

Coronavirus Disease 19

(COVID-19)

Guidelines

February 2020
V1.1

As only limited epidemiological data on COVID-19 infection is currently available, health care workers (HCWs) are advised to follow guidelines and tools designed for MERS-CoV case investigations. The COVID-19 guidelines will be updated as more information becomes available.

VERSIONS UPDATE

Version 1.0 was written and published on January 10th 2020.

Version 1.1

- Updated the name of the virus and the disease name.
- Updated the case definition
- Added (Management of exposure to COVID-19 in healthcare facilities)
- Added (The risk communication)
- Updated the designated hospitals list
- Updated the reporting form and the visual triage checklist form.

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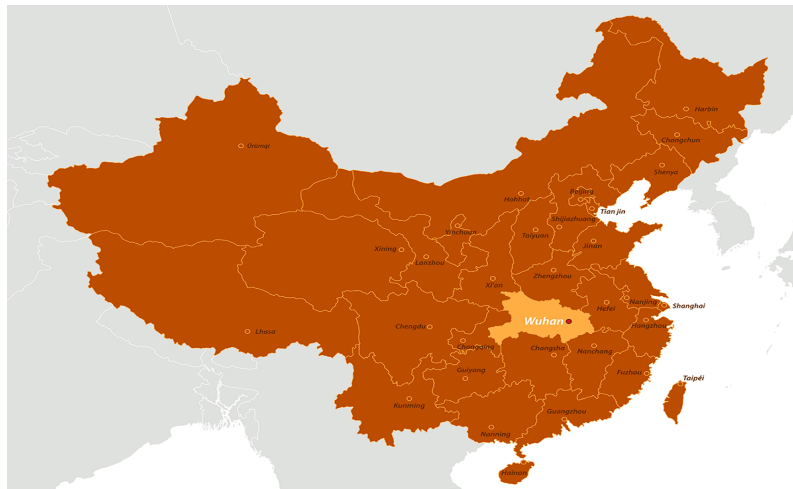
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1. INTRODUCTION

Coronaviruses (CoV) are a large family of RNA viruses that cause illnesses ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). The new strain of coronavirus identified in December 2019 in Wuhan city, Hubei province of China, has been named by the International Committee on Taxonomy of Viruses (ICTV) as Severe Acute Respiratory Syndrome Corona Virus-2 (SARS-CoV-2). The ICTV have determined that SARS-CoV-2 is the same species as SARS-CoV but a different strain. The World Health Organization (WHO) has named the disease associated with SARS-CoV-2 infections as Corona "COVID-19". According to the WHO, as at February 17, 2020, there have been 71 429 confirmed cases of COVID worldwide. Although, almost all the cases have been recorded in China, COVID-19 has spread to 25 countries with some reporting local transmission. Most of the cases involved in the first cluster in December 2019 were linked to the large Wuhan Seafood Market.

The original source(s) of SARS-CoV-2 transmission remain unidentified. However, available genetic and epidemiological data suggests that SARS-CoV-2 is a zoonotic pathogen with possible spillover directly from wildlife or via intermediate animal hosts or their products. Sustained human to human transmission has been confirmed in China where numerous healthcare workers have been infected in clinical settings with overt clinical illness and fatalities. While most cases have been associated with fever and respiratory symptoms (coughing, shortness of breath and pneumonia), mild or subclinical cases cannot be ruled out. However, there is not much information about SARS-CoV-2 to draw definitive conclusions about transmission mode, clinical presentation or the extent to which it has spread. Investigations are currently in progress.



2. OBJECTIVES

Based on the best available scientific evidence, the objectives of this document are to:

- Provide guidance on COVID-19 surveillance in healthcare and community settings.
- Enhance rapid detection of confirmed cases/clusters of COVID-19 and any evidence of amplified or sustained human-to-human transmission
- Determine clinical and epidemiological characteristics of the COVID-19 infection: modes of transmission, incubation period, disease spectra, risk factors and secondary attack rates
- Determine risk (including geographic) factors associated with COVID-19 infection.
- Provide guidance on infection prevention and control (IPC) practices to be implemented when managing suspected and confirmed COVID-19 cases.
- Standardize the clinical management of COVID-19 patients.
- Provide guidance for rational use of resources including laboratory testing.
- Serve as a quality control/audit tool for COVID-19 surveillance and prevention program.

3. SURVEILLANCE CASE DEFINITIONS

▪ **Suspected COVID-19 case is defined as:**

1. **Patients with acute respiratory infection (sudden onset of at least one of the following: Fever or recent history of fever, cough, sore throat or shortness of breath) AND In the 14 days prior of onset of symptoms, met at least one of the following epidemiological criteria:**
 - Had a history of travel to areas with presumed ongoing community transmission of COVID-19 (China, Iran, South Korea, Japan, Singapore, Hong Kong, or any updated information added on <https://www.moh.gov.sa/CCC/healthp/regulations/Documents/SuspectedCOVID19Supplement.pdf>)
 - A close physical contact in the past 14 days prior to symptoms onset with a confirmed case of COVID-19.
 - Working in or attended a healthcare facility where patients with confirmed COVID-19 were admitted.

OR

2. **Adult with severe acute respiratory illness (ICU admission, ARDS* or CURB 65** score ≥ 3 points) AND all the following conditions fulfilled**

- Testing for MERS-CoV or Influenza viruses were negative.
- Clinical assessment that patient is not improving and no clear underlying causes.
- With or without identified epidemiological link to COVID-19 cases.

▪ **“Close Contact” is defined as:**

- Health care associated exposure, including providing direct care for COVID-19 patients, working with HCWs infected with COVID-19, visiting patients or staying in the same close environment of a COVID-19 patient.
- Working together in close proximity or sharing the same classroom environment with a COVID-19 patient.
- Traveling together with COVID-19 patient in any kind of transportation.
- Living in the same household as a COVID-19 patient.

▪ **Confirmed COVID-19 case is defined as:**

A confirmed case is defined as a suspected case with laboratory confirmation of COVID-19 infection.

* ARDS: Acute respiratory distress syndrome (based on clinical or radiological evidence)

** CURB-65 = Confusion, Urea nitrogen, Respiratory rate, Blood pressure, 65 years of age and older.

Note: Clinicians should be alert to the possibility of atypical presentations in patients who are immunocompromised.

4. INFECTION PREVENTION AND CONTROL (IPC)

The principles of infection prevention and control strategies associated with health care with suspected COVID-19 are:

1. Early recognition and source control.
2. Application of Standard Precautions for all patients.
3. Implementation of empiric additional precautions (droplet and contact and whenever applicable airborne precautions) for suspected cases.
4. Administrative controls.
5. Environmental and engineering controls.

4.1 Early recognition and source control.

- Encourage HCWs to have a high level of clinical suspicion.
- Activation of respiratory triage (see Appendix 4).
- Post signage reminding symptomatic patients to alert HCWs.
- Promotion of respiratory hygiene is an important preventative measure.
- Suspected COVID-19 patients should be placed in an area separate from other patients, and additional Infection Prevention and Control IPC (droplet and contact) precautions promptly implemented

4.2 Application of Standard Precautions for all patients

- Standard Precautions include:

- Correct and consistent use of available PPE and appropriate hand hygiene.
- Perform hand hygiene after contact with respiratory secretions.
- PPE effectiveness depends on adequate and regular supplies.
- Adequate staff training and specifically appropriate human behaviour.
- Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly. Thorough cleaning of environmental surfaces with water and detergent and applying commonly used hospital level disinfectants (such as sodium hypochlorite) is an effective and sufficient procedure.
- Manage laundry, food service utensils and medical waste in accordance with safe routine procedures.
- prevention of needle-stick or sharps injury

- Ensure the following respiratory hygiene measures:

- Offer a medical mask for suspected COVID-19 infection for those who can tolerate it.
- Cover nose and mouth during coughing or sneezing with tissue or flexed elbow for others.

4.3 Implementation of empiric additional precautions.

4.3.1 Contact and Droplet precautions for suspected COVID-19:

In addition to Standard Precautions, all individuals, including family members, visitors and HCWs should apply Contact and Droplet precautions.

- Place patients in adequately ventilated single rooms.
- When single rooms are not available, cohort patients suspected of COVID-19 infection together (Place patient beds at least 1m apart, when possible, cohort HCWs to exclusively care for cases to reduce the risk of spreading transmission due to inadvertent infection control breaches).
- Use a medical mask with an eye/facial protection (i.e. goggles or a face shield).
- Use gloves and a clean, non-sterile, long-sleeved fluid resistant gown.
- Use either single use disposable equipment or dedicated equipment (e.g. stethoscopes, blood pressure cuffs and thermometers). If equipment needs to be shared among patients, clean and disinfect between each patient use (e.g. ethyl alcohol 70%).
- Refrain from touching eyes, nose or mouth with potentially contaminated hands.
- Avoid the movement and transport of patients out of the room or area unless medically necessary.
- Use designated portable X-ray equipment and/or other important diagnostic equipment.
- If transport is required, use pre-determined transport routes to minimize exposures to staff, other patients and visitors and apply medical mask to patient.
- Ensure that HCWs who are transporting patients wear appropriate PPE as described in this section and perform hand hygiene.
- Notify the receiving area of necessary precautions as soon as possible before the patient's arrival.
- Routinely clean and disinfect patient-contact surfaces.
- Limit the number of HCWs, family members and visitors in contact with a patient with suspected COVID-19 infection.
- Maintain a record of all persons entering the patient's room including all staff and visitors.

4.3.2 Airborne precautions for aerosol-generating procedures for suspected COVID-19:

Some aerosol generating procedures have been associated with increased risk of transmission of coronaviruses (SARS-CoV and MERS-CoV) such as nasopharyngeal swabbing, tracheal intubation, non-invasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation and bronchoscopy. HCWs performing aerosol-generating procedures should note the following:

- Use a fit tested particulate respirator (certified N95).
- Always perform the seal-check when putting on a disposable particulate respirator (certified N95), always perform the seal-check.
- HCW that all available types of (N95) are not fit to him should be avoided from aerosol-generating procedures or use PAPR(Powered Air-Purifying Respirator).
- Facial hair (beard) prevents proper respirator fit; either avoid aerosol-generating procedures or use PAPR.
- Use eye protection (i.e. goggles or a face shield).
- Clean, non-sterile, long-sleeved gown and gloves, if gowns are not fluid resistant, use a waterproof apron for procedures with expected high fluid volumes that might penetrate the gown.
- Perform procedures in negative pressure rooms with at least 12 air changes per hour (ACH) and controlled direction of air flow when using mechanical ventilation.
- Limit the number of persons present in the room to the absolute minimum required for the patient's care and support.

4.4 Management of exposure to COVID-19 in healthcare facilities

4.4.1 Healthcare workers exposed to a COVID-19 case:

- Healthcare facilities should identify and trace all health care workers who had protected (proper use of PPE) or unprotected (without wearing PPE or PPE used improperly) exposure to patients with suspected or confirmed COVID-19.
- The decision to permit a healthcare worker to resume his/her duties after an exposure to COVID-19 should be individualized. Infection control team will be ultimately responsible for taking that decision.
- The following are general guidelines, but management will depend on the infection control team risk assessment:

4.4.1.1 Asymptomatic healthcare workers WITH protected exposure OR unprotected low-risk exposure (more than 1.5 meters of the patient):

- Testing healthcare workers for **COVID-19** is not recommended.
- Healthcare workers can continue their duties.
- Healthcare workers shall be assessed daily for 14 days post exposure for the development of symptoms.

- Healthcare workers should delay travel until cleared by infection control team.
- **Asymptomatic healthcare workers WITH protected exposure OR unprotected low-risk exposure are considered CLEAR if they:**
 - Remain asymptomatic
AND
 - The observation period is over (14 days post exposure).

Please note, health care worker should be defined as all staff in the health care facility involved in the provision of care for a COVID-19 infected patient, including those who have been present in the same area as the patient, as well as those who may not have provided direct care to the patient, but who have had contact with the patient's body fluids, potentially contaminated items or environmental surfaces. This includes health care professionals, allied health workers, auxiliary health workers (e.g. cleaning and laundry personnel, x-ray physicians and technicians, clerks, phlebotomists, respiratory therapist, nutritionists, social workers, physical therapists, lab personnel, cleaners, admission/reception clerks, patient transporters, catering staff etc.).

4.4.1.2 Healthcare workers who had unprotected high-risk exposure (within 1.5 meters of the patient) or have suggestive symptoms regardless of exposure type:

- Healthcare workers shall stop performing their duties immediately.
- Testing (Nasopharyngeal swabs) for **COVID-19** is required (preferably 24hr or more after the exposure)
- Healthcare workers shall not resume their duties until cleared by infection control team.
- Healthcare workers should delay travel until cleared by infection control team.
- Healthcare workers who test positive for **COVID-19** (regardless of the exposure type); healthcare workers who develop **COVID-19** suggestive symptoms (regardless of the exposure type) and healthcare workers who had unprotected high-risk exposure are considered CLEAR if:
 - They are asymptomatic for at least 48 hrs.
AND
 - The observation period is over (14 days post exposure)
AND
 - Had at least one negative RT-PCR for **COVID-19**.

4.4.2 Patients exposed to a COVID-19 case:

- Patients can be exposed to **COVID-19** patients prior to diagnosis or due to the failure of implementing recommended isolation precautions.
- The following are general guidelines, but management will depend on the infection control team risk assessment:
- Patients sharing the same room (any setting e.g. Ward with shared beds, open ICU, open emergency unit...etc) with a confirmed case of **COVID-19** for at least 30 minutes:
 - Testing (Nasopharyngeal swabs or deep respiratory sample if intubated) for **COVID-19** is required (preferably 24hr or more after the exposure).
 - Patients should be followed daily for symptoms for 14 days after exposure.
 - If negative on initial testing, exposed patients should be retested with RT-PCR if they develop symptoms suggestive of **COVID-19** within the follow up period.
 - Patients discharged during the follow up period must be reported to public health department to continue monitoring for symptoms.

4.5 Administrative controls

- Establishment of sustainable IPC infrastructures and activities.
- HCWs training; patients' care givers education.
- Policies on early recognition of acute respiratory infection potentially due to COVID-19
- Access to prompt laboratory testing for identification of the etiologic agent.
- Prevention of overcrowding especially in the emergency department.
- Provision of dedicated waiting areas with clear signage of "Respiratory Waiting Area for symptomatic patients and appropriate placement of hospitalized patients promoting an adequate patient-to-staff ratio.
- Provision and use of regular supplies.
- IPC policies and procedures for all facets of healthcare provisions with emphasis on surveillance of acute respiratory infection potentially due to COVID-19 among HCWs and the importance of seeking medical care.
- Monitoring of HCW compliance, along with mechanisms for improvement as needed.
- Designating of centers that all confirmed cases of COVID-19 should be transferred and isolated in (Exceptions must be by Regional Command and Control Centers).

4.6 Environmental and engineering controls

- Basic health-care facility infrastructures.
- Ensuring adequate environmental ventilation.
- Adequate environmental cleaning in all areas within a health-care facility.
- Terminal room cleaning at the time of discharge or transfer of patients.
- Physical separation of at least 1- 1.5-meter distance should be maintained between each suspect patient and others.

4.7 Contact and droplet precautions for COVID-19

Standard precautions should always be applied at all times. Additional contact and droplet precautions should continue until the patient is asymptomatic.

4.8 Collection and handling of laboratory specimens from patients with suspected COVID-19

- All specimens collected for laboratory investigations should be regarded as potentially infectious.
- HCWs who collect or transport clinical specimens should adhere rigorously to Standard Precautions to minimize the possibility of exposure to pathogens.
- Ensure that HCWs who collect specimens use appropriate PPE (eye protection, medical mask, long-sleeved gown, gloves).
- The respiratory specimen should be collected under aerosol generating procedure, personnel should wear a particulate certified N95 respirator.
- Ensure that all personnel who transport specimens are trained in safe handling practices and spill decontamination procedures.
- Place specimens for transport in leak-proof specimen bags (secondary container) that have a separate sealable pocket for the specimen (i.e. a plastic biohazard specimen bag), with the patient's name label on the specimen container (primary container), and a clearly written laboratory request form.
- Ensure that health-care facility laboratories adhere to appropriate biosafety practices and transport requirements according to the type of organism being handled.
- Deliver all specimens by hand whenever possible.
- DO NOT use pneumatic-tube systems to transport specimens.
- HESN Printed lab requisitions must be sent with samples and national lab reception report and result values must be updated on HESN on their corresponding time.

5. LABORATORY DIAGNOSIS

5.1 Specimen collection and shipment of SARS-CoV-2

All staff who will be handling the SARS-CoV 2 should be trained for appropriate collection, specimen storage, packaging and transportation. When collecting the specimen avoid contamination and it is advised to have sufficient quantity of sampling in case of repeating the test or preform further characterization. Follow the appropriate precautions for safety during collection and processing of samples.

5.2 Laboratories to perform diagnostic testing:

- Presently, all samples for SARS-CoV-2 testing should be sent to National Health Lab (NHL) and diagnostic testing can be conducted only at NHL.
- As currently there is limited information about the SARS-CoV-2, laboratories should NOT attempt viral isolation and culture from samples collected from patients suspected to have COVID-19.
- Since NHL will only perform SARS-CoV-2 diagnostic testing, treating hospital should carry out other laboratory investigations for common respiratory pathogens (viral, bacterial and fungi) according to clinical indications, local policies and epidemiology.

5.3 Samples to be collected

1. Lower respiratory tract samples: including endotracheal aspirate, bronchoalveolar lavage fluid or sputum.
 2. Upper respiratory tract samples:
 - a. Nasopharyngeal and oropharyngeal swabs in viral transport medium in separate tubes.
 - b. Nasopharyngeal wash/aspirate
- HESN request form is to be completed and must be attached with sample.
 - The lower respiratory tract samples are preferred and advised that lower respiratory tract samples should be collected where possible. If patient does not have signs or symptoms of lower respiratory tract infection or lower tract specimens are not possible or clinically indicated, upper respiratory samples should be collected.
 - Repeat testing should be performed if initial testing is negative and there is a high index of diseases suspicion. patients should be retested using a lower respiratory sample or, if not possible, repeat collection of a nasopharyngeal sample.
 - A single negative test result, especially from upper respiratory tract sample, does rule out the infection.
 - For in-patients, the frequency of sampling should be at least every 2- 4 days until there are two consecutive negative samples at least 24 hours apart.

5.4 Storage and Shipment of samples

- Store samples at 2-8°C and ship on ice pack to NHL. Samples can be stored at 2-8°C for ≤48 hours, if longer storage is needed, samples should be stored at -70 °C. If sample is frozen at -70°C, ship on dry ice.
- Samples can be shipped to NHL free of charge via the courier, SMSA, following appropriate regulations. The NHL provides a courier service for sample transportation and pickup locations throughout the country for collection of samples from MOH hospitals and other Health care facilities. Specimens pick up can be requested from SMSA at the following number (8006149999)
- All specimens must be appropriately packaged and must be addressed to the National Health Laboratory.
- Courier services are provided 7 days a week.
- The courier will package and transport the samples in accordance with Category B transportation regulations and the WHO guidance on regulations for the transport of infectious substances 2019-2020.
- For detailed guidelines on Sample collection, packaging and shipping, please refer to MERS-CoV guidelines version 5.1 (Appendix E).

6. TREATMENT

Since there no treatment recommendation is available, it is recommended to follow current MERS-CoV treatment guidelines until further information is available. However, it is necessary to transfer a confirmed COVID-19 case to a designated hospital (see Appendix 6) in coordination with command and control center. Intensive supportive care with treatment of symptoms is the main approach to manage the infection in people.

WHO published recommendations can be accessed at:

[https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-\(ncov\)-infection-is-suspected](https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected)

7. PUBLIC HEALTH CONSIDERATION

7.1 Reporting of suspected Cases

The COVID-19 is an emerging pathogen, which is by default as **category I** reportable disease that should be immediately reported. All healthcare facilities **must** report suspected cases immediately through Health Electronic Surveillance Network (HESN). Failure of healthcare organizations and/or professionals to report reportable infectious diseases is punishable by law.

7.2 Rapid Response Teams (RRTs)

The public health team or rapid response team (RRT) at regional health affairs (or equivalent body) is responsible of initiating the epidemiological investigation. After activation through regional command and control leader, the team should complete the epidemiological investigation in both settings; health care settings and the community settings using the COVID-19 epidemiological investigation forms. The form includes detailed items such as travel history and possible exposures which needs vigilant history taking and probing. Contacts identification is another important part of needed information (contacts as defined within surveillance case definition paragraph) and then list them for their tracing documentation (Contact tracing form).

7.3 Risk Communication

Risk communication is integral to the success of response to any health emergency and possible outbreaks. During outbreaks, panics, rumors and misunderstandings are raising between people. Thus, risk communication helps prevent infodemics, alleviate confusion and avoid misunderstandings. Most important and effective interventions in a public health response to any event or outbreak is to proactively communicate and engage and share strategies with the community.

Ensure to update health care workers about COVID-19 status globally and in Saudi Arabia. The internal communication plan should be developed for communicating information about suspected or confirmed cases inside the facility. The assigned risk communication team should be formed with clear roles and responsibilities. The main role of the team is to understand the concerns, believes, behaviors, rights and duties during alert and outbreak phases. Announcement of cases will be among the spokesperson of MoH only. To avoid any panic or rumors among the public. The main official sources of COVID-19 information are the MoH and SCDC.

7.4 Household and Community Contacts Management

Contacts are managed as per MERS-CoV guidelines, in terms of listing, daily follow up looking for symptoms (fever or respiratory symptoms) among originally asymptomatic, and clinical assessment for those who develop symptoms. Contacts are categorized by the presence or absence of suggestive symptoms at the first assessment:

- Contacts without suggestive symptoms should be listed for follow up on daily bases by phone or face-to face if feasible. Clinical assessment is not generally required at this stage. In certain situations, this may be considered if:
 - the exposed contact had intense exposure to a confirmed COVID-19 case (e.g. direct care, sleeping in same room)
 - the exposed contact is Immunocompromised (e.g. cancer, organ failure, use of immunosuppressive medications) or has other chronic underlying conditions (e.g. diabetes, hypertension)
- Contacts with suggestive symptoms should be assessed clinically and referred to a designated healthcare facility (Appendix 6) if admission deemed necessary.
- A nasopharyngeal swab should be collected by trained personnel and sent for testing for all symptomatic contacts (as a suspected case).
- Contacts who develop symptoms require enhanced monitoring for disease progression. Health status must be checked by phone and if feasible, by face-to-face visits on a daily base.
- The observation period of a community and household contacts is 14 days after the last exposure. Longer observation may be required if more than one generation of transmission is identified.
- The home isolation of stable contacts (do not need hospitalization) can be considered. Ensuring the person being informed about infection prevention procedures and respiratory etiquette. Environmental assessment of the house is needed to determine its suitability for home isolation.
- Regional public health teams should keep all line-lists in a good professional format.

7.5 Human-Animal Interface and SARS CoV 2:

As at the time of writing, field investigations into the source and mode(s) of zoonotic transmission of the newly emerged SARS-CoV 2 remain ongoing. However, given a substantial portion of the first set of COVID-19 cases in December 2019 were linked to the Wuhan Seafood market where live animals including wildlife were also sold, spillover and zoonotic transmission might be involved. Additionally, as it has been reported that some of these earlier cases were not linked to this Seafood market or human cases of COVID-19, it cannot be ruled out that possible zoonotic transmission might have occurred outside the market. Presently, it is thought that SARS-CoV-2 transmission might be similar to that of other recently emerged coronaviruses (MERS-CoV and SARS-CoV). If the situation arises that a local confirmed case has no direct or indirect link to confirmed cases in endemic countries or travelers returning from such places with history of animal exposure, joint investigations, using a One Health approach, in coordination the Ministries of Water, Environment and Agriculture (MEWA), Municipalities (MOMRA) and Interior are required.

7.6 Points of entry and traveler health

In response to the outbreak of COVID-19, several countries and territories were reported to have implemented health screening of travelers arriving (directly or indirectly) from China. The spread of COVID-19 from China to nearby and faraway countries (including Singapore, Japan, Thailand, US, UK, France, Canada and South Korea) through international travel of infected individuals have been reported. With increasing number of cases, points of screening for travellers coming from Singapore were added as well.

However, WHO advises against imposing travel or trade restrictions China based on the information currently available.

Reports on imported cases in multiple countries worldwide highlight the importance of instituting vigilant surveillance at ports of entry for detecting any suspected cases among people arriving from or with history of travel to endemic areas within a period of two weeks. It should be noted that it has been observed that travelers may be asymptomatic at PoEs.

Importantly, on arrival to Saudi Arabia, travelers from countries with ongoing transmission in general may undergo health screening, including recording body temperature, questionnaire to be filled that include any epidemiological contact. Travelers with symptoms (fever, cough, or difficulty breathing) will undergo additional health assessment based on SCDC and MoH regulations.

For proper implementation of COVID-19 prevention and control procedures, public health measures at ports of entry must to be followed:

7.6.1 Public health measures at ports of entry (PoE)

- Ensure routine measures, trained staff, and appropriate space and stockpile of adequate equipment are in place at points of entry for assessing and managing potentially infected or ill travelers onboard (airplane or ship) or upon arrival.
- Implement entry screening (including temperature recording) on all travelers arriving from China (directly/indirectly) or other infected countries at any point of entry.
- Ensure procedures and means are in place for communicating information on ill travelers between conveyances and points of entry.
- Communicate and share information on ill travelers between PoE and national health authorities and designated hospitals before patient's arrival to hospitals.
- Use standard precautions, contact precautions, airborne precautions and use eye protection (goggles or a face shield) when dealing with suspected patients.
- Organize safe transportation of symptomatic travelers to hospitals or designated facilities for clinical assessment and treatment.
- Ensure a functional public health emergency and contingency plan is in place at point of entry to respond to public health events.
- Ensure the existence of equipment necessary to disinfect and sterilize sites and tools that are expected to be contaminated with SARS-CoV-2 by infected cases.
- Increase health awareness and preventions methods for travelers, conveyance operators and operators working at the point of entry.
- Inform people who are travelling to China or other infected countries to avoid being in crowded places, avoid contact with sick people or animals (alive/ dead), avoid being in animal markets, and avoid eating raw or undercooked meat. Also, inform travelers to wash hands often with soap and water, to use alcohol-based hand sanitizer and to cover their mouth and nose with a tissue or your sleeve (cough etiquette) when coughing or sneezing.
- Inform travelers to China or other infected countries to request urgent medical health care by contacting the health service when feeling sick.
- If a traveler on board of an aircraft/a ship has signs and symptoms indicative of acute respiratory infections, the model of Maritime declaration of health or the health part of the aircraft general declaration should be used by conveyance operators to register the health information onboard and submit to point of entry health authorities upon arrival.
- A passenger locator form should be used in the event of a sick traveler detected on board a plane. This form is useful for collecting contact information for passengers and can be used for follow-up if necessary. Travelers should also be encouraged to self-report if they feel ill. The cabin crew should follow the operational procedures recommended by International Air Transport Association (IATA) with regard to managing suspected communicable disease on board an aircraft.

7.7 Command and Control

The Ministry of Health has National and Regional Command and Control Centers CCC (i.e. Incident Command System) to coordinate roles and responsibilities of different entities to expedite real-time response during events. The CCC has activated a COVID-19 preparedness and response plan; it coordinates communications, surveillance, information, resource allocation and educational activities to prevent and control possible COVID-19 events.

7.7.1 First: preparedness and real-time surveillance

National and Regional CCCs oversee the preparedness activities and leads national COVID-19 surveillance through enforcing the existing structure of incident command with relevant stakeholders to achieve unified, consistent, and timely actions over a significant period.

The aim of the preparation and surveillance

- Determine and establish operational response plan to COVID-19 outbreak.
- Education and training for all levels of responders with relevant plans and procedures.
- Ensure that preparation plan of; reporting, alert, escalation, stockpiles, bed capacities, isolation capacities and RRTs, are updated and disseminated to relevant stakeholders.
- Ensure timely and effective command and control of COVID-19 outbreak.
- Enforce Surveillance and appropriate levels of alert.
- Ensure real-time and accurate information flow to expedite actions.
- Public Health awareness.

Current Preparation of CCC:

Surveillance and PoE:

- Visual triage for passengers arriving from China (and other countries that might become endemic as the outbreak evolves) at all Point of Entry.
- Thermal screening of passengers arriving from China (and other countries that might become endemic as the outbreak evolves) at all Point of Entry.
- Declaration of being in China (and other countries that might become endemic as the outbreak evolves) or being in contact with a known case in the last 14 days at all PoE
- Suspected cases must immediately be managed by RRTs and referred to designated hospitals (see Appendix 6)

Preparedness of Healthcare Facilities:

- Risk assessment and gap closure
- Strengthen all healthcare facilities including the 25 Designated hospital (20 Primary and 5 secondary)
- Infection control procedures and visual triage is enforced and monitored in all healthcare facilities
- Monitor capacity for isolation bed, healthcare workers, and medical critical medical supplies
- Prepare and disseminate technical guidelines and operational protocols

Community based preparedness:

- Support public places by PPEs capacity
- CCC have Prepared a Risk communication plans during different stages of possible outbreak

Communication and Health awareness:

- Designated a hotline for the public consultations or general questions about the disease
- Designated hotline for the Healthcare workers for medical consultations
- Health awareness on social media, PoE and schools

7.7.3 Second: Response

The CCC commanders are responsible to activate ICS to coordinate actions of the relevant responders.

- The main goal of CCC and RCCC in response mode:
 - Have real-time information of the incident (outbreak)
 - Manage resources for lab and infection control requirements (acquisitions, tracking and monitoring)
 - Monitor COVID-19 cases in hospitals or household isolation
 - Plan and operate designated health facilities for the surge
 - Coordinate all actions between responders and stakeholders

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APPENDIX 1

Corona Virus Disease 2019 (COVID-19) Form

Date of initial notification: ____dd/____mm/____yyyy

Notification					
Name of who completed the form			Contact number		
Date			Email		
Hospital Name			City		
At the time of this report, is the case?			<input type="checkbox"/> Confirmed <input type="checkbox"/> Suspected <input type="checkbox"/> Case under investigation <input type="checkbox"/> Not a case		
Patient Information					
Full name			Date of Birth	____dd/____mm/____yyyy	
Identification number:			Marital status		
Occupation	<input type="checkbox"/> HCW <input type="checkbox"/> Non-HCW _____		Sex	<input type="checkbox"/> Male <input type="checkbox"/> Female	
Phone Number			Age		
Address	House No.: _____ Street name: _____ District _____ City: _____ Province/Region: _____				
Education					
Clinical Information					
Date of symptoms onset			____/____/____		
Symptoms	Yes	No	Symptoms	Yes	No
Fever $\geq 38^{\circ}$			Nausea		
History of fever (not measured).			Vomiting		
Sore throat			Headache		
Runny nose			Muscle pain		
Cough			Joint pain		
Shortness of breath			Diarrhea		
Other (specify):					

Hospitalization Information

Is/was the patient hospitalized?		<input type="checkbox"/> Yes, Date of admission ____/____/____ <input type="checkbox"/> No	
Admitted to ICU?	Intubated?	On ECMO?	Patient died?
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Comorbid conditions (check all that apply):

- ☐ None ☐ Unknown ☐ Pregnancy ☐ Diabetes ☐ Cardiac disease
☐ Hypertension ☐ Chronic pulmonary disease ☐ Chronic kidney disease
☐ Chronic liver disease ☐ Immunocompromised
☐ Other: _____

Epidemiological Information

Visiting and Travel History:

Did the patient travel in the 14 days prior to illness onset?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
---	---

If yes,

Trip 1: Dates of travel: ____/____/____ to ____/____/____ Country _____ City _____
 Trip 2: Dates of travel: ____/____/____ to ____/____/____ Country _____
 City _____ Trip 3: Dates of travel: ____/____/____ to ____/____/____
 Country _____ City _____

In the 14 days prior to illness onset, did the patient have close contact with someone who travelled outside the Country?

- ☐ Yes ☐ No ☐ Unknown

Please describe individual (including travel location)

If the patient was tourist/pilgrim, please complete information below:

Did the patient travel with?	<input type="checkbox"/> Airline <input type="checkbox"/> Ship <input type="checkbox"/> Bus <input type="checkbox"/> Car <input type="checkbox"/> Other _____
------------------------------	---

Airline Information:

Airline Name: _____	Flight Number: _____	Origin: _____
Date of arrival: ____/____/____	Date of departure: ____/____/____	Transit destination: _____

Other Trans Information:

Type of transportation: _____	Date of arrival: ____/____/____
Port of entry: _____	Origin: _____

Resident Information after arrival:

Name of resident (hotel, Hajj campaign, ..etc.): _____	where: _____
Date of check in: ____/____/____	Date of check out: ____/____/____
Note: (Describe the timeline of contact movement)	

Contact Exposure

Did the patient have contact with a known or suspect case, or with any sick person before becoming ill (14 days prior to illness onset)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
--	--

Did the patient have contact with anyone during illness period?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

If yes, please complete the list of patient contact in the end of report

In the 14 days before or after becoming ill, did the patient attend a public event where a large number of people were present (i.e., a sporting event, wedding, concert, Hajj and Umrah)?

<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	If yes, please describe the event (include date and location)
---	---

In the 14 days before or after becoming ill, did the patient visited any healthcare facility or setting?

<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Specify healthcare facility/reason: _____
---	---

Animal Exposure:

Did the patient have direct/ indirect contact with any animals within the last 14 days?

☐ Yes ☐ No ☐ Unknown

If yes, please specify and describe the contact (when/where/extent)

Did the patient visit any of the following locations where animals may be present within the last 14 day?

☐ Yes ☐ No ☐ Unknown

If yes, check all that apply: ☐ Farm ☐ Petting zoo ☐ Agricultural event ☐ Live animal market ☐ Slaughterhouse ☐ Pet store ☐

Other: _____

Please describe (when/where/extent):

Did the patient has any other occupation that regularly deals with animal?

☐ Yes, specify _____ ☐ No ☐ Unknown

Note:

APPENDIX 2

List of patient's contacts					
Name of contact	Relation to patient	Last contact date	City	Sex	Phone
		____/____/____		<input type="checkbox"/> Male <input type="checkbox"/> Female	
		____/____/____		<input type="checkbox"/> Male <input type="checkbox"/> Female	
		____/____/____		<input type="checkbox"/> Male <input type="checkbox"/> Female	
		____/____/____		<input type="checkbox"/> Male <input type="checkbox"/> Female	
		____/____/____		<input type="checkbox"/> Male <input type="checkbox"/> Female	
		____/____/____		<input type="checkbox"/> Male <input type="checkbox"/> Female	
		____/____/____		<input type="checkbox"/> Male <input type="checkbox"/> Female	
		____/____/____		<input type="checkbox"/> Male <input type="checkbox"/> Female	
		____/____/____		<input type="checkbox"/> Male <input type="checkbox"/> Female	
		____/____/____		<input type="checkbox"/> Male <input type="checkbox"/> Female	

For follow up of contacts, use the contact tracking form to collect additional information.

APPENDIX 3

Contact Tracing Form

Novel Coronavirus

Name of the contact: _____ ID/ Iqama number: _____
Age: _____ Nationality: _____ Phone #: _____

Daily Contact Follow-Up Form

1 Day after last exposure / /	2 Day after last exposure / /	3 Day after last exposure / /	4 Day after last exposure / /	5 Day after last exposure / /
<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____
<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____
<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	
<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	<input type="checkbox"/> No symptoms <input type="checkbox"/> Fever _____ °C <input type="checkbox"/> Shortness of breath <input type="checkbox"/> Sore throat <input type="checkbox"/> Cough <input type="checkbox"/> Headache <input type="checkbox"/> Muscle/joint pain <input type="checkbox"/> Diarrhea _____ times/day <input type="checkbox"/> Vomiting/nausea <input type="checkbox"/> Runny nose Others _____	

Note

Region: _____ Public Health Investigator: _____

APPENDIX 4

Visual Triage Checklist

Visual Triage Checklist for Acute Respiratory Illnesses

Date:	Time	MRN:
Name:	ID#:	Hospital:

Circle the number reflecting the patient's condition (exposure and clinical picture) and calculate the final score:

Risks for Acute Respiratory Illnesses	Score		
A. Exposure Risks (in the past 14 days prior to symptom onset)	Any Patient (Adult or Pediatric)		
1. Had a history of travel to areas with presumed ongoing community transmission of COVID-19 (China, Iran, South Korea, Japan, Singapore, Hong Kong , or any updated information added on www.moh.gov.sa/ccs) OR A close physical contact in the past 14 days prior to symptom onset with a confirmed case of COVID-19 OR Working in or attended a healthcare facility where patients with confirmed COVID-19 were admitted.	5		
2. Exposure to a confirmed MERS case in the last two weeks	3		
3. Exposure to camel or products (direct or indirect*) in the last two weeks	2		
4. Visit to a healthcare facility that had MERS case in the last two weeks	1		
B. Clinical Signs and Symptoms	Adult Patient with Exposure Risk No. 1	Patient with or without Exposure Risk No. 2, 3, or 4	
		Pediatric	Adult
1. Fever	1	1	2
2. Cough (new or worsening)	1	1	2
3. Shortness of breath (new or worsening)	1	1	2
4. Sore throat and/or runny nose	1	-	1
5. Nausea, vomiting, and/or diarrhea	-	-	1
6. Chronic renal failure, CAD/heart failure	-	-	1
Total Score			

*Patient or household

A score ≥ 4 , place patient in an isolation room and inform MD for assessment. MERS-CoV testing should be done only according to case definition.

A score ≥ 6 , place patient in an isolation room and inform MD for assessment. COVID-19 testing should be done only according to case definition.

Staff name: _____ ID number: _____

APPENDIX 5

نموذج الإبلاغ* الفوري لحالة مشتبهة بمرض كوفيد-19 في المملكة العربية السعودية

Immediate reporting* form for a suspected case with COVID-19 in Saudi Arabia

Date of reporting: dd/mm/yy Time: Reporting person: Reporting facility: Reporting address: Reporting contact number:	تاريخ الإبلاغ: يوم/شهر/سنة وقت الإبلاغ: اسم المبلغ: الجهة المبلغة: عنوان المبلغ/الجهة: رقم التواصل للمبلغ/للجهة:
Suspected case information Name: Sex: Date of birth: dd/mm/yyyy Age: Nationality: ID type: (specify) ID number: Contact number(s): Address: Healthcare worker: <input type="checkbox"/> Yes <input type="checkbox"/> No (specify occupation)	معلومات الحالة المشتبهة الاسم: تاريخ الميلاد: يوم/شهر/سنة العمر: الجنسية: رقم الهوية/الجواز: رقم التواصل: العنوان: عامل في الرعاية الصحية: <input type="checkbox"/> نعم <input type="checkbox"/> لا (الرجاء تحديد المهنة)
Definition 1: Does the suspected case has sudden onset of at least ONE of the following symptoms: Fever (or $T \geq 38^{\circ}C$)? <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No Cough? <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No Shortness of breath? <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No Sore throat? <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No Other (specify) Onset: dd/mm/yyyy AND had at least ONE of the following exposure within 14 days before symptom onset: Travel to or reside in China, Hong Kong, Singapore, South Korea, Japan, Iran, and/or areas listed and updated on www.moh.gov.sa/cc? <input type="checkbox"/> Yes, last date: dd/mm/yyyy location: <input type="checkbox"/> No Close contact** with a confirmed COVID-19 case? <input type="checkbox"/> Yes, last date: dd/mm/yyyy location: <input type="checkbox"/> No Work in or attend a healthcare facility where confirmed COVID-19 case admitted? <input type="checkbox"/> Yes, last date: dd/mm/yyyy location: <input type="checkbox"/> No	تعريف رقم 1: هل الحالة المشتبهة لديها على الأقل أحد الأعراض التالية: سخونة (أو درجة حرارة $\geq 38^{\circ}C$ مئوية)? <input type="checkbox"/> نعم، إبتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا سعال (كحة)? <input type="checkbox"/> نعم، إبتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا ضيق في التنفس? <input type="checkbox"/> نعم، إبتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا التهاب الحلق? <input type="checkbox"/> نعم، إبتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا أخرى (حدد) <input type="checkbox"/> إبتداءً من: يوم/شهر/سنة وهل تم التعرض على الأقل لأي من التالي خلال 14 يوماً قبل ظهور الأعراض: سفر أو إقامة بالصين أو هونغ كونغ أو سنغافورة أو كوريا الجنوبية أو اليابان أو إيران و/أو ما يتم إدراجه والتحديث عن وضعه الوبائي في الموقع الإلكتروني لمركز القيادة والتحكم بوزارة الصحة? <input type="checkbox"/> نعم، آخر تاريخ: يوم/شهر/سنة المكان: <input type="checkbox"/> لا اتصال وثيق** مع حالة مؤكدة مصابة بمرض كوفيد-19? <input type="checkbox"/> نعم، آخر تاريخ: يوم/شهر/سنة المكان: <input type="checkbox"/> لا عمل أو تواجد في منشأة صحية تم فيها تنويم حالة مؤكدة مصابة بمرض كوفيد-19? <input type="checkbox"/> نعم، آخر تاريخ: يوم/شهر/سنة المكان: <input type="checkbox"/> لا
OR Definition 2: Does the suspected case has any of the following conditions: Intensive Care Unit admission? <input type="checkbox"/> Yes <input type="checkbox"/> No Acute Respiratory Distress Syndrome? <input type="checkbox"/> Yes <input type="checkbox"/> No CURB-65*** score ≥ 3 points? <input type="checkbox"/> Yes <input type="checkbox"/> No AND fulfilled ALL the following conditions: Tested negative for influenza and MERS-CoV in adults? Influenza <input type="checkbox"/> -ve <input type="checkbox"/> +ve MERS-CoV <input type="checkbox"/> -ve <input type="checkbox"/> +ve No clear underlying causes and no clinical improvement? Unknown cause <input type="checkbox"/> Yes <input type="checkbox"/> No Deterioration <input type="checkbox"/> Yes <input type="checkbox"/> No With or without identified epidemiological link to a confirmed COVID-19 case? <input type="checkbox"/> Yes (identify) <input type="checkbox"/> No	أو تعريف رقم 2: هل الحالة المشتبهة لديها أي من الظروف التالية: الحاجة إلى تنويم في وحدة العناية المركزة? <input type="checkbox"/> نعم <input type="checkbox"/> لا وجود بيانات تشير إلى متلازمة الضائقة التنفسية الحادة? <input type="checkbox"/> نعم <input type="checkbox"/> لا وجود قيمة معايير كورب-65 ≥ 3 نقاط? <input type="checkbox"/> نعم <input type="checkbox"/> لا وتستوفي جميع الظروف التالية: وجود نتائج الكشف التأكيدي للإنفلونزا وفيروس كورونا مبرس للبالغين سلبية? <input type="checkbox"/> -ve <input type="checkbox"/> +ve <input type="checkbox"/> -ve <input type="checkbox"/> +ve عدم وجود مسببات أخرى تقصر المسار السريري وعدم حصول تحسن? <input type="checkbox"/> غير معتاد أو متوقع <input type="checkbox"/> نعم <input type="checkbox"/> لا وجود أو عدم وجود صلة وبائية مباشرة مع حالة مؤكدة مصابة بمرض كوفيد-19? <input type="checkbox"/> نعم (الرجاء التعرف) <input type="checkbox"/> لا

*ONLY report and request laboratory testing for suspected** cases. Official reporting in Saudi Arabia is through the Health Electronic Surveillance Network (HESN) by selecting the nCoV2019 investigation e-forms and testing panel. If unable to report through HESN, kindly fill out this form and sent it via an SMS or WhatsApp message to the Generate Directorate of Communicable Disease Control at 00966501486268. Last updated 24 February 2020.

Source: Saudi Center for Disease Prevention and Control, Ministry of Health, Saudi Arabia.

**Close contact is defined as living in the same household with a COVID-19 patient; working together in close proximity or sharing the same classroom environment with a COVID-19 patient; traveling together with a COVID-19 patient in any kind of conveyance; or providing direct care for COVID-19 patients, visiting patients or staying in the same close environment of a COVID-19 patient, or working with healthcare workers infected with COVID-19 with the epidemiological link may occurred within a 14-day period before symptom onset.

***CURB-65: Confusion, Urea nitrogen, Respiratory rate, Blood pressure, 65 years of age and older.

APPENDIX 6

Corona Virus Disease-2019 Designated Hospitals

Region	Primary COVID-19 Hospital	COVID-19 Backup Hospital
Riyadh	Prince Mohammed bin Abdul-Aziz Hospital	Imam Abdulrahman Alfaisal Hospital
Makkah	Al-Noor Hospital	East Jeddah Hospital
Jeddah	King Abdullah Medical Complex	
Taif	King Faisal Hospital	
Madinah	Ohud Hospital	
Eastern Region	Dammam Medical Complex	Qatif Central Hospital
Ahsa	King Fahd General Hospital in Hafuf	
Hafr Al-Batin	King Khalid General Hospital	
Al-Qassim	Buraidah Central Hospital	King Saud Hospital-Qassim
Tabuk	King Fahd Hospital	
Hail	King Khalid Hospital	
Al-Jouf	King Abdulaziz Specialist Hospital	
Northern Borders	Arar Central Hospital	
Al-Qurayyat	Qurayyat General Hospital	
Asir	Asir Central Hospital	Khamis Mushait General Hospital
Bisha	King Abdullah Central Hospital	
Albaha	King Fahd Hospital	
Jazan	Bish Hospital	
Najran	King Khalid Hospital	
Al Qunfudah	South Al-Qunfudah General Hospital	