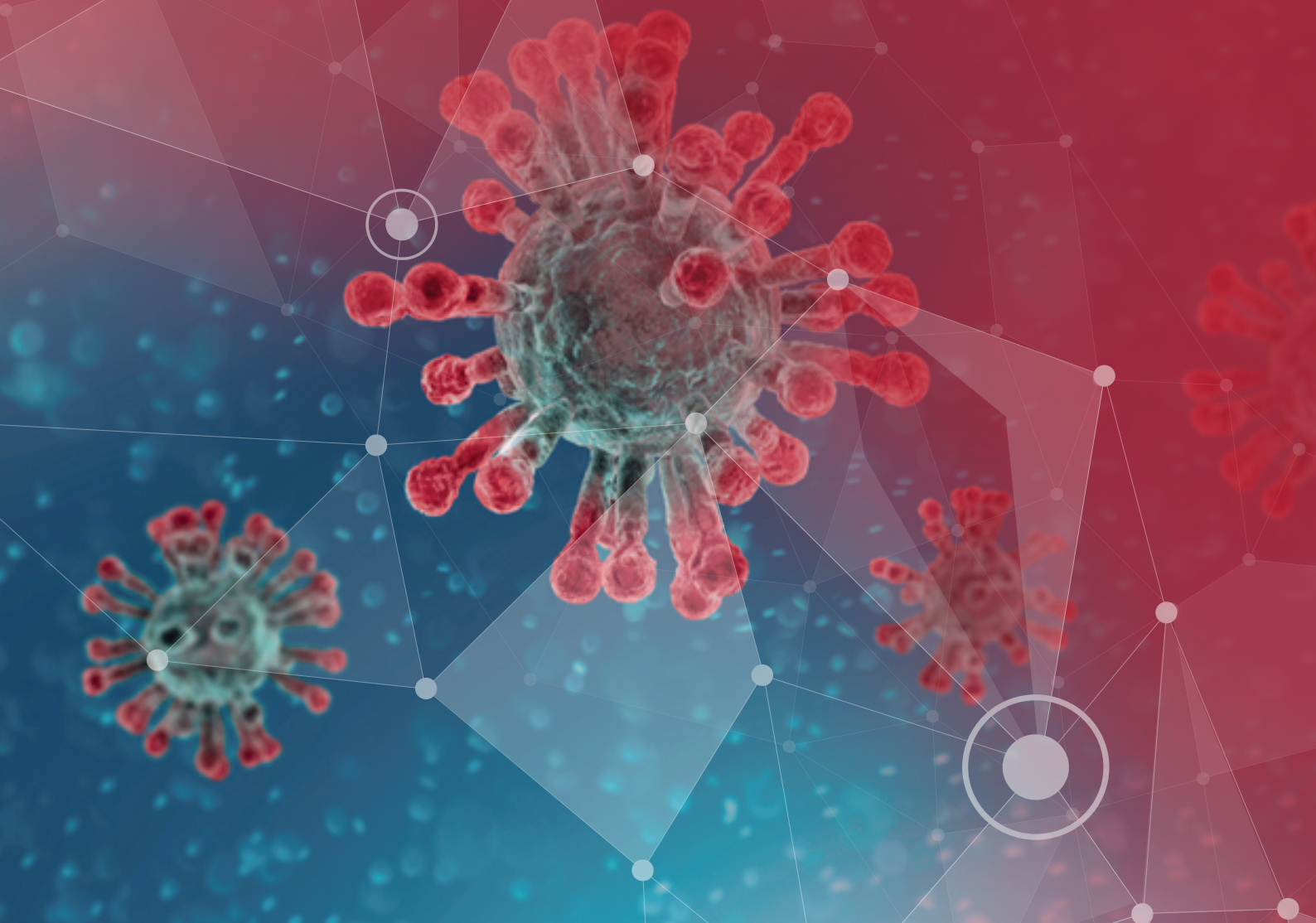
Ministry of Public Health

NATIONAL INFECTION PREVENTION AND CONTROL INTERIM GUIDELINE FOR COVID-19



Contents

Abbreviations

AGPs	Aerosol-generating Procedures
CDC	Centers for Disease Control and Prevention
COVID-19	Corona Virus Disease 2019
DPH	Department of Public Health
ED	Emergency Department HMC
EVD	Ebola Virus Disease
HCW	Health Care Worker
HGH	Hamad General Hospital
HIA	Hamad International Airport
HMC	Hamad Medical Corporation
HMC AS	Hamad Medical Corporation Ambulance Services
HP & CDC	Health Protection & Communicable Diseases Control
HQPS	Healthcare Quality and Patient Safety Department
IHR 2005	International Health Regulations 2005
IPC	Infection Prevention and Control
MERS-CoV	Middle East Respiratory Syndrome Corona Virus
MOD	Ministry of Defense
MOE	Ministry of Environment
MOI	Ministry of Interior
MOPH	Ministry of Public health
NFP	National IHR focal point
NHS	National Health Strategy
OCT	Outbreak Taskforce
PHCC	Primary Health Care Corporation
SARS	Severe Acute Respiratory Syndrome
WHO	World Health Organization

Purpose:

This guideline outlines the infection prevention and control (IPC) practices associated with COVID-19.

This document aims to provide healthcare workers (HCWs) with updated interim guidelines on timely, effective, and safe IPC practices when dealing with patients with COVID-19 and Severe Acute Respiratory Infections (SARI). This guideline is intended for all HCWs including ambulance staff, healthcare administrators, housekeeping staff and IPC teams at the national and the facility level. It should be used in conjunction with IPC policies. It also includes the advice that HCWs will provide for patients and their care givers.

The recommendations in this document are derived from WHO and CDC guidance.

Background

Coronaviruses (CoV) are a large family of viruses that cause illness ranging from common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). The novel coronavirus; COVID-19 is a new strain that has not been previously identified in humans.

Coronaviruses are zoonotic; they are transmitted between animals and people. Detailed investigations found that SARS-CoV was transmitted from civet cats to humans and MERS-CoV from dromedary camels to humans. Several known coronaviruses are circulating in animals that have not yet infected humans.

The outbreak of COVID-19 in Wuhan, China has been reported to be linked to a large seafood and animal market, suggesting a possible zoonotic origin to the outbreak.

Infection prevention & control procedures including administrative rules and engineering controls, environmental hygiene, correct IPC practices, and appropriate use of personal protective equipment (PPE) are all necessary to prevent infections from spreading during healthcare delivery. Prompt detection and effective triage and isolation of potentially infectious patients are essential to prevent unnecessary exposures among patients, healthcare workers, and visitors at the healthcare facility. Infection prevention & control procedures should be implemented in health care facilities by all staff.

Surveillance

The primary objectives of surveillance are to:

1. Detect early, sustained human-to-human transmission; recognize and sort all patients with SARI at first point of contact with health care system (such as the emergency department).
2. Determine the geographic risk area for infection with the virus.

Case definitions for COVID-19

Suspect case

1. Patient with acute respiratory illness (fever and at least one sign/symptom of respiratory disease (e.g., cough, shortness of breath), AND with no other aetiology that fully explains the clinical presentation AND a history of travel to or residence in a country/area or territory reporting local transmission of COVID-19 disease during the 14 days prior to symptom onset

OR

2. A Patient with any acute respiratory illness **AND** having been in contact with a confirmed or probable COVID-19 case during the 14 days prior to symptom onse.

OR

3. A patient with severe acute respiratory infection (fever and at least one sign/symptom of respiratory disease (e.g., cough, shortness breath) **AND** requiring hospitalization **AND** with no other aetiology that fully explains the clinical presentation.

Probable case

A suspect case for whom testing for COVID-19 is inconclusive; where the result of the test reported by the laboratory is inconclusive.

Confirmed case

A person with laboratory confirmation of COVID-19 infection, irrespective of clinical signs and symptoms.

Further confirmed case definitions

A: Primary case (or index case):

A primary case is an individual who tests positive for COVID-19 and has the earliest onset date in a particular setting e.g. household, school, hospital etc. Cases with onset dates less than 24 hours of the onset date of the primary case are “co-primary” cases.

B: Secondary case:

a contact who becomes a case with positive test result 24 hours or more after the latest positive test date of the primary and/or co-primary case; or with onset of symptoms 24 hours or more after the latest onset date of the primary and/or co-primary case.

C: Imported case:

An imported case is a case with a history of travel from an affected area in the 14 days before disease onset.

Definition of contact

A contact is a person that is involved in any of the following: -

- Providing direct care without proper personal protective equipment (PPE) for COVID-19 patients
- Staying in the same close environment of a COVID-19 patient (including workplace, classroom, household, gatherings)
- Traveling together in close proximity (1 m) with a COVID-19 patient in any kind of conveyance within a 14-day period after the onset of symptoms in the case under consideration

Reporting and notification

- Any suspected or confirmed case should be notified immediately to Health Protection & Communicable Disease Control (HP & CDC) at the Ministry of Public Health by calling the hotlines **66740948 / 66740951**
- Any suspected or confirmed case should be notified immediately to healthcare IPC team and health care facility management.
- WHO requests that probable and confirmed cases be reported within 24 hours of classification, through the regional contact point for International Health Regulations at the appropriate WHO regional office.

General Infection Prevention and Control precautions

Preventing transmission of respiratory pathogens including COVID-19 in healthcare facilities requires the application of infection prevention and control procedures and protocols. They include the following:

1. Early recognition and source control
2. Application of Standard Precautions for all patients
3. Implementation of empiric additional precautions; airborne and contact precautions. If airborne precautions are not feasible; apply droplet precautions instead.
4. Administrative controls
5. Environmental and engineering controls

The facilities should implement all these strategies simultaneously. The success of the implementation depends on the presence of clear administrative policies and organizational leadership that promote and facilitate adherence to these recommendations among the various people within the healthcare setting, including patients, visitors, and HCWs.

IPC Measures should be implemented before patient arrival, upon arrival, and throughout the duration of the affected patient's presence in the healthcare setting.

Before Arrival

- When scheduling appointments, instruct patients and persons who accompany them to call ahead or inform HCW upon arrival if they have symptoms of any respiratory infection (e.g. cough, runny nose, fever) and to take appropriate preventive actions (e.g. wear a facemask upon entry to contain cough, follow triage procedure).

Upon Arrival and During the Visit

- Ensure rapid triage and isolation of patients who might have COVID-19 infection (See Appendix 1: Visual Triage for COVID-19[1]).
- Immediately isolate those identified as at risk for having COVID-19 infection.
- Take steps to ensure all persons with symptoms of a respiratory infection adhere to, respiratory hygiene and cough etiquette; cover the mouth and nose with a tissue when coughing or sneezing, dispose of used tissue in the nearest waste receptacle and perform hand hygiene. Place a facemask over the patient's nose and mouth, throughout the duration of the visit.
- Consider posting visual alerts (e.g., signs, posters) at the entrance and in strategic places (e.g. waiting areas, elevators, cafeterias) to provide patients and HCW with instructions (in appropriate languages) about hand hygiene, respiratory hygiene, and cough etiquette. Instructions should include how to use facemasks or tissues to cover nose and mouth when coughing or sneezing, to dispose of tissues and contaminated items in waste receptacles, and how and when to perform hand hygiene.
- Provide space and encourage persons with symptoms of acute respiratory infections to sit at least 6 feet away from others as possible. If available, facilities may wish to place these patients in a separate area while waiting for care.

[1] Please check MOPH website for updated versions of triage

- Isolate those at risk for COVID-19. See recommendations for “Patient Placement” below.
- Inform local infection prevention and control services, national public health authorities and IPC, and other healthcare facility staff as appropriate (e.g. management) about the presence of suspected case for COVID-19.
- Provide supplies to perform hand hygiene to all patients upon arrival to facility (e.g., at entrances of facility, waiting rooms, at patient check-in) and throughout the entire duration of the visit to the healthcare setting.

Table 1: IPC measures for COVID-19 at the Healthcare Facility

Component	Recommendation	Comments
Hand Hygiene	• HCW should perform hand hygiene as per the 5 moments of Hand Hygiene (Appendix 4: The Five Moments of Hand Hygiene). Hand hygiene should also be performed after coughing and sneezing as part of respiratory hygiene/cough etiquette. • Hand hygiene in healthcare settings can be performed by washing with soap and water or using alcohol-based hand sanitizer. If hands are visibly soiled, use soap and water, not alcohol-based hand sanitizer.	• Healthcare facilities should ensure that supplies for performing hand hygiene are available for staff, patients and visitors.
Patient Placement	1. Airborne Infection Isolation Rooms AIIR (Negative Pressure Rooms) particularly during an aerosol generating procedures 2. Well ventilated single patient room (preferably containing a private bathroom) with the door closed if AIIR are not available. 3. In primary care setting and ambulatory care, the patient should be placed in a dedicated isolation/ Separation room with the door closed. 4. If an AIIR is not available, patients who require hospitalization should be transferred as soon as is feasible to a facility where an AIIR is available. If the patient does not require hospitalization, they can be discharged home (in consultation with HP & CDC public health authorities) if deemed medically and socially appropriate. Pending transfer or discharge, place a facemask on the patient and isolate him/her in an examination room with the door closed. Ideally, the patient should not be placed in any room where room exhaust is recirculated within the building without HEPA filtration. 5. Avoid the movement and transport of patients out of the isolation room unless medically necessary 6. If transport is required: a. Provide patients with Alcohol-based hand sanitizer	• Post the appropriate isolation signage outside the room. • Ensure Adherence to Standard, Contact and Airborne or Droplet or Precautions as appropriate (Contact IPC team for confirmation). • Ensure the PPE resources are available at the point of need. • Patient who are critically ill (e.g. pneumonia with respiratory distress or hypoxemia) should be placed in Airborne Isolation rooms • When single rooms are not available, place patients with the same diagnosis together (cohorting). If this is not possible, place patient beds at least 6 feet apart

Component	Recommendation	Comments
	b. Patients should wear a surgical mask c. Use routes of transport that minimize exposures of staff, other patients, and visitors. d. Notify the receiving area of the patient's diagnosis and necessary precautions as soon as possible before the patient's arrival. e. Ensure that healthcare workers (HCWs) who are transporting patients wear appropriate PPE and perform hand hygiene (HH) as per the 5 moments of HH. 7. Facilities should maintain a log of all persons entering the patient's room	
Personal Protective Equipment (PPE)	a) For triage nurse: • Wear surgical mask until escorting the patient to the isolation room. • Remove /dispose surgical mask into a yellow bin after the patient enters the isolation room. • Perform HH as per 5 moments of HH. b) PPE should be worn by HCWs upon entry into the patient room. c) Housekeeping staff wear the same PPE as the HCW managing the patient. d) Adults accompanying children suspected or confirmed COVID-19 should be instructed to wear the appropriate PPE as the HCWs caring for their children. e) Change PPE between use and for each different patient. f) Dispose of single use PPE in a closed bin **Sequence of Putting on (donning) the PPE:** 1. Gowns (clean, non-sterile, long-sleeved disposable gown) 2. Fit tested, seal checked N95 respirator. (Surgical mask if N95 mask is not available.) 3. Eye protection (goggles or face shield) 4. Gloves **Sequence of Removing the (doffing) PPE:** 1. Gloves 2. Goggles or face shield	i. For HCWs who fail the fit testing of N95 masks (e.g. those with beards) an alternative respirator, such as a powered air-purifying respirator, should be used ii. Upon exit from the patient room or care area, PPE should be removed and discarded iii. Except for N95 masks, remove PPE at doorway or in anteroom. Remove N95 mask after leaving patient room and closing door. iv. You can perform HH immediately after removing gloves if you believe that your hands may have been contaminated.

Component	Recommendation	Comments
	3. Gown 4. Mask. Perform Hand hygiene before donning and after doffing of PPE	
Patient Care Equipment	• Dedicated medical equipment (preferably disposable, when possible) should be used for the provision of patient care • All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected according to manufacturer's instructions and hospital policies	• Follow manufacturer's instructions and hospital policies
Sample collection	Diagnostic Respiratory Specimen Collection: • At that stage, no samples/swabs will be collected except at the Communicable Diseases Center, Hamad Medical Corporation. • HCW collecting specimens for testing for COVID-19 should adhere to Standard, Contact, and Airborne Precautions, including the use of eye protection. • These procedures should take place in an air borne negative pressure room. Ideally, the patient should not be placed in any room where room exhaust is recirculated within the building without HEPA filtration.	• Collecting diagnostic respiratory specimens (e.g., nasopharyngeal swab) are likely to induce coughing or sneezing. Individuals in the room during the procedure should, ideally, be limited to the patient and the healthcare provider obtaining the specimen.
Collection And handling of laboratory specimens	• Ensure that HCWs who collect specimens wear appropriate PPE; gowns, gloves, face-shield/goggles and surgical mask except in aerosol generating procedures use N95 Mask. • 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 label on the specimen container (primary container), and a clearly written request form. • Deliver all specimens by hand whenever possible. Do not use pneumatic-tube systems to transport specimens. • Notify the laboratory as soon as possible that the specimen is being transported.	

Component	Recommendation	Comments
Aerosol Generating Procedures (AGPs)	• If performing AGPs, use a combination of measures to reduce exposure: a. Wear N95 masks b. Wear eye protection (i.e. goggles or a face shield). c. Wear a clean, non-sterile, long-sleeved gown and gloves (some of these procedures require sterile gloves). d. Wear an impermeable apron for some procedures with expected high fluid volumes that might penetrate the gown. e. Perform procedures in a negative pressure room. • Perform hand hygiene as per the 5 moments of HH. • Limiting the number of HCWs present during the procedure to only those essential for patient-care and support. • Conduct environmental surface cleaning following procedures (see section below on environmental infection control). • Collection and handling of soiled re-usable respirators must be done by trained individuals using PPE	• Although there are limited data available to definitively define a list of aerosols generating procedures, procedures that are usually included are those planned ahead of time, such as bronchoscopy, sputum induction, elective intubation and extubation; and some procedures that often occur in unplanned, emergent settings and can be life-saving, such as cardiopulmonary resuscitation, urgent intubation, and open suctioning of airways. • Once the patient vacates a room where aerosol generating procedures were conducted, unprotected individuals, including HCWs, should not be allowed in that room until sufficient time has elapsed for enough air changes to remove potentially infectious particles.
Environmental Infection Control	• Designate well trained housekeeping personnel for cleaning and disinfecting patient rooms occupied by suspected or confirmed COVID-19 cases. • Staff performing environmental cleaning and disinfection should wear recommended PPE (described above) and consider use of additional barriers i.e. shoe and leg coverings, etc.) if needed. • Face protection (face shield or facemask with goggles) should be worn when performing tasks such as liquid waste disposal that can generate splashes. • Follow standard operating procedures, per hospital policy and manufacturers'	• Follow standard procedures for cleaning and/or disinfection of environmental surfaces and patient-care equipment, linen, stretcher (trolley), and bed. • For equipment that requires sterilization, follow routine sterilization procedures • Use sodium hypochlorite at 0.5% (equivalent 5000ppm) for disinfection of frequently touched hard non-porous surfaces and equipment as per facility policies and manufacturer’s instructions.

Component	Recommendation	Comments
	instructions, for cleaning and/or disinfection of: ○ Environmental surfaces and equipment ○ Textiles and laundry • Food utensils and dishware should be disposable. • Waste management should follow the facility guidelines.	• Use 70% Ethyl alcohol to disinfect re-usable medical equipment • Manage laundry, food service utensils and medical waste in accordance with IPC policy and procedures
Safe Injection practices	• Staff should follow safe injection practices as specified under Standard Precautions.	• Any injection equipment or parenteral medication container that enters the patient treatment area should be dedicated to that patient and disposed of at the point of use.
Duration of Infection Control Precautions	• Currently, information is lacking to definitively determine a recommended duration for keeping patients in isolation precautions. • Duration of precautions should be determined on a case-by-case basis, in conjunction with local, and national health authorities. • Factors that should be considered include: presence of symptoms related to COVID-19, date symptoms resolved, other conditions that would require specific precautions (e.g., tuberculosis, Clostridium difficile) and available laboratory information.	• Patient can be taken of isolation when negative results of molecular assay for COVID-19 from at least two consecutive sets of paired nasopharyngeal and throat swabs specimens collected ≥24 hours apart while the patient has been afebrile for at least 24 hours.
Monitoring and Management of Potentially Exposed Healthcare Personnel	• Trace all health care workers who had protected or unprotected contacts with patients with suspected, probable, or confirmed COVID-19 infection. • The infection control and occupational health and safety services of the facility should proactively call by phone all contacts to assess their health on a daily basis for a total of 14 days. **Managing unprotected exposure:** Asymptomatic HCWs, allied health staff and housekeeping staff who had an unprotected exposure to a patient with COVID-19 (i.e. not	• Asymptomatic HCWs who test positive should be isolated and managed as confirmed cases.

Component	Recommendation	Comments
	wearing recommended PPE at the time of contact within 6 feet (2meters) for a prolonged period, shall consider the following: 1. Testing (Nasopharyngeal swabs) for COVID-19 is recommended even if asymptomatic. 2. Testing to be done after 24 hours of exposure. 3. Contact should be off work until the test is reported as negative 4. Advice to monitor their health for 14 days from last day of possible contact **Protected exposure** Contact with confirmed COVID-19 case and having appropriate isolation precautions including the PPE: Testing for COVID-19 is not recommended if asymptomatic. • Contacts should monitor their health for 14 days, starting from the day they were last exposed to the ill person. Watch for these symptoms: 1. Fever (38° C, or higher). Take temperature twice a day. 2. Coughing. 3. Shortness of breath. 4. Other early symptoms to watch for are chills, body aches, sore throat, headache, nausea/vomiting and runny nose • Contacts should also be instructed to home isolate and report immediately to HP & CDC at MOPH, if they develop upper or lower respiratory illness • Symptomatic contacts should be assessed clinically. Nasopharyngeal swabs should be collected and tested for COVID-19 PCR • Symptomatic contacts should be managed using the same guidance described in the COVID-19 management algorithm (see Appendix 2: Interim Algorithm for COVID-19)	
Monitoring, Management, and	• Family members and visitors in contact with a patient should be limited to those essential for patient support	• Visitors who have been in contact with the COVID-19 patient before and during

Component	Recommendation	Comments
Training of Visitors	• They should be trained on the risk of transmission and on the use of the same infection control precautions • Further training may be needed in settings where hospitalized patients are often cared for by family members	hospitalization are a possible source of COVID-19 for other patients, visitors, and staff. These asymptomatic contacts should follow the instructions provided here on • Home Isolation.
Managing deceased bodies	• Follow the proper identification of body transportation, and documentation in the morgue as per the facility IPC- policy	• Notify the Morgue Supervisor of the deceased infectious status. • This should be documented in writing on the identification tag
Awareness & education training	• Deliver regular IPC awareness/ education activities for HCW and public	• Post visual alerts at the entrance and strategic places

Laboratory Testing

Testing should be according to local guidance for management of community-acquired pneumonia. Examples of other etiologies include Streptococcus pneumoniae, Hemophilus influenzae type B, Legionella pneumophila, other recognized primary bacterial pneumonias, influenza viruses, and respiratory syncytial virus.

Recommendations for Sample Collection:

1. All suspected cases should have nasopharyngeal and oropharyngeal swabs, and, when possible, lower respiratory secretions samples such as sputum, endotracheal aspirate, or bronchoalveolar lavage collected for testing.
2. If patients do not have signs or symptoms of lower respiratory tract infection or lower tract specimens are not possible or clinically indicated, both nasopharyngeal and oropharyngeal specimens should be collected and combined in a single collection container and tested together.
3. Patients should also be evaluated for common causes of community-acquired pneumonia (bacterial or viral such as influenza A and B, respiratory syncytial virus, Streptococcus pneumoniae, Hemophilus influenzae, Staphylococcus aureus, and Legionella pneumophila). This evaluation should be based on clinical presentation and epidemiologic and surveillance information.
4. If initial testing of a nasopharyngeal swab is negative in a patient who is strongly suspected to have COVID-19 infection, patients should be retested using a lower respiratory specimen or, if not possible, a repeat nasopharyngeal and oropharyngeal specimen.
5. In a patient with suspected COVID-19, especially with pneumonia or severe illness, a single URT sample does not exclude the diagnosis, and additional URT and LRT samples are recommended.
6. Sputum induction should be avoided due to increased risk of increasing aerosol transmission.
7. When serological assays become available, WHO recommends that a paired acute and convalescent sera for antibody detection should also be collected where possible (for surveillance and research purposes).
8. Collect blood cultures for bacteria that cause pneumonia and sepsis, ideally before antimicrobial therapy. DO NOT delay antimicrobial therapy to collect blood cultures.
9. A positive alternate pathogen does not necessarily rule out COVID-19 infection, as little is yet known about the role of coinfections.
10. Health Care workers (HCWs) who collect specimens follow the IPC guideline and use the adequate PPE: eye protection, surgical mask, long-sleeved gown, gloves). If it is suspected that sample collection may generate aerosol, personnel should wear a particulate respirator at least as protective as a NIOSH-certified N95, EU FFP2 or equivalent.

Home Isolation

Home isolation is recommended for people who are asymptomatic but with the epidemiological link/risk factor to COVID-19 after consultation with healthcare professional. HP&CDC needs to be consulted & informed by calling the hotlines. The residential setting should be suitable for home isolation.

The following instructions should be provided to these individuals.

Stay home except to get medical care: You should restrict activities outside your home, except for getting medical care. Do not go to work, school, or public areas. Do not use public transportation, ride-sharing, or taxis

Separate yourself from other people in your home: As much as possible, you should stay in a different room from other people in your home. Also, you should use a separate bathroom, if available

Wear a surgical mask: You should wear a surgical mask when you are in the same room with other people and when you visit a healthcare provider. If you cannot wear a surgical mask, the people who live with you should wear one while they are in the same room with you.

Cover your coughs and sneezes: Cover your mouth and nose with a tissue or your flexed elbow when you cough or sneeze. Throw used tissues in a closed bin and immediately wash your hands with soap and water or disinfect it with alcohol-based hand sanitizer

Clean your hands: Wash your hands often with soap and water for at least 20 seconds. If soap and water are not available, clean your hands with an alcohol-based hand sanitizer that contains at least 60% alcohol, covering all surfaces of your hands and rubbing them together until they feel dry. Soap and water should be used preferentially if hands are visibly dirty. Avoid touching your eyes, nose, and mouth with unwashed hands.

Avoid sharing household items: You should not share dishes, drinking glasses, cups, eating utensils, towels, bedding, or other items with other people in your home. After using these items, you should wash them thoroughly with soap and warm water

Monitor your symptoms: Seek prompt medical attention if you develop any symptoms as fever, cough, sore throat, shortness of breath or difficulty breathing.

Call ahead before visiting your doctor: Before seeking care, call your healthcare provider and tell them that you have, or are being evaluated for, COVID-19 infection. Put on a facemask before you enter the facility. These steps will help the healthcare provider's office to keep other people from getting infected or exposed. Ask your healthcare provider to call the local or state health department. Persons who are placed under active monitoring or facilitated self-monitoring should follow instructions provided by their local health department or occupational health professionals, as appropriate.

Discontinuing home isolation

The decision to discontinue home isolation precautions should be made on a case-by-case basis, in consultation with healthcare providers and HP & CDC department. Current information on COVID-19 is limited; thus, home precautions are conservative and based on general recommendations for other coronaviruses, like Middle Eastern Respiratory Syndrome (MERS).

For caregivers and household members:

Care givers are instructed to do the following:

- Limit the number of caregivers, ideally assign one person who is in good health without risk conditions.
- Household members should stay in a different room.
- Restrict visitors who do not have an essential need to be in the house.

- Limit the movement of the individual and minimize shared space. Ensure that shared spaces (e.g. kitchen, bathroom) are well ventilated (e.g. keep windows open).
- Remind the individual to wear a surgical mask when in the presence of other family members
- Keep elderly people and those who have compromised immune systems or specific health conditions away from the ill person. This includes people with chronic heart, lung or kidney diseases, and diabetes
- Wear a surgical mask, gown, and gloves when you touch or have contact with the individual's blood, body fluids and/or secretions, such as sweat, saliva, sputum, nasal mucous, vomit, urine, or diarrhea.
- Throw out surgical masks, gowns, and gloves after using them. Do not reuse.
- Wash your hands immediately after removing your medical mask, gown, and gloves
- Wash your hands often and thoroughly with soap and water. Use an alcohol-based hand sanitizer if soap and water are not available and if hands are not visibly dirty. Avoid touching eyes, nose, and mouth with unwashed hands
- Avoid other types of possible exposure to the person's or contaminated items in their immediate environment (e.g. avoid sharing toothbrushes, cigarettes, eating utensils, dishes, drinks, towels, washcloths or bed linen). Eating utensils and dishes should be cleaned with either soap or detergent and water after use and may be re-used instead of being discarded.
- Clean and disinfect frequently touched surfaces such as bedside tables, bedframes, and other bedroom furniture daily. Also, clean any surfaces that may have blood, body fluids and/or secretions on them with regular household disinfectant containing a diluted bleach solution (1-part bleach to 99 parts water).
- Clean and disinfect bathroom and toilet surfaces at least once daily with regular household disinfectant containing a diluted bleach solution (1-part bleach to 99 parts water).
- Clean clothes, bedclothes, bath and hand towels, etc. using regular laundry soap and water or machine wash at 60–90 °C with common household detergent, and dry thoroughly. Place contaminated linen into a laundry bag. Do not shake soiled laundry and avoid direct contact of the skin and clothes with the contaminated materials.
- Use disposable gloves and protective clothing (e.g. plastic aprons) when cleaning or handling surfaces, clothing or linen soiled with body fluids. Perform hand hygiene before and after removing gloves.
- Place all used gloves, gowns, medical masks, and other contaminated items in a lined container before disposing them with other household waste. Wash your hands immediately after handling these items.

Patient Transportation and Prehospital Emergency Medical Services – HMC Ambulance Service (HAS)

Patients who may have COVID-19 may be safely transported by HMC Ambulance service with the proper precautions. **The transport will be arranged by the Health Protection & Communicable Disease Control at the Ministry of Public Health.**

1. Involve the fewest HAS personnel required to minimize possible exposures.
2. Family members and other contacts of COVID-19 patients should not ride in the ambulance. If necessary, they should be evaluated for fever and lower respiratory symptoms and, if either is present, asked to wear a surgical mask when riding in the vehicle.
3. When possible, use vehicles that have a separate driver and patient compartments that can provide separate ventilation to each area. Close the door/window between these compartments before bringing the patient on board.
4. Set the vehicle's ventilation system to the non-recirculating mode to maximize the volume of outside air brought into the vehicle. If the vehicle has a rear exhaust fan, use it to draw air away from the cab, toward the patient-care area, and out the back end of the vehicle. Some vehicles are equipped with a supplemental recirculating ventilation unit that passes air through HEPA filters before returning it to the vehicle.
5. If a vehicle without separate compartments and ventilation must be used, open the outside air vents in the driver area and turn on the rear exhaust ventilation fans to the highest setting. This action will create a negative pressure gradient in the patient area.
6. Place a surgical mask on the patient to contain droplets expelled during coughing. If this is not possible (i.e. would further compromise respiratory status, difficult for the patient to wear), have the patient cover the mouth/nose with a tissue when coughing.
7. Oxygen delivery with a non-rebreather face mask may be used to provide oxygen support during transport.
8. If a patient has been mechanically ventilated before transport, HEPA or equivalent filtration of airflow exhaust should be available.
9. Aerosol-generating procedures (e.g., mechanical ventilation, nebulizer treatment) should be avoided during prehospital care.
10. Prehospital care providers who directly handle a patient with COVID-19 or who are in the compartment with the patient should wear PPE as recommended.
11. Avoid touching face with contaminated gloves. Avoid unnecessary touching of surfaces in the ambulance vehicle.
13. Arrange for the receiving facility staff to meet the patient at the ambulance door to limit the need for EMS personnel to enter the emergency department in contaminated PPE. (It may not be practical to change PPE before patient transfer into the facility.) Remove and discard PPE after transferring the patient at the receiving facility and perform hand hygiene. Treat used disposable PPE as medical waste.
14. Handle clinical specimens that must be collected during transport (e.g., blood gas) by standard operating procedures.
15. Follow standard operating procedures for the containment and disposal of regulated medical waste.

16. Follow standard operating procedures for containing and reprocessing used linen. Wear appropriate PPE when removing soiled linen from the vehicle. Avoid shaking the linen.

17. Clean and disinfect the vehicle by standard operating procedures. Personnel performing the cleaning should wear a disposable gown and gloves (a respirator should not be needed) during the clean-up process; the PPE should be discarded after use.

All surfaces that may have come in contact with the patient or materials contaminated during patient care (e.g., stretcher, rails, control panels, floors, walls, work surfaces) should be thoroughly cleaned and disinfected using an MOPH-approved hospital disinfectant by manufacturer's recommendations.

18. Clean and disinfect reusable patient-care equipment per manufacturer's instructions.

19. Ensure appropriate follow-up and care of HAS personnel who transport COVID-19 patients as recommended for HCWs.

References:

- Clinical management of severe acute respiratory infection when novel coronavirus (CAUVID-19) infection is suspected Interim guidance *Available at:* https://www.who.int/docs/default-source/coronaviruse/clinical-management-of-novel-cov.pdf?sfvrsn=bc7da517_2
- Surveillance case definitions for human infection with novel coronavirus (CAUVID-19) Interim guidance WHO/COVID-19/Surveillance/
- Infection prevention and control during health care when novel coronavirus (CAUVID-19) infection is suspected Interim guidance.

  Available at: https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected
- CDC Infection Control: Novel Coronavirus 2019 (COVID-19). *Available at:* https://www.cdc.gov/coronavirus/COVID-19/infection-control.html
- Laboratory testing of human suspected cases of novel coronavirus (nCoV) infection Interim guidance. *Available at* https://apps.who.int/iris/bitstream/handle/10665/330374/WHO-COVID-19-laboratory-2020.1-eng.pdf

Appendix 1: Visual Triage for COVID-19[2]

VERSION: 7
VISUAL TRIAGE: ACUTE RESPIRATORY ILLNESS CHECKLIST FOR 2019- NOVEL CORONA VIRUS (COVID-19) / MERS CoV

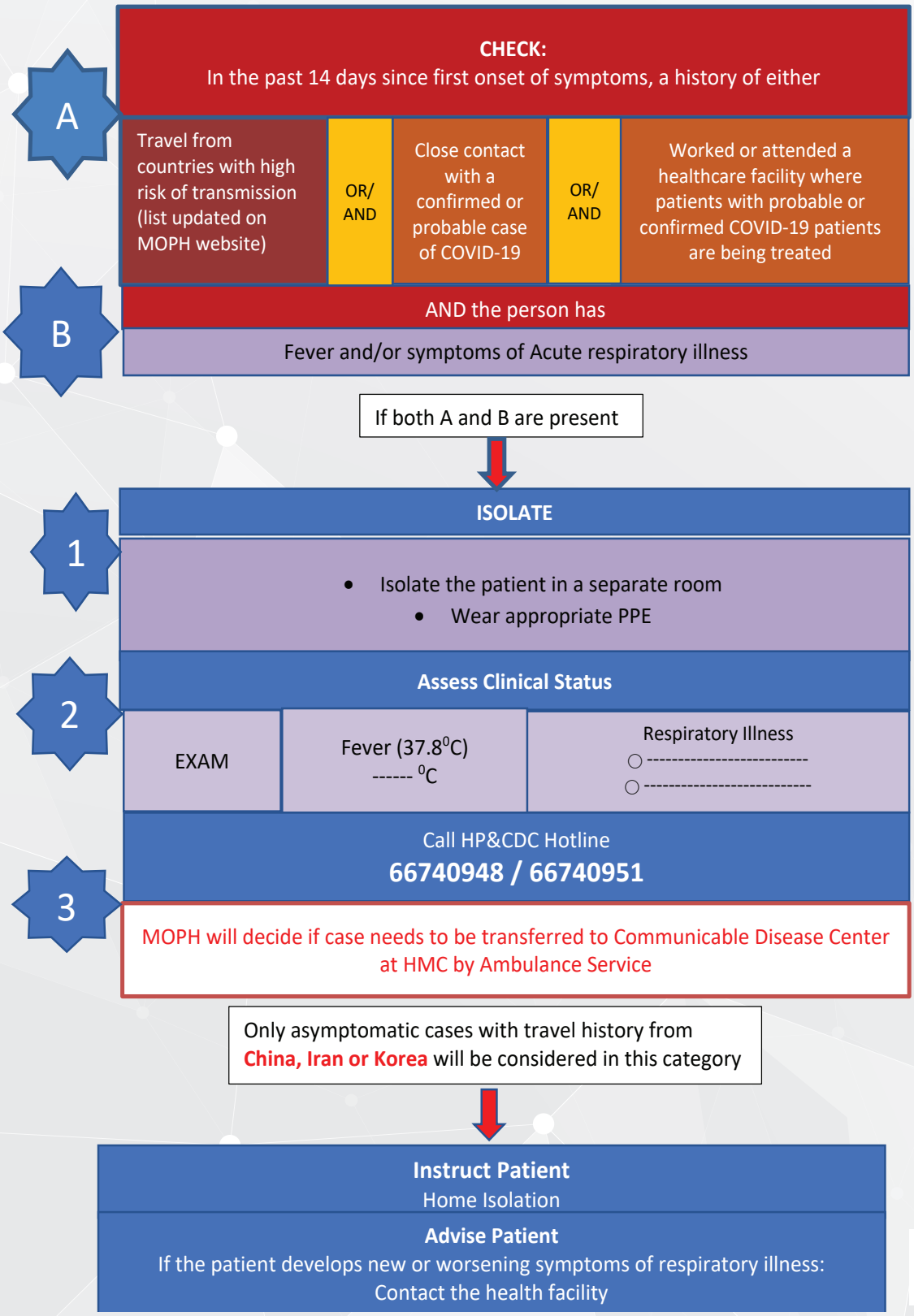
Date: ..... **Time:** .....
Name: ..... ID/ HC: ..... Address: ..... Gender: .....
Date of birth .....

A. Clinical Features	POINT	SCORE
Does the patient have the following?		
Fever or history of fever	2	
Cough (New or Worsening)	2	
Shortness of Breath (New or worsening)	2	
Vomiting /diarrhoea	1	
Sore throat and / or Runny Nose	1	
DM, Chronic kidney diseases, Cardiac/Heart failure ,age 60 &above	1	
B. Epidemiological Risk (COVID-19/ MERS CoV)		
Has the patient been in contact with a person confirmed/ suspected with COVID-19/ MERS CoV infection during the 14 days prior to symptom onset?	3	
COVID-19: Has the patient lived in or traveled to countries with high risk of transmission* / Traveling together with individuals infected with COVID-19 during the 14 days prior to symptom onset? *list updated on MOPH website	3	
COVID-19: Exposure to live animals, seafood/animal market in China during the 14 days prior to symptom onset. **Or** **MERS CoV** Camel farm or contact with Camel and camel products during the 14 days prior to symptom onset.	3	
Worked or attended a health care facility in the 14 days prior to onset of symptoms where patients with hospital-associated COVID-19 or MERS-COV infections have been reported	3	
Total		

- If the total score is ≥ 4 and includes any element from category B, consider as risk of exposure to COVID-19/ MERS CoV → Offer a surgical mask to the patient and immediately isolate the patient (contact and Airborne precautions)
- Call HP & CDC Hotline 66740948 / 66740951 if referral to CDC hospital is advised by HP & CDC it should be only via HMC ambulance
- If score is ≥4 and does not include any of the element from B category apply → Droplet precaution in addition to standard precaution
- If negative pressure room is not available, then isolate the patient in adequately ventilated single room under droplet and contact isolation precaution and maintain the door closed and keep Portable HEPA filter in the room

[2] Please check MOPH website for updated versions of the triage document

Appendix 2: Interim Algorithm for COVID-19



Appendix 3: Definitions

(a) **Fever** may not be present in some patients, such as those who are very young, elderly, immunosuppressed, or taking certain medications. Clinical judgement should be used to guide testing of patients in such situations.

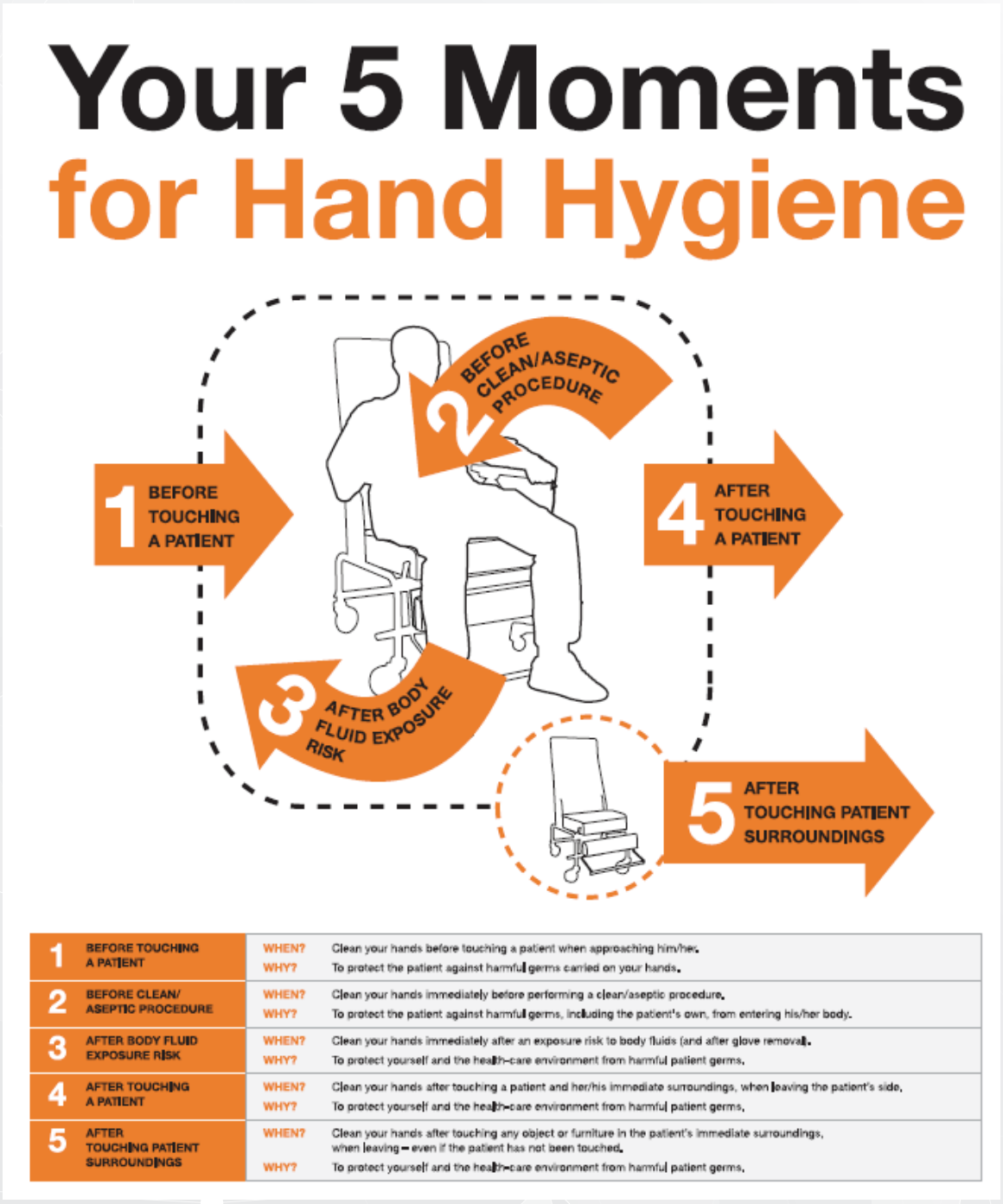
(b) **Protected exposure** is defined as contact within 1.5 meters with a patient with confirmed or probable Novel- CoV infection while wearing all personal protective equipment (surgical mask, gloves, and gowns, and, when indicated, goggles, or N95 mask).

(c) **Unprotected exposure** is defined as contact within 1.5 meters with a patient with confirmed or probable Novel -CoV infection without wearing all personal protective equipment (surgical mask, gloves, and gowns, and, when indicated, goggles, or N95 mask).

(d) **A 'cluster'** is defined as two or more persons with onset of symptoms within the same 14 day period, and who are associated with a specific setting such as a classroom, workplace, household, extended family, hospital, other residential institution, military barracks or recreational camp. Recommendations for testing in clusters associated with health care settings Human to human transmission of COVID-19 has been amplified in health care settings. During outbreaks WHO recommend that, if feasible, all contacts of laboratory confirmed cases, especially health care worker contacts and inpatients sharing rooms/wards with confirmed cases, regardless of the development of symptoms, be tested for COVID-19 using RT-PCR.

(e) **Home Isolation**: Is defined as the separation or restriction of activities of an ill person with a contagious disease from those who are well

Appendix 4: The Five Moments of Hand Hygiene



1	BEFORE TOUCHING A PATIENT	WHEN?	Clean your hands before touching a patient when approaching him/her.
		WHY?	To protect the patient against harmful germs carried on your hands.
2	BEFORE CLEAN/ ASEPTIC PROCEDURE	WHEN?	Clean your hands immediately before performing a clean/aseptic procedure.
		WHY?	To protect the patient against harmful germs, including the patient's own, from entering his/her body.
3	AFTER BODY FLUID EXPOSURE RISK	WHEN?	Clean your hands immediately after an exposure risk to body fluids (and after glove removal).
		WHY?	To protect yourself and the health-care environment from harmful patient germs.
4	AFTER TOUCHING A PATIENT	WHEN?	Clean your hands after touching a patient and her/his immediate surroundings, when leaving the patient's side.
		WHY?	To protect yourself and the health-care environment from harmful patient germs.
5	AFTER TOUCHING PATIENT SURROUNDINGS	WHEN?	Clean your hands after touching any object or furniture in the patient's immediate surroundings, when leaving – even if the patient has not been touched.
		WHY?	To protect yourself and the health-care environment from harmful patient germs.

www.moph.gov.qa /MOPHQatar /MOPHQatar