGHP) (b) (6); Marston, Barbara J. (CDC/DDPHSIS/CGH/DPDM) (b) (6); DRURY, Patrick Anthony (b) (6); CAYABYAB, Ramoncito (b) (6)  
**Subject:** GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China | COVID-2019  
**Importance:** High

In the interest of time and having not been copied on any communication we may have received from Cliff, I'm forwarding this to him. Cliff, if you are able to participate, we need your CV, passport photo page, medical clearance, and flight itinerary as soon as possible.

Many thanks,  
Phyllis  
<image002.jpg>

**Phyllis Nichols**

Operations Coordinator, Global Outbreak Alert and Response Network (GOARN)  
World Health Organization (WHO)  
20 Avenue Appia, Geneva 1211, Switzerland  
Email: (b) (6)  
<https://extranet.who.int/goarn/>

---

**From:** UMALI DALANGIN, Khristeen  
**Sent:** Thursday, February 13, 2020 5:37 PM  
**To:** AZZIZ-BAUMGARTNER, Eduardo (b) (6); Zhou, Weigong (CDC/DDID/NCIRD/ID) (b) (6); (b) (6)  
**Cc:** NICHOLS, Phyllis Jane (b) (6); Bresee, Joseph (CDC/DDID/NCIRD/ID) (b) (6); Simonds, R. J. (CDC/DDPHSIS/CGH/OD) (b) (6); Roberts, Nathalie A.

(CDC/DDPHSIS/CGH/DGHP) (b) (6); Marston, Barbara J. (CDC/DDPHSIS/CGH/DPDM)  
(b) (6); DRURY, Patrick Anthony (b) (6); CAYABYAB, Ramoncito  
(b) (6)

**Subject:** GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China | COVID-2019

**Importance:** High

Dear all,

Please find attached a copy of the pre-deployment package/information for Drs Weigong Zhou and Cliff Lane.

As GOARN Experts, you will be issued with a nil-remuneration consultant contract; **please note:** the contract issued is for insurance purposes only with no remuneration as you will continue receiving your salary and benefits with your current institution. As this is an emergency deployment and in order to avoid any delays in issuing a contract, we need the following mandatory administrative steps which are a pre-requisite for finalizing the deployment formalities:

1. Medical certificate of fitness and a pre-travel questionnaire forms – mandatory for all the members (non-WHO Staff) that are not passing through Geneva. The completed and signed forms must be sent directly WHO Staff Health and Wellbeing Services [shws@who.int](mailto:shws@who.int) to expedite approval process.
2. Passport - please send this to us as soon as possible if not done yet.
3. UN Security training or BSAFE security training - the BSAFE is a mandatory requirement. However, in consideration of the exceptional and urgent nature of the mission, WHO Department of Safety and Security (DSS) in China had agreed a security briefing and assistance on the BSAFE be provided to the experts when they arrive in Beijing. In the event that you have already taken the BSAFE training course, may we kindly ask that you send us a copy at [umalik@who.int](mailto:umalik@who.int).

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#### **IMPORTANT:**

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Thanks to acknowledge receipt of this message.

Best,

Kristeen

<image003.png>

Kristeen Umali

Assistant

**Global Outbreak Alert and Response Network**

Division of Emergency Response (WRE)

WHO Health Emergencies Programme (WHE)

World Health Organization

Avenue Appia 20

1211 Geneva 27, Switzerland

Work: (b) (6)

Mobile/WhatsApp: (b) (6)

<Updated travel to Tokyo, Beijing.pdf>

<001[2].pdf>

<HCLane\_Bio.docx>

<001[1].pdf>



**From:** SCHWARTLANDER, Bernhard F.  
**Sent:** Fri, 14 Feb 2020 16:14:05 +0000  
**To:** Lane, Cliff (NIH/NIAID) [E]  
**Subject:** Re: Thank-you

It's incredible what is possible if all want to make something happen. Thanks  
So much for coping with this and making your time available.  
This is an extremely important mission. Beyond the specific occasion.  
Hope to have the chance for a personal debrief once all is done.  
Safe travels.  
Warmest.  
Be

Dr Bernhard Schwartländer  
Chef de Cabinet  
World Health Organization

On 14 Feb 2020, at 16:35, Lane, Cliff (NIH/NIAID) [E] (b) (6) wrote:

Bernhard,

I very much appreciate all the effort that has gone into helping get me from Japan to China.

Thank you again.

Cliff

---

**From:** "SCHWARTLANDER, Bernhard F." (b) (6)  
**Date:** Friday, February 14, 2020 at 10:14 AM  
**To:** Gray Handley (b) (6)  
**Cc:** "NICHOLS, Phyllis Jane" (b) (6), "UMALI DALANGIN, Khristeen" (b) (6), "Lane, Cliff (NIH/NIAID) [E]" (b) (6), "Elvander, Erika (OS/OGA)" (b) (6), "Arthur, Ray (CDC/DDPHSIS/CGH/DGHP)" (b) (6), "DRURY, Patrick Anthony" (b) (6), "CAYABYAB, Ramoncito" (b) (6), "ParrishFuentes, Adrienne L (Beijing)" (b) (6), "GALEA, Gauden" (b) (6), Stewart Simonson (b) (6), "PANG, Xinxin" (b) (6)  
**Subject:** Re: GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China | COVID-2019

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F. Gray Handley  
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Tel: (b) (6)  
Fax: 301 480 2954

5601 Fishers Lane, Room 1E50  
Bethesda, MD 20892-9802

(b) (6)

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Ramoncito (b) (6)  
**Subject:** RE: GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China |  
COVID-2019

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2019  
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Phyllis

<image002.jpg>

**Phyllis Nichols**

Operations Coordinator, Global Outbreak Alert and Response Network (GOARN)



World Health Organization (WHO)  
20 Avenue Appia, Geneva 1211, Switzerland  
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Thanks to acknowledge receipt of this message.

Best,

Khristeen

<image003.png>

**Khristeen Umali**

**Assistant**

**Global Outbreak Alert and Response Network**

Division of Emergency Response (WRE)

WHO Health Emergencies Programme (WHE)

World Health Organization

Avenue Appia 20

1211 Geneva 27, Switzerland

Work: [REDACTED] (b) (6)

Mobile/WhatsApp: [REDACTED] (b) (6)

<Updated travel to Tokyo, Beijing.pdf>

<001[2].pdf>

<HCLane\_Bio.docx>

<001[1].pdf>



**From:** UMALI DALANGIN, Khristeen  
**Sent:** Fri, 14 Feb 2020 17:05:21 +0000  
**To:** Lane, Cliff (NIH/NIAID) [E]  
**Cc:** ARTHUR, Ray Richard; DRURY, Patrick Anthony; CAYABYAB, Ramoncito  
**Subject:** RE: GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China | COVID-2019  
**Attachments:** Supplier Creation Modification Template.doc  
**Importance:** High

Dear Cliff,

I have been trying to create a profile for you in our system without banking details, with no success. Due to system's upgrade, the bank detail is mandatory requirement for issuing contracts in our system regardless whether the contract is with or without remuneration. You may send this to me directly.

P.S. WHO Country Office is arranging hotel including organizing airport pick-up for Cliff and other team members. Information package will also be sent through WHO Country Office.

Hope to receive the bank and medical forms to finalize the contract.

Thanks,

Khristeen

---

**From:** UMALI DALANGIN, Khristeen  
**Sent:** Friday, February 14, 2020 2:41 PM  
**To:** Handley, Gray (NIH/NIAID) [E] (b) (6); Lane, Cliff (NIH/NIAID) [E] (b) (6)  
**Cc:** Elvander, Erika (OS/OGA) (b) (6); (b) (6); DRURY, Patrick Anthony (b) (6); CAYABYAB, Ramoncito (b) (6); ParrishFuentes, Adrienne L (Beijing) (b) (6); SCHWARTLANDER, Bernhard F. (b) (6); GALEA, Gauden (b) (6); Stewart Simonson (b) (6); NICHOLS, Phyllis Jane (b) (6); Zhou, Weigong (CDC/DDID/NCIRD/ID) (b) (6)  
**Subject:** RE: GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China | COVID-2019

Dear Gray,

Thanks for your message and very appreciate the efforts.

Please find attached a copy of the medical questionnaire and medical certificate which are mandatory for this deployment. Would it help if you contact the US Embassy in Tokyo to assist Cliff?



Best,

Khristeen

---

**From:** Handley, Gray (NIH/NIAID) [E] (b) (6)  
**Sent:** Friday, February 14, 2020 2:28 PM  
**To:** NICHOLS, Phyllis Jane (b) (6); UMALI DALANGIN, Khristeen (b) (6)  
**Cc:** Lane, Cliff (NIH/NIAID) [E] (b) (6); Elvander, Erika (OS/OGA) (b) (6);  
(b) (6); (b) (6); DRURY, Patrick Anthony (b) (6); CAYABYAB, Ramoncito (b) (6); ParrishFuentes, Adrienne L (Beijing) (b) (6);  
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(b) (6)  
**Subject:** FW: GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China | COVID-2019

Dear GOARN Colleagues,

Over the last 24 hours we have been in active communication with WHO and Chinese officials to assure that Dr. Lane is able to participate in the WHO/GOARN Mission in China. This has been complicated by the fact that Dr. Lane was in transit to Japan when he received the invitation to participate in this mission. Upon arrival in Tokyo, he has made special efforts to obtain a visa, which was facilitated by the Chinese Embassy in Washington, WHO and the U.S. Embassy in Beijing.

I apologize that we were unaware of the list you have provided of necessary actions. I have attached the requested itinerary, passport face page and CV. Also attached is the completed visa application form. Dr. Lane will complete the security training upon arrival in Beijing. As for his medical clearance, Dr. Lane is a full-time U.S. Federal employee who maintains full medical clearance to practice as a research clinician in U.S. Facilities including the NIH Clinical Research Center.

Please let us know if anything more is needed.

One urgent need we have is an assurance that Dr. Lane will be met at the airport upon arrival and transported to the hotel. We also need confirmation of the hotel arrangements WHO/GOARN has made for members of the mission. If you can help with these matters, we would much appreciate it.

Thank you.

F. Gray Handley  
Associate Director for International Research Affairs  
National Institute of Allergy and Infectious Diseases  
National Institute of Health  
U.S. Department of Health and Human Services

Tel: (b) (6)

Fax: 301 480 2954

(b) (6)

5601 Fishers Lane, Room 1E50

Bethesda, MD 20892-9802

Disclaimer:

The information in this e-mail and any of its attachments is confidential and may contain sensitive information. It should not be used by anyone who is not the original intended recipient. If you have received this e-mail in error please inform the sender and delete it from your mailbox or any other storage devices. National Institute of Allergy and Infectious Diseases shall not accept liability for any statements made that are sender's own and not expressly made on behalf of the NIAID by one of its representatives.

---

**From:** Marston, Barbara J. (CDC/DDPHSIS/CGH/DPDM) (b) (6)

**Sent:** Friday, February 14, 2020 3:08 AM

**To:** NICHOLS, Phyllis Jane (b) (6); Lane, Cliff (NIH/NIAID) [E] (b) (6);

Handley, Gray (NIH/NIAID) [E] (b) (6); Lane, Cliff (NIH/NIAID) [E]

(b) (6); Elvander, Erika (OS/OGA) (b) (6); Arthur, Ray

(CDC/DDPHSIS/CGH/DGHP) (b) (6)

**Cc:** AZZIZ-BAUMGARTNER, Eduardo (b) (6); UMALI DALANGIN, Khristeen

(b) (6); Simonds, R. J. (CDC/DDPHSIS/CGH/OD) (b) (6); Roberts, Nathalie A.

(CDC/DDPHSIS/CGH/DGHP) (b) (6); DRURY, Patrick Anthony (b) (6); CAYABYAB,

Ramoncito (b) (6)

**Subject:** RE: GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China | COVID-2019

Hi Phyllis—including others from NIH in case they can help.

Hello WHO friends.

Barb

---

**From:** NICHOLS, Phyllis Jane (b) (6)

**Sent:** Friday, February 14, 2020 2:48 AM

**To:** (b) (6); ARTHUR, Ray Richard (b) (6)

**Cc:** AZZIZ-BAUMGARTNER, Eduardo (b) (6); UMALI DALANGIN, Khristeen

(b) (6); Bresee, Joseph (CDC/DDID/NCIRD/ID) (b) (6); Simonds, R. J.

(CDC/DDPHSIS/CGH/OD) (b) (6); Roberts, Nathalie A. (CDC/DDPHSIS/CGH/DGHP)

(b) (6); Marston, Barbara J. (CDC/DDPHSIS/CGH/DPDM) (b) (6); DRURY, Patrick

Anthony (b) (6); CAYABYAB, Ramoncito (b) (6)

**Subject:** GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China | COVID-2019

**Importance:** High

In the interest of time and having not been copied on any communication we may have received from Cliff, I'm forwarding this to him. Cliff, if you are able to participate, we need your CV, passport photo page, medical clearance, and flight itinerary as soon as possible.

Many thanks,

Phyllis



**Phyllis Nichols**

Operations Coordinator, **Global Outbreak Alert and Response Network (GOARN)**

World Health Organization (WHO)

20 Avenue Appia, Geneva 1211, Switzerland

Email: (b) (6)

<https://extranet.who.int/goarn/>

**From:** UMALI DALANGIN, Khristeen

**Sent:** Thursday, February 13, 2020 5:37 PM

**To:** AZZIZ-BAUMGARTNER, Eduardo (b) (6); Zhou, Weigong

(CDC/DDID/NCIRD/ID) (b) (6); (b) (6)

**Cc:** NICHOLS, Phyllis Jane (b) (6); Bresee, Joseph (CDC/DDID/NCIRD/ID) (b) (6);

Simonds, R. J. (CDC/DDPHSIS/CGH/OD) (b) (6); Roberts, Nathalie A.

(CDC/DDPHSIS/CGH/DGHP) (b) (6); Marston, Barbara J. (CDC/DDPHSIS/CGH/DPDM)

(b) (6); DRURY, Patrick Anthony (b) (6); CAYABYAB, Ramoncito

(b) (6)

**Subject:** GOARN Pre-deployment package | Drs Weigong ZHOU & Cliff LANE | Mission to China | COVID-2019

**Importance:** High

Dear all,

Please find attached a copy of the pre-deployment package/information for Drs Weigong Zhou and Cliff Lane.

As GOARN Experts, you will be issued with a nil-remuneration consultant contract; **please note:** the contract issued is for insurance purposes only with no remuneration as you will continue receiving your salary and benefits with your current institution. As this is an emergency deployment and in order to avoid any delays in issuing a contract, we need the following mandatory administrative steps which are a pre-requisite for finalizing the deployment formalities:

1. Medical certificate of fitness and a pre-travel questionnaire forms – mandatory for all the members (non-WHO Staff) that are not passing through Geneva. The completed and signed forms must be sent directly WHO Staff Health and Wellbeing Services [shws@who.int](mailto:shws@who.int) to expedite approval process.
2. Passport - please send this to us as soon as possible if not done yet.
3. UN Security training or BSAFE security training - the BSAFE is a mandatory requirement. However, in consideration of the exceptional and urgent nature of the mission, WHO Department of Safety and Security (DSS) in China had agreed a security briefing and assistance on the BSAFE be provided to the experts when they arrive in



Beijing. In the event that you have already taken the BSAFE training course, may we kindly ask that you send us a copy at [umalik@who.int](mailto:umalik@who.int).

### **UN SECURITY AWARENESS TRAINING COURSE- FOR INFO ONLY.**

For any person travelling on behalf of WHO it is mandatory to complete the UN security awareness training course 'BSAFE' through the UNDSS website (<https://training.dss.un.org>). The main goal of BSAFE is to teach UN personnel how to take better care of themselves and how to engage with security. The course contains vital security information for WHO personnel and is delivered in the shape of a story and through the eyes of staff members.

### **IMPORTANT:**

Please treat this as sensitive and not for public communications until we have agreed communications with China. To follow are the special declaration of interest and confidentiality forms which are being developed for this mission.

Thanks to acknowledge receipt of this message.

Best,

Khristeen



Khristeen Umali  
Assistant  
**Global Outbreak Alert and Response Network**  
Division of Emergency Response (WRE)  
WHO Health Emergencies Programme (WHE)  
World Health Organization  
Avenue Appia 20  
1211 Geneva 27, Switzerland

Work: [REDACTED] (b) (6)  
Mobile/WhatsApp: [REDACTED] (b) (6)

**From:** AYLWARD, Raymond Bruce J.  
**Sent:** Fri, 14 Feb 2020 18:26:04 +0000  
**To:** Alexander SEMENOV (b) (6); Chikwe IHEKWEAZU (b) (6); Lane, Cliff (NIH/NIAID) [E]; Dale FISHER (b) (6); Dr Hitoshi TAKAHASHI (b) (6); gmleung; LEE Jong-Koo (b) (6); Dr VAN KERKHOVE, Maria; Natalia PSHENICHNAYA (b) (6); Tim ECKMANN (b) (6); Zhou, Weigong (CDC/DDID/NCIRD/ID); Weigong ZHOU (b) (6); XING, Jun  
**Cc:** GALEA, Gauden; DRURY, Patrick Anthony  
**Subject:** Welcome to the WHO-CHN Joint Mission  
**Attachments:** WHO-China Joint Mission on COVID-19\_ToRs\_13Feb2020.pdf  
**Importance:** High

Dear Members of the Joint Mission,

Thank you all so much for your enthusiasm to participate in the forthcoming WHO-CHN Joint Mission on COVID-19.

I am also very grateful for your understanding and patience as key details of this Mission were worked out.

I am delighted that most of you are already scheduled to arrive either tomorrow (Saturday) or by mid-day Sunday. This should give us time for an initial 'pre-meeting' on Sunday afternoon at the WHO China office, which is a short walk from our hotel.

Over the past 3 days, myself and the other members of the Advance Team (Dr Maria van Kerkhove & Dr Jun Xing of WHO) have been working with national authorities here in Beijing to finalize the Mission objectives, workstreams, method of work and baseline information/data requests (please see attached 1-page summary of our draft ToRs).

Although the programme is still being finalized, we expect the formal Mission to start on Sunday evening with an in-depth workshop from 7-11 pm with our national Team counterparts and senior government officials from key Ministries involved in this COVID-19 response. Following a day of site visits here in Beijing there is a tentative plan for 3 days of field visits prior to our regrouping to consolidate findings.

A number of these details are still evolving, however, and will be finalized over the next 24 hours.

I understand that our very capable WHO teams in Geneva and here in Beijing have been communicating with each of you regarding your flights, airport pick-up and hotel accommodations. To facilitate our joint work and communications, we will also circulate a consolidated list of our names, affiliations, emails and cellphones by mid-day tomorrow (Saturday, 15 Feb).

You are in very good hands with our logistics teams, however please do not hesitate to contact me directly if I can be of assistance in advance of your arrival.

With very best regards,

Bruce

Bruce AYLWARD (WHO/Geneva)

Team Leader, WHO-China Joint Mission on COVID-19

Email: [REDACTED] (b) (6)

Mobile: [REDACTED] (b) (6) (international)





**From:** HAN, Mansuk Daniel  
**Sent:** Fri, 14 Feb 2020 19:47:56 +0000  
**To:** Lane, Cliff (NIH/NIAID) [E]  
**Subject:** [URGENT] COVID-19: DOI & Confidentiality forms  
**Attachments:** image001.gif, ATT00001.htm, (final) DOI\_EN\_Form\_WHO\_China Joint mission COVID19.docx, ATT00002.htm, Confidentiality Undertaking for WHO\_China Joint Mission.pdf, ATT00003.htm

Dear Cliff, could you please complete the DOI and confidentiality forms and return them to me ASAP?  
Understand you are incredibly busy busy and I hate to burden you with paperwork, but the forms need to be done...  
Thank you for your patience,  
Dan

**Mansuk Daniel HAN**

Technical Officer

WHO HQ, Geneva, Switzerland

Office: (b) (6)

Mobile: (b) (6)

Email: (b) (6)

Skype: dan.han3

**From:** Dale Fisher  
**Sent:** Sat, 15 Feb 2020 12:09:48 +0000  
**To:** GALEA, Gauden;AYLWARD, Raymond Bruce J.;Alexander SEMENOV  
(b) (6);Chikwe IHEKWEAZU (b) (6);Lane, Cliff  
(NIH/NIAID) [E];Dr Hitoshi TAKAHASHI (b) (6);gmleung;LEE Jong-Koo  
(b) (6);Dr VAN KERKHOVE, Maria;Natalia PSHENICHNAYA (b) (6)  
(b) (6);Tim ECKMANN (b) (6);Zhou, Weigong  
(CDC/DDID/NCIRD/ID);Weigong ZHOU (b) (6);XING, Jun  
**Cc:** DRURY, Patrick Anthony;PANG, Xinxin  
**Subject:** RE: Welcome to the WHO-CHN Joint Mission

Thanks Gauden;

Very pleased to be here and looking forward to meeting you tomorrow.

Dale

---

**From:** PANG, Xinxin (b) (6) **On Behalf Of** GALEA, Gauden  
**Sent:** Saturday, 15 February 2020 4:47 PM  
**To:** AYLWARD, Raymond Bruce J. (b) (6); Alexander SEMENOV  
(b) (6); Chikwe IHEKWEAZU  
(b) (6); Clifford LANE (b) (6)  
(b) (6); Dale Fisher (b) (6); Dr Hitoshi TAKAHASHI (b) (6)  
(b) (6); gmleung (b) (6); LEE Jong-Koo (b) (6)  
(b) (6); Dr VAN KERKHOVE, Maria (b) (6); Natalia PSHENICHNAYA  
(b) (6); Tim ECKMANN (b) (6)  
(b) (6); Weigong ZHOU (b) (6); Weigong  
ZHOU (b) (6); XING, Jun (b) (6)  
**Cc:** GALEA, Gauden (b) (6); DRURY, Patrick Anthony (b) (6); PANG, Xinxin  
(b) (6)  
**Subject:** RE: Welcome to the WHO-CHN Joint Mission

- External Email -

Dear Joint Mission members,

Further to Bruce's message of last evening, I am very pleased to welcome you to Beijing.

As Bruce informed you, we will have a meeting of the international team members from 11:00 hr – 15:00 hr at our WHO China Office tomorrow, Sunday 16 February. Our colleagues Maria and Jun will meet you in the lobby of the Holiday Inn Express at 10:45 so that you can walk over to our office together.

During the meeting we will provide you with a briefing folder that includes relevant administrative, epidemiologic and technical information, as well as a thumb drive with electronic versions of the same materials.

As we will serve a light lunch around 12:30hr, please let Xinxin know if you have any food allergies or strong preferences in that regard.

Finally, please be aware that our hosts, the National Health Commission (NHC), will be arranging all of our subsequent group transportation while you are in Beijing and during field visits.

I look forward to meeting you tomorrow.

With best regards,

Gauden GALEA  
WHO Representative to China  
Beijing

---

**From:** AYLWARD, Raymond Bruce J.

**Sent:** Saturday, February 15, 2020 2:26 AM

**To:** Alexander SEMENOV (b) (6); Chikwe IHEKWEAZU

(b) (6); Clifford LANE (b) (6)

(b) (6); Dale FISHER (b) (6); Dr Hitoshi TAKAHASHI

(b) (6); gmlung (b) (6); LEE Jong-Koo

(b) (6); Dr VAN KERKHOVE, Maria (b) (6);

Natalia PSHENICHNAYA (b) (6); Tim

ECKMANN (b) (6); Weigong ZHOU (b) (6)

(b) (6); Weigong ZHOU (b) (6); XING, Jun (b) (6)

**Cc:** GALEA, Gauden (b) (6); DRURY, Patrick Anthony (b) (6)

**Subject:** Welcome to the WHO-CHN Joint Mission

**Importance:** High

Dear Members of the Joint Mission,

Thank you all so much for your enthusiasm to participate in the forthcoming WHO-CHN Joint Mission on COVID-19.

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With very best regards,

Bruce

Bruce AYLWARD (WHO/Geneva)  
Team Leader, WHO-China Joint Mission on COVID-19  
Email: (b) (6)  
Mobile: (b) (6) (international)

---

Important: This email is confidential and may be privileged. If you are not the intended recipient, please delete it and notify us immediately; you should not copy or use it for any purpose, nor disclose its contents to any other person. Thank you.

**From:** Eckmanns, Tim  
**Sent:** Sat, 15 Feb 2020 13:43:20 +0000  
**To:** GALEA, Gauden;AYLWARD, Raymond Bruce J.;Alexander SEMENOV  
(b) (6);Chikwe IHEKWEAZU (b) (6);Lane, Cliff  
(NIH/NIAID) [E];Dale FISHER (b) (6);Dr Hitoshi TAKAHASHI  
(b) (6);gmleung;LEE Jong-Koo (b) (6);Dr VAN KERKHOVE, Maria;Natalia  
PSHENICHNAYA (b) (6);Zhou, Weigong (CDC/DDID/NCIRD/ID);Weigong  
ZHOU (b) (6);XING, Jun  
**Cc:** GALEA, Gauden;DRURY, Patrick Anthony;PANG, Xinxin  
**Subject:** AW: Welcome to the WHO-CHN Joint Mission

Dear Gauden  
Thank you.  
I am on my way. I will reach Beijing at 11:45. So I will be late for the meeting.  
Looking forward to meeting you tomorrow.  
Tim

**Foreign Language** BlackBerry 10-Smartphone.  
Von: GALEA, Gauden  
Gesendet: Samstag, 15. Februar 2020 09:47  
An: AYLWARD, Raymond Bruce J., Alexander SEMENOV (b) (6); Chikwe IHEKWEAZU  
(b) (6); Clifford LANE (b) (6); Dale FISHER (b) (6); Dr  
Hitoshi TAKAHASHI (b) (6); gmleung; LEE Jong-Koo (b) (6); Dr VAN  
KERKHOVE, Maria; Natalia PSHENICHNAYA (b) (6); Eckmanns, Tim; Weigong  
ZHOU (b) (6); Weigong ZHOU (b) (6); XING, Jun  
Cc: GALEA, Gauden; DRURY, Patrick Anthony; PANG, Xinxin  
Betreff: RE: Welcome to the WHO-CHN Joint Mission

Dear Joint Mission members,

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I look forward to meeting you tomorrow.

With best regards,

Gauden GALEA  
WHO Representative to China  
Beijing

From: AYLWARD, Raymond Bruce J.

Sent: Saturday, February 15, 2020 2:26 AM

To: Alexander SEMENOV (b) (6); Chikwe IHEKWEAZU

(b) (6); Clifford LANE (b) (6)

(b) (6); Dale FISHER (b) (6); Dr Hitoshi TAKAHASHI

(b) (6); gmlung (b) (6); LEE Jong-Koo (b) (6)

(b) (6); Dr VAN KERKHOVE, Maria (b) (6); Natalia PSHENICHNAYA

(b) (6); Tim ECKMANNS (b) (6)

(b) (6); Weigong ZHOU (b) (6); Weigong ZHOU (b) (6)

(b) (6); XING, Jun (b) (6)

Cc: GALEA, Gauden (b) (6); DRURY, Patrick Anthony (b) (6)

Subject: Welcome to the WHO-CHN Joint Mission

Importance: High

Dear Members of the Joint Mission,

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With very best regards,

Bruce

Bruce AYLWARD (WHO/Geneva)

Team Leader, WHO-China Joint Mission on COVID-19

Email: (b) (6)

Mobile: (b) (6) (international)



**From:** PANG, Xinxin  
**Sent:** Sun, 16 Feb 2020 13:44:47 +0000  
**To:** GALEA, Gauden;AYLWARD, Raymond Bruce J.;Alexander SEMENOV  
(b) (6);Chikwe IHEKWEAZU (b) (6);Lane, Cliff  
(NIH/NIAID) [E];Dale FISHER (b) (6);Dr Hitoshi TAKAHASHI  
(b) (6);gmleung;LEE Jong-Koo (b) (6);Dr VAN KERKHOVE, Maria;Natalia  
PSHENICHNAYA (b) (6);Tim ECKMANNS (b) (6);Zhou,  
Weigong (CDC/DDID/NCIRD/ID);Weigong ZHOU (b) (6);XING, Jun  
**Cc:** DRURY, Patrick Anthony  
**Subject:** RE: Welcome to the WHO-CHN Joint Mission

Dear Joint Mission members,

We just received the tentative agenda for tomorrow Feb 17:

8:20, travel from hotel to Ditan Hospital  
9:00, to visit Ditan Hospital  
Time TBC, to visit a Community Health Center  
12:30, travel to China CDC  
Time TBC, lunch at China CDC  
Time TBC, discussion at China CDC

NHC will provide more info later tonight or tomorrow morning.

With regards,  
Xinxin

---

**From:** PANG, Xinxin **On Behalf Of** GALEA, Gauden  
**Sent:** Saturday, February 15, 2020 4:47 PM  
**To:** AYLWARD, Raymond Bruce J. (b) (6); Alexander SEMENOV  
(b) (6); Chikwe IHEKWEAZU  
(b) (6); Clifford LANE (b) (6)  
(b) (6); Dale FISHER (b) (6); Dr Hitoshi TAKAHASHI  
(b) (6); gmleung (b) (6); LEE Jong-Koo  
(b) (6); Dr VAN KERKHOVE, Maria (b) (6);  
Natalia PSHENICHNAYA (b) (6); Tim  
ECKMANNS (b) (6); Weigong ZHOU (b) (6)  
(b) (6); Weigong ZHOU (b) (6); XING, Jun (b) (6)  
**Cc:** GALEA, Gauden (b) (6); DRURY, Patrick Anthony (b) (6); PANG, Xinxin  
(b) (6)  
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Gauden GALEA  
WHO Representative to China  
Beijing

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**Sent:** Saturday, February 15, 2020 2:26 AM

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(b) (6); Clifford LANE (b) (6)

(b) (6); Dale FISHER (b) (6); Dr Hitoshi TAKAHASHI

(b) (6); gmleung (b) (6); LEE Jong-Koo

(b) (6); Dr VAN KERKHOVE, Maria (b) (6);

Natalia PSHENICHNAYA (b) (6); Tim

ECKMANNS (b) (6); Weigong ZHOU (b) (6)

(b) (6); Weigong ZHOU (b) (6); XING, Jun (b) (6)

**Cc:** GALEA, Gauden (b) (6); DRURY, Patrick Anthony (b) (6)

**Subject:** Welcome to the WHO-CHN Joint Mission

**Importance:** High

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With very best regards,

Bruce

Bruce AYLWARD (WHO/Geneva)  
Team Leader, WHO-China Joint Mission on COVID-19  
Email: (b) (6)  
Mobile: (b) (6) (international)



**From:** AYLWARD, Raymond Bruce J.  
**Sent:** Sun, 16 Feb 2020 17:04:25 +0000  
**To:** Chikwe Ihekweazu  
**Cc:** GALEA, Gauden; Alexander SEMENOV (b) (6); Lane, Cliff (NIH/NIAID) [E]; Dale FISHER (b) (6); Dr Hitoshi TAKAHASHI (b) (6); gmleung; LEE Jong-Koo (b) (6); Dr VAN KERKHOVE, Maria; Natalia PSHENICHNAYA (b) (6); Tim ECKMANN (b) (6); Zhou, Weigong (CDC/DDID/NCIRD/ID); Weigong ZHOU (b) (6); XING, Jun; PANG, Xinxin; DRURY, Patrick Anthony  
**Subject:** Re: Welcome to the WHO-CHN Joint Mission

Welcome Chikwe!

So glad you've made it and we can benefit from your experience.

We've had a great first day (night actually)

Just finished 4+ hours with all of the Ministries involved in the response Task Force and had a 2 hour VC with Wuhan.

Very impressive and many insights already.

Look forward to catching up tomorrow.

Bruce

On 17 Feb 2020, at 00:59, Chikwe Ihekweazu (b) (6) wrote:

Thanks.

Arrived about an hour ago.

See you in the morning.

Chikwe

**From:** PANG, Xinxin (b) (6)  
**Sent:** Monday, February 17, 2020 12:15:18 AM  
**To:** GALEA, Gauden (b) (6); AYLWARD, Raymond Bruce J. (b) (6); Alexander SEMENOV (b) (6); Chikwe IHEKWEAZU (b) (6); Clifford LANE (b) (6); Dale FISHER (b) (6); Dr Hitoshi TAKAHASHI (b) (6); gmleung (b) (6); LEE Jong-Koo (b) (6); Dr VAN KERKHOVE, Maria (b) (6); Natalia PSHENICHNAYA (b) (6); Tim ECKMANN (b) (6); Weigong ZHOU (b) (6); Weigong ZHOU (b) (6); XING, Jun (b) (6)  
**Cc:** DRURY, Patrick Anthony (b) (6)  
**Subject:** Foreign Language Welcome to the WHO-CHN Joint Mission

Dear Joint Mission members,

We just received the tentative agenda for Monday Feb 17:

8:20, travel from hotel to Ditan Hospital

9:00, to visit Ditan Hospital  
Time TBC, to visit Anzhen Community Health Center  
12:30, travel to China CDC  
Time TBC, lunch at China CDC  
Time TBC, discussion at China CDC

NHC will provide more info when it's available.

With regards,  
Xinxin

----- Foreign Language -----  
Foreign Language: "GALEA, Gauden" (b) (6)  
2020 Foreign Language 16:47  
: "AYLWARD, Raymond Bruce J." (b) (6), "Alexander SEMENOV  
(b) (6), "Chikwe IHEKWEAZU  
(b) (6), "Clifford LANE  
(b) (6), "Dale FISHER (b) (6)  
(b) (6), "Dr Hitoshi TAKAHASHI (b) (6),  
gmleung (b) (6), "LEE Jong-Koo (b) (6),  
"Dr VAN KERKHOVE, Maria" (b) (6), "Natalia PSHENICHNAYA  
(b) (6), "Tim ECKMANNNS  
(b) (6), "Weigong ZHOU (b) (6)  
(b) (6), "Weigong ZHOU (b) (6), "XING, Jun"  
Foreign Language "GALEA, Gauden" (b) (6), "DRURY, Patrick Anthony"  
(b) (6), "PANG, Xinxin" (b) (6)  
Foreign Language RE: Welcome to the WHO-CHN Joint Mission

Dear Joint Mission members,

Further to Bruce's message of last evening, I am very pleased to welcome you to Beijing.

As Bruce informed you, we will have a meeting of the international team members from 11:00 hr - 15:00 hr at our WHO China Office tomorrow, Sunday 16 February. Our colleagues Maria and Jun will meet you in the lobby of the (b) (6) at 10:45 so that you can walk over to our office together.

During the meeting we will provide you with a briefing folder that includes relevant administrative, epidemiologic and technical information, as well as a thumb drive with electronic versions of the same materials.

As we will serve a light lunch around 12:30hr, please let Xinxin know if you have any food allergies or strong preferences in that regard.

Finally, please be aware that our hosts, the National Health Commission (NHC), will be arranging all of our subsequent group transportation while you are in Beijing and during field visits.

I look forward to meeting you tomorrow.

With best regards,

Gauden GALEA  
WHO Representative to China  
Beijing

---

**From:** AYLWARD, Raymond Bruce J.  
**Sent:** Saturday, February 15, 2020 2:26 AM  
**To:** Alexander SEMENOV (b) (6); Chikwe IHEKWEAZU (b) (6); Clifford LANE (b) (6); Dale FISHER (b) (6); Dr Hitoshi TAKAHASHI (b) (6); gmleung (b) (6); LEE Jong-Koo (b) (6); Dr VAN KERKHOVE, Maria (b) (6); Natalia PSHENICHNAYA (b) (6); Tim ECKMANN (b) (6); Weigong ZHOU (b) (6); Weigong ZHOU (b) (6); XING, Jun (b) (6)  
**Cc:** GALEA, Gauden (b) (6); DRURY, Patrick Anthony (b) (6)  
**Subject:** Welcome to the WHO-CHN Joint Mission  
**Importance:** High

Dear Members of the Joint Mission,

Thank you all so much for your enthusiasm to participate in the forthcoming WHO-CHN Joint Mission on COVID-19.

I am also very grateful for your understanding and patience as key details of this Mission were worked out.

I am delighted that most of you are already scheduled to arrive either tomorrow (Saturday) or by mid-day Sunday. This should give us time for an initial 'pre-meeting' on Sunday afternoon at the WHO China office, which is a short walk from our hotel.

Over the past 3 days, myself and the other members of the Advance Team (Dr Maria van Kerkhove & Dr Jun Xing of WHO) have been working with national authorities here in Beijing to finalize the Mission objectives, workstreams, method of work and baseline information/data requests (please see attached 1-page summary of our draft ToRs).

Although the programme is still being finalized, we expect the formal Mission to start on Sunday evening with an in-depth workshop from 7-11 pm with our national Team counterparts and senior government officials from key Ministries involved in this COVID-19 response. Following a day of site visits here in Beijing there is a tentative plan for 3 days of field visits prior to our regrouping to consolidate findings.

A number of these details are still evolving, however, and will be finalized over the next 24 hours.



I understand that our very capable WHO teams in Geneva and here in Beijing have been communicating with each of you regarding your flights, airport pick-up and hotel accommodations. To facilitate our joint work and communications, we will also circulate a consolidated list of our names, affiliations, emails and cellphones by mid-day tomorrow (Saturday, 15 Feb).

You are in very good hands with our logistics teams, however please do not hesitate to contact me directly if I can be of assistance in advance of your arrival.

With very best regards,

Bruce

Bruce AYLWARD (WHO/Geneva)

Team Leader, WHO-China Joint Mission on COVID-19

Email: (b) (6)

Mobile: (b) (6) (international)

**From:** HAN, Mansuk Daniel  
**Sent:** Mon, 17 Feb 2020 16:37:03 +0000  
**To:** Lane, Cliff (NIH/NIAID) [E]  
**Subject:** Two DOI questions

Dear Cliff,

Sorry to bother you during a very busy mission but DGO requested to clear two questions from your DOI:

1. Research support from Gilead: is there any relationship between the present mission to China and any of your ongoing research regarding COVID-19?
2. Travel costs: could you please tell us who contributed toward your mission travel costs, and the amount contributed?

Thank you,  
Dan

**Mansuk Daniel HAN**  
Technical Officer  
WHO HQ, Geneva, Switzerland  
Office: (b) (6)  
Mobile: (b) (6)  
Email: (b) (6)  
Skype: dan.han3



**From:** (b) (6) on behalf of Foreign Language (b) (6)  
**Sent:** Fri, 13 Mar 2020 17:13:17 +0900  
**To:** SHINDO Nahoko; (b) (6); David Heymann; (SPmig) DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL (Amadou.S; Gary Kobinger; Johan Giesecke; (SPmig) Juliet Bedford (b) (6); Ziad Memish; President\_RKI (b) (6); Schuchat, Anne MD (CDC/OD); Lane, Cliff (NIH/NIAID) [E]  
**Cc:** STAG IH Secretariat  
**Subject:** RE: RE: Possible SPAM detected: RE: !!STAG-IH!! Next version for the Lancet Comment  
**Attachments:** JKMS-2020-0205.pdf

Please find attached pdf file for our paper. Thank you

Oh Myoung-don, M.D.  
Professor,  
Department of Internal Medicine  
Seoul National University College of Medicine  
Seoul National University Hospital  
101 Daehak-ro, Jongno-gu, Seoul, 03080, South Korea  
TEL: (b) (6), FAX: 82-2-762-9662  
e-mail: (b) (6)

Foreign Language  
Foreign Language "SHINDO, Nahoko" (b) (6)  
(b) (6)  
(b) (6), David Heymann  
(b) (6), "(SPmig) DELIA ENRIA" (b) (6),  
"Delia Enria (b) (6) "Dr Amadou Alpha SALL (Amadou.S" (b) (6), Gary Kobinger  
(b) (6), Johan Giesecke  
(b) (6), "(SPmig) Juliet Bedford" (b) (6),  
(b) (6), Ziad Memish  
(b) (6), "President\_RKI (b) (6),  
"Schuchat Anne MD (CDC/OD) (ac" (b) (6), "Lane Cliff (NIH/NIAID) [E]" (b) (6)  
Foreign Language STAG IH Secretariat (b) (6)  
Foreign Language 2020-03-13 Foreign Language 16:33:59



Foreign  
Language

RE: Possible SPAM detected: RE: !!STAG-IH!! Next version for the Lancet  
Comment

Thank you Myoung don, can you send us a pdf version of your paper? Best wishes, Nikki

**From:** mdohmd@snu.ac.kr (b) (6)

**Sent:** 12 March 2020 22:48

**To:** SHINDO, Nahoko (b) (6); (b) (6)

(b) (6); David Heymann (b) (6); (SPmig) DELIA

ENRIA (b) (6); "Delia Enria (b) (6); "Dr

Amadou Alpha SALL (Amadou.S" (b) (6); Gary Kobinger

(b) (6); Johan Giesecke (b) (6); (SPmig) Juliet

Bedford (b) (6); (b) (6)

(b) (6); Ziad Memish (b) (6); "President\_RKI (b) (6)

(b) (6); "Schuchat Anne MD (CDC/OD) (ac" (b) (6); "Lane Cliff (NIH/NIAID) [E]"

(b) (6)

**Cc:** STAG IH Secretariat (b) (6)

**Subject:** Possible SPAM detected: RE: !!STAG-IH!! Next version for the Lancet Commentary

Dear Nikki, References 4 & 5 for the viral shedding need to be amended.

Reference 4 can be deleted and replaced with this one

4. Zou L, Ruan F, Huang M, Liang L, Huang H, Hong Z, et al. SARS-CoV-2 Viral Load in Upper Respiratory Specimens of Infected Patients. New Engl J Med. 2020.

Reference 5.

Oh Myoung-don et al. Clinical Course and Outcomes of Patients with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Infection: A Preliminary Report of the First 28 Patients from the Korean Cohort Study on COVID-19 [submitted to J Korean Med Sci]

Regards,

Oh Myoung-don, M.D.

Professor,

Department of Internal Medicine

Seoul National University College of Medicine

Seoul National University Hospital

101 Daehak-ro, Jongno-gu, Seoul, 03080, South Korea

TEL: (b) (6), FAX: 82-2-762-9662

e-mail: (b) (6)

Foreign Language: (b) (6)

Foreign Language: "SHINDO, Nahoko" (b) (6)

(b) (6), David Heymann

(b) (6), "(SPmig) DELIA ENRIA" (b) (6), "Delia Enria" (b) (6)

(b) (6), "Dr Amadou Alpha SALL (Amadou.S)" (b) (6), Gary Kobinger

(b) (6), Johan Giesecke (b) (6), "(SPmig) Juliet Bedford"

(b) (6), (b) (6), "Lane, Cliff

(NIH/NIAID) [E" (b) (6), (b) (6), "President\_RKI

(b) (6), "Schuchat, Anne MD (CDC/OD) (ac" (b) (6), "Wieler, Lothar"

(b) (6), Ziad Memish (b) (6)

Foreign Language: STAG IH Secretariat (b) (6)

Foreign Language: 2020-03-13 (三) 02:33:10

Foreign Language: !!STAG-IH!! Next version for the Lancet Commentary

Dear STAG-IH, please find the next version of the draft attached. Nikki

**From:** HENAO RESTREPO, Ana Maria  
**Sent:** Wed, 19 Feb 2020 14:29:27 +0000  
**To:** AYLWARD, Raymond Bruce J.; Lane, Cliff (NIH/NIAID) [E]; SWAMINATHAN, Soumya; RYAN, Michael J.  
**Subject:** Master protocol therapeutics  
**Attachments:** PIND 147771 SN0002 5.3.5.1 20-0006 International Informed Consent Form - v1.0, 18Feb2020.eCTD.docx, ATT00001.htm, PIND 147771 SN0002 5.3.5.1 Protocol No. 20-0006 - v1.0 18Feb2020.eCTD.docx, ATT00002.htm

Dear Bruce,

Thanks to the colleagues in NIH that based on the deliberations of the international group of experts have develop the full master protocol for therapeutics attached here.

We will have a teleconference with the clinical trials expert group this Friday to seek final suggestions on the protocol.

However, to avoid delays and given that Cliff is part of the international team in China, we suggest that you can start referring to it as appropriate during your deliberations with the Chinese researchers.

A revised version will be shared on Monday.

Kind regards

Ana Maria on behalf of the team

Sent from my iPhone

Begin forwarded message:

**From:** "Higgs, Elizabeth (NIH/NIAID) [E]" (b) (6)  
**Date:** 19 February 2020 at 15:12:30 CET  
**To:** "HENAO RESTREPO, Ana Maria" (b) (6), "GSELL, Pierre" (b) (6), Peter Smith (b) (6), "GSELL, Pierre" (b) (6), (b) (6), Foreign Language (b) (6), "Thomas R. Fleming" (b) (6), ilongini (b) (6), (b) (6), Yaseen Arabi (b) (6), Steve Webb (b) (6), Tansy Edwards (b) (6), "RIVEROS BALTA, Alina Ximena" (b) (6), (b) (6), "PREZIOSI, Marie-pierre" (b) (6), "SATHIYAMOORTHY, Vaseeharan" (b) (6), "COSTA, Alejandro Javier" (b) (6), "SALAMI, Kolawole" (b) (6), "DIAZ, Janet Victoria" (b) (6), "David Lye Chien Boon (NCID)" (b) (6)  
**Cc:** "Kerr, Lawrence (HHS/OS/OGA)" (b) (6), "Walker, Robert (OS/ASPR/BARDA)" (b) (6), "Lane, Cliff (NIH/NIAID) [E]" (b) (6), (b) (6), "Beigel, John (NIH) [E]" (b) (6)  
**Subject:** Re: 2019 nCoV Master Protocol drafting group - CALL tomorrow Wednesday at 12:00 Geneva time

Dear Colleagues,



Apologies in the delay from the NIAID end regarding a draft master protocol. We are hopeful that the attached protocol and consent reflects the collective input of this group. An informed consent flipbook and set of FAQs may be needed. You will see that it has the majority of elements we agreed upon including a pilot phase. It is written now with remdesivir as the first therapeutic as was advised from the WHO prioritization group.

I defer to Peter and the R&D BP team on next steps for discussion, forward implementation, etc.

I'm sure there will questions and suggestions.

Kind regards,

Libby

Elizabeth S. Higgs, MD, DTMH, MIA  
Global Health Science Advisor  
Division of Clinical Research  
National Institute of Allergy and Infectious Diseases  
NIH, HHS, USG

(b) (6)

Skype: libbyhiggs2

Cell: (b) (6)

---

**From:** Ana Maria Henaoretrepoa (b) (6)

**Date:** Saturday, February 15, 2020 at 4:01 AM

**To:** "David Lye Chien Boon (NCID)" (b) (6), "GSELL, Pierre" (b) (6)

**Cc:** "GSELL, Pierre" (b) (6), <sup>Foreign</sup> ~~Language~~ (b) (6), Peter Smith

(b) (6), "Thomas R. Fleming" (b) (6), ilongini

(b) (6), John Beigel (b) (6), (b) (6)

(b) (6), (b) (6), Yaseen

Arabi (b) (6), Steve Webb (b) (6), Tansy Edwards

(b) (6), "RIVEROS BALTA, Alina Ximena" (b) (6), "PREZIOSI,

Marie-pierre" (b) (6), Vaseeharan SATHIYAMOORTHY (b) (6),

"COSTA, Alejandro Javier" (b) (6), "SALAMI, Kolawole" (b) (6), "DIAZ,

Janet Victoria" (b) (6)

**Subject:** Re: 2019 nCoV Master Protocol drafting group - CALL tomorrow Wednesday at 12:00 Geneva time

Dear All,

FYI – please find attached the latest study synopsis for Phase 2b/Phase 3 treatment trial, on the basis of the WHO Blueprint WG of Clinical Trials and with support from experts in this group as well.

A Protocol Writing Group has been established to further develop that synopsis into a multi-country Master Protocol.

The full Master protocol is expected by next Wednesday. However, we consider the synopsis very informative.

More information can be accessed here-

<https://www.who.int/blueprint/priority-diseases/key-action/novel-coronavirus/en/>

Kind regards

Ana Marla

**From:** SWAMINATHAN, Soumya  
**Sent:** Wed, 19 Feb 2020 18:26:37 +0000  
**To:** Lane, Cliff (NIH/NIAID) [E]; HENAO RESTREPO, Ana Maria; AYLWARD, Raymond Bruce J.; RYAN, Michael J.; Higgs, Elizabeth (NIH/NIAID) [E]  
**Subject:** RE: Master protocol therapeutics

Thanks Cliff, and Libby and colleagues at NIH for the incredible effort.  
Best  
Soumya

---

**From:** Lane, Cliff (NIH/NIAID) [E] (b) (6)  
**Sent:** Wednesday, February 19, 2020 4:39 PM  
**To:** HENAO RESTREPO, Ana Maria (b) (6); AYLWARD, Raymond Bruce J. (b) (6); SWAMINATHAN, Soumya (b) (6); RYAN, Michael J. (b) (6)  
**Subject:** Re: Master protocol therapeutics

Colleagues,

This is the most recent draft. An improved version will be ready in 1-2 days. The overall design is under review by FDA. There are plans to implement soon in the US and we are in discussion with Japan who have expressed strong interest.

Cliff

---

**From:** "HENAO RESTREPO, Ana Maria" (b) (6)  
**Date:** Wednesday, February 19, 2020 at 10:32 PM  
**To:** "AYLWARD, Raymond Bruce J." (b) (6), "Lane, Cliff (NIH/NIAID) [E]" (b) (6), "SWAMINATHAN, Soumya" (b) (6), Mike Ryan (b) (6)  
**Subject:** Master protocol therapeutics

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Sent from my iPhone

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**Date:** 19 February 2020 at 15:12:30 CET  
**To:** "HENAORESTREPO, Ana Maria" (b) (6), "GSELL, Pierre" (b) (6), Peter Smith (b) (6), "GSELL, Pierre" (b) (6), Foreign Language (b) (6), (b) (6) "Thomas R. Fleming" (b) (6), ilongini (b) (6), "Rob. Fowler@sunnybrook.ca" (b) (6), Yaseen Arabi (b) (6), Steve Webb (b) (6), Tansy Edwards (b) (6), "RIVEROS BALTA, Alina Ximena" (b) (6), "PREZIOSI, Marie-pierre" (b) (6), "SATHIYAMOORTHY, Vaseeharan" (b) (6), "COSTA, Alejandro Javier" (b) (6), "SALAMI, Kolawole" (b) (6), "DIAZ, Janet Victoria" (b) (6), "David Lye Chien Boon (NCID)" (b) (6)  
**Cc:** "Kerr, Lawrence (HHS/OS/OGA)" (b) (6), "Walker, Robert (OS/ASPR/BARDA)" (b) (6), "Lane, Cliff (NIH/NIAID) [E]" (b) (6), "Beigel, John (NIH) [E]" (b) (6)  
**Subject: Re: 2019 nCoV Master Protocol drafting group - CALL tomorrow Wednesday at 12:00 Geneva time**

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Libby

Elizabeth S. Higgs, MD, DTMH, MIA  
Global Health Science Advisor  
Division of Clinical Research  
National Institute of Allergy and Infectious Diseases  
NIH, HHS, USG  
(b) (6)  
Skype: libbyhiggs2  
Cell: (b) (6)

---

**From:** Ana Maria Henaoretrepoe (b) (6)  
**Date:** Saturday, February 15, 2020 at 4:01 AM

**To:** "David Lye Chien Boon (NCID)" (b) (6), "GSELL, Pierre" (b) (6)  
**Cc:** "GSELL, Pierre" (b) (6), ~~Forage~~ ~~Language~~ (b) (6), Peter Smith  
(b) (6), "Thomas R. Fleming" (b) (6), ilongini  
(b) (6), John Beigel (b) (6), (b) (6)  
(b) (6), ' (b) (6)' (b) (6), Yaseen  
Arabi (b) (6), Steve Webb (b) (6), Tansy Edwards  
(b) (6), "RIVEROS BALTA, Alina Ximena" (b) (6), "PREZIOSI,  
Marie-pierre" (b) (6), Vaseeharan SATHIYAMOORTHY (b) (6),  
"COSTA, Alejandro Javier" (b) (6), "SALAMI, Kolawole" (b) (6), "DIAZ,  
Janet Victoria" (b) (6)  
**Subject:** Re: 2019 nCoV Master Protocol drafting group - CALL tomorrow Wednesday at 12:00  
Geneva time

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FYI – please find attached the latest study synopsis for Phase 2b/Phase 3 treatment trial, on the basis of the WHO Blueprint WG of Clinical Trials and with support from experts in this group as well.

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More information can be accessed here-

<https://www.who.int/blueprint/priority-diseases/key-action/novel-coronavirus/en/>

Kind regards

Ana Maria

**From:** Albert, Sara (NIH) [C]  
**Sent:** Fri, 13 Mar 2020 13:08:56 +0000  
**To:** Miranda, Alejandra (NIH) [C]; Lane, Cliff (NIH/NIAID) [E]; Smolskis, Mary (NIH/NIAID) [E]; McNay, Laura (NIH/NIAID) [E]; Parrish, David (NIH/NIAID) [E]; Vogel, Susan (NIH/NIAID) [E]; Grace, Beth (NIH/NIAID) [C]; Crozier, Ian (NIH) [C]; Siddiqui, Sophia (NIH/NIAID) [E]; Cone, Katherine (NIH/NIAID) [E]; Pierson, Jerome (NIH/NIAID) [E]; Cahill, Kelly (NIH/NIAID) [E]; Carver, Trea (NIH) [C]; Higgs, Elizabeth (NIH/NIAID) [E]; Marston, Hilary (NIH/NIAID) [E]; Baseler, Beth (NIH) [C]; Proffitt, Calvin (NIH) [C]; Tierney, John (NIH/NIAID) [E]; Davey, Richard (NIH/NIAID) [E]; Herpin, Betsey (NIH/NIAID) [E]; Stern, Kaytee (NIH) [C]; Dodd, Lori (NIH/NIAID) [E]; Hensley, Lisa (NIH/NIAID) [E]; Lambert, Laurie (NIH) [C]; Duvenhage, Michael (NIH) [C]; Zuckerman, Judith (NIH/NIAID) [E]; Aboulhab, Jamila (NIH/NIAID) [E]; Sow, Ydrissa (NIH/NIAID) [E]; Osborne, Cynthia (NIH) [C]; Bonnett, Tyler (NIH) [C]; Eckes, Risa (NIH/NIAID) [V]; Simpson, Shelly (NIH) [C]; Billieux, Bridgette (NIH/NINDS) [E]; Newell, Kevin (NIH) [C]; Selthoffer, Lizanne (NIH/NIAID) [E]; Crissey, John (NIH/NIAID) [C]; Barrett, Kevin (NIH/NIAID) [E]; Gettinger, Nikki; Chessley Atchison; (b) (6); Steve AHUKA; Antoine Tshomba; Sinaré COULIBALY; (b) (6); Tona Lutete; Placide Mbala; Lusakibanza, Mariano; marcelo kalonji; (b) (6); Esaie Kindombe Iuzolo; Augustin Ibanda; Olivier Tshiani; Emile Okitolonda; DIAZ, Janet Victoria (b) (6); Adam Levine; Sivahera, Billy; Tomas Cihlar; (b) (6); (b) (6); (b) (6); (b) (6); Galcik, Michael (NIH) [C]; Dighero-Kemp, Bonnie (NIH/NIAID) [C]; Ewetola, Raimi (CDC/DDPHSIS/CGH/DGHT); (b) (6); Jacqueline Nordwall; Giri, Jiwan (NIH) [C]; (b) (6); Teitelbaum, Marc (NIH) [C]; Marchand, Jonathan (NIH) [C]; Jankelevich, Shirley (NIH) [C]; Holley, H. Preston (NIH) [C]; Coulibaly, Sinare; gael mukendi; Patrick Mutombo; (b) (6); Bagayogo, Oumar; Eric BARTE DE SAINTE FARE; NIAID CMRPD Emergency Ebola team; 'Babacar GUEYE'; (b) (6); Kallon, Kade (NIH) [C]; Camara, Josephine; Yovo, Koffi; Camara, Modet; 'CeCe Francis, Koli'; Daniel Mukadi; Nsengi NTAMABYALIRO; May, Corina (NIH) [C]  
**Cc:** Huyen Cao; Tara Nyhuis; Gray Heppner; Simon Eng; Johanna Mendoza; Yasmin Khan; Sarah Svoboda; Tenpenny, Elliott E; URLEP, Frederic; (b) (6); Sprecher, Armand (Médecins Sans Frontières Operational Center of Brussels); (b) (6); (b) (6); (b) (6); (b) (6); Issaka SOUMANA; Walker, Robert (OS/ASPR/BARDA); Benson, Sarah M; Singh, IP; Bera, Victoria (NIH/NIAID) [C]; Dixon, Mary (NIH/NCI) [C]; Sewell, Heather (NIH/NCI) [C]; Hayes, Beverly (NIH/NCI) [C]; Ledgerwood, Julie (NIH/NIAID) [E]; Doepel, Laurie (NIH/NIAID) [E]; Gause, Barry (NIH/NCI) [C]; Dmitrovsky, Ethan (NIH/NCI) [C]; Jackson, Shannon (NIH/NCI) [C]  
**Subject:** DRC Ebola Therapeutics Trial Implementation Team: Social Analytics  
**Attachments:** PALM Weekly Social Analytics Report 3-13-20.pdf, Rapport Regional d'Analyse Sociale de PALM 13-03-2020.pdf, PALM Weekly Social Analytics Report 3-13-20.pptx, Rapport Regional d'Analyse Sociale de PALM 13-03-2020.pptx

Dear DRC Ebola Trial Implementation team,

On behalf of the Social Mobilization and Psychosocial Committees please find attached the Social Analytics Report.

Please let the team know if you have any questions.



Thank you!  
Sara

Sara Albert, MPH (Contractor)  
Clinical Project Manager II  
Clinical Monitoring Research Program Directorate (CMRPD)  
Frederick National Laboratory for Cancer Research  
Leidos Biomedical Research, Inc.  
Support to NIAID  
5705 Industry Lane, Room 135  
Frederick, MD 21704  
Phone: (b) (6)  
BB#: (b) (6)  
Email: (b) (6)

This e-mail and any attachments to it are intended only for the identified recipients. It may contain proprietary or otherwise legally protected information for Leidos Biomedical Research, Inc. Any unauthorized use or disclosure of this communication is strictly prohibited. If you have received this communication in error, please notify the sender and delete or otherwise destroy the e-mail and all attachments immediately.

**From:** STAG IH Secretariat  
**Sent:** Tue, 24 Mar 2020 17:30:58 +0000  
**To:** vernonljm (b) (6); David Heymann;(SPmig) DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL (b) (6); Gary Kobinger; Johan Giesecke;(SPmig) Juliet Bedford; (b) (6); Lane, Cliff (NIH/NIAID) [E]; (b) (6); President\_RKI (b) (6); Schuchat, Anne MD (CDC/OD); Wieler, Lothar; Ziad Memish; MATHIS, Margaux Manoua; TWAL, Hanan; (b) (6); Hitoshi Oshitani; gmleung; Maya Arie; BARBESCHI, Maurizio; MORGAN, Oliver; BRIAND, Sylvie; RYAN, Michael J.; AYLWARD, Raymond Bruce J.; Dr VAN KERKHOVE, Maria; GREIN, Thomas; Adam Kucharski; SHAMSELDIN, Khaled; LEWIS, Rosamund F. (Felicity)  
**Cc:** VANDEMAELE, Katelijn A.h.; MAHJOUR, Jaouad; BALLER, April; DIAZ, Janet Victoria; PERKINS, Mark; FALL, Ibrahima Soce; DRURY, Patrick Anthony; DOLEA, Carmen Mihaela; PARK, Munjoo; PENDERGAST, Scott Douglas; leunggm; HENAO RESTREPO, Ana Maria; Carver, Trea (NIH) [C]; SHIDEED, Olla  
**Subject:** RE: [EXT] Re: !!STAG-IH!! COVID-19 technical discussion\_exiting lockdown

Thanks Vernon!

---

**From:** Vernon Lee (b) (6)  
**Sent:** Tuesday, March 24, 2020 2:52 PM  
**To:** STAG IH Secretariat (b) (6); (b) (6); David Heymann (b) (6); (SPmig) DELIA ENRIA (b) (6); Delia Enria (b) (6); Dr Amadou Alpha SALL (b) (6); Gary Kobinger (b) (6); Johan Giesecke (b) (6); (SPmig) Juliet Bedford (b) (6); (b) (6); Lane, Cliff (NIH/NIAID) [E] (b) (6); (b) (6); President\_RKI (b) (6); Schuchat, Anne MD (CDC/OD) (b) (6); Wieler, Lothar (b) (6); Ziad Memish (b) (6); MATHIS, Margaux Manoua (b) (6); TWAL, Hanan (b) (6); (b) (6); Hitoshi Oshitani (b) (6); gmleung (b) (6); Maya Arie (b) (6); BARBESCHI, Maurizio (b) (6); MORGAN, Oliver (b) (6); BRIAND, Sylvie (b) (6); RYAN, Michael J. (b) (6); AYLWARD, Raymond Bruce J. (b) (6); Dr VAN KERKHOVE, Maria (b) (6); GREIN, Thomas (b) (6); Adam Kucharski (b) (6); SHAMSELDIN, Khaled (b) (6); LEWIS, Rosamund F. (Felicity) (b) (6)  
**Cc:** VANDEMAELE, Katelijn A.h. (b) (6); MAHJOUR, Jaouad (b) (6); BALLER, April (b) (6); DIAZ, Janet Victoria (b) (6); PERKINS, Mark (b) (6); FALL, Ibrahima Soce (b) (6); DRURY, Patrick Anthony (b) (6); DOLEA, Carmen Mihaela (b) (6); PARK, Munjoo (b) (6); PENDERGAST, Scott Douglas (b) (6); leunggm (b) (6); HENAO RESTREPO, Ana Maria (b) (6); Carver, Trea (NIH) [C] (b) (6); SHIDEED, Olla (b) (6)  
**Subject:** [EXT] Re: !!STAG-IH!! COVID-19 technical discussion\_exiting lockdown

Dear Mike and friends,

There was talk about contact tracing apps. Singapore just launched one last week and have had hundreds of thousands of downloads so far.

Individuals have to consent to the use of the data and it has been calibrated so that it can determine distance.

Cheers,  
Vernon

<https://www.straitstimes.com/tech/singapore-app-allows-for-faster-contact-tracing>

<https://www.gov.sg/article/help-speed-up-contact-tracing-with-tracetgether>

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**From:** STAG IH Secretariat (b) (6)  
**Sent:** Tuesday, March 24, 2020 7:59 PM  
**To:** (b) (6); David Heymann  
(b) (6); (SPmig) DELIA ENRIA (b) (6); Delia Enria  
(b) (6); Dr Amadou Alpha  
SALL (b) (6); Gary Kobinger  
(b) (6); Johan Giesecke (b) (6); (SPmig) Juliet  
Bedford (b) (6); (b) (6)  
(b) (6); Lane, Cliff (NIH/NIAID) [E (b) (6); (b) (6)  
(b) (6); President\_RKI (b) (6); Schuchat, Anne MD  
(CDC/OD) (b) (6); Wieler, Lothar (b) (6); Ziad Memish  
(b) (6); MATHIS, Margaux Manoua (b) (6); TWAL, Hanan  
(b) (6); (b) (6); vernonljm  
(b) (6); Hitoshi Oshitani (b) (6); gmleung  
(b) (6); Maya Arie (b) (6); BARBESCHI, Maurizio (b) (6);  
MORGAN, Oliver (b) (6); BRIAND, Sylvie (b) (6); RYAN, Michael J.  
(b) (6); AYLWARD, Raymond Bruce J. (b) (6); Dr VAN KERKHOVE, Maria  
(b) (6); GREIN, Thomas (b) (6); Adam Kucharski  
(b) (6); SHAMSELDIN, Khaled (b) (6); LEWIS, Rosamund F.  
(Felicity) (b) (6)  
**Cc:** VANDEMAELE, Katelijn A.h. (b) (6); MAHJOUR, Jaouad (b) (6);  
BALLER, April (b) (6); DIAZ, Janet Victoria (b) (6); PERKINS, Mark  
(b) (6); FALL, Ibrahima Soce (b) (6); DRURY, Patrick Anthony  
(b) (6); DOLEA, Carmen Mihaela (b) (6); PARK, Munjoo (b) (6);  
PENDERGAST, Scott Douglas (b) (6); leunggm (b) (6); HENAO  
RESTREPO, Ana Maria (b) (6); Carver, Trea (NIH) [C] (b) (6);  
SHIDEED, Olla (b) (6)  
**Subject:** !!STAG-IH!! COVID-19 technical discussion\_exiting lockdown  
**When:** Tuesday, March 24, 2020 8:30 PM-10:00 PM.  
**Where:** via Zoom, HQ - SalleA



Dear All, With presentation slides from WHO.

and Bruce's Transition from lockdown discussion paper, mass gathering paper.

STAG-IH and Invited panel members, please call in advance, we will open the line 10 minutes before the meeting start time

HQ participants, in order to ensure enough space between staff, we changed the venue to Salle A.

Dear STAG-IH, Invited panel members,

As indicated during the last VC, we will have a follow up discussion on transition/exit from lockdown.

Agenda:

1. Update from secretariat and pending questions from previous meeting for discussion – Maria van Kerkhove, Oliver Morgan, STAG-IH Secretariat
2. Report from Lothar (Germany) and Italy (Giuseppe Ippolito) (five minutes each)
3. Ethics related to COVID-19 – Juliet
4. Discussion on factors to consider for exiting lockdown using Bruce's document (I will send you my comments on it in a forwarded mail)

Heads up - we plan to organize the next call on Friday to have update on clinical research collaboration, research activities from NIAID, vaccine development (CEPI), and ethics discussion.

## CALL IN INFO

WHO HQ EOC3 COVID-19 is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting

(b) (4), (b) (6)

Meeting ID: (b) (4), (b) (6)

### One tap mobile

(b) (6), (b) (4), (b) (6) Switzerland  
(b) (6), (b) (4), (b) (6) Switzerland Toll-free

### Dial by your location

(b) (6) Switzerland  
(b) (6) Switzerland Toll-free  
(b) (6) Switzerland Toll-free  
(b) (6) US  
(b) (6) US Toll-free  
(b) (6) US Toll-free  
(b) (6) France Toll-free  
(b) (6) France Toll-free

Meeting ID: (b) (4), (b) (6)

Find your local number: (b) (4), (b) (6)

### Join by SIP

(b) (4), (b) (6)

### Join by H.323

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

Meeting ID: (b) (4), (b) (6)

### Join by Skype for Business

(b) (4), (b) (6)

**From:** STAG IH Secretariat  
**Sent:** Tue, 24 Mar 2020 18:31:04 +0000  
**To:** (b) (6); David Heymann; (SPmig) DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL (b) (6); Gary Kobinger; Johan Giesecke; (SPmig) Juliet Bedford (b) (6); Lane, Cliff (NIH/NIAID) [E]; (b) (6); President\_RKI (b) (6); Schuchat, Anne MD (CDC/OD); Wieler, Lothar; Ziad Memish; MATHIS, Margaux Manoua; TWAL, Hanan; (b) (6); vernonljm; Hitoshi Oshitani; gmleung; Maya Arij; BARBESCHI, Maurizio; MORGAN, Oliver; BRIAND, Sylvie; RYAN, Michael J.; AYLWARD, Raymond Bruce J.; Dr VAN KERKHOVE, Maria; GREIN, Thomas; Adam Kucharski; SHAMSELDIN, Khaled; VANDEMAELE, Katelijn A.h.; MAHJOUR, Jaouad; BALLER, April; DIAZ, Janet Victoria; PERKINS, Mark; FALL, Ibrahima Soce; DRURY, Patrick Anthony; DOLEA, Carmen Mihaela; PARK, Munjoo; PENDERGAST, Scott Douglas; leunggm; HENAO RESTREPO, Ana Maria; LEWIS, Rosamund F. (Felicity); Carver, Trea (NIH) [C]; SHIDEED, Olla; MCFARLAND, Jeffrey; McFarland, Jeffrey (CDC/DDPHSIS/CGH/GID); BEN EMBAREK, Peter Karim  
**Cc:** STAG IH Secretariat  
**Subject:** !!STAG-IH!! VC minutes 24 march 2020  
**Attachments:** Minutes\_STAG\_IH\_2020\_03\_24.pdf, STAG-IH- 24 March Italy Ippolito.pdf, nCoV\_Lagebericht\_RKI\_2020-03-24.pdf, Slides for STAG-IH VC 24032020.pdf, 2020-03-23-en.pdf, COVID-19 Transition Criteria & Process - STAG Discussion Paper - 23Mar2020.pdf

Thank you all for your participation today. Please find presentation files and meeting minutes. Please be reminded, the presentation from Italy by prof Giuseppe Ippolito contains unpublished confidential data. It should NOT go out this circle, please. Please check with Secretariat if you have any questions.

Best wishes,  
Nikki



**From:** STAG IH Secretariat  
**Sent:** Thu, 20 Feb 2020 12:36:51 +0000  
**To:** (b) (6); David Heymann; (SPmig) DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL  
(b) (6); Gary Kobinger; Johan Giesecke; (SPmig) Juliet Bedford (b) (6); Lane, Cliff (NIH/NIAID) [E]; (b) (6); President\_RKI (b) (6); Schuchat, Anne MD (CDC/OD); Wieler, Lothar; Ziad Memish  
**Cc:** MORGAN, Oliver  
**Subject:** RE: !!STAG-IH!!\_TC minutes nCoV epi deep-dive  
**Attachments:** 20200220\_2019-nCoV\_OLIVER\_MORGAN.PDF

Dear STAG-IH – please see the slides attached for today's call.

Rosamund on behalf of Secretariat

**From:** AYLWARD, Raymond Bruce J.  
**Sent:** Sun, 1 Mar 2020 18:40:37 +0000  
**To:** Alexander SEMENOV (b) (6); Chikwe IHEKWEAZU (b) (6); Lane, Cliff (NIH/NIAID) [E]; Zhou, Weigong (CDC/DDID/NCIRD/ID); Dale FISHER (b) (6); Dr Hitoshi TAKAHASHI (b) (6); LEE Jong-Koo (b) (6); Natalia PSHENICHNAYA (b) (6); Tim ECKMANN (b) (6); XING, Jun; gmleung (b) (6)  
**Cc:** Dr VAN KERKHOVE, Maria; Zunyou Wu; (SPmig) LEI ZHOU; (b) (6); (b) (6); (b) (6)  
**Subject:** WITH ATTACHMENTS: WHO-China Joint Mission on COVID-19  
**Attachments:** Joint Mission REPORT Chinese VERSION 29Feb2020.pdf, COVID Joint Mission Findings - at 29Feb2020.pptx  
**Importance:** High

Dear International Members of the Joint Mission,

Clearly I need to get more sleep! Maria just pointed out that I had forgotten to send the attachments – please find the message/attachments again here:

I trust (hope!) that everyone remains in good health as you approach Day 7 since your departures from China. I have now had a 2<sup>nd</sup> test here in Geneva and am – of course – negative (thanks to the good care of our Chinese hosts)

Congratulations to those of you who have been on the frontlines of managing new cases and importations such as Chikwe in Nigeria.

I'm writing tonight to share with you three things:

1. the official **Chinese version of the Joint Mission report** that WHO received from the National Health Commission and which will be posted on our site;
2. the **WHO website links for the English version** of the report in case helpful:
  - o in the section of WHO Coronavirus page: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
  - o direct link to the report in English: <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>
3. a **short overview presentation** I quickly put together to share some of the key findings of the report in a VC with RD/WPRO and the WPRO Ministers of Health on Friday morning.

Please note, **I have added 3 slides on 'key epi/technical insights'** from our Mission to the end of the presentation. Maria and I put these together and WU Zunyou did a quick check/correction of them earlier this evening for us. **I would be most grateful if you might have a look at the 3 'technical insight' slides and provide any thoughts/corrections from your side.** I am not trying to be comprehensive but just to find a few key points that are important to understanding the evolving epi and containment impact in China.

I have also cc'd Dr LIANG, Dr WANG Bin, Dr Wu Zunyou and Dr Zhou Lei so that they can 'hear' the conversation (where all of them remain in quarantine at the (b) (6) in Beijing....).

With very best regards to all,

Bruce

---

**From:** AYLWARD, Raymond Bruce J.

**Sent:** Friday, February 28, 2020 10:58

**To:** GHEBREYESUS, Tedros Adhanom (b) (6)

**Cc:** KASAI, Takeshi (b) (6); GALEA, Gauden (b) (6); (b) (6);

(b) (6); (b) (6); (b) (6); LI Juan (b) (6)

(b) (6); (b) (6); Alexander SEMENOV (b) (6)

(b) (6); Chikwe IHEKWEAZU (b) (6)

(b) (6); Clifford LANE (b) (6); Zhou,

Weigong (CDC/DDID/NCIRD/ID) (b) (6); Dale FISHER (b) (6)

(b) (6); Dr Hitoshi TAKAHASHI (b) (6); LEE Jong-Koo

(b) (6); Natalia PSHENICHNAYA (b) (6)

(b) (6); Tim ECKMANN (b) (6)

(b) (6); XING, Jun (b) (6); gmleung (b) (6); Dr VAN KERKHOVE,

Maria (b) (6); RYAN, Michael J. (b) (6); SCHWARTLANDER, Bernhard F.

(b) (6); MINHAS, Raman (b) (6); SNIDER, Paige Anne

(b) (6); ALEXANDER, Nyka (b) (6); STERN, Gabriella (b) (6)

**Subject:** NEW - FOR PUBLIC RELEASE: WHO-China Joint Mission on COVID-19

**Importance:** High

Dr Tedros & colleagues,

Our eagle-eyed counterparts spotted a tiny edit I had inadvertently overlooked in the version just sent (an updated section now has six sub-sections but I had forgotten to say (b) (4) in the preambular para).

I would be most grateful if the attached version be used as the 'final final' (with time stamp of 1100hr in the file name).

Apologies to all for any inconvenience.

Bruce

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**From:** AYLWARD, Raymond Bruce J.

**Sent:** Friday, February 28, 2020 10:22

**To:** GHEBREYESUS, Tedros Adhanom (b) (6)

**Cc:** KASAI, Takeshi (b) (6); (b) (6); (b) (6); (b) (6);



(b) (6); LI Juan (b) (6);  
(b) (6); Alexander SEMENOV (b) (6)  
(b) (6); Chikwe IHEKWEAZU (b) (6)  
(b) (6); Clifford LANE (b) (6); Zhou,  
Weigong (CDC/DDID/NCIRD/ID) (b) (6); Dale FISHER (b) (6)  
(b) (6); Dr Hitoshi TAKAHASHI (b) (6); LEE Jong-Koo  
(b) (6); Natalia PSHENICHNAYA (b) (6)  
(b) (6); Tim ECKMANN (b) (6)  
(b) (6); XING, Jun (b) (6); gmleung (b) (6); Dr VAN KERKHOVE,  
Maria (b) (6); RYAN, Michael J. (b) (6); SCHWARTLANDER, Bernhard F.  
(b) (6); MINHAS, Raman (b) (6); SNIDER, Paige Anne  
(b) (6); ALEXANDER, Nyka (b) (6); STERN, Gabriella (b) (6)

**Subject:** FOR PUBLIC RELEASE: WHO-China Joint Mission on COVID-19

**Importance:** High

Dear Dr Tedros,

It is my honor to share with you the attached, final version of the **Report of the WHO-China Joint Mission on COVID-19**, on behalf of myself, my Co-Lead Dr LIANG Wannian, our Deputy Team Leader Dr WANG Bin, and the entire Joint Team of Chinese national and international members.

I am pleased to inform you that in the 24 hours since sharing a preliminary version of this report, the China and international members have fully aligned the language of the English and Chinese versions, allowing the release of both versions today.

It is agreed with our Chinese counterparts that the English version can be released immediately, given the urgency of sharing these findings with the international community. The Honorable Minister of Health, Dr MA Xiaowei, will release the Chinese version within hours.

In closing, I would like to reiterate my personal gratitude to Dr LIANG for his deep experience and guidance as we consolidated our findings, and to the entire Team for their tremendous contributions throughout. As you and I have discussed, this was truly a Joint Mission and the quality of this report reflects the world-class expertise of all team members, both national and international. The attached findings and recommendations reflect the collective opinion of the entire team, all of whom have been closely engaged in its writing and finalization.

It is our common hope and belief that the findings contained herein can inform the global work you are leading to stem the ongoing international spread of COVID-19.

Regards

Bruce

**From:** SCANO, Fabio  
**Sent:** Sun, 23 Feb 2020 07:17:28 +0000  
**To:** Lane, Cliff (NIH/NIAID) [E]  
**Subject:** Chat history for group "WHO Experts Group"  
**Attachments:** eng Foreign Language v6 clinical protocol.pdf, ATT00001.htm

Dear:

The text and image message history of the WeChat group "WHO Experts Group" is as follows.

2020-2-11

**Fabio Scano 13:39**

eng Foreign Language v6 clinical protocol.pdf (View in attachment)

**From:** Dr VAN KERKHOVE, Maria  
**Sent:** Sun, 23 Feb 2020 10:59:30 +0000  
**To:** Lane, Cliff (NIH/NIAID) [E]  
**Cc:** (b) (6)  
**Subject:** Re: COVID 19 References

Hi Cliff,

I think we need to be more selective of the references that are identified. I would be grateful if we could pull some key ones from Zhong Nanshan's group, China CDC, the report of 41 cases, then of 425 cases, then 1099 cases – some on clinical features (as you have below), lab diagnostics and phylogenetics, clinical trial protocols, etc.

Thanks in advance for your work on this,  
Maria

---

**From:** Cliff Lane (b) (6)  
**Date:** Sunday, 23 February 2020 at 09:47  
**To:** Maria Van Kerkhove (b) (6)  
**Cc:** (b) (6)  
**Subject:** Fwd: COVID 19 References

Below are some of the key references regarding COVID 19. I pulled these from PubMed. There may be other documents (esp. governmental guidelines) we should add.

Cliff

Begin forwarded message:

**From:** NLM NCBI nobody (b) (6)  
**Date:** February 23, 2020 at 4:42:09 PM GMT+8  
**To:** "Lane, Cliff (NIH/NIAID) [E]" (b) (6)  
**Subject:** COVID 19 References

This message contains search results from the National Center for Biotechnology Information ([NCBI](#)) at the U.S. National Library of Medicine ([NLM](#)). Do not reply directly to this message

**Sent On:** Sun Feb 23 03:42:03 2020

30 selected items

PubMed Results



Items 1-30 of 30 ([Display the 30 citations in PubMed](#))

1. [A Novel Coronavirus From Patients With Pneumonia in China, 2019](#)  
N Zhu et al. N Engl J Med 382 (8), 727-733. 2020. PMID 31978945.  
In December 2019, a cluster of patients with pneumonia of unknown cause was linked to a seafood wholesale market in Wuhan, China. A previously unknown betacoronavirus was ...
2. [Clinical Features of Patients Infected With 2019 Novel Coronavirus in Wuhan, China](#)  
C Huang et al. Lancet 395 (10223), 497-506. 2020. PMID 31986264.  
Ministry of Science and Technology, Chinese Academy of Medical Sciences, National Natural Science Foundation of China, and Beijing Municipal Science and Technology Commis ...
3. [Detection of 2019 Novel Coronavirus \(2019-nCoV\) by Real-Time RT-PCR](#)  
VM Corman et al. Euro Surveill 25 (3). Jan 2020. PMID 31992387.  
BackgroundThe ongoing outbreak of the recently emerged novel coronavirus (2019-nCoV) poses a challenge for public health laboratories as virus isolates are unavailable wh ...
4. [Genomic Characterisation and Epidemiology of 2019 Novel Coronavirus: Implications for Virus Origins and Receptor Binding](#)  
R Lu et al. Lancet. 2020. PMID 32007145.  
National Key Research and Development Program of China, National Major Project for Control and Prevention of Infectious Disease in China, Chinese Academy of Sciences, Sha ...
5. [Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia](#)  
Q Li et al. N Engl J Med. 2020. PMID 31995857.  
On the basis of this information, there is evidence that human-to-human transmission has occurred among close contacts since the middle of December 2019. Considerable eff ...
6. [Genomic Characterization of the 2019 Novel Human-Pathogenic Coronavirus Isolated From a Patient With Atypical Pneumonia After Visiting Wuhan](#)  
JF Chan et al. Emerg Microbes Infect 9 (1), 221-236. Dec 2020. PMID 31987001.  
A mysterious outbreak of atypical pneumonia in late 2019 was traced to a seafood wholesale market in Wuhan of China. Within a few weeks, a novel coronavirus tentatively n ...
7. [Epidemiological and Clinical Characteristics of 99 Cases of 2019 Novel Coronavirus Pneumonia in Wuhan, China: A Descriptive Study](#)  
N Chen et al. Lancet 395 (10223), 507-513. 2020. PMID 32007143.



National Key R&D Program of China.

8. [Preliminary Estimation of the Basic Reproduction Number of Novel Coronavirus \(2019-nCoV\) in China, From 2019 to 2020: A Data-Driven Analysis in the Early Phase of the Outbreak](#)

S Zhao et al. Int J Infect Dis 92, 214-217. 2020. PMID 32007643.

The mean estimate of  $R_0$  for the 2019-nCoV ranges from 2.24 to 3.58, and is significantly larger than 1. Our findings indicate the potential of 2019-nCoV to cau ...

9. [A Familial Cluster of Pneumonia Associated With the 2019 Novel Coronavirus Indicating Person-To-Person Transmission: A Study of a Family Cluster](#)

JF Chan et al. Lancet 395 (10223), 514-523. 2020. PMID 31986261.

The Shaw Foundation Hong Kong, Michael Seak-Kan Tong, Respiratory Viral Research Foundation Limited, Hui Ming, Hui Hoy and Chow Sin Lan Charity Fund Limited, Marina Man-W ...

10. [CT Imaging Features of 2019 Novel Coronavirus \(2019-nCoV\)](#)

M Chung et al. Radiology 200230. 2020. PMID 32017661.

In this retrospective case series, chest CT scans of 21 symptomatic patients from China infected with the 2019 novel coronavirus (2019-nCoV) were reviewed, with emphasis ...

11. [CT Imaging of the 2019 Novel Coronavirus \(2019-nCoV\) Pneumonia](#)

J Lei et al. Radiology 200236. 2020. PMID 32003646.

12. [Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China](#)

D Wang et al. JAMA. 2020. PMID 32031570.

In this single-center case series of 138 hospitalized patients with confirmed NCIP in Wuhan, China, presumed hospital-related transmission of 2019-nCoV was suspected in 4 ...

13. [A Pneumonia Outbreak Associated With a New Coronavirus of Probable Bat Origin](#)

P Zhou et al. Nature. 2020. PMID 32015507.

Since the SARS outbreak 18 years ago, a large number of severe acute respiratory syndrome-related coronaviruses (SARSr-CoV) have been discovered in their natural reservoir ...

14. [Molecular Diagnosis of a Novel Coronavirus \(2019-nCoV\) Causing an Outbreak of Pneumonia](#)

DKW Chu et al. Clin Chem. 2020. PMID 32031583.

The established assays can achieve a rapid detection of 2019n-CoV in human samples, thereby allowing early identification of patients.

15. [Clinical Characteristics of Novel Coronavirus Cases in Tertiary Hospitals in Hubei](#)



## Province

L Kui et al. Chin Med J (Engl). 2020. PMID 32044814.

The majority of patients with 2019-nCoV coronavirus pneumonia present with fever as the first symptom, and most of them still showed typical manifestations of viral pneum ...

16. [RNA Based mNGS Approach Identifies a Novel Human Coronavirus From Two Individual Pneumonia Cases in 2019 Wuhan Outbreak](#)

L Chen et al. Emerg Microbes Infect 9 (1), 313-319. Dec 2020. PMID 32020836.

From December 2019, an outbreak of unusual pneumonia was reported in Wuhan with many cases linked to Huanan Seafood Market that sells seafood as well as live exotic anima ...

17. [Initial CT Findings and Temporal Changes in Patients With the Novel Coronavirus Pneumonia \(2019-nCoV\): A Study of 63 Patients in Wuhan, China](#)

Y Pan et al. Eur Radiol. 2020. PMID 32055945.

Imaging changes in novel viral pneumonia are rapid. The manifestations of the novel coronavirus pneumonia are diverse. Imaging changes of typical viral pneumonia and some ...

18. [Preliminary Prediction of the Basic Reproduction Number of the Wuhan Novel Coronavirus 2019-nCoV](#)

T Zhou et al. J Evid Based Med. 2020. PMID 32048815.

The early transmission ability of 2019-nCoV is close to or slightly higher than SARS. It is a controllable disease with moderate to high transmissibility. Timely and effe ...

19. [Measures for Diagnosing and Treating Infections by a Novel Coronavirus Responsible for a Pneumonia Outbreak Originating in Wuhan, China](#)

F Yu et al. Microbes Infect. 2020. PMID 32017984.

On 10 January 2020, a new coronavirus causing a pneumonia outbreak in Wuhan City in central China was denoted as 2019-nCoV by the World Health Organization (WHO). As of 2 ...

20. [Origin and Evolution of the 2019 Novel Coronavirus](#)

L Zhang et al. Clin Infect Dis. 2020. PMID 32011673.

21. [Consistent Detection of 2019 Novel Coronavirus in Saliva](#)

KK To et al. Clin Infect Dis. 2020. PMID 32047895.

The 2019-novel-coronavirus (2019-nCoV) was detected in the self-collected saliva of 91.7% (11/12) of patients. Serial saliva viral load monitoring generally showed a decl ...

22. [Incubation Period of 2019 Novel Coronavirus \(2019-nCoV\) Infections Among Travellers From Wuhan, China, 20-28 January 2020](#)

JA Backer et al. Euro Surveill 25 (5). Feb 2020. PMID 32046819.



A novel coronavirus (2019-nCoV) is causing an outbreak of viral pneumonia that started in Wuhan, China. Using the travel history and symptom onset of 88 confirmed cases t ...

23. [Initial Cluster of Novel Coronavirus \(2019-nCoV\) Infections in Wuhan, China Is Consistent With Substantial Human-to-Human Transmission](#)  
H Nishiura et al. J Clin Med 9 (2). 2020. PMID 32054045.  
Reanalysis of the epidemic curve from the initial cluster of cases with novel coronavirus (2019-nCoV) in December 2019 indicates substantial human-to-human transmission. ...
24. [CT Manifestations of Two Cases of 2019 Novel Coronavirus \(2019-nCoV\) Pneumonia](#)  
Y Fang et al. Radiology 200280. 2020. PMID 32031481.
25. [Emergence of a Novel Coronavirus Causing Respiratory Illness From Wuhan, China](#)  
JW Tang et al. J Infect. 2020. PMID 32001309.
26. [Therapeutic and Triage Strategies for 2019 Novel Coronavirus Disease in Fever Clinics](#)  
J Zhang et al. Lancet Respir Med. 2020. PMID 32061335.
27. [Molecular and Serological Investigation of 2019-nCoV Infected Patients: Implication of Multiple Shedding Routes](#)  
W Zhang et al. Emerg Microbes Infect 9 (1), 386-389. Dec 2020. PMID 32065057.  
In December 2019, a novel coronavirus (2019-nCoV) caused an outbreak in Wuhan, China, and soon spread to other parts of the world. It was believed that 2019-nCoV was tran ...
28. [Estimation of the Transmission Risk of the 2019-nCoV and Its Implication for Public Health Interventions](#)  
B Tang et al. J Clin Med 9 (2). 2020. PMID 32046137.  
Since the emergence of the first cases in Wuhan, China, the novel coronavirus (2019-nCoV) infection has been quickly spreading out to other provinces and neighboring coun ...
29. [A Familial Cluster of Infection Associated With the 2019 Novel Coronavirus Indicating Potential Person-To-Person Transmission During the Incubation Period](#)  
P Yu et al. J Infect Dis. 2020. PMID 32067043.  
An ongoing outbreak of pneumonia associated with 2019 novel coronavirus (2019-nCoV) was reported in China. It is unclear if the infectivity exists during the incubation p ...
30. [Abnormal Coagulation Parameters Are Associated With Poor Prognosis in](#)

Patients With Novel Coronavirus Pneumonia

N Tang et al. J Thromb Haemost. 2020. PMID 32073213.

The present study shows that abnormal coagulation results, especially markedly elevated D-dimer and FDP are common in deaths with NCP.

**From:** Dr VAN KERKHOVE, Maria  
**Sent:** Thu, 20 Feb 2020 23:59:49 +0000  
**To:** Lane, Cliff (NIH/NIAID) [E]  
**Cc:** AYLWARD, Raymond Bruce J.  
**Subject:** Re: Comments on research

Thank you Cliff, well received.

On 21 Feb 2020, at 02:26, Lane, Cliff (NIH/NIAID) [E] (b) (6) wrote:

Maria,

Attached (and pasted below) are some thoughts regarding research. I do not know how much, if any, of this is helpful for the report.

Comments for consideration on research activities

Strategic perspective/findings

There is an urgent need to answer a series of critical questions related to the current outbreak. Among them are what is the pathogenesis of COVID-19 infection; what are the long-term sequelae (if any) of COVID-19; what available therapies (licensed western products, investigational western products and traditional Chinese medicines) are most effective and are there new therapies and vaccines that can be developed. We repeatedly heard the comment that the medical community is busy saving lives and does not have time for research. This is a false choice and it is critical that additional resources be devoted to the effort such that this critical research can be conducted and science-based therapies identified. When asking about research we were often told that patients are dying and need to be given any medications that might be of benefit. When experimental agents were used the comment we received most often was that they were working, however there were no objective data to support those claims. Among the western medications being administered are chloroquine, favipiravir, inhaled interferon, lopinavir/ritonavir (kaletra), advera, ribavirin, convalescent plasma and remdesivir. The most promising traditional Chinese medicine was said to be Lianhu Qingwen and an additional 10 were also noted to be of value. It was not clear whether or not there was any centralized prioritization of the use or evaluation of these agents (western or traditional). While we did not review the precise protocols under which these are being administered we did hear that remdesivir is being studied in a randomized, controlled trial but that there were difficulties in enrolling that study. As was demonstrated in the early days of the HIV pandemic and during the West African Ebola outbreak the fastest way to get the most effective therapies to the greatest number of individuals is through rigorous, well-controlled clinical trials. Given the substantial research infrastructure and subject matter expertise present in China and critical unknowns to be addressed, the development of a substantial, centrally coordinated



human subjects research program would seem possible. This infrastructure could support observational studies, treatment studies and vaccine trials.

Technical perspectives/recommendations



<WHO-China joint mission research.docx>

**From:** Kumnuan Ungchusak  
**Sent:** Fri, 21 Feb 2020 10:20:55 +0700  
**To:** Foreign Language  
**Cc:** STAG IH Secretariat; (b) (6); David Heymann; (SPmig) DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL (Amadou.S; Gary Kobinger; Johan Giesecke; (SPmig) Juliet Bedford; Lane, Cliff (NIH/NIAID) [E]; President\_RKI (b) (6); Schuchat, Anne MD (CDC/OD); Wieler Lothar; Ziad Memish; MORGAN Oliver  
**Subject:** Re: Evolving situation in South Korea

Dear Dr. Myoung-don,

Thank you so much for sharing this information. Is the church a close-space and how long is the service. I guess the activity is very close contact for hours as you mentioned "leg to leg". Interesting one outbreak in Singapore is related to church service. If we understand the enabling environment then some good suggestions that acceptable to churchgoers can be proposed.

On Fri, Feb 21, 2020, 06:29 Foreign Language (b) (6) wrote:

Dear David and all,

The situation of COVID-19 outbreaks is rapidly evolving. As of 20 Feb, 4 PM, Korea Time, Korea CDC confirmed 104 cases, a sudden increase of 73 cases over the last 2 days. This sudden increase is related to 2 large clusters of COVID-19 cases: the outbreaks at a church and a hospital. The cluster size, so far, is 44 for the church outbreak, and 15 for the hospital outbreak.

The church is located in Daegu Metropolitan city, 4<sup>th</sup> largest city in Korea, with a population of 2.5 million. The church, "ShinCheonJi (New Heaven, New World), is a heresy,

information regarding the church. <http://en.shincheonji.kr/>

and the member meet in the chapel, sit cross-legged on the floor with leg to leg. There are ~9 thousand members of the church in Daegu city. Of the 1001 who met in the chapel, 135 (13.5%) had symptoms, 705 (70.5%) didn't, and the others (16%) did not respond to the interview calls. Korea CDC is investigating the clusters, and preliminary data shows that illness onsets of the 44 cases showed 2 peaks, one at 7-9 Feb, the other at 15-17 Feb, suggesting 2- and 3-transmissions had occurred on the consecutive Sundays.

I think the church outbreak is very important to note, because church can be an amplifying place for SARS-CoV-2, and I am very concerned of community spread due to the church outbreak.

Regarding the hospital outbreak, the hospital is located near the Daegu metropolitan city. Of the 15 cases, all were from psychiatric closed ward, and one patient (61/male) died of pneumonia on 19 Feb. 12 HCWs work at the ward, and 5 nurses were found infected. A total of 101 patients had been admitted to the closed ward. The investigating is underway, and we expect more cases.

This is all that I have now, and I will update you as we have more detailed information.

Regards,

Oh Myoung-don, M.D.  
Professor,  
Department of Internal Medicine  
Seoul National University College of Medicine  
Seoul National University Hospital  
101 Daehak-ro, Jongno-gu, Seoul, 03080, South Korea  
TEL: (b) (6), FAX: 82-2-762-9662  
e-mail: (b) (6)

Foreign Language

Foreign  
Language:

STAG IH Secretariat (b) (6)

: (b) (6)

David Heymann (b) (6), "(SPmig) DELIA ENRIA"

(b) (6), "Delia Enria (b) (6)

(b) (6), "Dr Amadou Alpha SALL (Amadou.S"

(b) (6), Gary Kobinger

(b) (6), Johan Giesecke

(b) (6), "(SPmig) Juliet Bedford" (b) (6),

(b) (6), "Lane, Cliff (NIH/NIAD)

[E" (b) (6), (b) (6),

"President\_RKI (b) (6), "Schuchat, Anne MD (CDC/OD)

(ac" (b) (6), "Wieler, Lothar" (b) (6), Ziad Memish

(b) (6)

Foreign  
Language:

"MORGAN, Oliver" (b) (6)



Foreign  
Language: 2020-02-20 (목) 21:41:43

Foreign  
Language: RE: !!STAG-IH!!\_TC minutes nCoV epi deep-dive

Dear STAG-IH – please see the slides attached for today's call.

Rosamund on behalf of Secretariat

**From:** Raghunathan, Pratima (CDC/DDPHSIS/CGH/OD)  
**Sent:** Fri, 21 Feb 2020 07:13:28 +0000  
**To:** (b) (6); steve ahuka; Sabue Mulangu  
2; (b) (6); (b) (6); DEDE NDUNGI; Gisèle  
Mbuyi; (b) (6); GUEYE, Abdou Salam; Beach, Michael J.  
(CDC/DDID/NCEZID/DFWED); Kaiser, Reinhard (CDC/DDPHSIS/CGH/DGHP); Christie, Athalia  
(CDC/DDPHSIS/CGH/OD); Montgomery, Joel M. (CDC/DDID/NCEZID/DHCPP); Lane, Cliff (NIH/NIAID)  
[E]; Aboulhab, Jamila (NIH/NIAID) [E]  
**Subject:** possible ASTMH symposium submission on Ebola - request for feedback by  
February 23  
**Attachments:** 2020\_02\_20 ASTMH Ebola symposium proposal v2.docx

Dear colleagues,

There have been a few discussions in DRC about developing an ASTMH symposium on scientific innovations in the Ebola response. Prof Muyembe indicated his interest in generating a draft proposal, focused on 4 presentations (overview, vaccines, treatments, and health system strengthening in post-Ebola transition), with potential speakers from INRB, WHO, NIH, and MOH.

Attached is a draft ASTMH symposium proposal for your consideration and feedback, and the symposium proposal guidelines are linked below. **If your institution would like to participate, please express interest by Saturday; and provide a focal point, and your edits to the document by Sunday February 23.** Please also consider whom you would nominate as a speaker and/or co-chair, noting the importance ASTMH places on diversity and gender representation.

<https://www.astmh.org/ASTMH/media/2020-Annual-Meeting/ASTMH-2020-Call-for-Symposia-FINAL.pdf>

Because of the impending submission deadline on February 26, we would like to plan a discussion/conference call on Saturday February 22 and/or February 24 to finalize content, co-chairs and speakers, and submission logistics. There is an unrelated meeting at INRB in Kinshasa this afternoon where we aim to gauge next steps with Prof Muyembe and Ahuka, and will share their additional feedback.

**Please let us know whether you would be available for a conference call on Saturday February 22, 9am ET/ 3pm Kinshasa/4pm Goma.**

Thank you in advance for considering this, and look forward to your input and suggestions. Many thanks for your time and interest.

Best, Pratima

Ferdinand Ntanguya

Best,  
Pratima

Pratima Raghunathan, PhD, MPH  
Acting Country Director  
Centers for Disease Control and Prevention  
Kinshasa, Democratic Republic of the Congo

DRC Cell: (b) (6)

US cell: (b) (6)

Email: (b) (6)



**From:** Dale Fisher  
**Sent:** Fri, 21 Feb 2020 11:46:48 +0000  
**To:** DRURY, Patrick  
Anthony, (b) (6); (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); Zhou, Weigong (CDC/DDID/NCIRD/ID); Lane, Cliff (NIH/NIAID) [E]; (b) (6)  
(b) (6); (b) (6)  
**Cc:** AYLWARD, Raymond Bruce J.; XING, Jun; Dr VAN KERKHOVE, Maria; PANG, Xinxin; GALEA, Gauden; AL-SHORBAJI, Farah; UMALI DALANGIN, Khristeen; HAN, Mansuk Daniel; GREIN, Thomas; MAHAMUD, Abdi Rahman  
**Subject:** RE: WHO/GOARN: China mission - changes to return flights

Thanks Pat, Khris, WPRO, CO and all!

We can feel the support.....logistics are very smooth allowing us to get on with the work. Its been great

Regards

Dale

---

**From:** DRURY, Patrick Anthony (b) (6)  
**Sent:** Friday, 21 February 2020 7:20 PM  
**To:** Dale Fisher (b) (6); (b) (6); (b) (6);  
(b) (6); (b) (6); (b) (6); (b) (6); (b) (6); (b) (6)  
(b) (6); (b) (6)  
**Cc:** AYLWARD, Raymond Bruce J. (b) (6); XING, Jun (b) (6); Dr VAN KERKHOVE, Maria (b) (6); PANG, Xinxin (b) (6); GALEA, Gauden (b) (6); AL-SHORBAJI, Farah (b) (6); UMALI DALANGIN, Khristeen (b) (6); HAN, Mansuk Daniel (b) (6); GREIN, Thomas (b) (6); MAHAMUD, Abdi Rahman (b) (6)  
**Subject:** WHO/GOARN: China mission - changes to return flights

- External Email -

Dear colleagues,

We have received news from Bruce and WHO country team on the latest changes, the Wuhan deployment, and current planning on the final wrap up.

Khris and the HR/Travel team at HQ and WPRO are working on the changes, and rescheduling travel/flights.

Thanks for your continuing commitment and support.

best wishes,

Pat

Pat Drury

Deputy Incident Manager – COVID-19

Global Outbreak Alert and Response Network (GOARN)

WHO Health Emergency Preparedness and Response

(b) (6)

(b) (6)

---

Important: This email is confidential and may be privileged. If you are not the intended recipient, please delete it and notify us immediately; you should not copy or use it for any purpose, nor disclose its contents to any other person. Thank you.

**From:** (b) (6) on behalf of Foreign Language (b) (6)  
**Sent:** Wed, 25 Mar 2020 05:33:21 +0900  
**To:** Gary Kobinger; STAG IH Secretariat (b) (6); David Heymann; (SPmig) DELIA ENRIA; Delia Enria (b) (6); Dr Amadou Alpha SALL (Amadou.S; Johan Giesecke; (SPmig) Juliet Bedford; (b) (6); President\_RKI (b) (6); Ziad Memish (b) (6); Schuchat, Anne MD (CDC/OD); Lane, Cliff (NIH/NIAID) [E]  
**Subject:** RE: Re: I!STAG-IH!\_FW: COVID-19 summary as of 18h 23 Mar 2020

Dear David and all,

To assess the effect of wearing mask, I just looked up our influenza surveillance data. And, the proportion of ILI was 47.8/1000 during the 2nd week of 2020 --> 40.9, 4th week --> 16.4, 6th week --> 8.5, 8th week (16~ 22 Feb) --> 3.9, 10th week (1~7 March) --> 2.9, 11th week.

It would be interesting if we could compare ILI rates between the "countries wearing masks" and "countries not wearing masks."  
Maybe, influenza group already have these data.

Regards,

Oh Myoung-don, M.D.  
Professor,  
Department of Internal Medicine  
Seoul National University College of Medicine  
Seoul National University Hospital  
101 Daehak-ro, Jongno-gu, Seoul, 03080, South Korea  
TEL: (b) (6), FAX: 82-2-762-9662  
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Foreign Language  
Foreign Language: Gary Kobinger (b) (6)  
: STAG IH Secretariat (b) (6),  
(b) (6), David Heymann  
(b) (6), "(SPmig) DELIA ENRIA" (b) (6),  
"Delia Enria (b) (6), "Dr Amadou Alpha SALL  
(Amadou.S" (b) (6), Johan Giesecke (b) (6),  
"(SPmig) Juliet Bedford" (b) (6),  
(b) (6), "Lane, Cliff (NIH/NIAID)  
[E" (b) (6), "  
"President\_RKI (b) (6), "Schuchat, Anne MD (CDC/OD)



(ac" (b) (6), "Wieler, Lothar" (b) (6), Ziad Memish

(b) (6)

Foreign  
Language : 2020-03-25 (수) 04:32:08

Foreign  
Language : Re: !!STAG-IH!!\_FW: COVID-19 summary as of 18h 23 Mar 2020

Hello

So lucky for you'all I couldn't unmute this am (unsure why) clearly there is a guardian angel for all of you. Unlucky for you'all I am now writing this ☹

Was thinking of the 90%+ of people wearing masks in countries/areas where it seems better controlled (Singapore, SK, arguably China with a slow return to "normal"). The great data from last TC showing the positive effect of masks on SARS-CoV2 but not flu and rhino. The similar populations between Italy and Japan (older etc) with different propagation CFR etc. and likely usage of masks

Realizing that if we put everyone in a BSL4 suit today transmission will stop today, also in Papis 100% effective, probably down >99% with N100 and >95% with N95 (with correct usage).

Considering that :

- we are investing huge resources for therapeutics and vaccines clinical evaluation.
- Masks seem to work in health care settings
- Physical distancing seem to work and that a physical barrier can do the same job with less distance (and for example allow people to go back to work etc)
- everybody on this planet has clothing and access to tools to make masks (even if imperfect)
- any physical barriers even if imperfect could at the minimum reduce exposure frequency and importantly dose.

Why are we not seeing the usage of masks being evaluated at the community levels... ?!?!?!?

What am I missing?

Would be nice to have some real data on this

Lastly, the model from 4-6 weeks ago showing that closure of borders would only delay spread but not really speed of amplification; which we see now as pretty close to what has happened and is happening. What are these models showing/predicting now? Including at more regional levels

The very best

Gary

---

**From:** STAG-IH (b) (6)  
**Date:** Tuesday, March 24, 2020 at 07:29  
**To:** (b) (6), David Heymann  
(b) (6), "(SPmig) DELIA ENRIA" (b) (6), "Delia Enria  
(b) (6), "Dr  
Amadou Alpha SALL (b) (6), Gary Kobinger  
(b) (6), Johan Giesecke (b) (6), "(SPmig)  
Juliet Bedford" (b) (6), (b) (6)  
(b) (6), "Lane, Cliff (NIH/NIAID) [E" (b) (6),  
(b) (6), "President\_RKI (b) (6)  
(b) (6), "Schuchat, Anne MD (CDC/OD) (b) (6), "Wieler,  
Lothar" (b) (6), Ziad Memish (b) (6)  
**Cc:** STAG-IH (b) (6)  
**Subject:** !!STAG-IH!!\_FW: COVID-19 summary as of 18h 23 Mar 2020

**PREFACE:** The following slides are not final and are produced solely for the purposes of informing operations. As investigations are ongoing, all data are subject to verification and change. Not all analyses are updated daily, and additional analyses will be added/removed depending on operational needs at the time of production. **All information in this slide deck should be treated as confidential and provisional**, and should not be shared or used for any outward facing products.

### Highlights

- Italy

Two weeks after implementing the strict country-wide lockdown, Italian officials reported a decline in number of cases and deaths reported for two days in a row.

Link: <https://www.nytimes.com/2020/03/23/world/europe/italy-coronavirus-hospitals.html?referringSource=articleShare>

- Republic of Korea

Yesterday, Korea saw its lowest daily increase in coronavirus cases in a month.

The country is also carrying out free virus testing for incoming travellers from Europe.

Link: <http://www.koreaherald.com/view.php?ud=20200323000803>

- Pakistan

The number of reported COVID-19 cases in Pakistan has more than doubled since last Thursday, from 302 cases to 784 cases as of 23 March. As concerns remain about cases arriving from Iran, more than 1 million travellers have been screened and 217 suspected cases identified.

Link: <https://www.nih.org.pk/wp-content/uploads/2020/03/COVID-19-Daily-Updated-SitRep-23-Mar-2020.pdf>

- Update on first case in Syria

The case was an asymptomatic 19 yo student returning from US after their university closed. Contact tracing and testing was conducted (including those from the planes) and no additional cases were identified at this time.

## Current Situation (As of 23 Mar, 18H Geneva Time)

### Updates from last 24 hours

- **40,902 new confirmed cases from 162 countries/states/territories:**
- **1,709 new deaths:** Italy (649), Spain (394), United States of America (201), Iran (Islamic Republic of) (127), France (112), The United Kingdom (48), Netherlands (43), Germany (27), China (9), Turkey (9), Austria (8), Belgium (8), Philippines (8), Republic of Korea (7),



Canada (6), Japan (5), Egypt (4), India (4), Switzerland (4), Hungary (3), Iraq (3), Algeria (2), Colombia (2), Greece (2), Malaysia (2), Pakistan (2), Panama (2), Poland (2), Portugal (2), Romania (2), Afghanistan (1), Argentina (1), Czechia (1), Democratic Republic of the Congo (1), Guam (1), Indonesia (1), Ireland (1), Kosovo\* (1), Mexico (1), Morocco (1), North Macedonia (1), Sweden (1)

- **3 countries/states/territories reported the 1st confirmed case:** Grenada (1), Syrian Arab Republic (1), Mozambique (1)
- **7 countries/states/territories reported the 1st death:** Colombia (2), Afghanistan (1), Guam (1), Czechia (1), Kosovo (All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999)) (1), North Macedonia (1), Romania (2)
- **Top 10 countries with the most number of cases in past 24 hours:** United States of America(16354), Italy(5560), Spain(3646), Germany(3311), France(1525), Iran (Islamic Republic of)(1411), Switzerland(894), The United Kingdom(669), Australia(611), Austria(607)

**Globally, between 31 Dec 2019 - 23 Mar 2020**

- **335,012** cases from **190** countries/states/territories and 1 international conveyance
- **14,653** deaths from **85** countries/states/territories and 1 international conveyance
- **Top 10 countries with the highest number of cumulative cases:** China(81603), Italy(59138), United States of America(31573), Spain(28572), Germany(24774), Iran (Islamic Republic of)(23049), France(15821), Republic of Korea(8961), Switzerland(6971), The United Kingdom(5687)

\*All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999)

Regards,

Blanche

Epidemiologist

Public Health Intelligence, Risk Assessment and Dissemination (PHI)

Health Emergency Information and Risk Assessment (HIM)

WHO Health Emergencies Programme (WHE)

World Health Organization

Work: (b) (6)

Mobile: (b) (6)

(b) (6)

web: [www.who.int](http://www.who.int)

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**From:** Alexander Semenov  
**Sent:** Fri, 21 Feb 2020 20:09:39 +0800  
**To:** DRURY, Patrick Anthony  
**Cc:**

(b) (6); (b) (6); (b) (6); (b) (6); (b) (6)  
(b) (6); Zhou, Weigong (CDC/DDID/NCIRD/ID); Lane, Cliff (NIH/NIAID) [E]; (b) (6)  
(b) (6); AYLWARD, Raymond Bruce J.; XING, Jun; Dr VAN  
KERKHOVE, Maria; PANG, Xinxin; GALEA, Gauden; AL-SHORBAJI, Farah; UMALI DALANGIN, Khristeen; HAN,  
Mansuk Daniel; GREIN, Thomas; MAHAMUD, Abdi Rahman  
**Subject:** Re: WHO/GOARN: China mission - changes to return flights

Thanks a lot for support. We are ready to go further with such a good team.

ПТ, 21 февр. 2020 г., 19:20 DRURY, Patrick Anthony (b) (6):

Dear colleagues,

We have received news from Bruce and WHO country team on the latest changes, the Wuhan deployment, and current planning on the final wrap up.

Khris and the HR/Travel team at HQ and WPRO are working on the changes, and rescheduling travel/flights.

Thanks for your continuing commitment and support.

best wishes,

Pat

Pat Drury

Deputy Incident Manager – COVID-19

Global Outbreak Alert and Response Network (GOARN)

WHO Health Emergency Preparedness and Response

(b) (6)



(b) (6)

**From:** Wieler, Lothar  
**Sent:** Tue, 24 Mar 2020 21:13:53 +0000  
**To:** Foreign Language: Gary Kobinger; STAG IH Secretariat (b) (6)";  
<David Heymann;(SPmig) DELIA ENRIA" <Delia Enria (b) (6) <Dr Amadou Alpha SALL  
(Amadou.S" <Johan Giesecke;(SPmig) Juliet Bedford" <(b) (6)  
<President\_RKI;Ziad Memish;Schuchat, Anne MD (CDC/OD);Lane, Cliff (NIH/NIAID) [E]  
**Subject:** RE: Re: !!STAG-IH!!\_FW: COVID-19 summary as of 18h 23 Mar 2020

Interesting thoughts indeed

Am 24. März 2020 um 21:33:53 Foreign Language (b) (6):

Dear David and all,

To assess the effect of wearing mask, I just looked up our influenza surveillance data.  
And, the proportion of ILI was 47.8/1000 during the 2nd week of 2020 --> 40.9, 4th week -->  
16.4, 6th week --> 8.5, 8th week (16~ 22 Feb) --> 3.9, 10th week (1~7 March) --> 2.9, 11th  
week.

It would be interesting if we could compare ILI rates between the "countries wearing masks" and  
"countries not wearing masks."

Maybe, influenza group already have these data.

Regards,

Oh Myoung-don, M.D.

Professor,

Department of Internal Medicine

Seoul National University College of Medicine

Seoul National University Hospital

101 Daehak-ro, Jongno-gu, Seoul, 03080, South Korea

TEL: (b) (6), FAX: 82-2-762-9662

e-mail: (b) (6)

Foreign Language

Foreign  
Language:

Gary Kobinger (b) (6)

: STAG IH Secretariat (b) (6),

(b) (6), David Heymann

(b) (6), "(SPmig) DELIA ENRIA" (b) (6),

"Delia Enria (b) (6), "Dr Amadou Alpha SALL  
(Amadou.S" (b) (6), Johan Giesecke (b) (6),

"(SPmig) Juliet Bedford" (b) (6),

(b) (6), "Lane, Cliff (NIH/NIAID)  
[E" (b) (6), (b) (6),  
"President\_RKI (b) (6), "Schuchat, Anne MD (CDC/OD)  
(ac" (b) (6), "Wieler, Lothar" (b) (6), Ziad Memish  
(b) (6)

From: [redacted] : 2020-03-25 (수) 04:32:08

Re: [redacted] : Re: !!ISTAG-IH!!\_FW: COVID-19 summary as of 18h 23 Mar 2020

Hello

So lucky for you'all I couldn't unmute this am (unsure why) clearly there is a guardian angel for all of you. Unlucky for you'all I am now writing this ( )

Was thinking of the 90%+ of people wearing masks in countries/areas where it seems better controlled (Singapore, SK, arguably China with a slow return to "normal"). The great data from last TC showing the positive effect of masks on SARS-CoV2 but not flu and rhino. The similar populations between Italy and Japan (older etc) with different propagation CFR etc. and likely usage of masks

Realizing that if we put everyone in a BSL4 suit today transmission will stop today, also in Paps 100% effective, probably down >99% with N100 and >95% with N95 (with correct usage).

Considering that :

- we are investing huge resources for therapeutics and vaccines clinical evaluation.
- Masks seem to work in health care settings
- Physical distancing seem to work and that a physical barrier can do the same job with less distance (and for example allow people to go back to work etc)
- everybody on this planet has clothing and access to tools to make masks (even if imperfect)
- any physical barriers even if imperfect could at the minimum reduce exposure frequency and importantly dose.

Why are we not seeing the usage of masks being evaluated at the community levels... ?!?!?!?

What am I missing?

Would be nice to have some real data on this

Lastly, the model from 4-6 weeks ago showing that closure of borders would only delay spread but not really speed of amplification; which we see now as pretty close to what



has happened and is happening. What are these models showing/predicting now?  
Including at more regional levels  
The very best  
Gary

---

**From:** STAG-IH (b) (6)  
**Date:** Tuesday, March 24, 2020 at 07:29  
**To:** (b) (6), David Heymann (b) (6), "(SPmig) DELIA ENRIA" (b) (6), "Delia Enria" (b) (6), (b) (6), "Dr Amadou Alpha SALL" (b) (6), Gary Kobinger (b) (6), Johan Giesecke (b) (6), "(SPmig) Juliet Bedford" (b) (6), (b) (6), "Lane, Cliff (NIH/NIAD)" (b) (6), [E] (b) (6), (b) (6), "President\_RKI" (b) (6), "Schuchat, Anne MD (CDC/OD)" (b) (6), "Wieler, Lothar" (b) (6), Ziad Memish (b) (6)  
**Cc:** STAG-IH (b) (6)  
**Subject:** !!STAG-IH!!\_FW: COVID-19 summary as of 18h 23 Mar 2020

**PREFACE:** The following slides are not final and are produced solely for the purposes of informing operations. As investigations are ongoing, all data are subject to verification and change. Not all analyses are updated daily, and additional analyses will be added/removed depending on operational needs at the time of production. **All information in this slide deck should be treated as confidential and provisional**, and should not be shared or used for any outward facing products.

## Highlights

- Italy

Two weeks after implementing the strict country-wide lockdown, Italian officials reported a decline in number of cases and deaths reported for two days in a row.

Link: <https://www.nytimes.com/2020/03/23/world/europe/italy-coronavirus-hospitals.html?referringSource=articleShare>

- Republic of Korea

Yesterday, Korea saw its lowest daily increase in coronavirus cases in a month.

The country is also carrying out free virus testing for incoming travellers from Europe.

Link: <http://www.koreaherald.com/view.php?ud=20200323000803>

- Pakistan

The number of reported COVID-19 cases in Pakistan has more than doubled since last Thursday, from 302 cases to 784 cases as of 23 March. As concerns remain about cases arriving from Iran, more than 1 million travellers have been screened and 217 suspected cases identified.

Link: <https://www.nih.org.pk/wp-content/uploads/2020/03/COVID-19-Daily-Updated-SitRep-23-Mar-2020.pdf>

- Update on first case in Syria

The case was an asymptomatic 19 yo student returning from US after their university closed. Contact tracing and testing was conducted (including those from the planes) and no additional cases were identified at this time.

## **Current Situation (As of 23 Mar, 18H Geneva Time)**

### **Updates from last 24 hours**

- **40,902 new confirmed cases from 162 countries/states/territories:**
- **1,709 new deaths:** Italy (649), Spain (394), United States of America (201), Iran (Islamic Republic of) (127), France (112), The United Kingdom (48), Netherlands (43), Germany (27), China (9), Turkey (9), Austria (8), Belgium (8), Philippines (8), Republic of Korea (7), Canada (6), Japan (5), Egypt (4), India (4), Switzerland (4), Hungary (3), Iraq (3), Algeria (2), Colombia (2), Greece (2), Malaysia (2), Pakistan (2), Panama (2), Poland (2), Portugal (2), Romania (2), Afghanistan (1), Argentina (1), Czechia (1), Democratic Republic of the Congo (1), Guam (1), Indonesia (1), Ireland (1), Kosovo\* (1), Mexico (1), Morocco (1), North Macedonia (1), Sweden (1)
- **3 countries/states/territories reported the 1st confirmed case:** Grenada (1), Syrian Arab Republic (1), Mozambique (1)
- **7 countries/states/territories reported the 1st death:** Colombia (2), Afghanistan (1), Guam (1), Czechia (1), Kosovo (All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999)) (1), North Macedonia (1), Romania (2)
- **Top 10 countries with the most number of cases in past 24 hours:** United States of America(16354), Italy(5560), Spain(3646), Germany(3311), France(1525), Iran (Islamic Republic of)(1411), Switzerland(894), The United Kingdom(669), Australia(611), Austria(607)

### **Globally, between 31 Dec 2019 - 23 Mar 2020**

- **335,012 cases from 190 countries/states/territories and 1 international conveyance**
- **14,653 deaths from 85 countries/states/territories and 1 international conveyance**
- **Top 10 countries with the highest number of cumulative cases:** China(81603), Italy(59138), United States of America(31573), Spain(28572), Germany(24774), Iran (Islamic Republic of)(23049), France(15821), Republic of Korea(8961), Switzerland(6971), The United Kingdom(5687)



\*All references to Kosovo in this document should be understood to be in the context of the United Nations Security Council resolution 1244 (1999)

Regards,

Blanche

Epidemiologist

Public Health Intelligence, Risk Assessment and Dissemination (PHI)

Health Emergency Information and Risk Assessment (HIM)

WHO Health Emergencies Programme (WHE)

World Health Organization

Work: [REDACTED] (b) (6)

Mobile: [REDACTED] (b) (6)

[REDACTED] (b) (6)

web: [www.who.int](http://www.who.int)

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**From:** GALEA, Gauden  
**Sent:** Fri, 21 Feb 2020 12:13:24 +0000  
**To:** DRURY, Patrick  
Anthony (b) (6); (b) (6); (b) (6); (b) (6)  
(b) (6); Zhou, Weigong (CDC/DDID/NCIRD/ID); Lane, Cliff (NIH/NIAD)  
[E]; (b) (6); (b) (6)  
**Cc:** AYLWARD, Raymond Bruce J.; XING, Jun; Dr VAN KERKHOVE, Maria; PANG,  
Xinxin; AL-SHORBAJI, Farah; UMALI DALANGIN, Khristeen; HAN, Mansuk Daniel; GREIN,  
Thomas; MAHAMUD, Abdi Rahman  
**Subject:** Re: WHO/GOARN: China mission - changes to return flights

Thanks to all from the China side too. Having you dealing with this really frees up the space to focus on the Wuhan component.

Warmly

~ Gauden

~~~~

Gauden Galea <sup>Foreign</sup> WHO Representative for China  
Office: (b) (6) Mobile: (b) (6)

---

**From:** "DRURY, Patrick Anthony" (b) (6)  
**Date:** Friday, 21 February 2020 at 19:20  
**To:** (b) (6), (b) (6),  
(b) (6), (b) (6),  
(b) (6), (b) (6),  
(b) (6), (b) (6), (b) (6),  
(b) (6), (b) (6),  
(b) (6)  
**Cc:** "Raymond Bruce Aylward," (b) (6), XING (b) (6), "Maria Van  
Kerkhove," (b) (6), Xinxin Pang (b) (6), "Gauden <sup>Foreign</sup> Galea"  
(b) (6), "AL-SHORBAJI, Farah" (b) (6), "UMALI DALANGIN,  
Khristeen" (b) (6), "HAN, Mansuk Daniel" (b) (6), "GREIN, Thomas"  
(b) (6), "MAHAMUD, Abdi Rahman" (b) (6)  
**Subject:** WHO/GOARN: China mission - changes to return flights

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