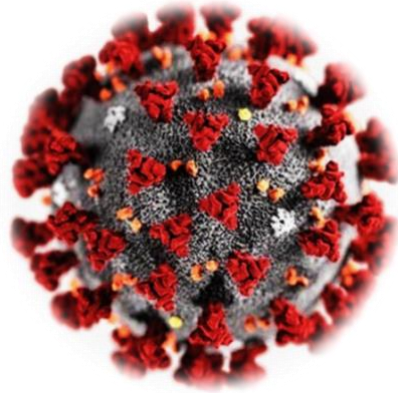


**Version 9**  
**30th March 2020**



# COVID-19 Quick Reference Guidelines

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## WHAT IS NEW IN THIS VERSION OF QR Guidelines

Table: Selection of PPE ( revised)

Consideration for PPE utilisation

COVID-19: Contact tracing in non-health care setting (revised)

Virological evaluation (revised)

Exposure risk categorization of contacts (revised)

Risk assessment and management of health care workers with potential exposure to COVID-19  
(Revised)

Return to work criteria for symptomatic health caseworkers (New)

Annex: PPE Selection ( New)

Annex: Donning procedure for ward (New)

Annex: Doffing procedure for ward (New)

Annex: Donning procedure for ICU (New)

Annex: Doffing procedure for ICU (New)

Annex: Dilution of disinfectant (New)



## Introduction

Coronavirus disease 2019 (COVID-19) is an illness caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). This novel corona virus was first identified in Wuhan City, Hubei Province, China.

It was initially reported to the WHO on 31<sup>st</sup> December 2019. The virus was isolated on 7<sup>th</sup> January 2020 by the Chinese authorities and on 30<sup>th</sup> January 2020 the WHO declared the COVID-19 outbreak a global health emergency. On 11<sup>th</sup> March 2020, the WHO declared COVID-19 a global pandemic.

Currently globally 693,224 confirmed cases with 33,106 deaths ( as per WHO situation update on 30<sup>th</sup> March 2020).

Maldives reported first case of Covid-19 on 7<sup>th</sup> March 2020 and on 12<sup>th</sup> of March public health emergency was declared in the country. As of 30<sup>th</sup> March 2020, 17 cases of COVID-19 have been reported with no deaths.

# INFORMATION ABOUT FREQUENTLY ASKED QUESTIONS: COVID-19

## Disease

- Coronavirus disease 2019 (COVID-19)

## Organism

- SARS-coronavirus-2 (SARS-CoV-2)

## Incubation period

- Most estimates show about 1-14 days

## Period of infectivity

- Not sure
- Asymptomatic transmission possible

## Modes of transmission

- Person to person spread via respiratory droplets produced when an infected person coughs or sneezes (usually within 6 feet distance)
- Spread from contact with infected surfaces or object

## Symptoms

- Fever (some people may not have fever)
- Cough
- Shortness of breath

## Outcome

- Severe disease in 15-20%
- Critical care needed in ~ 3-5%
- Mortality ~ 1-2%

## Risk groups

- Elderly
- People with underlying conditions like hypertension, COPD/ other chronic lung conditions, diabetes and other cardiovascular and cerebrovascular conditions and immunocompromising conditions
- Smokers
- Pregnancy

## COVID-19 CASE DEFINITION FOR A SUSPECTED CASE (as of 28<sup>th</sup> February 2020):

- A.** Patient with **any acute respiratory illness** (fever\* and at least one sign/symptom of respiratory disease (e.g., cough, shortness of breath),  
**AND**  
no other etiology 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**
- B.** Patient with **any respiratory illness**  
**AND**  
having been in *contact* with a confirmed or probable COVID-19 case in the last 14 days prior to onset of symptoms
- OR**
- C.** Patient with **SARI**  
**AND**  
no other etiology that fully explains the clinical presentation

**SARI** is defined as an acute respiratory infection (ARI) with history of fever\* or measured temperature  $\geq 38^{\circ}\text{C}$  and cough; with onset within last 14 days and requiring admission to hospital.

\*Absence of fever does NOT exclude viral infection

**Probable case:** A probable case is a suspected case for whom the report from laboratory testing for the COVID-19 virus is inconclusive.

**Confirmed case:** A confirmed case is a person with laboratory confirmation of infection with the COVID-19 virus, irrespective of clinical signs and symptoms

Please follow WHO daily situation updates <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

## COVID-19 HEALTH FACILITY PREPAREDNESS CHECK LIST

All hospitals should ensure their staff are trained, equipped and capable of practices needed to:

- Prevent the spread of respiratory diseases including COVID-19 within the facility
- Collect and provide updated information on SARI, ARI and pneumonia to HPA
- Promptly identify and isolate patients with possible COVID-19 and inform the correct facility staff and HPA
- Depending on the available resources facility should have provision to care for a limited number of patients with confirmed or suspected COVID-19 as part of routine operations
- Potentially care for a larger number of patients in the context of an escalating outbreak
- Monitor and manage any healthcare personnel that might be exposed to COVID-19
- Communicate effectively within the facility and appropriate external communication with HPA related to COVID-19

**Please fill the boxes according to the facility preparedness**

**Green** 😊: **Accomplished**

**Orange** 😐: **Partially implemented/ in process**

**Red** ☹️: **Not initiated**

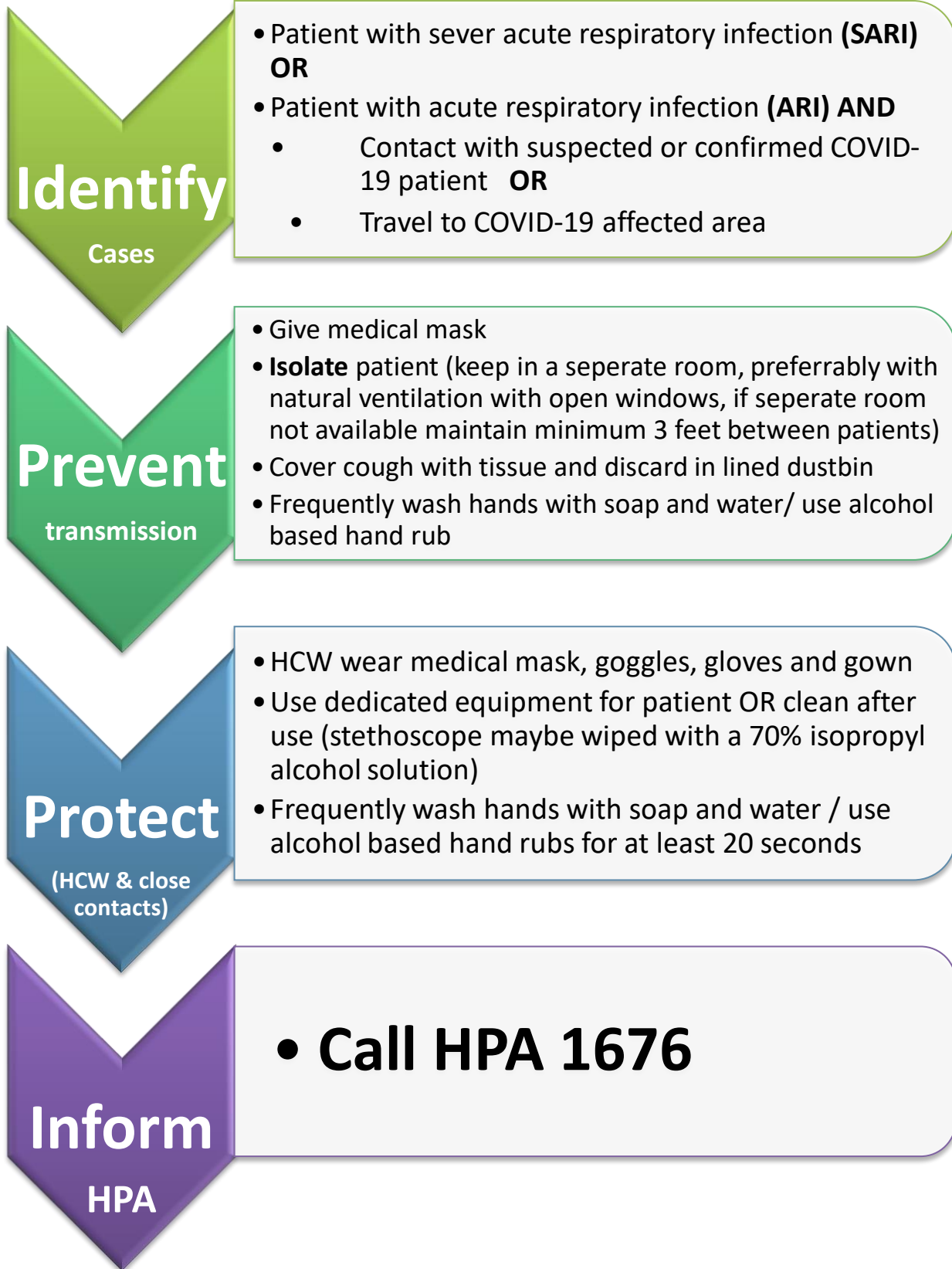
Important elements to be assessed	
<p><b>1. Infection prevention and control policies and training of health care workers</b></p> <ul style="list-style-type: none"> <li>• The facility should have an identified COVID-19 taskforce responsible for organizing and implementing required measures</li> <li>• All stakeholders including the front line staff in emergency department, Internal medicine, pulmonology, pediatrics, gynecology, staff at QID, laboratory staff , radiology technicians, physiotherapy units, dietetics, heads of services (house-keeping, transportation) should review the HPA guideline on care of COVID-19 patient</li> <li>• Facility should have mechanism to collect, evaluate and provide the data on SARI, ARI and pneumonia to facility level COVID-19 task force and HPA</li> <li>• Facility should provide education to all HCW and concerned staff regarding COVID-19 including:,               <ul style="list-style-type: none"> <li>○ Signs and symptoms of infection,</li> <li>○ How to safely collect a specimen,</li> <li>○ Correct infection control practices and personal protective equipment (PPE) use,</li> <li>○ Triage procedures including patient placement and clinical management</li> <li>○ HCW sick leave policies and recommended actions for unprotected exposures (e.g., not using recommended PPE, an unrecognized infectious patient contact),</li> </ul> </li> </ul>	<div style="margin-bottom: 10px;"><input type="checkbox"/></div> <div style="margin-bottom: 10px;"><input type="checkbox"/></div> <div style="margin-bottom: 10px;"><input type="checkbox"/></div> <div style="margin-bottom: 10px;"><input type="checkbox"/></div>



<ul style="list-style-type: none"> <li>• Staff should be trained on proper use and indications of PPE</li> <li>• Medical mask, gown, gloves and eye protection for patient contact</li> <li>• N95 mask with other PPE when doing aerosol generating procedures</li> <li>• Fluid resistant gowns and face shield for procedures expecting splash</li> <li>• Provision of dedicated equipment's for suspected patient</li> <li>• Ensure that staff working with suspected patients does not go to other wards in the hospital and visit to other areas of the hospital should only be after properly removing PPE and washing with soap and water.</li> </ul>	
<p><b>5. Hand hygiene</b></p> <ul style="list-style-type: none"> <li>• Provision of alcohol based hand rub</li> <li>• Provision of soap and water with access to sinks to wash hands</li> <li>•</li> </ul>	<input type="checkbox"/>
<p><b>6. Movement of patients with confirmed or suspected COVID-19 within and out of facility</b></p> <ul style="list-style-type: none"> <li>• Patient transportation within and outside the facility should be limited</li> <li>• There should be SOP on transportation of patient</li> <li>• Patient should be given a medical mask and a clean sheet should be kept on the stretcher or chair used to transport patient</li> </ul>	<input type="checkbox"/>
<p><b>7. Environmental cleaning, laundry and waste disposal</b></p> <ul style="list-style-type: none"> <li>• SOP should be there on environmental cleaning</li> <li>• Staff should be trained in cleaning procedures</li> <li>• Any linens used by the patients should be laundered in the hospital premises (refer to the cleaning guidelines)</li> <li>• Waste from the COVID-19 ward should be considered as infectious waste and should be segregated and should not be mixed with other common general waste.</li> </ul>	<input type="checkbox"/>
<p><b>8. Monitoring and managing HCW</b></p> <ul style="list-style-type: none"> <li>• It is recommended that staff should change to a scrub/separate clothes when on duty</li> <li>• The scrubs/clothes worn during the duty time should be washed on premises</li> <li>• Register should be kept in the wards/unit to track exposure of HCW</li> <li>• Facility has the process to conduct symptoms and temperature check of staff before start of shift.</li> <li>• All staff working in the hospital should have readily available access to medical consultations if symptoms develop</li> <li>• Symptomatic HCW should not come to work</li> <li>• Staff should be provided with a separate refreshments and toilet with shower facility if possible.</li> <li>• Facility should make provision for food and water to on duty HCW</li> </ul>	<input type="checkbox"/>
<p><b>9. Visitor access and movement within the facility</b></p> <ul style="list-style-type: none"> <li>• Visitors should not be allowed to enter area where COVID -19 patients are admitted</li> <li>• Facility should restrict all visitation to the hospital (visitation timing and numbers)</li> </ul>	<input type="checkbox"/>

<ul style="list-style-type: none"> <li>• Facility should restrict visitors having acute respiratory illness (spread awareness through posters kept at the entrance)</li> <li>• Ensure that visitors limit their movement within facility</li> <li>• Visitors policy should be regularly reviewed</li> </ul>	
<p><b>10. Ensure adequate stock</b></p> <ul style="list-style-type: none"> <li>• PPE</li> <li>• Medications as per the management guidelines (antibiotics, oseltamivir , IV fluids) and other consumables</li> <li>• Laboratory sampling materials (Viral transport media and synthetic swabs) and other consumables</li> <li>• Environmental cleaning products</li> </ul>	<input type="checkbox"/>
<p><b>11. Facility should make provision for basic necessities for the patient including: food and water, clothing, toiletries etc.</b></p> <ul style="list-style-type: none"> <li>• Ideally use designated utensils for the patient or disposable items</li> <li>• Plates and spoons should not be shared between patients</li> </ul>	<input type="checkbox"/>
<p><b>12. Facility should regularly monitor and update the situation to HPA</b></p>	<input type="checkbox"/>

# COVID-19: INITIAL RESPONSE AT HEALTH FACILITY



**In clinical areas, HCWs are recommended to wear closed shoes or boots**



# PERSONAL PROTECTIVE EQUIPMENTS: COVID -19



## Contact and Droplet precaution:

Note: For aerosol generating procedure (such as open suctioning/ intubation use contact and airborne precaution



### Clean hands, including before entering and when leaving the room

- With soap and water if visibly soiled or
- Alcohol based hand rub



### GOWNS

- Put on gown **before room entry**. Discard gown **before room exit**
- Do not wear the same gown and gloves for the care of more than one person.



### MASK and goggles / face shield

- Make sure their eyes, nose and mouth are fully covered before room entry



- Remove face protection **before** room exit.



### GLOVES

- Put on gloves **before** room entry.
- Discard gloves **before** room exit



### DEDICATED EQUIPMENTS

- Use dedicated or disposable equipment.
- Clean and disinfect reusable equipment before use on another person

**In clinical areas, HCWs are recommended to wear closed shoes or boots**

# PERSONAL PROTECTIVE EQUIPMENTS: COVID -19



## AIRBORNE and CONTACT precaution:

Aerosol generating procedures:  
Open suctioning, intubation, sputum induction, nebulization  
Surgery, drilling etc.



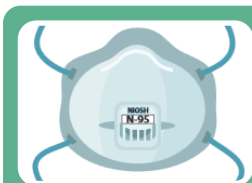
Clean hands, including before entering and when leaving the room

- Use soap and water if visibly soiled or
- Alcohol based hand rub



## GOWNS

- Put on gown before room entry. Discard gown before room exit
- Do not wear the same gown and gloves for the care of more than one person.



## USE N-95 MASK

Make sure their eyes, nose and mouth are fully covered before room entry

- Remove mask **AFTER** room exit.



## EYE PROTECTION with GOGGLES

- Make sure their eyes are fully covered before room entry
- Remove eye /face protection just before room exit/ in anteroom if available.



## GLOVES

- Put on gloves before room entry.
- Discard gloves before room exit



**DOOR TO ROOM MUST REMAIN CLOSED**

**In clinical areas, HCWs are recommended to wear scrubs, closed shoes or boots**

## TABLE: SELECTION OF PERSONAL PROTECTIVE EQUIPMENT

A scrub may be used in the patient areas and if a scrub is not available, clothes may be changed after patient care.

<b>TRIAGE AREA PPE</b>			
<b>SETTING</b>	<b>TARGET PATIENTS/PERSONNEL</b>	<b>ACTIVITY</b>	<b>TYPE OF PPE OR PROCEDURE</b>
Ambulance & transfer vehicle	Staff, healthcare workers, Driver who is needed to patient during transfer	Transporting patients to the referral healthcare facility Assisting with loading or unloading patient	<ul style="list-style-type: none"> <li>✓ Surgical mask</li> <li>✓ Gowns</li> <li>✓ Gloves</li> <li>✓ Eye protection (goggle/face shield)</li> <li>✓ Closed shoes/boots</li> </ul>
	Driver (All ambulances should have a partition between the driver and patient area)	<p>If the driver assist the patient then the PPE should be removed and hand hygiene done prior to entering into driver's compartment.</p> <p>If he is needed attend to the patient, he will need to wear a new PPE</p>	<p><i>Direct contact with the patient:</i></p> <ul style="list-style-type: none"> <li>✓ As above (Remember to remove PPE before entering driver's compartment)</li> </ul> <p><i>No direct contact with the patient within 6 feet distance:</i></p> <ul style="list-style-type: none"> <li>✓ No PPE</li> </ul>
Triage	Healthcare workers	Providing direct care to patients	<ul style="list-style-type: none"> <li>✓ Surgical mask</li> <li>✓ Gowns</li> <li>✓ Gloves</li> <li>✓ Eye protection</li> <li>✓ Closed shoes</li> </ul>
	Other staff	No direct contact with patient	<ul style="list-style-type: none"> <li>✓ Surgical mask</li> <li>✓ Reusable cloth gowns</li> <li>✓ Closed shoes</li> </ul>

<b>ICU PPE</b>			
<b>SETTING</b>	<b>TARGET PATIENTS/PERSONNEL</b>	<b>ACTIVITY</b>	<b>TYPE OF PPE OR PROCEDURE</b>
ICU all areas <b>Considered to be an area where airborne transmission is highly likely</b>	Healthcare workers	Providing direct care to patients	<ul style="list-style-type: none"> <li>✓ Scrubs</li> <li>✓ Coverall</li> <li>✓ Gloves (double gloves)</li> <li>✓ N95 mask</li> <li>✓ Eye protection (goggles)</li> <li>✓ Surgical head cover</li> <li>✓ Boot cover</li> <li>✓ Head Bonnet</li> </ul> <p><b>In addition, if performing any procedure or splash is expected</b></p> <ul style="list-style-type: none"> <li>○ 3<sup>rd</sup> gloves</li> <li>○ Eye protection (Goggles <b>AND</b> face shield)</li> <li>○ Water proof apron over gowns</li> </ul>
	Healthcare workers	Not involved in direct care to patients (e.g. taking rounds with no plans to perform any procedure, to take an x-ray)	<ul style="list-style-type: none"> <li>✓ Scrubs</li> <li>✓ Gown (long sleeved)</li> <li>✓ Gloves</li> <li>✓ N95 mask</li> <li>✓ Eye protection (goggles)</li> <li>✓ Boot covers</li> </ul>
	Attendants	Entering the room of ICU patients and care areas for cleaning purpose in ICU where critical care is given	<ul style="list-style-type: none"> <li>✓ N95 mask</li> <li>✓ Gown (long sleeved)</li> <li>✓ Heavy duty gloves</li> </ul>

			<ul style="list-style-type: none"> <li>✓ Eye protection (if risk of splash from organic material or chemicals)</li> <li>✓ Gum boots or closed work shoes</li> </ul>
<b>ISOLATION FACILITY PPE</b>			
<b>SETTING</b>	<b>TARGET PATIENTS/PERSONNEL</b>	<b>ACTIVITY</b>	<b>TYPE OF PPE OR PROCEDURE</b>
<b>Wards</b> including main nursing counter	All staff, including healthcare workers	Providing direct care to patients	<ul style="list-style-type: none"> <li>✓ Gloves</li> <li>✓ Gown (long sleeved)</li> <li>✓ Surgical mask / Aerosol generating procedure N95 mask</li> <li>✓ Eye protection (goggles or face shield)</li> <li>✓ Boots or close work shoes</li> <li><b>If performing any procedure</b></li> <li><b>If splash is expected AND/OR aerosol generating procedure</b></li> <li>✓ 3<sup>rd</sup> gloves</li> <li>✓ Eye protection (Goggles AND face shield)</li> <li>✓ Water proof apron over gowns</li> </ul>

<b>Wards</b>	Attendants	Entering the room of patients and care areas	<ul style="list-style-type: none"> <li>✓ Surgical Mask/N95 if aerosol generating procedure is on going</li> <li>✓ Gown (long sleeved)</li> <li>✓ Heavy duty gloves</li> <li>✓ Eye protection (if risk of splash from organic material or chemicals)</li> <li>✓ Boots or closed work shoes</li> </ul>
<b>Corridors</b> other office areas	Cleaners	DO NOT enter patient care areas	<ul style="list-style-type: none"> <li>✓ Surgical mask</li> <li>✓ Gown (long sleeved)</li> <li>✓ Heavy duty gloves</li> <li>✓ Boots or closed work shoes</li> </ul>
Administrative area	All staff, including healthcare workers	Administrative tasks that do not involve contact with patients or going into patient care area	<ul style="list-style-type: none"> <li>✓ No PPE required</li> </ul>
Conference room	All staff, including healthcare workers	Administrative tasks that do not involve contact with patients or going into patient care area	<ul style="list-style-type: none"> <li>✓ No PPE required</li> </ul>
Laundry	Laundry staff	DO NOT enter patient care areas	<ul style="list-style-type: none"> <li>✓ Scrub (long sleeved top and pants)</li> <li>✓ Apron (water proof)</li> <li>✓ Surgical mask</li> <li>✓ Face shield</li> <li>✓ Heavy duty gloves</li> </ul>

			✓ Boots or closed work shoes
Waste Management	Waste management staff	DO NOT enter patient care areas Waste should be collected in double bags	✓ Scrub (long sleeved top and pants- preferably water resistant) ✓ Heavy duty gloves ✓ Boots or closed work shoes

- Ensure frequent hand hygiene with soap and water / alcohol based hand rub before and after wearing PPE
- Wear the PPE before entering into patient room/ward area
- Remove PPE inside the ward area 6 feet distance away from the patient (if using N95 mask; all PPE except N95 mask should be removed inside the patients room) and remove the N95 once outside the room.
- Hand hygiene should be performed before and after room exit and after removing N95 mask
- PPE should be removed by handling the uncontaminated areas of the PPE as much as possible and if the hands get contaminated during PPE removal hands use alcohol based hand rub.
- The shoes/ boots should be wiped clean with 70% alcohol solution or boots maybe washed and disinfected by wiping with bleach solution 1ml bleach to 9ml water
- Please refer to posters provided for PPE donning and doffing. Additional posters are available specific for different areas (Isolation ward and the ICU setting). Please contact HPA to get a copy.
- Useful link :
- <https://youtu.be/bG6zISnenPg>





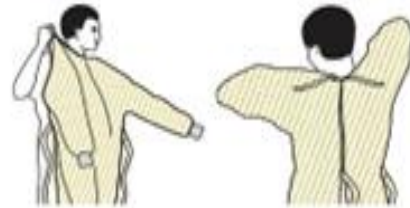
# SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

TRIAGE AREA: Type of PPE used will vary based on the level of precaution

**Wash hands -> Gown -> Mask or Respirator -> Goggles or Face Shield -> Gloves**

## 1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



## 2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator



## 3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



## 4. GLOVES

- Extend to cover wrist of isolation gown



# SEQUENCE FOR PUTTING OFF PERSONAL PROTECTIVE EQUIPMENT (PPE) x1

**Remove: Gloves -> Gown -> Goggles or Face Shield -> Mask or Respirator**

## HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

### 1. GOWN AND GLOVES

- Gown front and sleeves and the outside of gloves are contaminated!
- If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands
- While removing the gown, fold or roll the gown inside-out into a bundle
- As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gown and gloves into an infectious\* waste container



### 2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in an infectious\* waste container

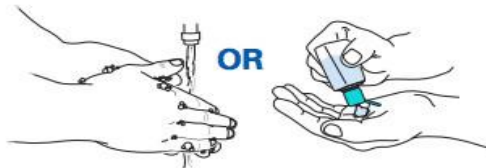


### 3. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in an infectious\* waste container



### 4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



\* An infectious waste container is used to dispose of PPE that is potentially contaminated with Ebola virus.

**PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE**



**In clinical areas, HCWs are recommended to wear scrubs, closed shoes or boots**



# SEQUENCE FOR PUTTING OFF PERSONAL PROTECTIVE EQUIPMENT (PPE) x2

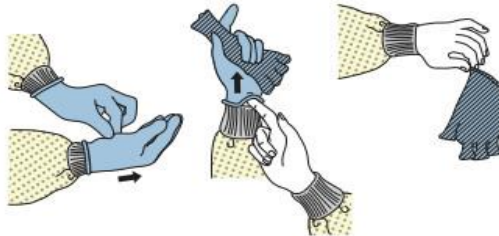
**Remove: Gloves -> Goggles or Face Shield -> Gown -> Mask or Respirator**

## HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

### 1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in an infectious\* waste container



### 2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in an infectious\* waste container



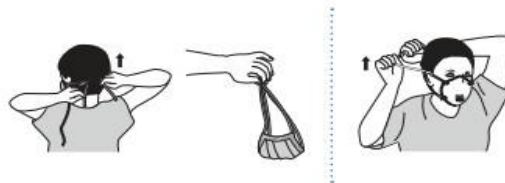
### 3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in an infectious\* waste container



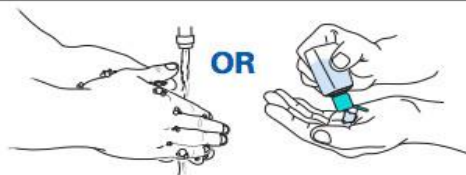
### 4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in an infectious\* waste container



### 5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE

\* An infectious waste container is used to dispose of PPE that is potentially contaminated with Ebola virus.



**PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE**



**In clinical areas, HCWs are recommended to wear scrubs, closed shoes or boots**

## Important points:

- **PPE**

- **Sequence of putting on PPE:**

- **Wash hands -> Gown -> Mask or Respirator -> Goggles or Face Shield -> Gloves**

- **Sequence for removing PPE**

- **Remove: Gloves -> Gown -> Goggles or Face Shield -> Mask or Respirator and wash hands**

**OR**

- **Gloves -> Goggles or Face Shield -> Gown -> Mask or Respirator and Wash hands**

- **Clean areas you can touch while removing**

- The inside and back of the gown, gown's ties, inside of the gloves, ear pieces/straps of mask/goggles/respirator/face shield

- **Dirty area you CAN'T touch while removing**

- Outside the front of the gloves, gown (includes sleeves), and outside of the mask, face shield, goggles, respirator
- If you touch any of the dirty parts while removing PPE, perform hand hygiene with soap and water or alcohol based hand rub and then move to the next step of removal of PPE

- In clinical areas, HCWs are recommended to wear closed shoes or boots ( a shoe cover may be used )

**Wear the full PPE before room entry and remove PPE before exit (keep 6 feet distance from patient while removing PPE). If N95 mask is used, all PPE except N95 is removed before room exit and perform hand hygiene then exit room and remove the N95 and hand hygiene performed again**

<https://www.youtube.com/watch?v=oUo5O1JmLH0>



The doffing or removing PPE should be done inside the patients room, 6 feet distance away from the patient( exception only for N95 mask after aerosol generating procedures should be removed after closing the door of the patients room but other PPE removed inside patients room).

Wash hands before leaving the room and again after leaving the room.

**Full PPE should be worn before entering the room.**

## Considerations for PPE Utilization

- Facilities should keep track of their current PPE inventory, supply chain and their PPE utilization rate
- Facilities should coordinate with management and relevant authorities on PPE issues
- Facilities should implement other engineering and administrative control measures (depending on the situation) such as:
  - Reducing the number of patients going to the hospital or outpatient settings
  - Excluding HCW not directly involved in patient care
  - Reducing face-to-face HCW encounters with patients
  - Excluding visitors to patients with confirmed or suspected COVID-19
  - Cohorting patients and HCW
  - Maximizing use of telemedicine
  - Exclude HCW at higher risk for severe illness from COVID-19 from contact with known or suspected COVID-19 patients as resource available
  - Designate convalescent HCW for provision of care to known or suspected COVID-19 patients.
  - During care activities where splashes and sprays are anticipated, which typically includes aerosol generating procedures.
  - During activities where prolonged face-to-face or close contact with a potentially infectious patient is unavoidable.

### Engineering and administrative Controls to reduce exposures for healthcare worker (HCW)

- Use face mask for suspected patients
- Patient isolation in negative pressure room if available
- Use physical barriers such as glass or plastic windows at reception areas, curtains between patients, etc.
- Properly maintain ventilation systems to provide air movement from a clean to contaminated flow direction
- Reduce face-to-face HCW encounters with patients (e.g., bundling activities, use of video monitoring)
- Exclude visitors to patients with known or suspected COVID-19
- Cohort patients: Group together patients who are infected with the same organism to confine their care to one area
- Cohort HCP: Assign designated teams of HCP to provide care for all patients with suspected or confirmed COVID-19

Additional points to consider in PPE utilization:

### **Consideration to be given during extended use of eye protection.**

Extended use of eye protection is the practice of wearing the same eye protection for repeated close contact encounters with several different patients, without removing eye protection between patient encounters. Extended use of eye protection can be applied to disposable and reusable devices.

When using eye protection for extended periods the following points should be kept in mind:

- Eye protection should be removed and reprocessed if it becomes visibly soiled or difficult to see through.
  - If a disposable face shield is reprocessed, it should be dedicated to one HCW and reprocessed whenever it is visibly soiled or removed (e.g., when leaving the isolation area) prior to putting it back on. See protocol for removing and reprocessing eye protection below.
- Eye protection should be discarded if damaged (e.g., face shield can no longer fasten securely to the provider, if visibility is obscured and reprocessing does not restore visibility).
- HCW should take care not to touch their eye protection. If they touch or adjust their eye protection they must immediately perform hand hygiene.
- HCW should leave patient care area if they need to remove their eye protection. See protocol for removing and reprocessing eye protection below.

### **Reuse/reprocessing of items:**

- Reusable / reprocessed items if possible should be reused by the same person.
- Adhere to recommended manufacturer instructions for cleaning and disinfection.
- Cleaning and disinfection of goggles or face shield when manufacturer instructions are unavailable:
  - While wearing gloves, carefully wipe the inside, followed by the outside of the face shield or goggles using a clean cloth saturated with neutral detergent solution or cleaner wipe.
  - Carefully wipe the outside of the face shield or goggles using a wipe or clean cloth saturated with EPA-registered hospital disinfectant solution or disinfect with 0.5% sodium hypochlorite solution or diluted bleach solution (1ml bleach : 9 ml water ).
  - Wipe the outside of face shield or goggles with clean water or alcohol to remove residue.
  - Fully dry (air dry or use clean absorbent towels).
  - Remove gloves and perform hand hygiene.

### **Gowns and Coveralls**

- The disposable coveralls should be prioritized for those working in aerosol generating environments.
- Disposable fluid resistant gowns should be prioritized based upon risk assessment.

- During care activities where splashes and sprays are anticipated.
- During the following high-contact patient care activities that provide opportunities for transfer of pathogens to the hands and clothing of healthcare providers, such as:
  - Dressing, bathing/showering, transferring, providing hygiene, changing linens or assisting with toileting, device care or use, wound care
  - Surgical gowns should be prioritized for surgical and other sterile procedures.
- Options for Reusable (i.e., washable) gowns/coveralls:
  - Reusable fluid-resistant clothing (gowns/coveralls) maybe explored based upon risk assessment (areas with low risk of exposure to secretions and non-aerosol generating environment)
  - Reusable gowns are typically made of polyester or polyester-cotton fabrics. Gowns made of these fabrics can be safely laundered according to routine procedures and reused.
  - Care should be taken to ensure that HCW do not touch outer surfaces of the gown/coveralls during care.
  - The isolation gowns (disposable or cloth) maybe used such that the same gown is worn by the same HCW when interacting with more than one patient known to be infected with the same infectious disease when these patients are housed in the same location. Additionally there should not be additional co-infectious diagnoses transmitted by contact.

### Medical or surgical masks

- In addition to the facility staff the facemasks should be made available for all symptomatic patients upon entry to the facility. All facemasks should be placed in a secure and monitored site.
- Face marks should be used properly including the proper technique during donning and doffing (including avoidance of touching the contaminated areas of the mask during doffing).
- The facemask should be removed and discarded if soiled, damaged, or hard to breathe through.
- Facemasks should be prioritized for
  - For provision of essential surgeries and procedures
  - During care activities where splashes and sprays are anticipated (with face shield)
  - During activities where prolonged face-to-face or close contact with a potentially infectious patient is unavoidable
- Only N95 mask should be used during all aerosol generating procedures
- **Extended** use of N95 mask: refers to the practice of wearing the same N95 respirator for repeated close contact encounters with several patients, without removing the respirator between patient encounters. Extended use may be implemented when multiple patients are infected with the same respiratory pathogen and patients are placed together in dedicated waiting rooms or hospital wards and the of N95 are in limited supply.
  - Discard N95 respirators following use during aerosol generating procedures.
  - Discard N95 respirators contaminated with blood, respiratory or nasal secretions, or other bodily fluids from patients.



- Discard N95 respirators following close contact with, or exit from, the care area of any patient co-infected with an infectious disease requiring contact precautions.
- Consider use of a cleanable face shield (preferred) over an N95 respirator and/or other steps (e.g., masking patients, use of engineering controls) to reduce surface contamination.
- Perform hand hygiene with soap and water or an alcohol-based hand sanitizer before and after touching or adjusting the respirator (if necessary for comfort or to maintain fit).
- Extended use alone is unlikely to degrade respiratory protection. However, healthcare facilities should develop clearly written procedures to advise staff to:
  - Discard any respirator that is obviously damaged or becomes hard to breathe through.
  - Respiratory pathogens on the respirator surface can potentially be transferred by touch to the wearer's hands and thus risk causing infection through subsequent touching of the mucous membranes of the face (i.e., self-inoculation). While studies have shown that some respiratory pathogens remain infectious on respirator surfaces for extended periods of time, in microbial transfer and reaerosolization studies more than ~99.8% have remained trapped on the respirator after handling or following simulated cough or sneeze.
- If the N95 mask is reused it should be done only on limited Reuse basis and this refers to the practice of using the same N95 respirator for multiple encounters with patients but removing it ('doffing') after each encounter. The respirator is stored in between encounters to be put on again ('donned') prior to the next encounter with a patient. Limited reuse maybe practiced only with severe shortage of supply and the following points should be followed
  - N95 respirators must only be used by a single wearer. To prevent inadvertent sharing of respirators, label of the containers used for storing respirators or label the respirator itself (e.g., on the straps, between uses with the user's name
  - Discard N95 respirators following use during aerosol generating procedures.
  - Discard N95 respirators contaminated with blood, respiratory or nasal secretions, or other bodily fluids from patients.
  - Discard N95 respirators following close contact with any patient co-infected with an infectious disease requiring contact precautions.
  - Consider use of a cleanable face shield (preferred) over an N95 respirator and/or other steps (e.g., masking patients, use of engineering controls like a barrier), when feasible to reduce surface contamination of the respirator.
  - Hang used respirators in a designated storage area or keep them in a clean, breathable container such as a paper bag between uses. To minimize potential cross-contamination, store respirators so that they do not touch each other and the person using the respirator is clearly identified. Storage containers should be disposed of or cleaned regularly.
  - Clean hands with soap and water or an alcohol-based hand sanitizer before and after touching or adjusting the respirator (if necessary for comfort or to maintain fit).
  - Avoid touching the inside of the respirator. If inadvertent contact is made with the inside of the respirator, discard the respirator and perform hand hygiene as described above.

- Use a pair of clean (non-sterile) gloves when donning a used N95 respirator and performing a user seal check. Discard gloves after the N95 respirator is donned and any adjustments are made to ensure the respirator is sitting comfortably on your face with a good seal.
- Hang used respirators in a designated storage area or keep them in a clean, breathable container such as a paper bag between uses. To minimize potential cross-contamination, store respirators so that they do not touch each other and the person using the respirator is clearly identified. Storage containers should be disposed of or cleaned regularly.
- If no manufacturer guidance is available, it is advice to limit the number of reuses to no more than five uses per device to ensure an adequate safety margin is maintained.
  - It should be ensured that additional training and/or reminders for users to reinforce the need for proper respirator donning techniques including inspection of the device for physical damage (e.g., Are the straps stretched out so much that they no longer provide enough tension for the respirator to seal to the face?, Is the nosepiece or other fit enhancements broken?, etc.).

# CLEANING PROCEDURES PART 1

## Hand Hygiene

- Use soap and water OR alcohol based hand rub (>60% ABHR) before starting to clean
- SOAP AND WATER is preferred if hands are visibly soiled, after going to toilet, after cleaning procedures and before eating.
- Dry hands preferably with disposable paper towels/tissue or use clean cloth towels and replace them when wet.

## Personal Protective Equipment (PPE)

Before starting to clean wear PPE:

Heavy duty gloves, Mask, Water proof apron/gowns, Goggles / face shield and boots or closed work shoes

## Surfaces and reusable materials

(bed room furnitures, bath room, heavy duty gloves)

- Clean with soap/detergent & water -> Rinse with water -> disinfect with bleach in the following dilution
- Surfaces in patient area diluted bleach solution 1ml bleach in : 9ml water and keep for 10min contact time
- The bleach solution should be prepared fresh every 24 hourly and kept in closed container
- If diluted bleach solution cannot be used on a surface (like metal) 70% ethanol maybe used
- If available other hospital grade disinfectant maybe used which is active against enveloped viruses

## Linen/laundry and utensils

- Use a laundry bag to collect dirty laundry do not carry dirty clothes against your body and do not shake clothes
- Wash clothes with laundry detergent/soap in hot water (60-90 °C) and dry well. Bleach maybe added if available.
- Plates : Wash with regular dish washing liquid and dry. The plates can be reused.
- Do not share towels /beds/clothes/plates

## CLEANING PROCEDURES PART 2

- Usual public areas should be cleaned by soap/detergent and water -> rinse with water AND areas where people touch frequently should be cleaned with diluted bleach solution 1ml bleach: in 49ml water or 70% ethanol solution if bleach cannot be used (like on metal surface)
- Exposed surfaces where a suspected patient has been should be cleaned with soap an water then rinsed and bleach solution 1: 9ml water as given above is applied.
- When handling dead body wear: Gloves, Mask, water resistant Gown , Apron and boots. If any splash is expected use Goggles /Face shield to protect eyes.

- Reusable items may be washed with soap/detergent and water -> rinsed -> disinfected with diluted bleach solution (1ml bleach :9ml water) OR
- The used linen or mop heads maybe washed with detergent and hot water with added bleach if available , dried well and reused.
- Disposable items should be disposed properly according to the waste disposal recommendations

### **WASTE DISPOSAL:**

Used masks, gloves and other waste should be discarded in a dustbin lined with two water proof bags inside it. When the dustbin is 2/3<sup>rd</sup> full the bags should be sealed well, marked as infectious waste and taken to waste disposal area. This waste should be autoclaved (if available) or this waste should be kept separated from other waste and the bags should not be re-opened/manipulated.

## SPILL DECONTAMINATION

### PPE

- **Gloves , mask, apron/gown and if expecting splash use goggles/face shield.**

### CONTAIN

- **Contain the spill by covering with paper towels or other absorbent material**
- **Saturate the contaminated area with 1% Sodium Hypochlorite solution (1 :5 dilutions) and mark the area well**
- **Wait for minimum 10 minutes**

### DISPOSE

- **Remove any broken peices by tongs/ forceps or brush and pans (do not pick up pieces with your hands)**
- **Dispose all contaminated materials in biohazard a bag**

### DISINFECT

- **Swab the contaminated area with 1% sodium hypochlorite solution (1:5 dilutions)**
- **Remove gloves and PPE and wash hands with soap and water.**

**Reusable items should be disinfected before use.  
For routine surface cleaning in laboratory: use Sodium Hypochlorite solution at 0.1% (1:50 dilution).**

# PROTOCOL FOR TRANSPORTATION OF PATIENTS WITH SUSPECTED COVID-19 INFECTION

## Inform HPA

- All suspected cases of COVID-19 should be informed to HPA via HPA toll free number **1676**
- HPA will decide for further evaluation or transportation of patient to a COVID-19 care center.
- HPA will also guide the clinician on management of close contacts

## Sending facility

- Inform transport department about patient's condition, any special requirements during transportation.
- Inform nursing team and doctors at the receiving facility regarding patients condition. If possible give an estimated time of arrival.
- A written summary of the case should accompany the patient.

## IPC measures for patient

- Patient should wear a medical mask.
- The surface on which patient is seated (wheel chair/ vehicle seat) or lying down (stretcher) should be covered with a sheet or other physical barrier.
- Tissue and hand sanitizer should be provided to the patient.

## IPC measures for transport personnel

- Should wear gloves, mask and gown/overall.
- Staff who were taking care of the patient in the facility should change to new PPE if they are going to accompany the patient during transport.
- After transportation of patient, wash hands with soap and water or an alcohol based hand rub after gloves are removed.
- The gowns/overall maybe discarded or if reusable maybe washed and reused.

## Transporting the patient

- The most direct route to the destination should be taken.
- Avoid contact with staff of the facility and visitors as much as possible.
- Open the windows of the vehicle to allow ventilation

## Disinfection of vehicle and surfaces after transport

- Cleaning of wheelchairs should focus on the seat, arm rest, and back rest.
- Cleaning of stretchers should focus on upper and lower surface of the stretcher pad.
- Inspect the padded and metal parts of wheelchairs and stretchers for contamination with blood and other body fluids.
- Household soap or detergent should be used for cleaning the surfaces first and then, after rinsing, regular household disinfectant containing 0.5% sodium hypochlorite (i.e. 1-part bleach to 9 parts of water) should be applied. If the surface has been contaminated with blood or body fluids use 1% sodium hypochlorite solution (1 part bleach to 5 parts of water) (refer to cleaning and spill decontamination protocol)

# SAMPLE COLLECTION PROTOCOL 1

## Type of Specimen

- **Lower respiratory specimens are preferred as higher diagnostic value**
- **lower respiratory specimens:** sputum, endotracheal aspirate, or bronchoalveolar lavage fluid
- **upper respiratory tract samples:** nasopharyngeal (NP) aspirate or combined oropharyngeal (OP) and nasopharyngeal (NP) swabs *if not possible for lower respiratory sample*

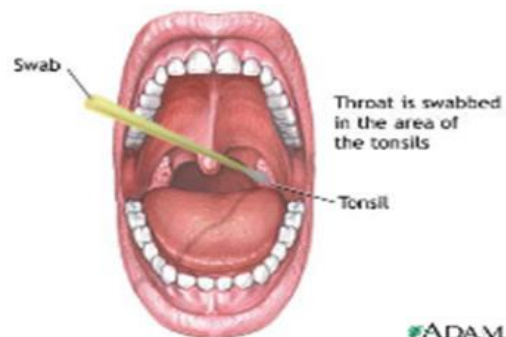
## PPE and IPC Measures

- Use **Gloves, Mask, Goggles/Eye shield and long sleeved Gowns**
- Use **N95 mask** with goggles, gloves and gowns if collected under **aerosole generating procedures** (tracheal aspiration, bronchoalveolar lavage or by sputum induction)
- **Fluid resistant gown:** if anticipating increased fluid exposure

## Sample Technique: OP

- Hold the tongue out of the way with a tongue depressor
- Insert the OP swab into the posterior pharynx and tonsillar areas rub swabs over both tonsillar pillars and posterior oropharynx
- Avoid swabbing the soft palate and do not touch the tongue with the swab tip
- Place the swab immediately into a VTM.

## Oropharyngeal swab (OP)



## SAMPLE COLLECTION PROTOCOL 2

### Sample Technique: NP

- Insert NP swab through the nares parallel to the pallet (not upwards) until resistance is encountered
- Gently rub and roll the swab and leave the swab in place for several seconds to absorb secretions before removing
- Withdraw slowly with a rotating motion

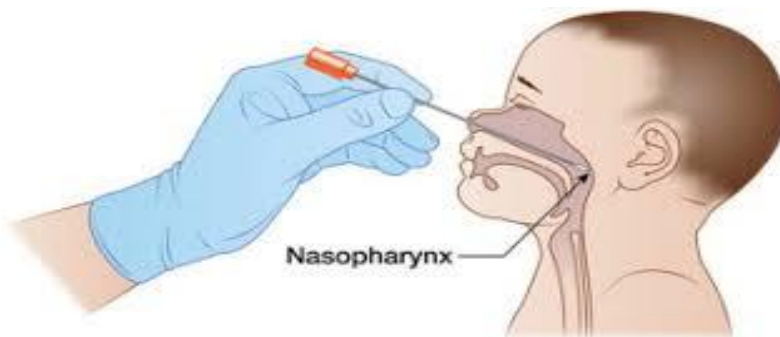
### Colletion Medium

- **NP/OP swab:** Swabs used for influenza sampling
- **Lower respiratory samples:** sterile container
- Use **VTM**( viral transportation medium) for transportation and the OP and NP swab maybe kept in the same VTM.
- Keep the samples in **2-8°C**(in a fridge) immediately, if any delay in transporting

### Sample Transportation

- Label properly and to put a **sticker** to identify the samples as **COVID-2019 suspected**
- Specimens in viral transport media and other samples like blood, urine should be packed in separate zip lock bags individually
- All samples of same patients should be packed in a big zip lock bag and sealed properly
- Samples **should be transported by hand** with proper documents (Request forms /**case reporting form** for acute respiratory illness)
- Transport in **cooler box with ice packs** (if sent from another center other than IGMH).
- If any spillage during transport, to follow spill decontamination procedure

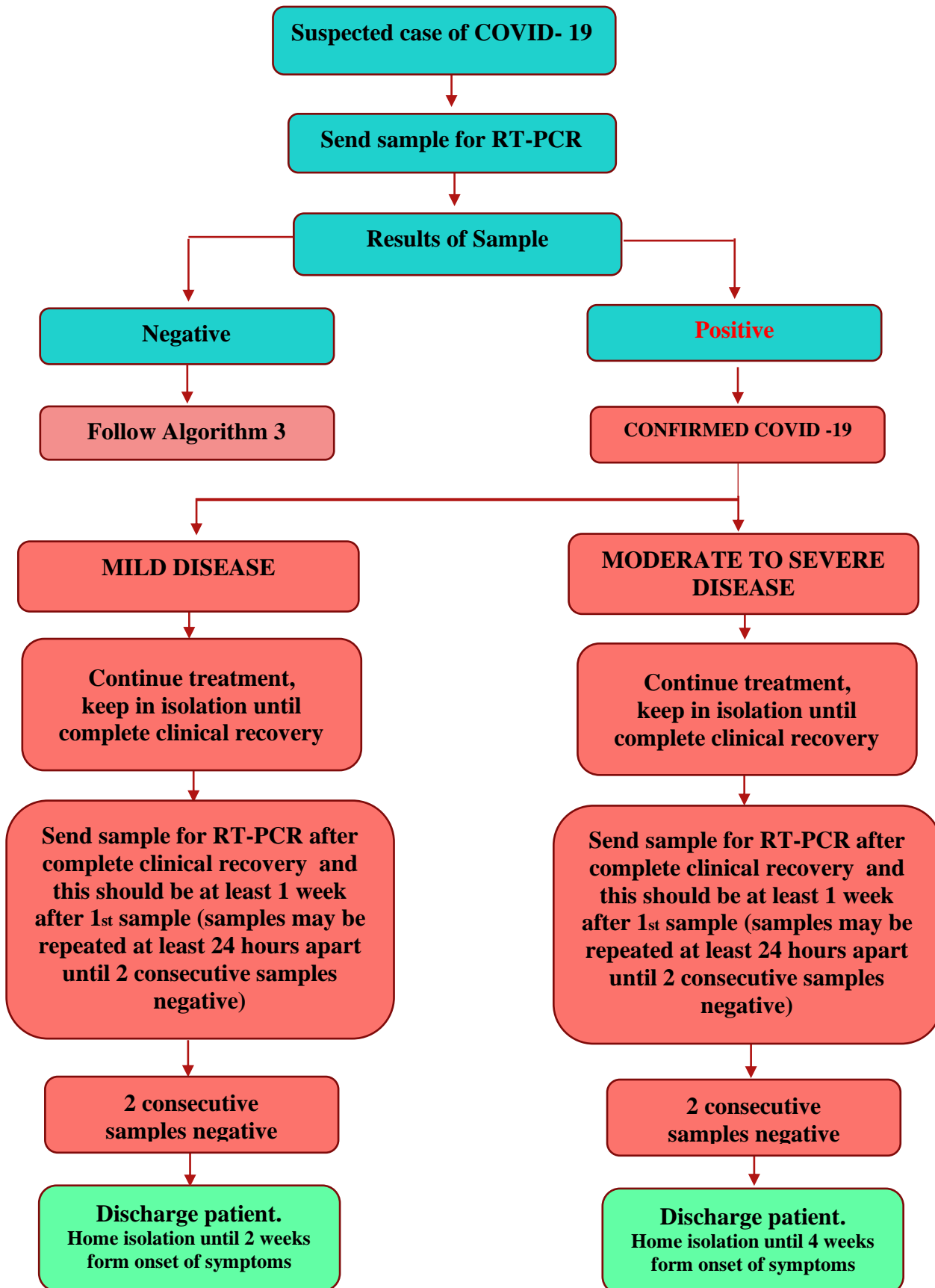
### Nasopharyngeal swab (NP)



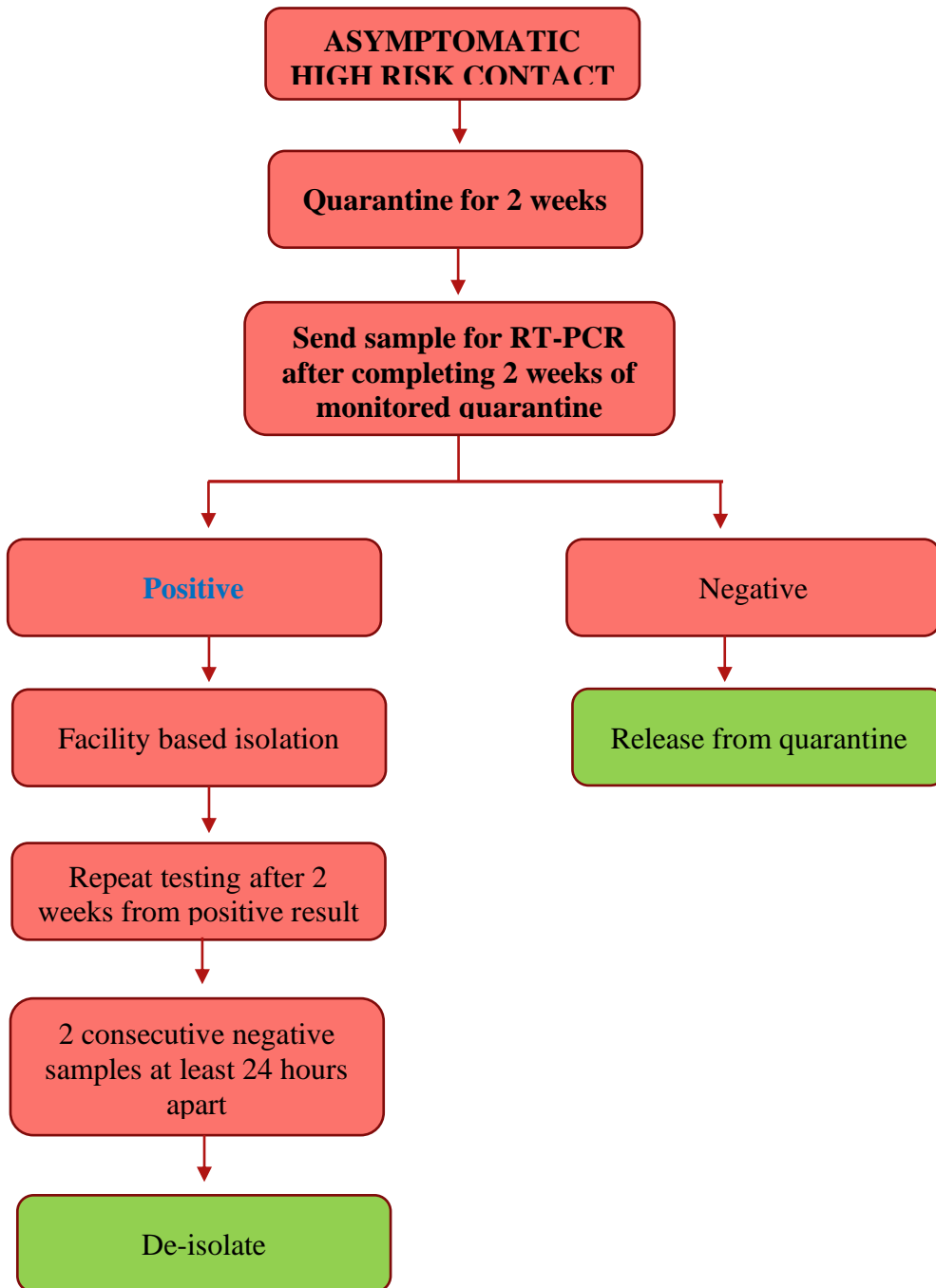
[https://www.youtube.com/watch?v=mfZYAMDpGNk&feature=emb\\_logo](https://www.youtube.com/watch?v=mfZYAMDpGNk&feature=emb_logo)



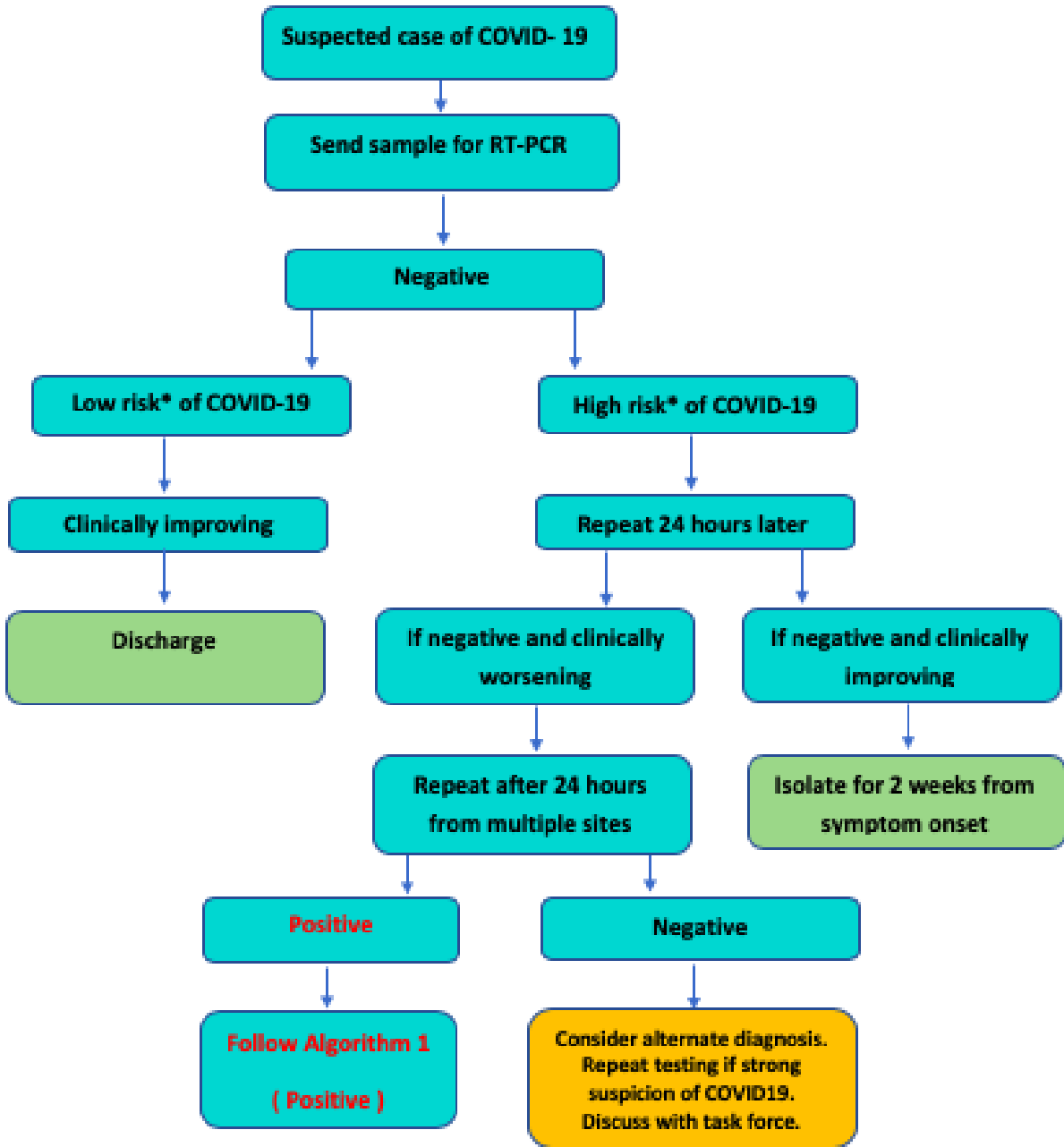
# VIROLOGICAL EVALUATION OF COVID 19 INFECTION: ALGORITHM 1



# VIROLOGICAL EVALUATION OF COVID19 INFECTION: ALGORITHM 2



## VIROLOGICAL EVALUATION OF COVID19 INFECTION: ALGORITHM 3

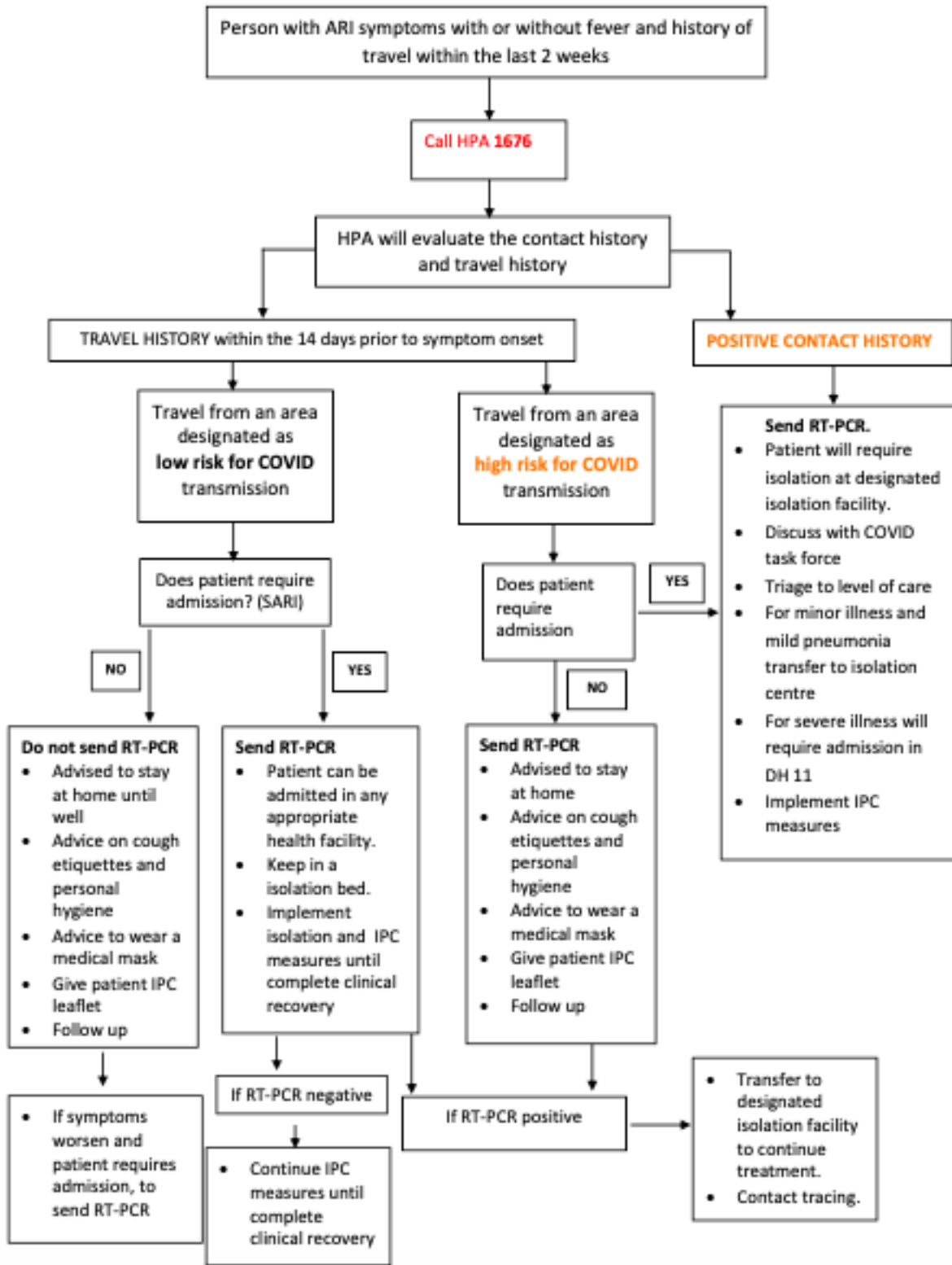


\*Refer to risk stratification table

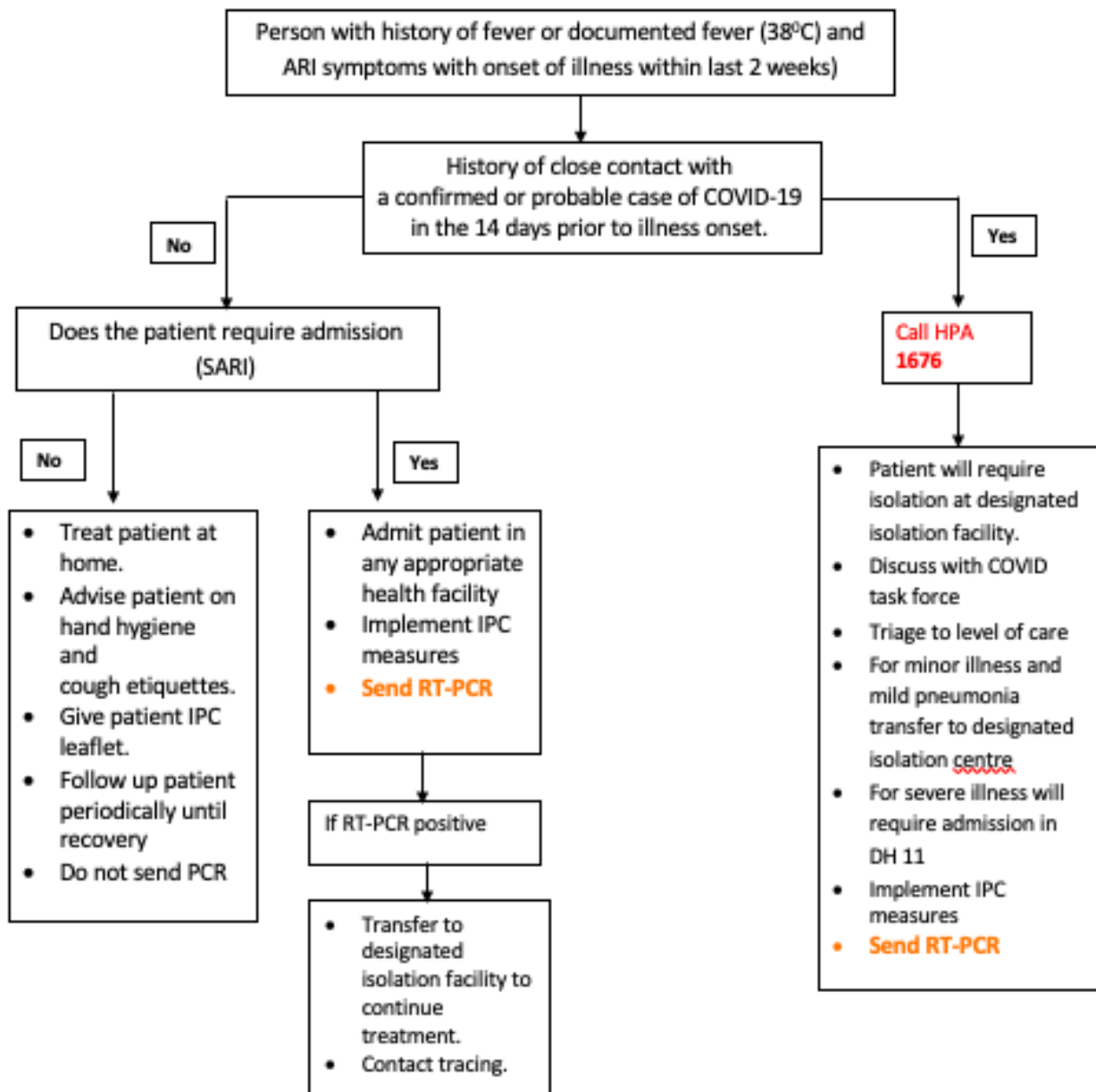
## TRIAGE AND CLINICAL MANAGEMENT OF A CASE OF SUSPECTED COVID-19 INFECTION

Surveillance Case Definition	
<b>Suspected case</b>	<p>If the patient fits criteria <b>A</b> , <b>B</b> or <b>C</b> given below, he/she is a suspected case of COVID-19 infection:</p> <p><b>A.</b> Patient with <b>any acute respiratory illness</b> (fever* and at least one sign/symptom of respiratory disease (e.g., cough, shortness of breath),  <b>AND</b>  no other etiology that fully explains the clinical presentation  <b>AND</b>  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.</p> <p><b>OR</b></p> <p><b>B.</b> Patient with <b>any respiratory illness</b>  <b>AND</b>  having been in <i>contact</i> with a confirmed or probable COVID-19 case in the last 14 days prior to onset of symptoms</p> <p><b>OR</b></p> <p><b>C.</b> Patient with <b>SARI</b>  <b>AND</b>  no other etiology that fully explains the clinical presentation</p> <p><b>SARI</b> is defined as an acute respiratory infection (ARI) with history of fever* or measured temperature <math>\geq 38^{\circ}\text{C}</math> and cough; with onset within last 14 days and requiring admission to hospital.</p> <p>*Absence of fever does NOT exclude viral infection</p>

## ALGORITHM FOR TRIAGE OF PERSONS WITH ARI AND A RECENT TRAVEL HISTORY



# ALGORITHM FOR TRIAGE OF ARI WITHOUT RECENT TRAVEL HISTORY



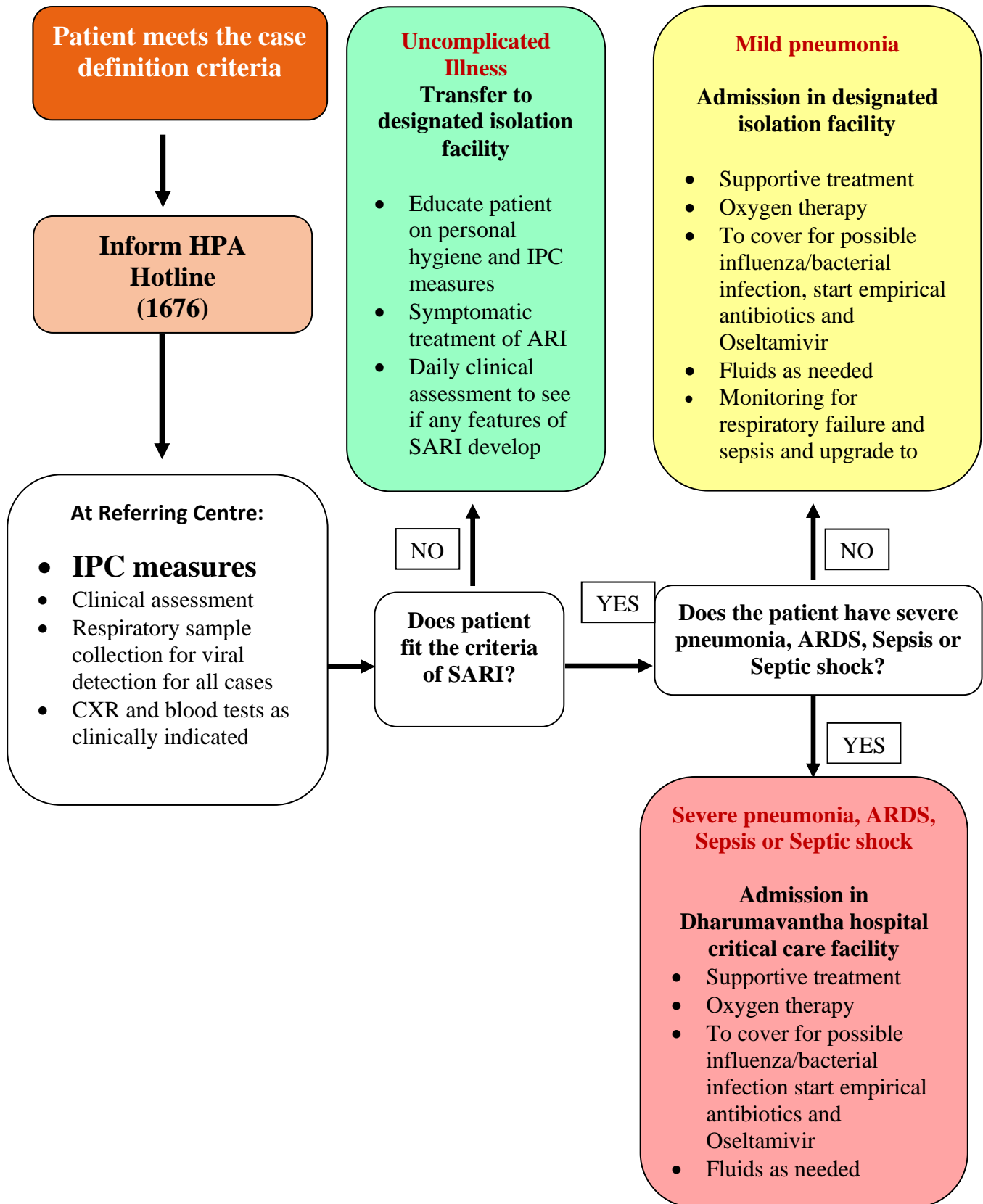
## CLINICAL SYNDROMES ASSOCIATED WITH COVID-19 INFECTION

<b>Uncomplicated Illness</b>	<p>Low-grade fever, cough, malaise, rhinorrhoea, sore throat <b>without any warning signs</b>, such as shortness of breath or difficulty in breathing, haemoptysis, gastro-intestinal symptoms such as nausea, vomiting, and/or diarrhoea and without changes in mental status (i.e. confusion, lethargy).</p> <p><b>No underlying chronic conditions</b> such as lung or heart disease, renal failure, or immunocompromising conditions</p>
<b>Mild pneumonia</b>	<p>Patient with pneumonia and no signs of severe pneumonia.</p> <p>Child with non-severe pneumonia has cough or difficulty breathing + fast breathing: fast breathing (in breaths/min): &lt;2 months, <math>\geq 60</math>; 2–11 months, <math>\geq 50</math>; 1–5 years, <math>\geq 40</math> and no signs of severe pneumonia.</p>
<b>Severe pneumonia</b>	<p><b>Adolescent or adult:</b> fever or suspected respiratory infection, plus any one of the following:</p> <ul style="list-style-type: none"> <li>• Respiratory rate <math>&gt;30</math> breaths/min</li> <li>• Severe respiratory distress</li> <li>• SpO<sub>2</sub> <math>&lt; 90\%</math> on room air.</li> </ul> <p><b>Child:</b> Cough or difficulty in breathing, plus at least one of the following:                  Central cyanosis or SpO<sub>2</sub> <math>&lt; 90\%</math>                  Severe respiratory distress (e.g. grunting, very severe chest indrawing)                  Signs of pneumonia with a general danger sign: inability to breastfeed or drink, lethargy or unconsciousness, or convulsions.</p>
<b>Acute Respiratory Distress Syndrome</b>	<p><b>Onset:</b> new or worsening respiratory symptoms within one week of known clinical insult.</p> <p><b>Chest imaging</b> (radiograph, CT scan, or lung ultrasound): bilateral opacities, not fully explained by effusions, lobar or lung collapse, or lung nodules.</p> <p><b>Origin of oedema:</b> respiratory failure not fully explained by cardiac failure or fluid overload.</p> <p><b>Oxygenation (adults):</b></p> <ul style="list-style-type: none"> <li>• Mild ARDS: <math>200 \text{ mmHg} &lt; \text{PaO}_2/\text{FiO}_2 \leq 300 \text{ mmHg}</math> (with PEEP or CPAP <math>\geq 5 \text{ cmH}_2\text{O}</math>, or non-ventilated)</li> <li>• Moderate ARDS: <math>100 \text{ mmHg} &lt; \text{PaO}_2/\text{FiO}_2 \leq 200 \text{ mmHg}</math> with PEEP <math>\geq 5 \text{ cmH}_2\text{O}</math>, or non-ventilated)</li> <li>• Severe ARDS: <math>\text{PaO}_2/\text{FiO}_2 \leq 100 \text{ mmHg}</math> with PEEP <math>\geq 5 \text{ cmH}_2\text{O}</math>, or non-ventilated</li> <li>• When PaO<sub>2</sub> is not available, SpO<sub>2</sub>/FiO<sub>2</sub> <math>\leq 315</math> suggests ARDS (including in non-ventilated patients)</li> </ul>

	<p><b>Oxygenation in Children:</b> (note OI = Oxygenation Index and OSI = Oxygenation Index using SpO2):</p> <ul style="list-style-type: none"> <li>• Bilevel NIV or CPAP <math>\geq 5</math> cmH2O via full face mask: PaO2/FiO2 <math>\leq 300</math> mmHg or SpO2/FiO2 <math>\leq 264</math></li> <li>• Mild ARDS (invasively ventilated): <math>4 \leq OI &lt; 8</math> or <math>5 \leq OSI &lt; 7.5</math></li> <li>• Moderate ARDS (invasively ventilated): <math>8 \leq OI &lt; 16</math> or <math>7.5 \leq OSI &lt; 12.3</math></li> <li>• Severe ARDS (invasively ventilated): <math>OI \geq 16</math> or <math>OSI \geq 12.3</math></li> </ul>
<b>Sepsis</b>	<p><b>Adults:</b> life-threatening organ dysfunction caused by a dysregulated host response to suspected or proven infection, with organ dysfunction. <b>Signs of organ dysfunction include:</b> altered mental status, difficult or fast breathing, low oxygen saturation, reduced urine output, fast heart rate, weak pulse, cold extremities or low blood pressure, skin mottling, or lab evidence of coagulopathy, thrombocytopenia, acidosis, high lactate or hyperbilirubinemia.</p> <p><b>Children:</b> suspected or proven infection and <math>\geq 2</math> SIRS criteria, of which one must be abnormal temperature or white blood cell count.</p>
<b>Septic shock</b>	<p><b>Adults:</b> persisting hypotension despite volume resuscitation, requiring vasopressors to maintain MAP <math>\geq 65</math> mmHg and serum lactate level <math>&gt; 2</math> mmol/L.</p> <p><b>Children:</b> any hypotension (SBP <math>&lt; 5</math>th centile or <math>&gt; 2</math> SD below normal for age) or 2-3 of the following: altered mental state; tachycardia or bradycardia (HR <math>&lt; 90</math> bpm or <math>&gt; 160</math> bpm in infants and HR <math>&lt; 70</math> bpm or <math>&gt; 150</math> bpm in children); prolonged capillary refill (<math>&gt; 2</math> sec) or warm vasodilation with bounding pulses; tachypnea; mottled skin or petechial or purpuric rash; increased lactate; oliguria; hyperthermia or hypothermia.</p>



# TRIAGE AND CLINICAL MANAGEMENT OF SUSPECTED COVID-19



# CLINICAL MANAGEMENT OF SARI IN ADULTS WHEN COVID-19 IS SUSPECTED

## Oxygen therapy

- Give supplemental oxygen therapy immediately to patients with SARI and respiratory distress, hypoxaemia, or shock.
- Initiate oxygen therapy at 5 L/min and titrate flow rates.
- Target SpO<sub>2</sub> ≥90% in non-pregnant adults and SpO<sub>2</sub> ≥92-95 % in pregnant patients.

## Fluids

- Conservative fluid management in patients with SARI when there is no evidence of shock
- In resuscitation from septic shock in adults, give at least 30 ml/kg of isotonic crystalloid.
- Perfusion targets include MAP >65 mmHg , urine output >0.5 ml/kg/hr in adults, and improvement of skin mottling, capillary refill, level of consciousness, and lactate level.
- Administer vasopressors when shock persists after fluid resuscitation (Intra venous Noradrenaline is the preferred first-line in adult patients).

## Empirical antibiotics

- Patients with sepsis should receive antimicrobials within one hour of presentation to hospital
- Empirical antibiotic should be based on the clinical diagnosis (CAP, HAP, or sepsis).
- Empiric therapy should include coverage for influenza when there is local circulation of influenza in the community.
- Antibiotics should be de-escalated on the basis of microbiology results and clinical judgment.

## Close monitoring

- Monitor for clinical deterioration, such as progressive respiratory failure and sepsis.
- Apply supportive care interventions immediately.

## Manage respiratory failure and ARDS

- Recognize hypoxemic respiratory failure when a patient with respiratory distress continues to have hypoxemia despite high flow oxygen
- Non invasive ventilation should not be used for patients with hemodynamic instability, multiorgan failure, or abnormal mental status and should be considered for intubation and mechanical ventilation.
- Endotracheal intubation should be performed using airborne precautions
- Do not routinely give systemic corticosteroids for treatment of viral pneumonia or ARDS unless they are indicated for another reason.

## HOME ISOLATION

- Those who have **mild symptoms** *without any underlying conditions* may be isolated at home:
  - Low-grade fever, cough, malaise, rhinorrhoea, sore throat **without** any *warning signs*, such as shortness of breath or difficulty in breathing, hemoptysis, gastro-intestinal symptoms such as nausea, vomiting, and/or diarrhoea and without changes in mental status (i.e. confusion, lethargy).
  - **No** underlying chronic conditions such as lung or heart disease, renal failure, or immunocompromising conditions
- **Single isolation rooms** is preferred with attached toilets. If toilets are shared the toilet should be cleaned after use and the persons side door should be kept closed.
- The room should preferably have **good natural ventilation** with open windows.
- If a care taker is with the patient
  - Recommended to keep 6 feet distance from other people/ if the care needs to be with the patient they should be trained in IPC
  - It is recommended that care taker be a person without underlying conditions
  - The care take who attends the sick person should be aware about IPC including waste disposal/ food handling/ cleaning and other IPC measures
  - Adequate supply of appropriate Personal Protective Equipment (PPE) and hand hygiene materials (gloves, mask for the care taker and soap and water)
  - Availability of education materials on the IPC practices and COVID-19
  - Caretaker should stay in a separate room or be separated from the patient as much as possible.
  - Household members should use a separate bedroom and bathroom, if available
  - Avoid touching your eyes, nose, and mouth with unwashed hands
  - Wear a disposal face mask and gloves when you touch or have contact with the patient's, blood, stools or other body fluid like saliva, nasal mucus, sputum, vomit, urine.
  - When removing the PPE first remove gloves wash hands with soap and water then remove mask and again wash hands with soap and water.
- **Adequate IPC protocols for:**
  - Environmental cleaning, Linen and laundry, waste disposal, water, Sanitation and hygiene, respiratory hygiene

- Clean and disinfect bathroom and toilet surfaces at least once daily with a hospital grade disinfectant or regular household disinfectant containing diluted bleach solution (1-part bleach to 9 parts water).
  - Clean clothes, bedclothes, bath and hand towels of ill persons with regular laundry soap and water 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 to provide oral or respiratory care and when handling stool, urine and waste.
  - Gloves, tissues, masks and other waste generated by ill persons or in the care of ill persons should be placed in a lined container in the ill person’s room before disposal with other household waste.
  - 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 with regular household disinfectant containing a diluted bleach solution (1-part bleach to 99 parts water).
  - Any surfaces that become soiled with respiratory secretions or body fluids during transport should be cleaned with soap and water and disinfected with a solution containing regular household diluted bleach (1-part bleach to 99 parts water).
- Basic supplies (clothing, food, hand-hygiene supplies, laundry services) should be available
  - Mechanism for addressing special needs, if any disability
  - Mechanism for communication, including telephone (gaining access to support services and communicating with family)
  - Access to mental health and other psychological support services and health staff as required
  - Delivery systems for food, water and other needs if no care.
  - Depending on the risk category supervision should be done by a health authority.

# REQUIREMENTS FOR QUARANTINE FACILITY/HOME QUARANTINE

- Authorities must provide people with clear, up-to-date, transparent and consistent guidelines, and with reliable
- Information about quarantine measures.
- Constructive engagement with communities should be essential if quarantine measures are to be accepted.
- Persons who are quarantined need to be provided with health care; financial, social and psychosocial support; and basic needs, including food, water, and other essentials. The needs of vulnerable populations should be prioritized.

## **Basic requirements:**

- Basic supplies (clothing, food, hand-hygiene supplies, laundry services), medications for people who are on regular medical treatment should be available
- Mechanism for addressing special needs, if any disability
- Mechanism for communication, including telephone (for monitoring by health staff, reporting of symptoms, gaining access to support services, and communicating with family)
- Access to basic first aid supplies including thermometers
- Access to a health care worker should be available, such as a doctor, health worker or a nurse who could attend to immediate concerns.
- Access to mental health and other psychological support services
- Separate rooms and bathrooms for each contact if possible. If single rooms are not available, beds should be placed at least 1 metre apart (preferably 2 meters apart).
- If toilets are shared, to clean the toilet after each use.
- Delivery systems for food, water and other needs
- Services for removal of waste.
- Availability of/access to educational materials about 2019-nCoV and quarantine
- Adequate ventilating (preferably good natural ventilation)

Appropriate quarantine arrangements include the following measures.

- Suitable environmental infection controls must be used, such as ensuring adequate air ventilation, air filtration systems, and waste-management protocols.
- Social distance must be maintained at all times (preferably at 2 meters and at least 1 metre) between all persons who are quarantined.
- As available medical/surgical mask should be provided to those in quarantine while being transported or when not in single rooms.
- Accommodation must provide an appropriate level of comfort, including:
  - Provision of food, water, and hygiene facilities.

Additional considerations to minimize exposure to facility staff

- Social distancing and frequent hand hygiene should be practiced by all in the facility.
- Ensure that there is minimum contact with those in quarantine
  - Explore ways that food delivery and waste collection can occur without contact within 6 feet.
- If needed it is advised to use masks and gloves during contact within 2 meter distance.
- Use of dedicated clothing during duty timing and change of clothes and bathing after duty is recommended.
- During procedures such as cleaning, laundry and waste collection PPE should be worn as per the PPE guidelines should be used.
- Any time interacting with a person within 6 feet (2 meters) gloves, mask and eye protection (such as face shield) and gowns (maybe reusable cotton gowns/dedicated clothing) should be worn. The gown/clothing would need to be changed and exposed clothes laundered (if reusable) as advised at 60-90 degrees C. When removing gowns/clothing all measures should be taken not to touch the outside exposed areas. It is recommended that the exposed person takes bath and that there is cleaning and disinfection of all exposed areas. Please refer to Consideration PPE utilization section.
- Daily follow up of persons who are quarantined should be conducted within the facility for the duration of the quarantine period and should include screening for body temperature and symptoms.
- Groups of persons at higher risk of infection and severe disease may require additional surveillance owing to chronic conditions or they may require specific medical treatments.

- Consideration should be given to the resources and personnel needed and rest periods for staff at quarantine facilities.
  
- Respiratory samples from quarantined persons, irrespective of whether they have symptoms, should be sent for laboratory testing at the end of the quarantine period.

## MANAGEMENT OF CONTACTS

**If any suspected case is found, proper disinfection, contact tracing, management of contacts as per risk categorisation, provision of psychosocial support should be carried out. A contact is a person who was in contact with the patient from 2 days before and up to 14 days after onset of symptoms.**

### **Close contact:**

Having face-to-face contact with a COVID-19 patient within 1 meter and for >15 minutes

Providing direct care for patients with COVID-19 disease without using proper personal protective equipment

Staying in the same close environment as a COVID-19 patient (including sharing a workplace, classroom or household or being at the same gathering) for any amount of time

Travelling in close proximity with (that is, within 1 m separation from) a COVID-19 patient in any kind of conveyance and other situations case by case

### **Contact with a suspect/ confirmed case:**

**Should be advised for quarantine for 14 days after the last contact with a suspected COVID-19 infected patient .**

**Healthcare worker should be defined as all staff in the health care facility involved in the provision of care for a COVID-2019 infected patient (clinical and non clinical contact with patient or contaminated surface or materials:**

**If a healthcare associated exposure occurs to a confirmed case without appropriate PPE, the HCW would be advised for home quarantine even if asymptomatic**

Respiratory samples from quarantined persons, irrespective of whether they have symptoms should be tested for SARS-CoV2 at the end of monitored quarantined period.



## COVID-19: CONTACT TRACING IN NON-HEALTH CARE SETTING

SARS CoV-2 is transmitted mainly by respiratory droplets (up to 6 feet) when the person coughs or sneezes and by contact transmission.

### **Close contacts**

Factors for consideration include the

- Duration of exposure
  - longer exposure time likely increases exposure risk
- Clinical symptoms of the patient
  - coughing likely increases exposure risk
- Type of interaction
  - did the patient cough directly into the face of the HCP
- Whether the patient was wearing a facemask
  - which can efficiently block respiratory secretions from contaminating others and the environment
- PPE used by personnel
- Whether aerosol-generating procedures were performed

**Contacts of the suspected / confirmed COVID-19 cases are classified as high risk, medium or low risk categories depending on the type of exposure.**

## EXPOSURE RISK CATEGORISATION OF CONTACTS

EXPOSURE RISK CATEGORIZATION (contacts)	Action	
	Results of Suspected case is <b>Negative</b>	Results of suspected case is <b>Positive</b>
<p><b>High Risk</b></p> <ul style="list-style-type: none"> <li>Living in the same household as, being an intimate partner of, or providing care in a non-healthcare setting (such as a home) for a person with symptomatic laboratory-confirmed or suspected 2019-nCoV infection <i>without using recommended precautions</i></li> </ul>	<p><b>Remain at home for 14 days</b></p> <p><b>Monitor for symptoms under public health supervision</b></p>	<p><b>Quarantine in facility / home quarantine x 14 days</b></p> <p><b>Monitor for symptoms under public health supervision</b></p>
<p><b>Medium Risk</b></p> <ul style="list-style-type: none"> <li>Close contact within 6 feet and <i>not having</i> any exposures that meet a high-risk definition.</li> <li>Being in the same indoor environment (e.g., a classroom, a hospital waiting room) as a person with symptomatic laboratory-confirmed 2019-nCoV infection for a prolonged period of time but not meeting the definition of close contact.</li> </ul>	<p><b>Avoid public gatherings</b></p> <p><b>Self-monitoring x 14 days</b></p>	<p><b>Remain at home x 14 days.</b></p> <p><b>Practice social distancing</b></p> <p><b>Self-monitoring for symptoms under public health supervision</b></p>

<ul style="list-style-type: none"> <li>• On an aircraft, being seated within 6 feet (two meters) of a traveller with symptomatic laboratory-confirmed 2019-nCoV/ suspected infection; this distance correlates approximately with 2 seats in each direction</li> <li>• Living in the same household as, an intimate partner of, or caring for a person in a <b>non-healthcare</b> setting (such as a home) to a person with symptomatic laboratory-confirmed 2019-nCoV infection <i>while consistently using recommended precautions</i></li> </ul>		
<p>Travel from a country with uncontained community transmission- i.e. a country in <b>RED</b> AND not having any exposures that meet a high-risk definition:</p> <ul style="list-style-type: none"> <li>• If the country is under travel ban then entry to foreigners may be banned depending on the local travel advisory</li> <li>• All locals coming in to the country will be either taken for quarantine OR advice to remain at home</li> </ul>	<ul style="list-style-type: none"> <li>• Quarantine (for Maldivians coming from a country with a travel ban)/Remain at home x 14 days (if coming from a country in RED but not in travel ban)</li> <li>• Social distancing</li> <li>• Monitor for symptoms under public health supervision</li> </ul>	
<p><b>Low Risk:</b> Any exposure that does not fit into the above two categories</p>	<p><b>No action</b></p>	<p><b>Self-observation:</b> Advice to report if any symptoms</p>

SARS CoV-2 is transmitted mainly by respiratory droplets (up to 6 feet) when the person coughs or sneezes and by contact transmission.

## Close contacts

Factors for consideration include the

- Duration of exposure
  - longer exposure time likely increases exposure risk
- Clinical symptoms of the patient
  - coughing likely increases exposure risk
- Type of interaction
  - did the patient cough directly into the face of the HCP
- Whether the patient was wearing a facemask
  - which can efficiently block respiratory secretions from contaminating others and the environment
- PPE used by personnel
- Whether aerosol-generating procedures were performed

## Definitions:

**Quarantine** separates and restricts the movement of people who were exposed to a contagious disease to see if they become sick.

**Self-monitoring** means people should monitor themselves for fever by taking their temperatures twice a day and remain alert for cough or difficulty breathing. If they feel feverish or develop measured fever, cough, or difficulty breathing during the self-monitoring period, they should self-isolate, limit contact with others, and seek advice by telephone to HPA hotline number 1676 and determine whether medical evaluation is needed.

**Self-monitoring with public health supervision:** Provide a plan for self-monitoring and clear instructions for notifying the health department before the person seeks health care if they develop fever, cough, or difficulty breathing. Health authorities follow up daily/ as resource allow communicate with these people over the course of the self-monitoring period.

**Self-observation** means people should remain alert for subjective fever, cough, or difficulty breathing. If they feel feverish or develop cough or difficulty breathing during the self-observation period, they should take their temperature, self-isolate, limit contact with others, and seek advice by telephone from a healthcare provider or their local health department to determine whether medical evaluation is needed.

**Social distancing** means remaining out of congregate settings, avoiding local public transportation (e.g., bus, taxi, ride share), and maintaining distance (approximately 6 feet or 2 meters) from others.

**For Contacts of asymptomatic contacts:**

Symptom monitoring or special management for people exposed to asymptomatic people with potential exposures to SARS-CoV-2 (such as in a household), i.e., “contacts of contacts;” are not needed.

# RISK ASSESSMENT AND MANAGEMENT OF HEALTH CARE WORKERS WITH POTENTIAL EXPOSURE TO COVID-19

The guidance was designed for a “containment” approach in the absence of sustained SARS-CoV-2 transmission

**Close contact** for healthcare exposures is defined as follows:

Health care associated exposure, including providing direct care for nCoV patients, working with health care workers infected with novel coronavirus, visiting patients or staying in the same close environment as a nCoV patient. Risk of exposure is increased with the type of contact, PPE of HCW and status of the patient.

Considerations for close contacts include:

- Being within approximately 6 feet (2 meters), of a person with COVID-19 (such as caring for or visiting the patient; or sitting within 6 feet of the patient in a healthcare waiting area or room)
- Having unprotected direct contact with infectious secretions or excretions of the patient (e.g., being coughed on, touching used tissues with a bare hand).

### Health Care Worker (HCW) exposure risk categorization:

Risk group	Patient	HCW	Procedure
<b>High-risk</b> HCP who have had close contact with patients with COVID-19 who were not wearing a facemask while HCP nose and mouth were exposed to material potentially infectious with the virus causing COVID-19. Risk is considered very high if HCW is present in the room for procedures that generate aerosols or during which respiratory secretions are likely to be poorly controlled *	No mask	No mask	Any
*AGP or procedures where respiratory secretions maybe poorly controlled: cardiopulmonary resuscitation, intubation, extubation, bronchoscopy, nebulizer therapy, sputum induction, drilling) on patients with COVID-19 when the healthcare providers’ eyes, nose, or mouth were not protected.			
<b>Medium-risk</b> <ul style="list-style-type: none"> <li>• Close contact with <b>patients</b> with COVID-19 who <b>were wearing a facemask</b> while HCW nose and mouth were exposed potentially infectious materials.</li> <li>• HCW who were wearing a gown, gloves, eye protection and a facemask (instead of an N95mask) during an aerosol-generating (AGP) procedure would be considered to have a <b>medium-risk exposure</b>.</li> </ul> If an AGP had not been performed, they would have been considered <i>low-risk</i> .	Medical Mask	No mask	Routine
	Aerosol generating procedure	PPE with normal mask	AGP
<b>Low-risk</b> Brief interactions with patients with COVID-19 or prolonged close contact with patients who were wearing a facemask for source control while HCP were wearing a facemask or respirator. Use of eye protection, in addition to a facemask or respirator would further lower the risk of exposure.	Mask	Normal mask	Routine
		N95 mask	Aerosol generating procedure
		Mask/N95 mask with	Routine/A PG
		Additional PPE	Routine/A PG

## RECOMMENDATIONS

<i>Epidemiologic risk factors</i>	<i>Exposure category</i>	<i>Recommended Monitoring for COVID-19 (until 14 days after last potential exposure)</i>	<i>Work Restrictions for Asymptomatic HCP</i>
<b><i>Prolonged close contact with a COVID-19 patient who was wearing a facemask (i.e., source control)</i></b>			
<i>HCW PPE: None</i>	<i>Medium</i>	<i>Active</i>	<i>Exclude from work for 14 days after last exposure.</i>
<i>HCP PPE: Not wearing a facemask or respirator</i>	<i>Medium</i>	<i>Active</i>	<i>Exclude from work for 14 days after last exposure</i>
<i>HCP PPE: Not wearing eye protection</i>	<i>Low</i>	<i>Self with delegated supervision</i>	<i>None</i>
<i>HCP PPE: Not wearing gown or gloves</i>	<i>Low</i>	<i>Self with delegated supervision</i>	<i>None</i>
<i>HCP PPE: Wearing all recommended PPE (except wearing a facemask instead of a respirator)</i>	<i>Low</i>	<i>Self with delegated supervision</i>	<i>None</i>
<b><i>Prolonged close contact with a COVID-19 patient who was not wearing a facemask (i.e., no source control)</i></b>			
<i>HCP PPE: None</i>	<i>High</i>	<i>Active</i>	<i>Exclude from work for 14 days after last exposure</i>
<i>HCP PPE: Not wearing a facemask or respirator</i>	<i>High</i>	<i>Active</i>	<i>Exclude from work for 14 days after last exposure</i>
<i>HCP PPE: Not wearing eye protection but</i>	<i>Medium</i>	<i>Active</i>	<i>Exclude from work for 14 days after last exposure</i>
<i>Not wearing gown or gloves</i>	<i>Low</i>	<i>Self with delegated supervision</i>	<i>None</i>
<i>HCP PPE: Wearing all recommended PPE (except wearing a facemask instead of a respirator)</i>	<i>Low</i>	<i>Self with delegated supervision</i>	<i>None</i>

**For medium and high risk exposure cases, 2 RT-PCR should be done at the end of the quarantine period**

HCW= Healthcare Worker; PPE=Personal Protective Equipment

a The risk category for these rows would be elevated by one level if HCP had extensive body contact with the patients (e.g., rolling the patient).

b The risk category for these rows would be elevated by one level if HCW performed or were present for a procedure likely to generate higher concentrations of respiratory secretions or aerosols (e.g., cardiopulmonary resuscitation, intubation, extubation, bronchoscopy, nebulizer therapy, sputum induction). For example, HCP who were wearing a gown, gloves, eye protection and a facemask (instead of a respirator) during an aerosol-generating procedure would be considered to have a medium-risk exposure.

Additional Scenarios:

- Refer to the footnotes above for scenarios that would elevate the risk level for exposed HCP. For example, HCP who were wearing a gown, gloves, eye protection and a facemask (instead of a respirator) during an aerosol-generating procedure would be considered to have a medium-risk exposure.
- Proper adherence to currently recommended infection control practices, including all recommended PPE, should protect HCP having prolonged close contact with patients infected with COVID-19. However, to

account for any inconsistencies in use or adherence that could result in unrecognized exposures, HCP should still perform self-monitoring with delegated supervision.

- HCP not using all recommended PPE who have only brief interactions with a patient regardless of whether patient was wearing a facemask are considered low-risk.
  - Examples of brief interactions include: brief conversation at a triage desk; briefly entering a patient room but not having direct contact with the patient or the patient's secretions/excretions; entering the patient room immediately after the patient was discharged.
- HCP who walk by a patient or who have no direct contact with the patient or their secretions/excretions and no entry into the patient room are considered to have no identifiable risk.

### **Community or travel-associated exposures**

HCP with potential exposures to COVID-19 in community settings should have their exposure risk assessed according to CDC guidance. HCP should inform their facility's occupational health program that they have had a community or travel-associated exposure. HCP who have a community or travel-associated exposure should undergo monitoring as defined by that guidance. Those who fall into the high- or medium- risk category described there should be excluded from work in a healthcare setting until 14 days after their exposure. HCP who develop signs or symptoms compatible with COVID-19 should contact their established point of contact (HPA or their facility's concerned authority) for medical evaluation prior to returning to work (please refer to the exposure risk categories in non-health care setting).

### **Additional Considerations and Recommendations depending on escalation of situation:**

In the case of community transmission, all HCW are at some risk for exposure to COVID-19, whether in the workplace or in the community.

Facilities should shift emphasis to more routine practices, which include:

- Asking HCW to report recognized exposures,
- Regularly monitor themselves for fever
- Symptoms of respiratory infection and not report to work when ill.

Facilities should develop a plan for how they will screen for symptoms and evaluate ill HCW. This could include having HCW report absence of fever and symptoms prior to starting work each day.

Facilities could consider allowing asymptomatic HCW who have had an exposure to a COVID-19 patient to continue to work **after options to improve staffing have been exhausted** and in consultation with concerned authority and HPA. These HCP should still report temperature and absence of symptoms each day prior to starting work. Facilities could have **exposed HCP wear a facemask while at work for the 14 days** after the exposure event if there is a sufficient supply of facemasks. If HCP develop even mild symptoms consistent with COVID-19, they must cease patient care activities, don a facemask (if not already wearing), and notify their supervisor or occupational health services prior to leaving work.

The guidance for non-healthcare settings can also be used to identify the movement, public activity and travel restrictions that apply to the HCW included here.



These scenarios do not cover all potential exposure scenarios and should not replace an individual assessment of risk for the purpose of clinical decision making or individualized public health management. Any public health decisions that place restrictions on an individual's or group's movements or impose specific monitoring requirements should be based on an assessment of risk for the individual or group. Healthcare facilities, in consultation with HPA should use the concepts outlined in this guidance along with clinical judgement to assign risk and determine need for work restrictions.

## Return to Work Criteria for Symptomatic Healthcare Workers:

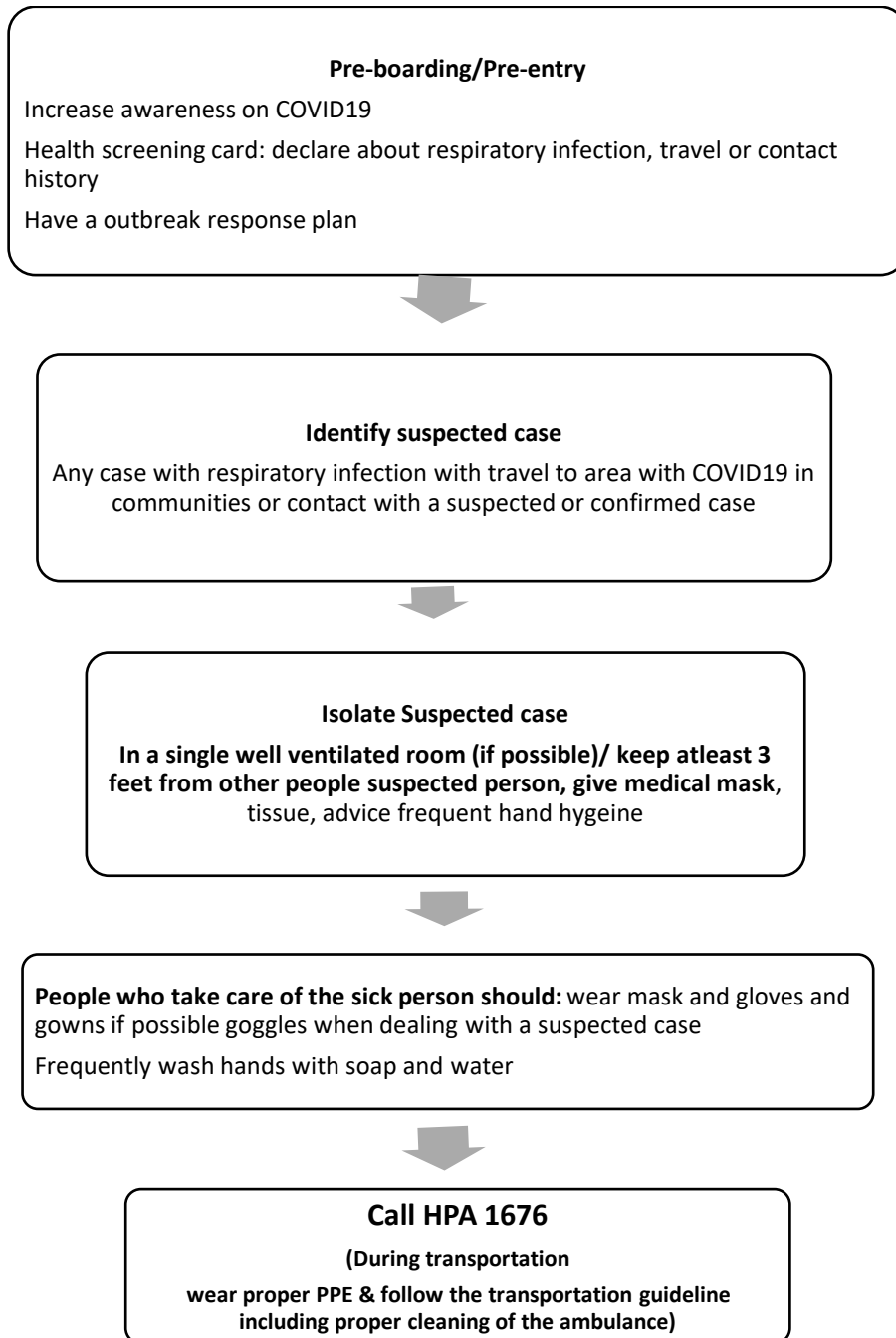
### Healthcare workers with low risk exposure:

- Exclude from work until
  1. At least 3 days (72 hours) since resolution of symptoms  
AND
  2. At least 2 consecutive negative RT-PCR ( 24 hours apart)  
AND
  3. At least 7 days since symptom onset with negative antibody test (if available)

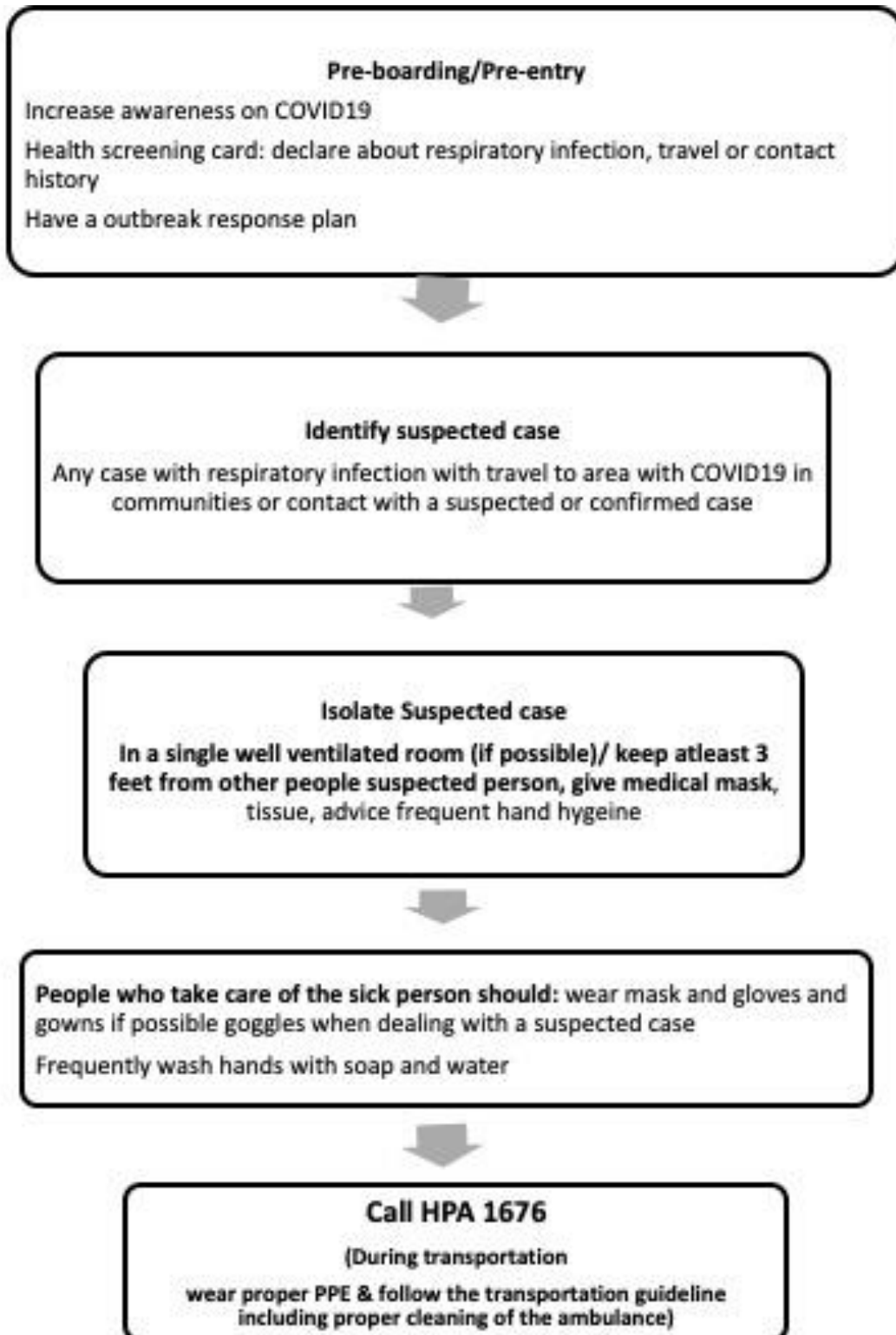
**Symptomatic health care workers with high risk and medium risk exposure and 2-negative RT-PCR, to complete isolation for 2 weeks from symptom onset.**

**For confirmed COVID-19 cases, to follow the virological evaluation algorithm 1.**

# Outbreak management plan for SAFARI or enclosed spaces with COVID-19 suspected



**Contact tracing:** The close contacts who have been exposed to the index case from 48 hours before the onset of symptoms. Contact tracing should be started immediately as soon as a suspected case is identified



### **Definition of a close contact**

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

- Providing direct care to a patient with COVID-19 disease, visiting patients or staying in the same environment as a COVID-19 patient;
- Working in close proximity to or sharing a cabin or room with a patient with COVID-19 disease;
- Traveling with a COVID-19 patient in any kind of conveyance;
- Living in the same household as a patient with COVID-19 disease within 14 days after the patient's onset of symptoms (2).

### **Definition of close contacts with high risk exposure, on board a ship**

A person is considered to have had a high-risk exposure if they meet one of the following criteria:

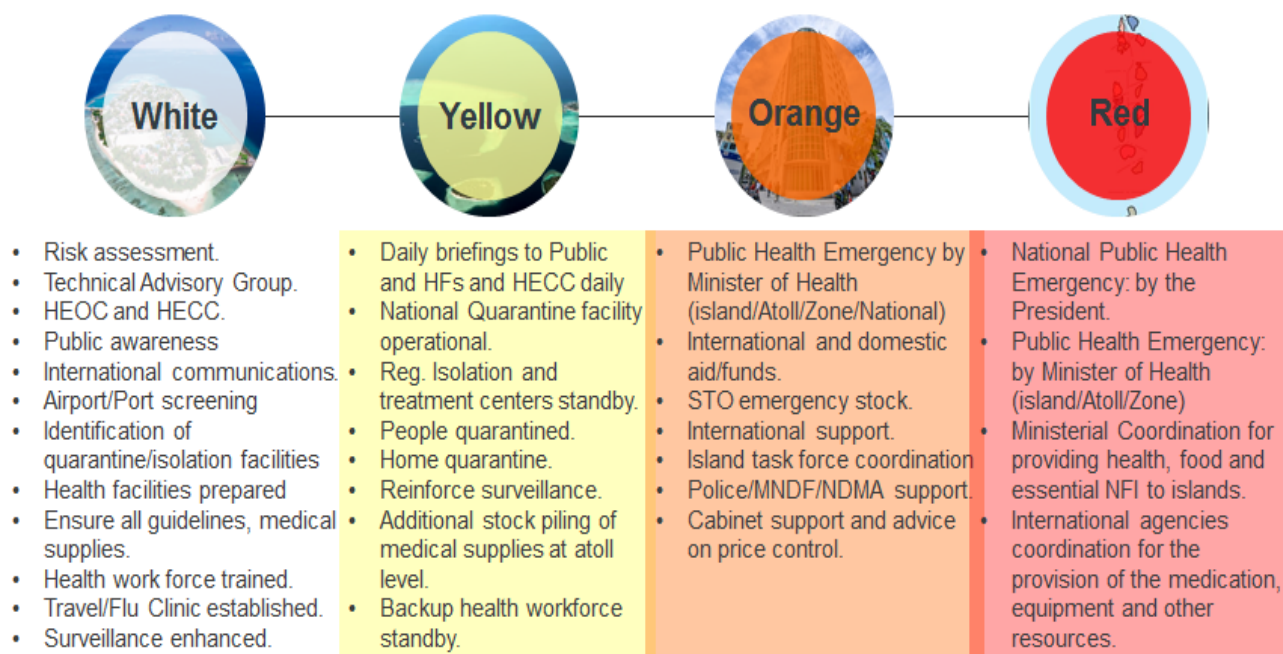
- they stayed in the same cabin as a suspected or confirmed COVID-19 case;
- they had close contact (that is, they were within 1 m of) or were in a **closed** environment with a suspected or confirmed COVID-19 case:
  - For passengers, this may include participating in common activities on board the ship or while ashore, being a member of a group travelling together, dining at the same table;
  - For crew members, this includes the activities described above, as applicable, as well as working in the same area of the ship as the suspected or confirmed COVID-19 case,
    - for example, cabin stewards who cleaned the cabin or restaurant staff who delivered food to the cabin, as well as gym trainers who provided close instruction to the case;
  - Or a person who provided care for a suspected or confirmed COVID-19 case.

Staff on board should have knowledge of the outbreak management plan and should implement it as required.

## PUBLIC HEALTH RISK LEVEL AND RESOPONSE: COVID-19

Colour: (risk level)	Status
White (level I)	No case identified
Yellow (level II)	Imported case with no local human to human transmission (suspected or confirmed)
Orange (level III)	Human to human transmission directly linked to imported case (suspected or confirmed)
Red (level IV)	<b>Confirmed</b> human to human transmission with no direct link to imported case

### Escalating Response: National Level

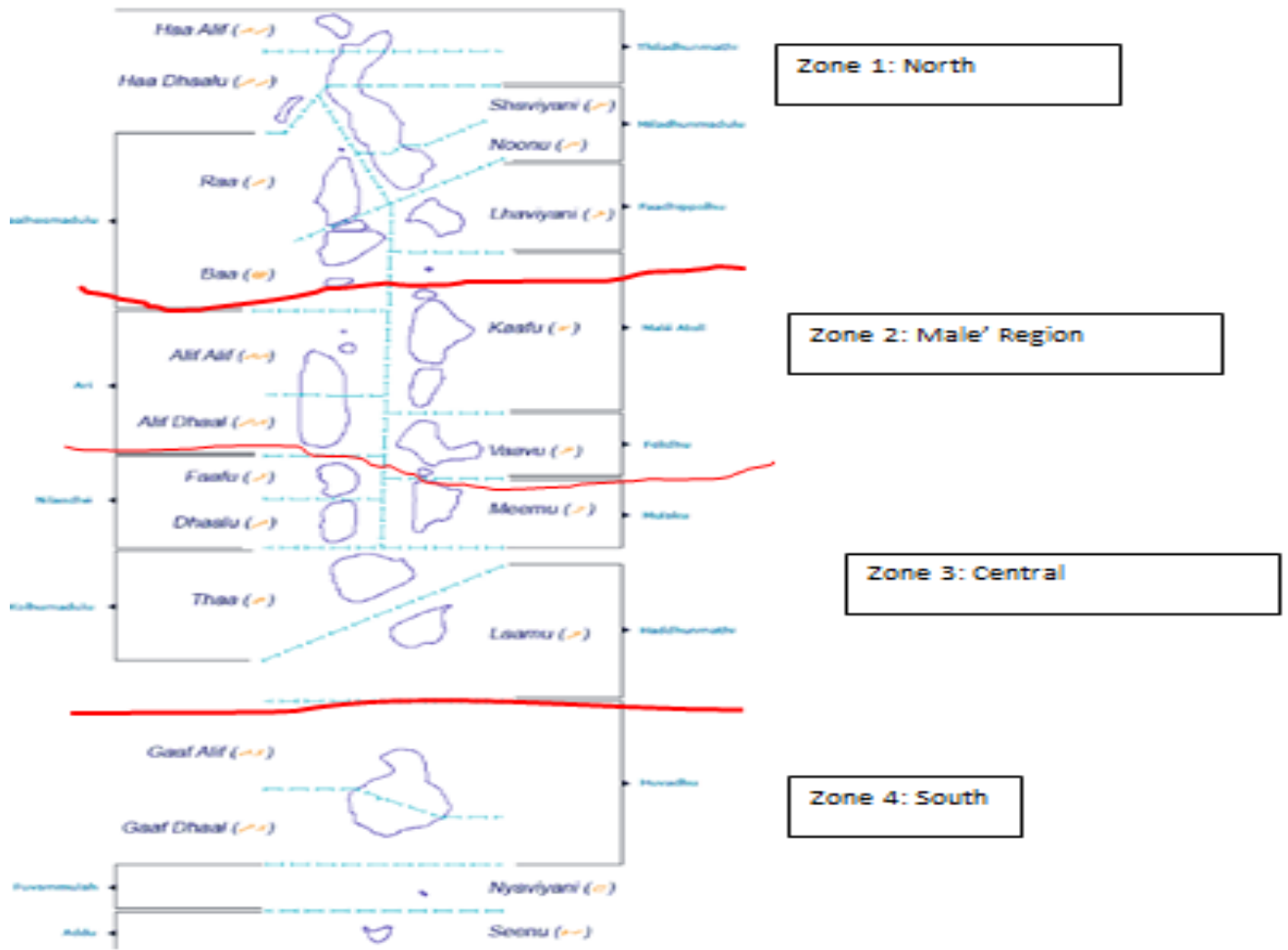


## Escalating Response: Island and Atoll Level



- |  |  |  |  |
|--|--|--|--|
| <ul style="list-style-type: none"> <li>• Establish health emergency taskforce and RRTs.</li> <li>• Provide awareness.</li> <li>• Training of doctors, nurses, health workers.</li> <li>• Monitoring and reporting of related diseases</li> <li>• Quarantine/isolation facilities identified and on standby.</li> <li>• Ensuring adequate stock of medical supplies.</li> <li>• Arrangements for entry/exit screening.</li> </ul> | <ul style="list-style-type: none"> <li>• Public advised to restrict non-essential travel to certain areas.</li> <li>• Screen people exiting island.</li> <li>• Suspected/confirmed case isolated and MOH on alert.</li> <li>• Close contacts quarantined.</li> <li>• Home quarantine.</li> <li>• Psychosocial support.</li> <li>• Ensure public awareness and hygiene.</li> <li>• Transfer of severe cases to critical care facilities.</li> </ul> | <ul style="list-style-type: none"> <li>• Non-emergency surgeries interrupted.</li> <li>• Pre-arranged medical consultations for cases.</li> <li>• School closure in affected areas.</li> <li>• Limit non-essential public gatherings.</li> <li>• Ferry owners to restrict non-essential travel.</li> <li>• Ensure enough food and other essentials in island.</li> <li>• Home quarantine.</li> </ul> | <ul style="list-style-type: none"> <li>• Non-emergency services at health facility halted</li> <li>• Halt all public transportation systems</li> <li>• Halt all non-essential transport</li> <li>• Close down schools in affected areas.</li> <li>• Close non-essential offices</li> <li>• Advice families to stay indoors.</li> </ul> |
|--|--|--|--|

**Zones defined for public health alert level**



When 2 islands are in orange or red the whole atoll will go into Orange or Red  
 When 2 atolls in a zone is in Orange or Red the country will go into Orange or Red

# COVID -19 RESPONSE: ENVIRONMENTAL CLEANING FOR AREAS WITH SUSPECTED CASES

This document can be applied to any non-healthcare setting where a suspected or confirmed case resided

<p><b>PPE</b></p> <ul style="list-style-type: none"><li>• <b>Wear:</b> Mask, Apron, , Gloves (may use reusable gloves heavy duty gloves and cleaned afterwards), goggles and closed boots</li><li>• <b>Area:</b> keep well ventilated by opening the windows during cleaning and disinfection</li></ul>
<p><b>Product :</b></p> <ul style="list-style-type: none"><li>• <b>For regular cleaning:</b> Soap/ detergent with water</li><li>• <b>Disinfection:</b><ul style="list-style-type: none"><li>○ Diluted bleach solution 1ml bleach in 9ml water or use 0.5% sodium hypochlorite solution</li><li><b>OR</b></li><li>○ Surfaces where diluted bleach solution cannot be used (like metal) 70% ethanol solution may be used.</li><li><b>OR</b></li><li>○ If an alternative disinfectant is used within the organization, this should be checked and ensure that it is effective against enveloped viruses</li></ul></li></ul>
<p><b>Procedure:</b></p> <ul style="list-style-type: none"><li>• First clean all areas with Soap/detergent and water</li><li>• Rinse with water</li><li>• Disinfect with diluted bleach solution (1ml bleach in 9 ml water)</li></ul>
<ul style="list-style-type: none"><li>• Ensure that the premises is well ventilated (open windows) during the procedures</li><li>• Wash hands with soap and water after cleaning</li></ul>

## CLEANING OF USED EQUIPMENTS

- The clothes/ mop heads used for cleaning should be soaked for 10 minutes in soap/detergent solution in hot water (at 60 – 90 degrees C) and washed and rinsed well. Add Bleach if possible to the solution (½ cup or 118ml bleach to 3 ½ liters of water).
- Utility gloves maybe washed with soap and water.
- Dry the products well after cleaning.
- Disposable products should be properly disposed of after use.



## COVID -19 RESPONSE: ENVIRONMENTAL CLEANING FOR PUBLIC AREAS

This document can be applied to any non-healthcare setting such as ferry terminal, ferry, bus, taxi, mosques, shopping center, waiting rooms, hotel rooms, restaurants, cafes etc

<b>ALERT LEVEL</b>	<b>Normal cleaning:</b>		<b>Cleaning of frequently touched surfaces</b> such as door knobs, handles, lift buttons, stair case railings, counter tops, switches, sink taps, tables, chairs, shopping basket/cart handles, floor areas of the mosque etc.	
	<i>Frequency</i>	<i>Product</i>	<i>Frequency</i>	<i>Product</i>
• <b>Wear:</b> Apron and gloves recommended to wear boots			<ul style="list-style-type: none"> <li>• <b>Wear:</b> Mask, Apron, Gloves (may use reusable gloves and clean after wards) and goggles (if splash is expected), boots</li> <li>• <b>Area:</b> keep well ventilated by opening the windows during disinfection</li> </ul>	
WHITE TO YELLOW	At least 2 times per day	Soap/detergent and water and rinse	At least 4 hourly	Soap/detergent and water and rinse -> disinfect with diluted bleach solution (1ml bleach in 49ml water)
ORANGE	At least 3 times per day	Soap/detergent and water and rinse	At least 2-3 hourly	Soap/detergent and water and rinse -> Disinfect with diluted bleach solution (1ml bleach in 49ml water)
RED	At least 4 times per day	Soap/detergent and water and rinse	At least 1-2 hourly	Soap/detergent and water and rinse -> Disinfect with diluted bleach solution (1ml bleach in 49ml water)
<ul style="list-style-type: none"> <li>• Ensure that the premises is well ventilated (open windows) during the procedures</li> <li>• The cleaning frequency maybe increased depending on the number of people using the premises OR the hygienic condition of the premises</li> <li>• After application of bleach solution, it is recommended to avoid touching/using the surfaces until after 10 minutes of application (if possible). This is to give time for the bleach solution to fully</li> <li>• Wash hands with soap and water after cleaning</li> </ul>				

## **SOLUTION FOR DISINFECTION**

- Regular cleaning: soap or detergent and water
  
- Disinfection:
  - Diluted bleach solution 1ml bleach in 49ml water or use 0.1% sodium hypochlorite solution  
**OR**
  - Surfaces where diluted bleach solution cannot be used (like metal) 70% ethanol solution may be used.  
**OR**
  - If an alternative disinfectant is used within the organization, this should be checked and ensure that it is effective against enveloped viruses

## **CLEANING OF USED EQUIPMENTS**

- The clothes/ mop heads used for cleaning should be soaked for 10 minutes in soap/detergent solution in hot water (at 60 – 90 degrees C) and washed and rinsed well. Add Bleach if possible to the solution (½ cup or 118ml bleach to 3 ½ liters of water).
- Utility gloves maybe washed with soap and water.
- Dry the products well after cleaning.
- Disposable products should be properly disposed of after use.

# NOVEL CORONAVIRUS (COVID-19)—FIGHTING PRODUCTS

12<sup>TH</sup> MARCH 2020

COMPERCIALLY AVAILABLE PRODUCT NAME	COMPANY/DISTRIBUTER	EPA REG. NO
Accel Tb	Virox Technologies, Inc.	74559-1
Advantage	Wechem, Inc.	1839-83-34370
AERO TB FRESH	AERO CHEMICAL CO	1839-83-13103
Af Ultra Acid Free Total Bathroom Cleaner	Ultra Chem	1839-83-57839
All Purpose Virex	Diversey, Inc.	1839-83-70627
Aviation RTU Cleaner	Zep	6836-152-1270
Avistat-D RTU Spray Disinfectant Cleaner	National Chemical Laboratories, Inc.	1839-83-2296
Bioesque Solutions Botanical Disinfectant Solution 12/1 qt	Bioesque Solutions/Natureal, LLC	87742-1-92595
Bioesque Solutions Botanical Disinfectant Solution 4/1 gal	Bioesque Solutions/Natureal, LLC	87742-1-92595
Bioesque Solutions Botanical Disinfectant Solution 5 gal	Bioesque Solutions/Natureal, LLC	87742-1-92595
Bioesque Solutions Botanical Disinfectant Solution 55 gal	Bioesque Solutions/Natureal, LLC	87742-1-92595
BLEACH DISINFECTANT CLEANER	Ecolab Inc	1677-235
Bright Solutions Lemon Zip Disinfectant RTU	Bright Solutions	1839-83-75473
Bright Solutions RTU Bathroom Cleaner Non-Acid Bowl and Restroom Disinfectant	Bright Solutions	1839-83-75473
BS & H	NATIONAL AMERICAN SALES CORP.	1839-83-50718
Byotrol Bathroom Disinfectant Cleaner	Byotrol, Inc.	83614-1
Byotrol Disinfectant Cleaner	Byotrol, Inc.	83614-1
CaviCide Bleach	Metrex	46781-15
CaviCide1	Metrex	46781-12
Clear Gear Sports Spray	On Track Enterprises, Inc d/b/a Clear Gear	6836-152-89301
Clorox 4 In One Disinfecting Spray	Clorox Professional Products Company	67619-29
Clorox Clean Up Cleaner + Bleach	The Clorox Company	5813-21
Clorox Commercial Solutions® Clorox® 4-in-One Disinfectant & Sanitizer	Clorox Professional Products Company	67619-29
Clorox Commercial Solutions® Clorox® Disinfecting Bathroom Cleaner	Clorox Professional Products Company	5813-40-67619
Clorox Commercial Solutions® Clorox® Disinfecting Biostain & Odor Remover	Clorox Professional Products Company	67619-33
Clorox Commercial Solutions® Clorox® Disinfecting Spray	Clorox Professional Products Company	67619-21
Clorox Commercial Solutions® Hydrogen Peroxide Cleaner Disinfectant	Clorox Professional Products Company	67619-24
Clorox Commercial Solutions® Tilex Soap Scum Remover	Clorox Professional Products Company	5813-40-67619
Clorox Commercial Solutions® Toilet Bowl Cleaner with Bleach1	Clorox Professional Products Company	67619-16
Clorox Commercial Solutions® Clorox® Clean-Up Disinfectant Cleaner with Bleach1	Clorox Professional Products Company	67619-17
Clorox Disinfecting Bathroom Cleaner	The Clorox Company	5813-40
Clorox Healthcare® Bleach Germicidal Cleaner Spray	Clorox Professional Products Company	56392-7
Clorox Healthcare® Fuzion® Cleaner Disinfectant	Clorox Professional Products Company	67619-30
Clorox Healthcare® Hydrogen Peroxide Cleaner Disinfectant	Clorox Professional Products Company	67619-24
Clorox Multi Surface Cleaner + Bleach	The Clorox Company	5813-105
Clorox Pet Solutions Advanced Formula Disinfecting Stain & Odor Remover	The Clorox Company	5813-110
Clorox Scentiva Bathroom Disinfectant Foamer	The Clorox Company	5813-40
Clorox Scentiva Bathroom Disinfecting Foam Cleaner	The Clorox Company	5813-115
Clorox Toilet Bowl Cleaner Clinging Bleach Gel	The Clorox Company	5813-89
Clorox Toilet Bowl Cleaner with Bleach	The Clorox Company	5813-89
CloroxPro™ Clorox Total 360® Disinfecting Cleaner1	Clorox Professional Products Company	67619-38
DETERGENT DISINFECTANT PUMP SPRAY	Stepan Company	1839-83
D-Germ TB	Wechem, Inc.	1839-83-34370
DIC-1 Spray Disinfectant	The Deirdre Imus Environmental Health Center®	1839-220-83908
Disinfectant Spray Cleaner RTU Victoria Bay	Victoria Bay	1839-83-68168
Don-O-Mite	Edward Don & Company	6836-152-14462

COMPERCIALLY AVAILABLE PRODUCT NAME	Company/Distributor	EPA REG No.
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Dutch®Plus Ready-To-Use Disinfectant Spray	Franklin Cleaning Technology	1839-83-1124
Fight Bac RTU	Betco Corporation	1839-83-4170
Foster First Defense	HB Fuller Construction Products Inc.	6836-152-63836
GERM BANDIT TB	ENVIROCHEMICAL INC	1839-83-66061
Germi-Kleen Non-Acid Bowl & Bathroom Disinfectant	National Chemical Laboratories, Inc.	1839-83-2296
HI-TIDE RTU DISINFECTANT	MID-AMERICAN RESEARCH CHEMICAL CORP.	1839-83-12204
INTERvention Farm Animal Care Disinfectant Cleaner & Deodorizer Ready to Use	Virox Technologies, Inc.	74559-9
KLERCIDE 70/30 IPA	Ecolab Inc	1677-249
Lemon Disinfectant	American Chemical Systems	6836-152-86408
LX-0307 RTU QUAT CLEANER DISINFECTANT	ABC COMPOUNDING CO., INC	1839-83-3862
LYSOL BRAND BLEACH MULTI-PURPOSE CLEANERLYSOL BRAND BLEACH MOLD AND MILDEW REMOVER	RB	777-83
LYSOL BRAND CLING & FRESH TOILET BOWL CLEANER	RB	777-70
LYSOL BRAND POWER PLUS TOILET BOWL CLEANER	RB	777-132
LYSOL BRAND POWER TOILET BOWL CLEANERLYSOL BRAND LIME & RUST TOILET BOWL CLEANER	RB	777-81
LYSOL® DISINFECTANT MAX COVER MIST	RB	777-127
LYSOL® DISINFECTANT SPRAYPROFESSIONAL LYSOL® DISINFECTANT SPRAY	RB	777-99
MAPS- 1 RTU	SynBionic Evolution, LLC.	6836-289-92677
Maxim GSC Germicidal Spray Cleaner	Midlab	1839-83-45745
Maxim No Acid Non-Acid Bowl & Restroom Disinfectant Cleaner RB 352 Brite	Midlab	1839-83-45745
Medline Micro-Kill R2	Medline Industries, Inc	1839-220-37549
Micro-Kill Bleach Germicidal Bleach Solution	Medline Industries, Inc	37549-2
Micro-Kill Bleach Germicidal Bleach Wipes	Medline Industries, Inc	37549-1
Miracle Disinfectant Spray and Wipe Cleaner	Swish Maintenance Limited	1839-83-67205
Non-Acid Bathroom Cleaner Victoria Bay	Victoria Bay	1839-83-68168
One-Step Disinfectant Cleaner	Schultz Supply Company	6836-152-46493
Oracle 1	Share Corporation	88494-3-11547
OXIVIR 1	Diversey, Inc.	70627-74
OXIVIR Tb	Diversey, Inc.	70627-56
PERIMO RTU SURFACE DISINFECT	CERTUS MEDICAL INC	1839-83-88205
PEROXIDE DISINFECTANT AND GLASS CLEANER RTU	Ecolab Inc/Kay Chemical Co.	1677-251
PEROXIDE MULTI SURFACE CLEANER AND DISINFECTANT RTU	Ecolab Inc/Kay Chemical Co.	1677-251
Peroxigard Ready to Use One-Step Disinfectant Cleaner and Deodorizer for Use inLife Sciences	Virox Technologies, Inc.	74559-9
POWER-CIDAL R-T-U	MID-AMERICAN RESEARCH CHEMICAL CORP.	1839-83-12204
PREempt RTU	Virox Technologies, Inc.	74559-1
Protection that Lives on Microban 24 Hour Keeps Killing 99.9% of Bacteria for Up to 24 Hours Multipurpose Cleaner” (Microban 24 Hour Multi-Purpose Cleaner)	The Procter & Gamble Company	4091-21-3573
“Protection that Lives on Microban 24 Hour Keeps Killing 99.9% of Bacteria for Up to 24 Hours Bathroom Cleaner” (Microban 24 hour Bathroom Cleaner)	The Procter & Gamble Company	4091-22-3573
PURACLEEN DISINFECTANT SPRAY	QBASED SOLUTIONS, INC.	1839-83-83894
PURELL Food Processing Surface Sanitizer	GOJO Industries, Inc.	84368-1-84150
PURELL Foodservice Surface Sanitizer	GOJO Industries, Inc.	84368-1-84150
PURELL Healthcare Surface Disinfectant	GOJO Industries, Inc.	84368-1-84150
PURELL Multi Surface Disinfectant	GOJO Industries, Inc.	84368-1-84150
PURELL Professional Surface Disinfectant	GOJO Industries, Inc.	84368-1-84150
Quat Plus TB	Rochester Midland Corporation	1839-83-527
Quatricide TB	Pharmaceutical Research Labs., Inc.	1839-83-8714
Rejuvenate Ready to Use One Step Disinfectant Cleaner For Use in Spas, Salons & Clinics	Virox Technologies, Inc.	74559-1
REScue Ready to Use One Step Disinfectant Cleaner & Deodorizer	Virox Technologies, Inc.	74559-9
RestorOx	Virox Technologies, Inc.	74559-9
RTU Disinfectant Cleaner	U S Chemical	70627-2-7546
Sani-24 Germicidal Spray	Professional Disposables International, Inc.	42182-9-9480
Sanicare TBX	Buckeye International, Inc.	1839-83-559
Sani-HyPerCide Germicidal Spray	Professional Disposables International, Inc.	9480-14
Sani-Prime Germicidal Spray	Professional Disposables International, Inc.	9480-10

Sani-Spritz Spray	Nyco Products Company	6836-152-8370
SaniZide Pro 1 Spray	Safetec of America, Inc.	88494-3-67161
SaniZide Pro 1 Wipes	Safetec of America, Inc.	88494-4-67161
SC-RTU DISINFECTANT CLEANER	Stepan Company	1839-220
SC-RTU-360 DISINFECTANT	Spectral Chemical Co Inc	1839-220-33466
SELECT ACID FREE	BROOKMEADE HARDWARE & SUPPLY COMPANY	1839-83-58336
Simple Green Clean Finish	Sunshine Makers, Inc	1839-220-56782
SPRITZ	CARE LABS, INC	1839-83-56669
SUPER Q	SELECT SPECIALTY PRODUCTS	1839-83-50735
SURFACE KLEEN TB	GENERAL PRODUCTS & SUPPLY INC.	1839-83-41316
SUV Ultra 5 Disinfectant & Cleaner	OSHA Review, Inc.	6836-366-70809
T.B. QUAT	PRO CHEM, INC.	1839-83-11861
TB DISINFECTANT CLEANER READY-TO-USE	Ecolab Inc/Kay Chemical Co.	1839-83-1677
TB Quat	Gordon Food Service	70627-2-45133
TB QUAT	AERO CHEMICAL CO	1839-83-13103
TB Quat Disinfectant	Warsaw Chemical Holdings LLC	1839-83-2230
VIRASEPT	Ecolab Inc	1677-226
Viro-Stat RTU	Share Corporation	6836-152-11547
Wet & Forget Indoor Mold+Mildew Disinfectant Cleaner	Wet & Forget USA	6836-152-85342
Xpress Detergent Disinfectant	Auto-Chlor System	1839-83-6243
X-Ray Apron Cleaner Disinfectant	BioXco LLC / MediRedi LLC	6836-289-93240
Zep Antibacterial Disinfectant & Cleaner	Zep	1839-83-40849
Zep Quick Clean Disinfectant	Zep	1839-220-40849
Zep Spirit II	Zep	1839-83-1270

Ref: CBC COVID19 Product List 3\_10\_202028415186424474426674761885431834294454.pdf

## IMPORTANT POINTS FOR ALL LONG TERM CARE FACILITIES

Improve awareness and plan ahead
<ul style="list-style-type: none"> <li>• Ensure that the residents and the staff in the facility have information on COVID19</li> <li>• Develop an outbreak response plan.</li> <li>• Keep up to date on information provided by HPA</li> </ul>
Prevent the introduction of infection into the facility
<ul style="list-style-type: none"> <li>• Post signs at the entrance instructing visitors not to visit if they have symptoms of respiratory infection.</li> <li>• Ensure sick leave policies allow employees to stay home if they have symptoms of respiratory infection.</li> <li>• Assess residents symptoms of respiratory infection upon the time of admission to the facility and implement appropriate infection prevention practices for incoming symptomatic residents (like keep those who have respiratory infection in a separate room or area)</li> <li>• Report suspected cases of COVID, severe respiratory tract infections requiring admissions or increased clusters of Acute respiratory infections to HPA</li> </ul>
Prevent the spread of respiratory germs WITHIN your facility
<ul style="list-style-type: none"> <li>• Those having fever or acute respiratory symptoms to stay in their room. To use medical/surgical mask (if tolerated) as necessary.</li> <li>• When caring for residents with undiagnosed respiratory infection use appropriate PPE (Frequent hand washing, use mask, gloves when handling secretions).</li> <li>• Inform HPA if anyone (residents and staff) in with facility have history of contact to a COVID19 confirmed/suspected case or travel history within last 14 days to a country with COVID19 community transmission.</li> <li>• Support hand and respiratory hygiene, as well as cough etiquette by residents, visitors, and employees.</li> <li>• Ensure staff and residents wash their hands with soap and water / hand sanitizer frequently (soap and water preferred if soiling, after using the toilet or before eating).</li> <li>• Make sure tissues hand washing and drying supplies are available.</li> <li>• Report any possible COVID-19 illness in residents and employees to HPA.</li> </ul>
<ul style="list-style-type: none"> <li>• Environmental cleaning</li> <li>• Ensure Frequent Cleaning of the surface with             <ul style="list-style-type: none"> <li>○ Soap/detergent with water -&gt; rinse at least daily once or twice</li> <li>○ Bathrooms should be cleaned once or twice daily and disinfected with diluted bleach solution 1ml bleach with 49ml water solution.</li> <li>○ The frequently touched surfaces: clean at least 3 to 4 times /per day (door knobs, chairs, stair railings etc.) should be cleaned with soap and water and disinfected with diluted bleach solution 1ml bleach in 49ml water.</li> </ul> </li> </ul>

- The areas where a suspected person resided should be cleaned with diluted bleach solution 1: 9ml dilution
- Bleach solution should be prepared fresh and should be kept in covered containers and used within 24 hours.
- Ensure proper disposal of waste (waste from a suspected case should be put in a bin with double bags, labeled and the waste collectors need to be informed not to open the bag.
- If a suspected case is present the laundry should be washed in hot water (60-90 deg C) with soap /detergent with bleach added if possible.
- Follow the appropriate PPE when cleaning and dealing with waste and laundry.

# PLAN OF RESPONSE WHEN A SUSPECTED CASE OF COVID-19 IS REPORTED FROM A RESORT

If a suspected case is identified from a resort the following actions will be taken:

- Travel restriction to and from the resort is imposed temporarily until contact tracing is completed.
- Suspected case should be transferred to Designated isolation centre (Farukolhufushi currently). Until patients transfer can be arranged, he/she will be isolated in a separate room first. Implement infection control measures at the patient area (patient should wear a medical mask, tissues, soap and water or alcohol-based hand sanitizer should be available at patient area).
- Rapid response team (RRT) is dispatched to the resort. RRT will do disinfection, initiate contact tracing and provide psychosocial support.
- RRT will compile a list of identity details of all persons who have been advised for home quarantine which is accessible to HPA, MNDF, Police and NDMA.
- Police/MNDF to provide security and to ensure that travel restriction and quarantine are implemented
- Health support for quarantined people.

## **Disinfection of buildings**

- HPA should ensure that disinfection is carried out.
- RRT should include staff who will do disinfection.
- RRT should follow the cleaning protocol and spill decontamination protocol outlined in the COVID-19 SOPs.
- Which areas to do disinfection:
  - The room where the suspected case is staying
  - All areas where the suspected case has visited
  - Areas in buildings which are shared will require to be disinfected (e.g. lifts, staircases and railings, lobbies)
- Staff who will do the disinfection should wear proper PPE
- Used materials such as wipes, masks, gloves, gowns used in disinfection process should be discarded in a dustbin with a double bags lined inside it. When the bag is 2/3<sup>rd</sup> full it should be properly sealed/tightly closed, labeled so can be identified by waste collectors. The waste from a suspected case should be discarded separately.



- Household waste from the suspected cases room should be discarded in a dustbin with a water proof bag lined inside it. When the bag is 2/3<sup>rd</sup> full it should be properly sealed/tightly closed.

### **Surveillance of quarantined contacts**

- For persons who are advised for monitoring under public health supervision, a resort doctor, health worker, doctor from health centre could interview over the phone to monitor their condition.
- Contact tracing cluster (under HPA) should over see that monitoring is done for persons who are advised for monitoring under public health supervision.
- Interview over the phone should see if any quarantined persons develop ARI symptoms.
- The identified health professionals should also attend to routine medical needs of quarantined persons (such as renewal of regular prescriptions, attending to a non-ARI complaint etc.)
- If any quarantined persons develop ARI symptoms, it should be informed to HPA.

### **Exit screening of staff or guests who are leaving a resort where a travel restriction has been imposed.**

- RRT will compile a list of identity details of all persons who have been advised for home quarantine which is accessible to HPA, MNDF, police and NDMA.
- All persons who are exit travelers will be checked to see if they are on the list of quarantined contacts.
- All persons who are exiting the resort will undergo exit screening (exit screening questionnaire to be completed and temperature will be taken).
- Exit screening can be done by a resort doctor, doctor from a health center, health worker or nurse. Exit screening should be monitored by HPA.
- Prior to exit screening, contact screening should have been done and symptomatic persons should have been separated.
- A suitable place away from the isolation facility should be provided for exit screening.
- Any staff or guest who has a history of high risk contact with a suspected or confirmed case in the past 14 days OR is in home quarantine OR has ARI symptoms OR currently has history of fever or documented fever should not be allowed to exit the resort.

## **Psychosocial support**

- Routine interview over the phone with members of the households to identify psychosocial needs and to provide support
- PSS cluster to provide psychosocial support

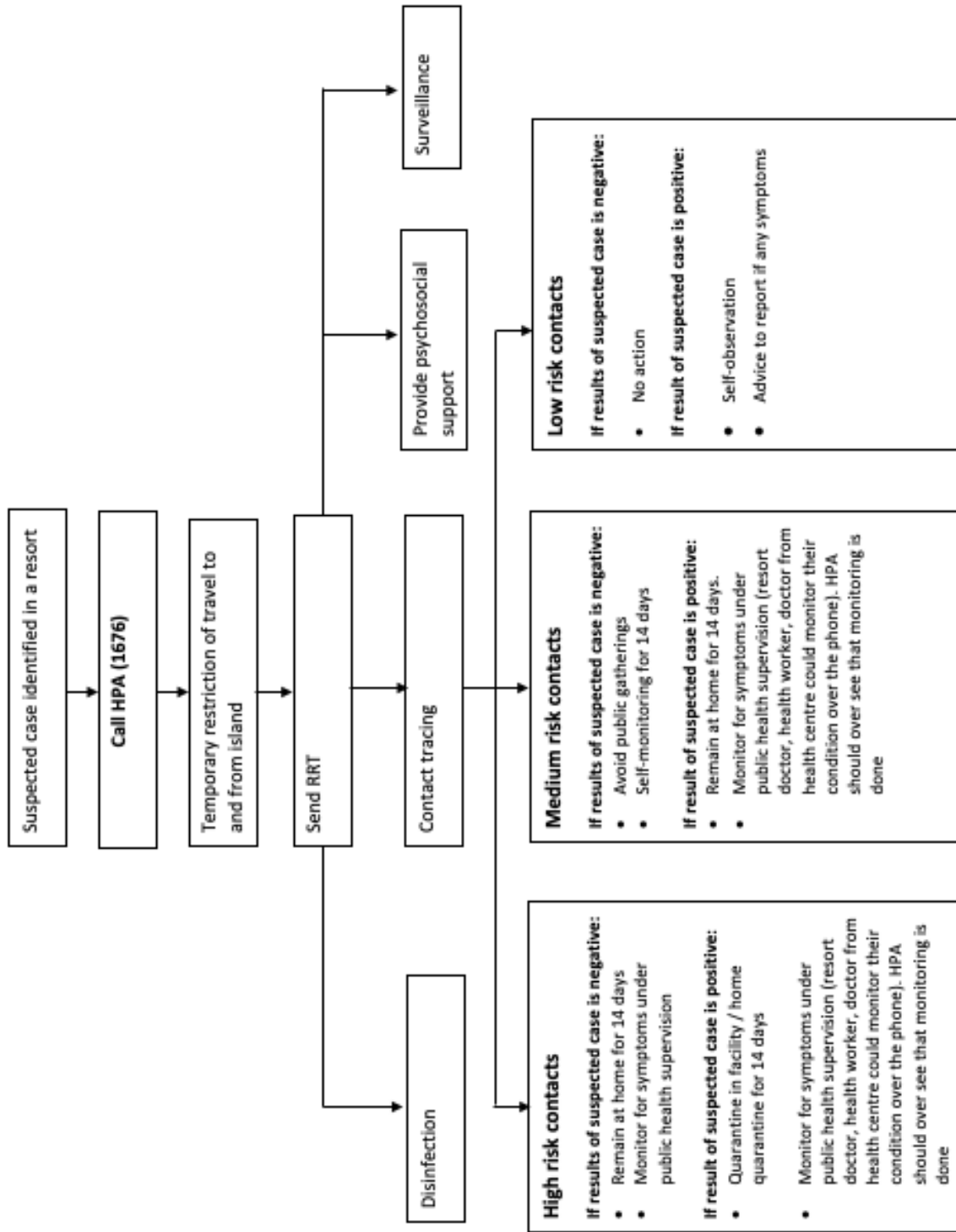
## **Health education in quarantined buildings**

- Health education leaflets can be provided on infection prevention and control measures
- Cleaning and disinfection procedures.

## **Basic requirements for quarantine facility/home quarantine**

- Basic supplies (clothing, food, hand-hygiene supplies, laundry services), medications for people who are on regular medical treatment should be available
- Mechanism for addressing special needs, if any disability
- Mechanism for communication, including telephone (for monitoring by health staff, reporting of symptoms, gaining access to support services, and communicating with family)
- Access to basic first aid supplies including thermometers
- Access to a health care worker should be available, such as a doctor, health worker or a nurse who could attend to immediate concerns.
- Access to mental health and other psychological support services
- Separate rooms and bathrooms for each contact if possible
- Delivery systems for food, water and other needs
- Services for removal of waste.
- Availability of/access to educational materials about 2019-nCoV and quarantine
- Adequate ventilating preferably good natural ventilation

**Response algorithm when a suspected case of COVID-19 is reported from a resort**



**Exit screening form for tourists and staff from island under quarantine**

**Name:**

**Passport number:**

**Nationality:**

**Period of stay at Resort:**

1) In the past 14 days have you been in contact with any confirmed or suspected case of COVID-19 while you were in this resort?

YES                      NO

2) Do you have any of the following symptoms?

Fever                      YES                      NO

Cough                      YES                      NO

Shortness of breath      YES                      NO

3) Are you a guest or staff who is advised for quarantine?

YES                      NO

4) What is the measured temperature?

Temperature \_\_\_\_\_ °C

The above information provided is accurate to the best of my knowledge.

Signature of guest or staff exiting the island \_\_\_\_\_

Name and Signature of health care worker who assessed the guest or staff:

Name \_\_\_\_\_

Signature \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

## COVID19: HANDLING OF DEAD BODIES

- Staff should be trained in prevention Infections prevention and control measures. The should have knowledge about:
  - The required PPE
  - The sequence of wearing and removing the PPE
  - Where to remove and wear the PPE
  - Should know how to clean and disinfect the environment
  - Proper waste management
- An impermeable bag such as body bag should be used for transferring the body.
- Those handling the body should use full PPE:
  - Gloves
  - Medical mask
  - Fluid resistant gown
  - Fluid resistant apron
  - Face shield/goggles
  - Boots
- The outer surface of the body bag should be decontaminated (using soap/detergent with water-> rinse and disinfect with diluted bleach solution 1ml bleach in 9ml water) immediately before the body bag leaves the anteroom. This may require at least 2 individuals wearing such protective clothing, in order to manage this process.
- The trolley carrying the body must be disinfected prior to leaving the area.
- Prior to leaving the anteroom, the staff members must remove their protective clothing. The patient's area is considered a contaminated area and the PPE should be removed inside this area. Hands should be washed with soap and water **before** leaving the area and **after** leaving the area.
- Those washing or preparing the body should wear PPE. Embalming is not recommended unless there are appropriate controls to manage aerosol generating procedures (please inform HPA if embalming is required)
- Once cleaned if acceptable the body maybe kept in the clean trolley/open coffin (as acceptable) for family **viewing ONLY**. The outside of the coffin should be cleaned with soap and water -> rinsed with water and disinfected.

- Those handling the body should wear gloves, mask, face shield and fluid resistant gown and boots.
- The used trolley and other contaminated environmental surfaces should be cleaned with soap and water -> rinsed with water and disinfected.
- After use, the empty body bags and other disposable item should be disposed of as infectious waste should be put in double bags and tightly closed and labeled as infectious waste.

### **Transportation human tissues**

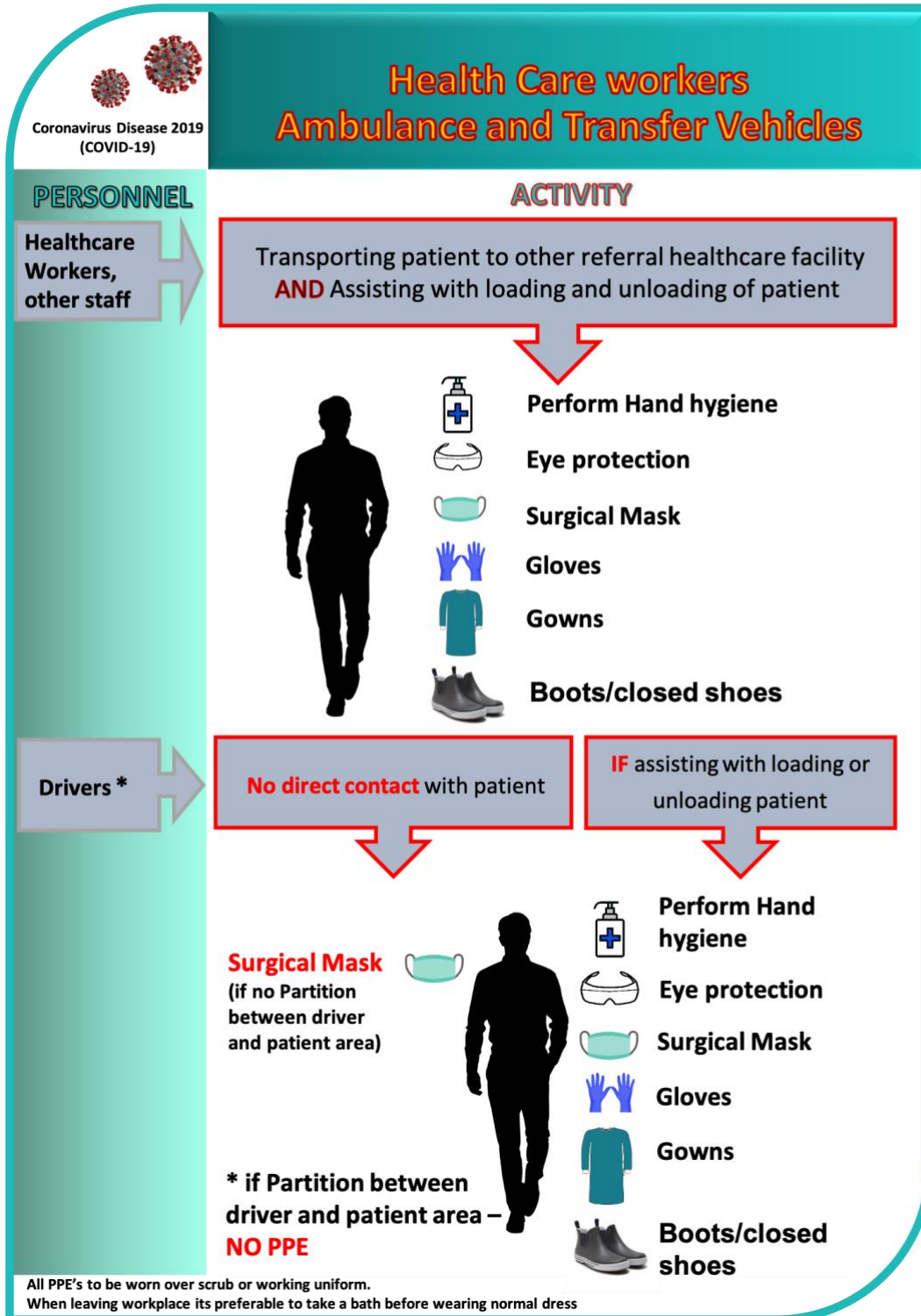
Ensure that the remains are put in double bags and sealed properly. Disinfect the outside of the bag using soap/detergent with water-> rinse and disinfect with diluted bleach solution 1ml bleach in 9ml water. Wear disposable utility gloves when handling the bags. Mark as infectious and take for burial.

## CONSIDERATIONS REGARDING BLOOD TRANSFUSION

- The potential for transmission of SARS-cov-2 by blood products is unknown at this time and there have been no reported cases of transfusion-transmitted SARS-CoV2.
- No cases of transfusion-transmission were ever reported for the other two coronaviruses (SARS and MERS-CoV).
- In general, respiratory viruses are not known to be transmitted by blood transfusion
- It is advisable that individuals refrain from donating blood at least 28 days after resolution of symptoms after a diagnosis of COVID-19 or 28 days after the last possible close contact exposure to a person with COVID-19.
- Routine laboratory testing for SARS-CoV2 in asymptomatic blood donors is not recommended at this time.
- Routine blood donor screening measures that are already in place, like checking body temperature, donor to be in good health should prevent individuals with clinical respiratory infections from donating blood.

# ANNEX: PPE SELECTION

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Select appropriate PPE – Support strategies to preserve supply





# SECURTY PERSONNEL DURING TRANSPORT

## PERSONNEL

Driver & assistant

## ACTIVITY

**No direct contact** with patient (if no Partition between driver and patient area)

Transporting patient to (by land and sea) with direct contact

Surgical Mask 

Fluid resistant and impermeable clothing 

\* if Partition between driver and patient area  
- **NO PPE**



Perform Hand hygiene



Face shield



Surgical Mask



Gloves



Fluid resistant and impermeable clothing



Closed boots

**IF exposure to increased secretions**



N95 Mask

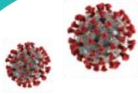
**IF assisting with loading and unloading of patient**



Gown

Select appropriate PPE - Support strategies to preserve supply

All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress



Coronavirus Disease 2019 (COVID-19)

# TRANSPORT

## PERSONNEL

Cleaning staff

## ACTIVITY

Cleaning transport vehicles (by land and sea) after and between transport of patients with suspected COVID-19 patients



Perform Hand hygiene



Heavy Duty Gloves



Washable jumpsuit/  
Washable, waterproof,  
Long sleeved top and  
pants over working  
uniform



Surgical Mask



Gum Boots

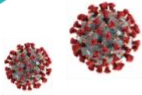


Face shield



All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress

Select appropriate PPE - Support strategies to preserve supply



Coronavirus Disease 2019 (COVID-19)

# Triage

## PERSONNEL

## ACTIVITY

Healthcare workers

Providing **direct care** to patient



Perform Hand hygiene

Eye protection

Surgical Mask

Gloves

Gowns

Closed work shoes

Other Staff

**No direct contact** with patient



Perform Hand hygiene

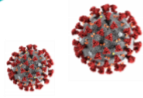
Surgical Mask

Reusable cloth Gowns

Closed shoes

Select appropriate PPE – Support strategies to preserve supply

All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress



Coronavirus Disease 2019 (COVID-19)

# Screening Area

## PERSONNEL

## ACTIVITY

Staff at hospital entry with thermal camera setup

No direct contact\* with patient



Perform Hand hygiene

Gloves

Surgical Mask

Closed shoes

\* This category include the use of no touch thermometers thermal imaging camera's and limited observation and questioning while maintaining a spatial distance of at least 1m

Primary Triage (Flu desk)

Direct contact with patient



Perform Hand hygiene

Eye Protection

Gloves

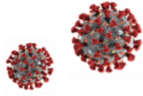
Surgical Mask

Gowns

Closed shoes

All PPE's to be worn over scrub or working uniform. When leaving workplace its preferable to take a bath before wearing normal dress

Select appropriate PPE - Support strategies to preserve supply



Coronavirus Disease 2019 (COVID-19)

# Isolation Area

## PERSONNEL

Healthcare workers

## ACTIVITY

Providing direct care to patient including sample collection



Perform Hand hygiene



Face shield



Surgical Mask



Gloves



Gown



Closed shoes

if collecting sample under aerosol generating procedures and exposure to increased secretions



N95 Mask

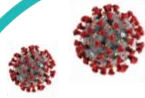
if anticipating increased fluid exposure



Water proof apron over Gowns

All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress

Select appropriate PPE - Support strategies to preserve supply



Coronavirus Disease 2019 (COVID-19)

# TRANSPORT

## PERSONNEL

Driver & assistant

## ACTIVITY

**No direct contact\*** with patient (if no Partition between driver and patient area)

Transporting patient to other referral healthcare facility

Surgical Mask 

Washable jumpsuit 

\* if Partition between driver and patient area  
– **NO PPE**



Perform Hand hygiene



Face shield



Surgical Mask



Gloves



Washable jumpsuit



Closed boots

**IF exposure to increased secretions**



N95 Mask

**IF assisting with loading and unloading of patient**

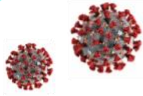


Gown over jumpsuit

All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress

Select appropriate PPE - Support strategies to preserve supply





Coronavirus Disease 2019 (COVID-19)

# TRANSPORT

## PERSONNEL

## ACTIVITY

Cleaning staff

Cleaning transport vehicles (by land and sea) after and between transport of patients with suspected COVID-19 patients



Perform Hand hygiene



Heavy Duty Gloves



Washable jumpsuit/  
Washable, waterproof,  
Long sleeved top and  
pants over working  
uniform



Surgical Mask



Gum Boots

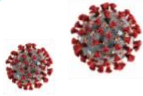


Face shield



All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress

Select appropriate PPE - Support strategies to preserve supply



Coronavirus Disease 2019 (COVID-19)

# TRANSPORT

## PERSONNEL

## ACTIVITY

Cleaning staff

Cleaning transport vehicles (by land and sea) after and between transport of patients with suspected COVID-19 patients



Perform Hand hygiene



Heavy Duty Gloves



Washable jumpsuit/  
Washable, waterproof,  
Long sleeved top and  
pants over working  
uniform



Surgical Mask



Gum Boots



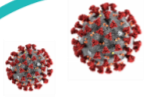
Face shield



All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress

Select appropriate PPE - Support strategies to preserve supply





Coronavirus Disease 2019 (COVID-19)

# Intensive Care Units

## PERSONNEL

Healthcare workers

## ACTIVITY

Providing direct care to patient



Perform Hand hygiene



Surgical head cover



Eye Protection



N95 Mask



Gloves x 2



Surgical Scrub



Head bonnet



Cover all



Boot cover

*if performing any procedure or splash is expected*



Gloves (3<sup>rd</sup> Pair)



Face shield



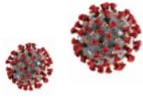
Gowns



Water proof apron over Gowns, if increased fluid is anticipated

All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress

Select appropriate PPE - Support strategies to preserve supply



Coronavirus Disease 2019 (COVID-19)

# Intensive Care Units

## PERSONNEL

Healthcare workers

## ACTIVITY

Doctors and Allied health professionals performing rounds



Perform Hand hygiene



Surgical head cover



Eye Protection



N95 Mask



Gloves x 2



Surgical Scrub



Gowns



Boot cover

if performing any procedure or splash is expected



Gloves (3<sup>rd</sup> Pair)



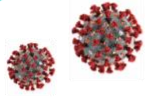
Face shield



Water proof apron over Gowns

All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress

Select appropriate PPE - Support strategies to preserve supply



Coronavirus Disease 2019 (COVID-19)

# Laundry

## PERSONNEL

Laundry Staff

## ACTIVITY

**DO NOT** enter patient care areas



Perform Hand hygiene



Heavy Duty Gloves



Reusable, waterproof, Long sleeved top and pants over working uniform



Surgical Mask



Boots/closed work shoes

When sorting and loading of laundry items;

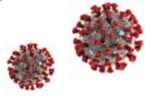


Face shield



All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress

Select appropriate PPE - Support strategies to preserve supply



Coronavirus Disease 2019 (COVID-19)

# Cleaners

## PERSONNEL

## ACTIVITY

Cleaners in all areas

Cleaning hospital premises, cleaning after and between transport of patients with suspected COVID-19 patients, after and in-between consultation with patients with respiratory symptoms, Waste cleaning isolation area



Perform Hand hygiene



Heavy Duty Gloves



Reusable, waterproof, Long sleeved top and pants over working uniform



Surgical Mask



Boots/closed work shoes

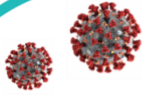
When sorting and loading of laundry items;



Face shield

All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress

Select appropriate PPE – Support strategies to preserve supply



Coronavirus Disease 2019 (COVID-19)

# Waste Management

## PERSONNEL

Waste Management staff

## ACTIVITY

**DO NOT** enter patient care areas.  
Waste should be collected in double bag



Perform Hand hygiene



Heavy Duty Gloves



Reusable, waterproof, Long sleeved top and pants over working uniform



Surgical Mask



Boots or closed work shoes



Face shield

Porters (Waste Transporting staff)

**No Direct Contact** with Waste



Perform Hand hygiene



Heavy Duty Gloves



Surgical Mask



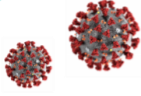
Boots/closed work shoes



Water proof apron

All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress

Select appropriate PPE – Support strategies to preserve supply



Coronavirus Disease 2019  
(COVID-19)

# HANDLING OF DEAD BODIES

## PERSONNEL

Healthcare workers & other staff

## ACTIVITY

Perform handling, moving and transporting of dead bodies



Perform Hand hygiene



Surgical mask



Gloves



Disposable Gown



Closed shoes

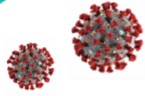
if anticipating increased fluid exposure



Face shield

Select appropriate PPE - Support strategies to preserve supply

All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress



Coronavirus Disease 2019 (COVID-19)

# HANDLING OF DEAD BODIES

## PERSONNEL

Cemetery Staff

## ACTIVITY

Prepare the dead for burial and placing the body in the grave



Perform Hand hygiene



Surgical mask



Gloves



Long sleeved water resistant Gown over working uniform



Gum Boots



Face shield or goggles

Select appropriate PPE - Support strategies to preserve supply


All PPE's to be worn over scrub or working uniform.  
When leaving workplace its preferable to take a bath before wearing normal dress



# ANNEX: DONNING PROCEDURE FOR WARD

## For WARDs

**1**



Remove personal clothing and items

**2**



Change into scrubs & crocs

**3**



Take & record vitals once before start of the day. Hydrate

**4**




Perform Hand Hygiene

**5**




Apply boot covers snug over ankle & calf

**6**



Put on inner gloves

**7**



Wear gown over the scrubs

**8**



Put on surgical mask **OR** N95 Mask for aerosol generating procedures

**9**




Put on goggles

**10**




Wear face shield if **splash** is expected

**11**



Put on surgical head cover if needed.

**12**




Perform Hand Hygiene

**13**




Put on 2<sup>nd</sup> gloves

**14**



Wear waterproof apron/gown if **splash** is expected

**15**



Wear a 3<sup>rd</sup> pair of gloves when performing any procedure

DONNING Procedure for Gown

GDon-Clinical-00-006-IP(QID-Mar2020) Quality Improvement Department



# ANNEX:DOFFING PROCEDURE FOR WARD

## For WARDs

DOFFING Procedure for Gown

- 1



Remove outer gloves

2



Remove apron/gown

3



Perform Hand Hygiene on gloved hand

4



Remove face shield
- 5



Remove 2<sup>nd</sup> pair gloves

6



Perform Hand Hygiene on gloved hand

7



Remove boot covers

8



Perform Hand Hygiene on gloved hand
- 9



Remove gown worn over the scrubs

10



Perform Hand Hygiene on gloved hand

11



Remove Head cover
- 12



Perform Hand Hygiene on gloved hand

13



Remove goggles

14



Perform Hand Hygiene on gloved hand

15



Remove Mask
- 16



Remove inner gloves

17



Perform Hand wash

18



Disinfect shoe/croc

19




Perform Hand wash

GDon-Clinical-00-006-IP(QID-Mar2020) Quality Improvement Department

# ANNEX:DONNING PROCEDURE FOR ICU


## For ICUs

1




Remove personal clothing and items

2




Change into scrubs & clogs

3




Take & record vitals once before start of the day. Hydrate

4




Perform Hand Hygiene

5



Apply boot covers snug over ankle & calf

6




Put on inner gloves

7



Step into legs of coverall and place coverall over boot covers and pull towards arms and shoulders and pull half way up

8




Perform Hand Hygiene

9




Put on surgical head cover if needed. Put on N95 respirator

10




Put on goggles

11




Put on head and neck covering

12




Put on long sleeve gown/plastic apron

13



Put on 2<sup>nd</sup> gloves

14



Put on face shield if **splash** is expected

15

Wear a 3<sup>rd</sup> pair of gloves when performing any procedure

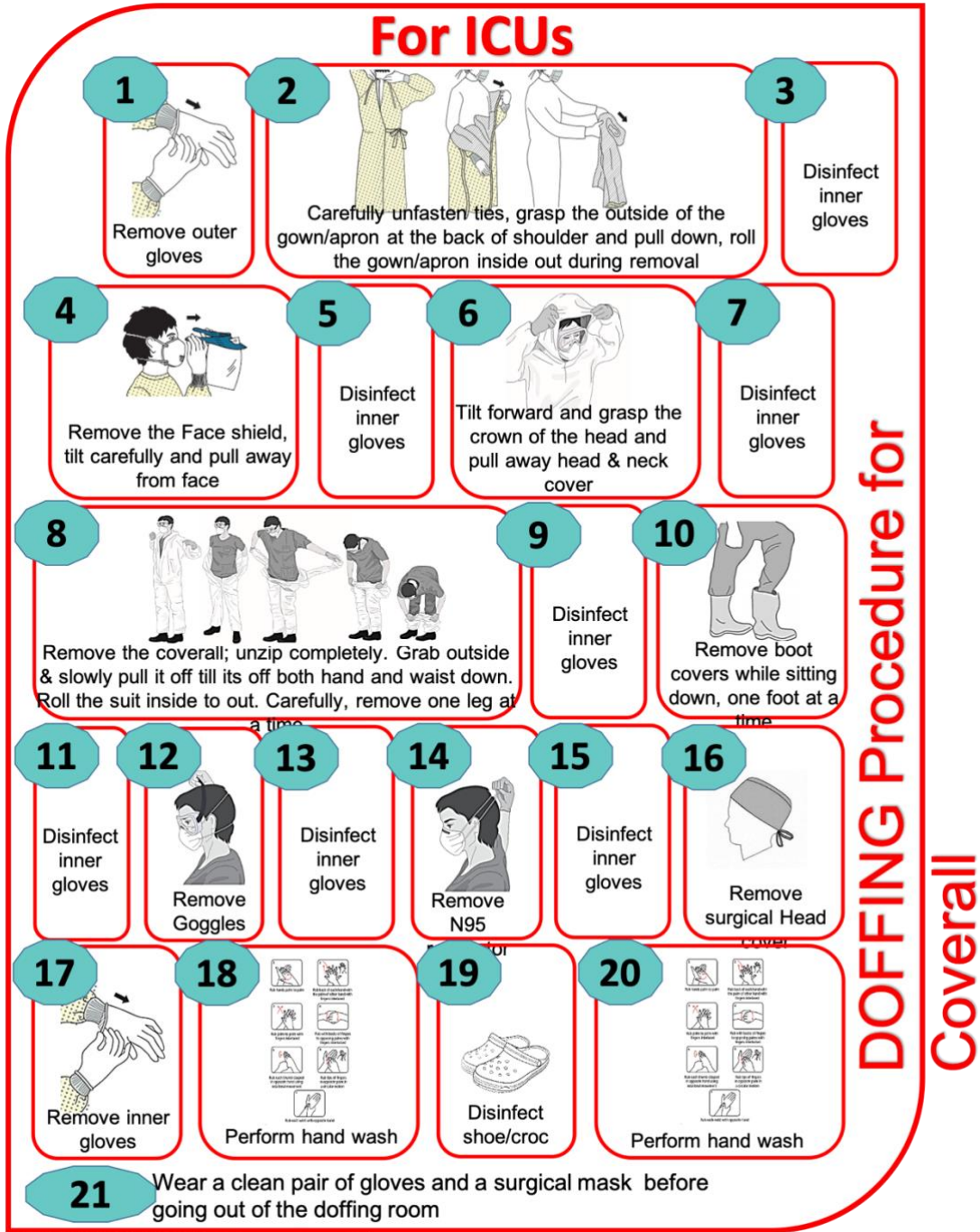
DONNING Procedure for Coverall

CDon-Clinical-00-002-1P(QID-Feb2020/ Quality Improvement Department

QR COVID-19 Version 9

102

# ANNEX:DOFFING PROCEDURE FOR ICU



CDof-Clinical-00-003-IP(QID-Feb2020)/ Quality Improvement Department



## ANNEX: DILUTION OF DISINFECTANT

**1:50 dilution (1 part of sodium hypochlorite to 49 parts of water)**

To make a solution of	Add sodium hypochlorite	Add Water
50 ml	1 ml	49 ml
100 ml	2 ml	98 ml
500 ml	10 ml	490 ml
1 liter	20 ml	980 ml
2 liters	40 ml	1960 ml
3 liters	60 ml	2940 ml
4 liters	80 ml	3920 ml
5 liters	100 ml	4900 ml
6 liters	120 ml	5880 ml
7 liters	140 ml	6860 ml
8 liters	160 ml	7840 ml
9 liters	180 ml	8820 ml
10 liters	200 ml	9800 ml
15 liters	300 ml	14700 ml
20 liters	400 ml	19600 ml
25 liters	500 ml	24500 ml
30 liters	600 ml	29400 ml