# COVID-19 Scientific and Public Health Policy Update – (March 3, 2020)

In addition to our weekly brief on the spread of COVID-19 and the actions that Africa CDC is taking to help member states, Africa CDC has begun to share a weekly brief detailing the latest changes in scientific knowledge and public health policy changes, as well as updates to the latest guidance from WHO and others. Contents of this document are not intended to serve as recommendations from the Africa CDC; rather, it is a summary of the factbase to help inform member states. It is important to note that the outbreak is evolving rapidly and that the nature of this information will continue to change. So we will continue to provide regular updates to ensure member states are informed of the most critical developments in these areas.

#### A. EXECUTIVE SUMMARY

- In February 28, WHO has increased the assessment of the risk of spread and risk of impact
  of COVID-19 to very high at the global level, and updated the COVID-19 case definition (for
  suspected, probable and confirmed cases)
- A study on recent reports of secondary transmission suggests a secondary attack rate (SAR) of 35% among close contacts
- A study evaluating the feasibility of controlling COVID-19 outbreaks by isolation and contact tracing suggests that with an R0 of 1.5, 2.5 and 3.5, 50%, 70% and 90%, respectively, of contacts have to be successfully traced to contain the outbreak
- The work to develop treatments and a potential vaccine continues as companies e.g., Gilead, Moderna and public health institutions e.g., US NIH join China in launching clinical trials
- As cases in Italy, South Korea, Japan and Iran escalate, countries continue to extend travel restrictions to those areas e.g., flight suspensions, entry restrictions, visa limitations, border closures to these countries
- As new cases in Africa emerge, countries are implementing tighter public health measures
  e.g., suspension of all flights to and from China, mandatory quarantine or entry restriction for
  travelers coming from Italy, South Korea and Iran. And Egypt Air postponed resumption of
  flights to China

#### **B. NEW GUIDELINES AND RESOURCES**

- WHO has released an updated <u>guidance on surveillance and case definitions</u> last February 27, updating guidance on definition of suspect, probable and confirmed cases.
- Additionally, WHO has launched an online training on <u>IPC for COVID-19</u> and released guidance on <u>use of PPE</u>, <u>recommendations for international traffic</u> and <u>operational</u> consideration for COVID-19 cases on board ships.

- Similarly, US CDC has updated its COVID-19 <u>PUI evaluation</u> and released new guidance on <u>patient management</u>, <u>specimen reporting</u>, <u>testing and collection</u>, <u>IPC (e.g., optimizing supply</u> of N95 respirators) and community (household and school) preparedness.
- ECDC has released new guidance on <u>resource estimation for surveillance and quarantine</u>, PPE handling, public health management for contact tracing and hospital preparedness.
- In addition, Africa CDC has published an article in the Lancet, outlining what Africa should do
  to prepare and respond to the looming threat of COVID-19.
- The full list of latest guidance and resources from WHO and other public health institutions are listed at the end of this update in **section E**.

#### C. NEW SCIENTIFIC RESEARCH

#### Basic science (virology, immunology, pathogenesis)

- Multiple new studies have emerged on identifying the intermediary host of SARS-CoV-2. One study suggests that <u>SARS-CoV-2 did not come from pangolins</u> based on an analysis of virome datasets from bat and pangolin coronaviruses. However, another study suggests <u>pangolins</u>, <u>snakes and turtles</u> could be intermediary hosts based on the study of interactions between the key amino acids of S protein RBD and ACE2. No conclusive study has yet been published on this topic.
- Following increasing evidence showing that coronaviruses could invade central nervous systems inducing neurological diseases, a study of the similarities of SARS-CoV and SARS-CoV-2 suggests that the <u>neurological invasion of SARS-CoV2 could be partially responsible</u> for the acute respiratory failure of COVID-19 patients.
- A study suggests <u>COVID-19 may have some relationship with the gut microbiota</u> through angiotensin-converting enzyme 2 (ACE2) receptor, implying that targeting of gut microbiota might be a new therapeutic option for treatment of the virus-related pneumonia.
- Recovered coronavirus patients who were discharged from hospitalization but later tested
  positive again have been found not to be infectious, an official at China's National Health
  Commission (NHC) said. However, further studies need to be conducted to verify this.
- A <u>Genome Detective Coronavirus Typing Tool</u> for rapid identification and characterization of novel coronavirus genome has been developed, allowing experts to identify SARS-CoV-2 sequences globally and track new viral mutations.

#### **Epidemiology**

A study on recent reports of secondary transmission suggests a <u>secondary attack rate (SAR)</u>
 of 35% among close contacts. SAR, defined as the probability that an infection occurs among
 susceptible people within a specific group (i.e., household or close contacts), provides an
 indication of how social interactions relate to transmission risk.

- An analysis of the mortality rates and healthcare resources between Wuhan and other Chinese cities, suggests a <u>strong correlation between mortality rate and healthcare burden</u>. However, most studies must be done to prove this causally.
- An analysis of the <u>COVID-19</u> outbreak in the <u>Diamond Princess ship suggests that the basic reproduction rate (R0) was initially 4 times higher (R0 of 14.8) on-board compared to the R0 in the epicenter in <u>Wuhan</u>, but the countermeasures lowered it substantially. The study estimated that isolation and quarantine prevented 2,307 cases, lowering the R0 to 1.78. However, evacuating all passengers and crew early in the outbreak would have prevented many more cases and would have led to a substantially lower number of latent undetectable cases (76 vs. 246) disembarking the ship.</u>
- A study estimating the outbreak size in Iran based on the travel connectivity to countries with internationally exported COVID-19 cases from Iran suggests that an <u>estimated 1,820 (best case) or 18,300 cases (base case) would have had to occur in Iran</u>, assuming an outbreak duration of 1.5 months in the country, in order to observe internationally exported cases in Canada, UAE and Lebanon. Numbers are far higher than reported case counts in Iran at time of writing i.e., 43 cases and today i.e., ~1,500 cases.
- A study assessing the <u>impact of reduced travel on exportation dynamics of COVID-19</u> suggests that from January 28 to February 7, 226 exported cases were prevented due to travel restrictions.

#### **Diagnostics**

- Studies have emerged on the <u>reliability of PCR tests</u>, stating that it has led to <u>false negatives</u> in some cases. As such, multiple experts have suggested that while RT-PCR testing should continue to be the primary diagnostic approach, it should be complemented by <u>clinical diagnosis</u> / <u>IgM-IgG antibody tests</u>.
- Disease trackers in Singapore have used an <u>experimental antibody test for COVID-19</u> to confirm that a suspected patient was infected with the coronavirus. Although its assay must be validated before it is taken into production and deployed widely.

#### **Care and Treatment**

- A study suggests that <u>convalescent plasma from patients who have recovered from viral infections could be used as a treatment</u>. Convalescent plasma was used to treat Ebola, AH1N1, MERS and no adverse events were observed.
- Meanwhile, clinical trials for COVID-19 treatments continue e.g., <u>Gilead is launching two new clinical trials</u> for remdesivir this month across multiple countries globally, <u>US NIH</u> has initiated a clinical trial for remdesivir

#### **Vaccines**

- According to Israel's Science and Technology Minister, <u>Israeli scientists are in the process of developing the first vaccine</u> (based on a new protein expression vector) against the novel <u>coronavirus</u>.
- Moderna Therapeutics has <u>shipped the first batches of its COVID-19 vaccine</u> for human testing in as early as April. Moderna's vaccine against COVID-19 was developed quickly

because it's based on a relatively new genetic method that does not require growing huge amounts of virus.

A study suggests that <u>immune targeting of a set of B cell and T cell epitopes derived from the spike (S) and nucleocapsid (N) proteins</u> may potentially offer protection against COVID-19.

#### **Quarantine, isolation, contact management**

- A study evaluating the <u>feasibility of controlling COVID-19 outbreaks by isolation and contact tracing</u> suggests that with an R0 of 1.5, 2.5 and 3.5, 50%, 70% and 90%, respectively, of contacts have to be successfully traced to contain the outbreak.
- A review of 24 studies suggests that <u>quarantine has negative psychological effects</u> including post-traumatic stress symptoms, confusion, and anger, suggesting that in situations where quarantine is necessary, officials should quarantine persons for no longer than required, provide clear rationale for quarantine and information about protocols, and ensure sufficient supplies are provided.
- A report on the <u>Italian outbreak</u> suggests that 1.) decentralization of public health systems can help "preparedness by design" only if plans are shared across all levels of governance. Decentralized competence should be integrated across regions. 2.) there is a strong need for efficient exchange of data across all borders. While Italy has an advanced surveillance system, the central government has almost no access to linked data in real time, and there is no formal data flow allowing regions to interconnect their systems and harmonize their preparedness and containment operations.

#### D. RELATED PUBLIC HEALTH POLICY

Contents of this section include only publicly announced public health policies.

#### **Africa**

- Following its first confirmed case, <u>Nigeria</u> has increased screening at ports of entry, conducted contact tracing and quarantine for identified contacts.
- Mauritius launched a <u>National Action Plan</u> to lay out the country's preventive and control
  measures. It has also been stockpiling 25,000 pieces of PPE. It has also imposed an entry
  restriction for foreign travelers who had been to Italy and Iran in the last 14 days.
- Following the arrival of 200+ travelers from a China Southern flight from China to Nairobi last
  week, Kenya's High Court has suspended flights to and from China for 10 days. In addition,
  President Kenyatta has issued an Executive Order to set up a 21-member task force,
  complete the isolation center at Mbagathi Hospital in Nairobi within seven days, enforce
  mandatory quarantine for travelers coming from Italy, South Korea and Iran, quarantine and
  identify and prepare isolation and treatment facilities in all Level Five and referral hospitals
  across the country by March 15.
- Similarly, <u>Angola</u> will prohibit the entry of citizens from China, South Korea, Italy, Iran,
   Nigeria, Egypt and Algeria, if they travel directly from those countries as a precaution, official news agency ANGOP reported.

- South Africa has ordered for the repatriation of its citizens from Wuhan. The government is in touch with their families and is making the necessary travel arrangements. Upon arrival in South Africa, they will be placed in quarantine for 21 days as an additional precautionary measure.
- Meanwhile, <u>Egypt Air postpones resumption of flights to China</u>. The airline has initially announced that it will resume flights to China from February 29.

#### **Rest of World**

- As COVID-19 cases outside China accelerate rapidly, heavily affected countries have continued to impose public health policies to contain the outbreak
  - <u>Japan</u> closes schools nationwide, while creating a fund to help companies pay subsidies to workers who need to take days off to look after their children following school closures
  - South Korea is piloting 'coronavirus drive-through testing stations' to expedite diagnosis while limiting exposure of frontline workers
  - Iran cancels Friday sermons and imposes domestic travel restrictions in key cities
- As a response to outbreaks in South Korea, Iran, Japan and Italy, countries globally have continued to impose significant travel restrictions (not exhaustive)
  - Flight or transport suspensions to above outbreak areas: Russia, Kazakhstan, Qatar, UAE, Oman, Turkey
  - Entry restrictions e.g., barring of foreigners who have been to above outbreak countries in the last 14 days or barring of citizens of above outbreak countries: <u>US</u>, New Zealand, Qatar, Iraq, El Salvador, Kazakhstan, Iraq, Mongolia, Philippines
  - Visa limitations: Russia is temporarily suspending visa issuance for Iranians
  - Border closures: Azerbaijan have temporarily closed borders with Iran, while Pakistan re-opens border with Iran
- Additionally, countries e.g., Kuwait, Qatar, have started to <u>repatriate citizens from COVID-19</u> hotspots outside China
- As cases rise, governments have started implementing unique public health policy enforcement measures e.g., Qianjian, a city in Hubei province is <u>offering \$1,400 reward to</u> <u>patients who proactively report symptoms of the illness and are confirmed positive after</u> testing

### D. GUIDANCE AND RESOURCES (FULL LIST)

### WHO guidelines and resources

Organization	Date published	Guidance or resource name		
Country read	iness			
WHO	9-Jan-2020	National capacities review tool for a novel coronavirus		
Surveillance a	and case defin	itions		
WHO	27-Feb-2020	Global Surveillance for human infection with coronavirus disease (COVID-19)		
WHO	27-Feb-2020	Revised case reporting form for COVID-19 for confirmed cases and their outcome		
WHO	n/a	Emerging respiratory viruses, including 2019-nCoV: methods for detection, prevention, response and control		
WHO	n/a	Global COVID-19 Clinical Characterization Case Record Form and new data platform for anonymized COVID-19 clinical data		
WHO	n/a	Case Reporting Form for COVID-19		
Laboratory gu	Laboratory guidance			
WHO	17-Jan-2020	Laboratory testing for 2019 novel coronavirus (2019-nCoV) in suspected human cases		
Patient manag	gement			
WHO	28-Jan-2020	Clinical management of severe acute respiratory infection when novel coronavirus (nCoV) infection is suspected		
WHO	20-Jan-2020	Home care for patients with suspected novel coronavirus (nCoV) infection presenting with mild symptoms and management of contacts		
WHO	n/a	WHO Critical Care Severe Acute Respiratory Infection Training Short Course		
WHO	18-Feb-2020	The Rights, Roles and Responsibilities Of Health Workers, Including Key Considerations For Occupational Safety And Health		
Infection prev	Infection prevention and control			
WHO	25-Jan-2020	Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected		
WHO	29-Jan-2020	Advice on the use of masks in the community, during home care and in health care settings in the context of the novel coronavirus (2019-nCoV) outbreak		
WHO	10-Feb-2020	Q&A on infection prevention and control for health care workers caring for patients with suspected or confirmed 2019-nCoV		

Reduction of transmission of animals to humans		
WHO	10-Jan-2020	Disease commodity package - Novel Coronavirus (nCoV)
Disease commodity package		
WHO	26-Jan-2020	Risk communication and community engagement (RCCE) readiness and response to the 2019 novel coronavirus (2019-nCoV)
Risk communication & community engagement		
WHO	16-Feb-2020	Coronavirus disease (COVID-19) technical guidance: Early investigations
WHO	25-Jan-2020	Global 2019-nCoV Clinical Characterization Case Record Form
WHO	29-Jan-2020	The First Few X (FFX) Cases and contact investigation protocol for 2019-novel coronavirus (2019-nCoV) infection
WHO	25-Jan-2020	Household transmission investigation protocol for 2019-novel coronavirus (2019-nCoV) infection
WHO	25-Jan-2020	Protocol for assessment of potential risk factors for 2019-novel coronavirus (2019-nCoV) infection among health care workers in a health care setting
Early inves	tigations	
WHO	24-Jan-2011	Handbook for inspection of ships and issuance of ship sanitation certificates
WHO	1-Jan-2016	Handbook for management of public health events on board ships
WHO	1-Mar-2016	Handbook for the Management of Public Health Events in Air Transport
WHO	27-Feb-2020	Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19)
WHO	n/a	Infection Prevention and Control (IPC) for Novel Coronavirus (COVID-19)
WHO	n/a	Online course for public health preparedness for mass gathering events
WHO	14-Feb-2020	Key planning recommendations for Mass Gatherings in the context of the current COVID-19 outbreak
WHO	18-Feb-2020	Surface sampling of coronavirus disease (COVID-19):  A practical "how to" protocol for health care and public health professionals
WHO	16-Feb-2020	Management of ill travellers at Points of Entry – international airports, seaports and ground crossings – in the context of COVID-19 outbreak
WHO	11-Feb-2020	Key considerations for repatriation and quarantine of travellers in relation to the outbreak of novel coronavirus 2019-nCoV

WHO	n/a	WHO recommendations to reduce risk of transmission of emerging pathogens from animals to humans in live animal markets	
Travel advice			
WHO	29-Feb-2020	<u>Updated WHO recommendations for international traffic in</u> <u>relation to COVID-19 outbreak</u>	
Others	Others		
WHO	3-Feb-2020	2019-nCoV Strategic Preparedness and Response Plan	
IATA (in partnership with WHO)	n/a	Emergency Response Plan and Action Checklist (for air carriers)	
IATA (in partnership with WHO)	n/a	Air Transport & Communicable Diseases Guidelines	
WHO	12-Feb-2020	2019 Novel Coronavirus: Global Research and Innovation Forum: Towards a Research Roadmap/report	
WHO	11-Feb-2020	2019 Novel Coronavirus: Global Research and Innovation Forum: Towards a Research Roadmap/report - presentation	
WHO	18-Feb-2020	COVID-19 Phase IIb/III Vaccine Trial Synopsis	
WHO	19-Feb-2020	Emerging respiratory viruses, including nCoV: methods for detection, prevention, response and control	
WHO	19-Feb-2020	ePROTECT Respiratory Infections (EN)	
WHO	24-Feb-2020	Operational considerations for managing COVID-19 cases/outbreak on board ships	

### Other public health institutions guidance and resources

Organization	Date published	Guidance or resource name	
Surveillance a	Surveillance and case definitions		
US CDC	2-Feb-2020	Interim Guidance for Healthcare Professionals	
US CDC	2-Feb-2020	Flowchart to Identify and Assess 2019 Novel Coronavirus	
ECDC	n/a	Case definition and European surveillance for human infection with novel coronavirus (2019-nCoV)	
Laboratory guidance			
US CDC	28-Jan-2020	US CDC panel primer and probes— U.S. CDC, USAV – U.S. CDC, USA	
US CDC	n/a	Information for Laboratories 2019-nCoV Requests for Diagnostic Panels and Virus	

US CDC	n/a	Real-Time RT-PCR Panel for Detection 2019-Novel Coronavirus
US CDC	n/a	2019-Novel Coronavirus (2019-nCoV) Real-time rRT-PCR Panel Primers and Probes
US CDC	10-Feb-2020	Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with Coronavirus Disease 2019 (COVID-19)
US CDC	14-Feb-2020	Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens from Persons Under Investigation (PUIs) for Coronavirus Disease 2019 (COVID-19)
US CDC	19-Feb-2020	Interim Guidance for Collection and Submission of Postmortem Specimens from Deceased Persons Under Investigation (PUI) for COVID-19, February 2020
ECDC	13-Jan-2020	Diagnostic detection of Wuhan coronavirus 2019 by real-time RTPCR
China CDC	24-Jan-2020	China CDC Primers and probes for detection 2019-nCoV
Patient manag	ement	
US CDC	n/a	Healthcare Professional Preparedness Checklist For Transport and Arrival of Patients Potentially Infected with 2019-nCoV
US CDC	n/a	Hospital Preparedness Checklist for Suspected or Confirmed 2019-nCoV Patients
US CDC	12-Feb-2020	Interim Clinical Guidance for Management of Patients with Confirmed 2019 Novel Coronavirus (2019-nCoV) Infection
US CDC	31-Jan-2020	Interim Guidance for Implementing Home Care of People Not Requiring Hospitalization for 2019 Novel Coronavirus (2019-nCoV)
US CDC	12-Feb-2020	Interim Guidance for Implementing Home Care of People Not Requiring Hospitalization for 2019 Novel Coronavirus (2019-nCoV)
US CDC	n/a	Interim Guidance on Breastfeeding for a Mother Confirmed or Under Investigation For COVID-19
US CDC	n/a	Frequently Asked Questions and Answers: Coronavirus Disease-2019 (COVID-19) and Children
US CDC	n/a	Frequently Asked Questions and Answers: Coronavirus  Disease 2019 (COVID-19) and Pregnancy
US CDC	n/a	What Healthcare Personnel Should Know about Caring for Patients with Confirmed or Possible COVID-19 Infection
ECDC	30-Jan-2020	Advice to healthcare workers: management of patients with 2019-nCoV infection
ECDC	10-Feb-2020	Guidelines for the use of non-pharmaceutical measures to delay and mitigate the impact of 2019-nCoV

Infection prevention and control		
US CDC	21-Feb-2020	Interim Infection Prevention and Control Recommendations for Patients with Confirmed Coronavirus Disease 2019 (COVID-19) or Persons Under Investigation for COVID-19 in Healthcare Settings
US CDC	n/a	Healthcare Supply of Personal Protective Equipment
US CDC	8-Feb-2020	Interim US Guidance for Risk Assessment and Public Health Management of Persons with Potential 2019 Novel Coronavirus (2019-nCoV) Exposure in Travel-associated or Community Settings
US CDC	n/a	Interim Considerations for Infection Prevention and Control of Coronavirus Disease 2019 (COVID-19) in Inpatient Obstetric Healthcare Settings
US CDC	11-Feb-2020	Interim Guidance for Discontinuation of In-Home Isolation for Patients with COVID-19
US CDC	11-Feb-2020	Interim Guidance for Discontinuation of Transmission-Based Precautions and Disposition of Hospitalized Patients with COVID-19
US CDC	25-Feb-2020	Interim Guidance for Preventing the Spread of Coronavirus  Disease 2019 (COVID-19) in Homes and Residential  Communities
US CDC	n/a	Interim U.S. Guidance for Risk Assessment and Public Health Management of Healthcare Personnel with Potential Exposure in a Healthcare Setting to Patients with 2019 Novel Coronavirus (2019-nCoV)
US CDC	n/a	Interim Guidance for Public Health Personnel Evaluating Persons Under Investigation (PUIs) and Asymptomatic Close Contacts of Confirmed Cases at Their Home or Non-Home Residential Setting
US CDC	n/a	Healthcare Infection Prevention and Control FAQs for COVID- 19
US CDC	n/a	Strategies for Optimizing the Supply of N95 Respirators
US CDC	28-Feb-2020	Checklist for Healthcare Facilities: Strategies for Optimizing the Supply of N95 Respirators during the COVID-19 Response
US CDC	28-Feb-2020	Release of Stockpiled N95 Filtering Facepiece Respirators Beyond the Manufacturer-Designated Shelf Life: Considerations for the COVID-19 Response
ECDC	29-Jan-2020	Public health management of persons having had contact with novel coronavirus cases in the European Union
ECDC	2-Feb-2020	Infection prevention and control for the care of patients with 2019-nCoV in healthcare settings

ECDC 7	′-Feb-2020	Personal protective equipment (PPE) needs in healthcare settings for the care of patients with suspected or confirmed novel coronavirus (2019-nCoV)
ECDC 1	8-Feb-2020	Interim guidance for environmental cleaning in non-healthcare facilities exposed to SARS-CoV-2
ECDC 2	-Mar-2020	Resource estimation for contact tracing, quarantine and monitoring activities for COVID-19 cases in the EU/EEA
ECDC 2	8-Feb-2020	Guidance for wearing and removing personal protective equipment in healthcare settings for the care of patients with suspected or confirmed COVID-19
ECDC 2	5-Feb-2020	Public health management of persons, including health care workers, having had contact with COVID-19 cases in the European Union
ECDC 2	6-Feb-2020	Checklist for hospitals preparing for the reception and care of coronavirus 2019 (COVID-19) patients
Early investigation	ons	
US CDC 2	8-Feb-2020	Recommendations for Reporting, Testing, and Specimen Collection
US CDC 3	Feb-2020	Patient Under Investigation form
US CDC 2	7-Feb-2020	Evaluating and Reporting Patients Under Investigation (PUI)
US CDC 2	-Feb-2020	Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens from Patients Under Investigation (PUIs) for 2019 Novel Coronavirus (2019-nCoV)
US CDC n/	ı/a	Information for Health Departments on Reporting a Patient Under Investigation (PUI) for 2019-nCoV
US CDC n	/a	Case Report Form for 2019 Novel Coronavirus
ECDC 3	0-Jan-2020	Algorithm for management of contacts of probable or confirmed 2019-nCoV cases
Risk communica	ation & comn	nunity engagement
US CDC 24	4-Feb-2020	CDC in Action: Preparing Communities for Potential Spread of COVID-19
US CDC n	/a	Interim Guidance: Get Your Household Ready for Coronavirus Disease 2019 (COVID-19)
US CDC n	/a	Interim Guidance for Administrators of US Childcare Programs and K-12 Schools to Plan, Prepare, and Respond to Coronavirus Disease 2019 (COVID-19)
ECDC 1	3-Feb-2020	Guidance on community engagement for public health events caused by communicable disease threats in the EU/EEA
Disease commodity package		

US CDC	2-Feb-2020	Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with 2019 Novel Coronavirus (2019-nCoV)	
Travel advice			
US CDC	n/a	Travelers from China Arriving in the United States	
US CDC	n/a	Communication Resources for Travelers	
US CDC	24-Feb-2020	Coronavirus Disease 2019 Information for Travel	
ECDC	30-Jan-2020	Advice for travellers: outbreak of a novel coronavirus 2019- nCoV	
Others			
US CDC	13-Feb-2020	Interim Guidance for Airlines and Airline Crew: Coronavirus  Disease 2019 (COVID-19)	
US CDC	4-Feb-2020	2019 Novel Coronavirus: Interim Health Guidance from the Federal Aviation Administration and the Centers for Disease Control and Prevention for Air Carriers and Crews	
US CDC	n/a	Preventing Spread of Disease on Commercial Aircraft: Guidance for Cabin Crew	
US CDC	n/a	Interim Guidance for Businesses and Employers to Plan and Respond to 2019 Novel Coronavirus (2019-nCoV), February 2020	
US CDC	n/a	Interim Guidance for Emergency Medical Services (EMS) Systems and 911 Public Safety Answering Points (PSAPs) for 2019-nCoV in the United States	
US CDC	18-Feb-2020	Interim Guidance for Ships on Managing Suspected Coronavirus Disease 2019	