



Republic of Botswana

MINISTRY OF HEALTH & WELLNESS

# Botswana COVID-19 SOP 1: Infection Prevention and Control



Vision: A Healthy Nation by 2023

Values: Customer Focus, Botho, Timeliness, Equity, Teamwork, Accountability.

**Version: 2.0 5<sup>th</sup> May 2020**

## WHAT HAS CHANGED IN THIS VERSION?

Version 1.0	First version
Version 2.0, 5 <sup>th</sup> May 2020	PPE edited to note that respiratory masks are only required for aerosol generating procedures

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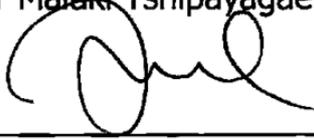
The compilation and input to the guide was obtained from experts in environmental health, infectious diseases and standards and ethics. Any changes and alterations can only be made with the approval of the Infection Prevention Control Committee for COVID 19 of the Ministry of Health and Wellness. For comments and suggestions please contact the Director of Health Services – Ministry of Health and Wellness.

## Foreword

On January 30, 2020, the International Health Regulations Emergency Committee of the World Health Organization (WHO) declared the Severe Acute Respiratory Syndrome due to novel coronavirus (SARS CoV-2) outbreak a "Public Health Emergency of International Concern" (PHEIC) and the WHO declared the outbreak of Coronavirus Disease (COVID-19) a pandemic on 12<sup>th</sup> March 2020.

Botswana announced the first positive case in the country on 30<sup>th</sup> March and the first death the following day on 31<sup>st</sup> March 2020. This document serves to aid healthcare facilities as they prepare themselves to screen individuals for COVID-19 as well as outlining how to handle suspected and confirmed cases.

Dr Malaki Tshipayagae



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Director of Health Services

Ministry of Health and Wellness

## ACKNOWLEDGEMENTS

Our sincere thanks goes to the Ministry of Health and Wellness and the Response Committee for their guidance in the production of this SOP. Our special thanks goes to the Infection Prevention Control Committee for putting the document together.

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## **1.0 PURPOSE**

The purpose of the document is to standardize and formalise Infection Prevention and Control (IPC) measures for the COVID-19 outbreak.

It has been adapted from WHO and CDC Interim guidance for Infection prevention and control during health care when COVID-19 is suspected.

## **2.0 SCOPE**

This SOP is applicable to all healthcare workers, cleaners, waste handlers, mortuary workers and the community at large.

### 3.0 USE OF PPE FOR IPC

Effective infection prevention and control emphasises on the proper use of Personal Protective Equipment (PPE) as illustrated below:

HOW TO PUT ON AND TAKE OFF  
**Personal Protective Equipment (PPE)**

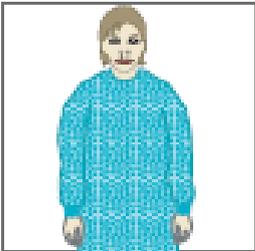


#### How to put on PPE (when all PPE items are needed)



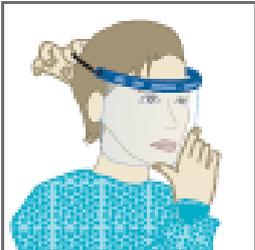
**Step 1**

- Identify hazards & manage risk. Gather the necessary PPE.
- Plan where to put on & take off PPE.
- Do you have a buddy? Mirror?
- Do you know how you will deal with waste?



**Step 2**

- Put on a gown.



**OR**

**Step 3a**

- Put on face shield.

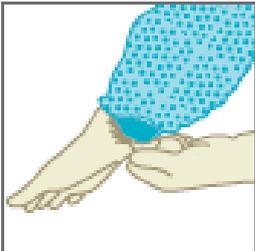
**OR**

**Step 3b**

- Put on medical mask and eye protection (e.g. eye visor/goggles)

+

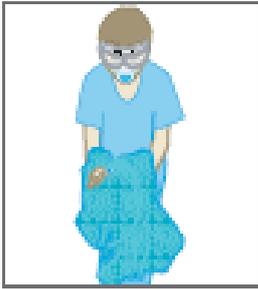
**Note:** If performing an aerosol-generating procedure (e.g. aspiration of respiratory tract, intubation, resuscitation, bronchoscopy, autopsy), a particulate respirator (e.g. US NIOSH-certified N95, EU FFP2, or equivalent respirator) should be used in combination with a face shield or an eye protection. Do user seal check if using a particulate respirator.



**Step 4**

- Put on gloves (over cuff).

## How to take off PPE

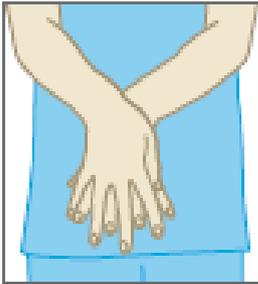


### Step 1

- Avoid contamination of self, others & the environment
- Remove the most heavily contaminated items first

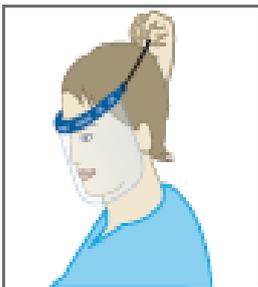
#### **Remove gloves & gown**

- Peel off gown & gloves and roll inside, out
- Dispose gloves and gown safely



### Step 2

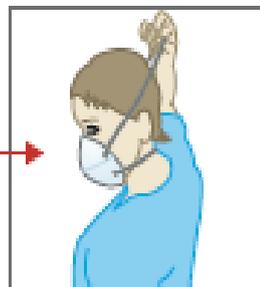
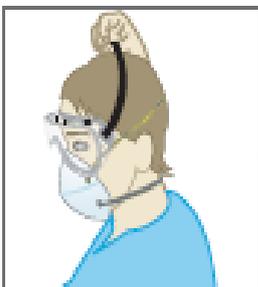
- Perform hand hygiene



### Step 3a

#### **If wearing face shield:**

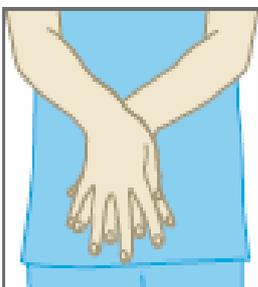
- Remove face shield from behind
- Dispose of face shield safely



### Step 3b

#### **If wearing eye protection and mask:**

- Remove goggles from behind
- Put goggles in a separate container for reprocessing
- Remove mask from behind and dispose of safely



### Step 4

- Perform hand hygiene

## 4.0 DISINFECTION OF AN AIRCRAFT

The airline is responsible for disinfecting its aircraft under the supervision of Port Health Officers.

The airliner shall use disinfectants recommended by the aircraft manufacturers.

A disinfection procedure should include the following steps:

- Put on closed work shoes or boots
- Put on disposable gown
- Put on a medical mask
- Put on goggles or face shield (if risk of splash from organic material or chemicals)
- Put on heavy duty gloves
- Open a biohazard bag and place it near the site of contamination. If a biohazard bag is not available, label a regular waste bag as "biohazard", date and location.
- The following surfaces should be cleaned and then disinfected with recommended disinfectant at the seat of the suspected case(s), adjacent seat(s) in the same row, adjacent row(s) and other areas, as noted below:
  - Seat area
    - Armrests
    - Seatbacks (the plastic and/or metal part)
    - Tray tables
    - Seatbelt latches
    - Light and air controls, cabin crew call button and overhead compartment handles
    - Adjacent walls and windows
    - Individual video monitor
  - Lavatories
    - Lavatory or lavatories used by the sick traveller: door handle, locking device, toilet seat, faucet (tap), washbasin, adjacent walls and counter.
- Clean the soiled area (remove solids and soak up liquid waste). Apply the disinfectant according to procedures approved by the original equipment manufacturer and as instructed on the disinfectant manufacturer's label.
- Once the area is wet, use paper towels to clean the area, and discard paper towels into the biohazard bag.
- Ensure adequate contact time between the disinfectant and the surface for destruction of microorganisms as per the manufacturer's instructions.
- Adhere to any safety precautions as directed by manufacturer (e.g. ensure adequate ventilation in confined areas such as lavatories, and avoid splashing or generating unintended aerosols).

- Remove gloves that become visibly soiled and perform hand hygiene before putting on new ones.
- Rinse the surface with water, and dry. Put all paper towels into the biohazard bag.
- Remove gloves, and place them into the biohazard bag.
- Seal the used biohazard bag, and ensure its proper transport and final disposal.
- When cleaning and disinfecting are complete and gloves have been removed, immediately clean hands with soap and water or an alcohol-based hand rub.
- Avoid touching the face with gloved or unwashed hands.
- Do not use compressed air and/or water under pressure for cleaning, or any other methods that can cause splashing or might aerosolize infectious material. Vacuum cleaners should be used only after proper disinfection has taken place.
- **Note:** For the duration of the flight, used airsickness bags should be stored in the waste bin of one lavatory. They should not be flushed down the toilet, and a notice to this effect should be placed in the lavatory. They should be removed from the aircraft by the toilet servicing team and disposed of along with the aircraft toilet wastes. If a specific receptacle is used on the aircraft for storage of used airsickness containers, it should be thoroughly cleaned, washed and disinfected after each use and treated in the same manner as portable toilet containers.

#### **4.1 CLEANING OF SPILLAGES IN THE AIRCRAFT**

The disinfection procedure for flat surfaces (e.g. floors, tables, sinks) should be as follows:

- If required, control pedestrian traffic through the area by directing people away from the site, posting a sign or putting up barrier tape.
- Put on closed work shoes or boots
- Put on disposable gown
- Put on a medical mask
- Put on goggles or face shield
- Put on heavy duty gloves
- Prepare the disinfectant solution of precept according to annexure 1.
- Open a biohazard bag, and put it near the spill site. If a biohazard bag is not available, label the regular waste bag as "biohazard", date and location.
- Using paper towels or an absorbent material, clean up the soiled material and excess liquid and place into the biohazard bag.
- Remove gloves if they become visibly soiled and perform hand hygiene before putting on new ones.

- Clean the area (remove solids and soak up liquid waste). Pour the detergent around the spill site, and use paper towels to spread the liquid onto the dirty area.
- Once the area is wet, use the paper towels to clean the area and discard into the biohazard bag.
- Cover the site with clean paper towels, and pour the precept onto the paper towels. Wait for 15-30minutes.
- Remove the paper towels and discard into the biohazard bag.
- Rinse with water, and dry the surface. Put all paper towels into the biohazard bag.
- Remove gloves, and place them into the biohazard bag.
- Seal used biohazard bag, and ensure proper transport and final disposal.
- Perform hand hygiene after completing the procedure

## 5.0 DISINFECTION OF AN AMBULANCE

### 5.1 Site Setup

- Select an appropriate site for ambulance decontamination that protects the vehicle and the decontamination team from weather elements, preferably a well-ventilated large enclosed structure.
- Establish a secure perimeter for safety of the public and decontamination personnel.
- Include considerations for waste management, security plan, public perception, and media visibility when selecting decontamination site.

### 5.2 Before Disinfection

- The vehicle driver and patient care provider are responsible for cleaning and disinfection of the ambulance.
- Two people in PPE should clean and disinfect the ambulance. A third person should be available to document the disinfecting process and be available for other assistance as needed.
- PPE selection should consider worker protection for biological exposures and potential chemical exposures based on the disinfectant used.
- Put on PPE:
  - Closed work shoes or boots
  - Disposable gown
  - Medical mask
  - Goggles or face shield (if risk of splash from organic material or chemicals)
  - Heavy duty gloves
- Prepare precept solution according to Annex 1 instruction attached below.
- Remove all medical equipment from the ambulance

### 5.3 During Disinfection

- Spray the interior of the ambulance, handles and medical equipment with precept solution.
- Any areas that are visibly contaminated with the patient's body fluids should be disinfected first before soaking up the fluid with absorbent materials.
- Once the interior has been wiped collect and package all waste into a biohazard bag.
- Manually wipe the ambulance's exterior patient loading doors and handles, and any areas that may have been contaminated, with disinfectant. The exterior of the ambulance does not require a full disinfectant wipe down.
- Dispose of all waste according to waste management SOP

- Once the outside of all surfaces (including waste bags) have been wiped with disinfectant, then doffing can occur.

#### **5.4 After Disinfection**

- Air the ambulance for an hour with windows and doors opened in an open space, direct sunlight
- A third person should supervise doffing.
- Perform hand hygiene and return all medical equipment in the ambulance.
- Perform hand hygiene again.
- The ambulance can then be returned to service.

## **6.0 CLEANING AND DISINFECTION OF A HEALTHCARE FACILITY AND ISOLATION ROOM**

### **General Precautions to take by cleaning staff.**

#### **6.1 Before cleaning and disinfection of areas**

- Wear appropriate PPE:
  - Closed work shoes or boots
  - Disposable gown
  - Medical mask
  - Goggles or face shield (if risk of splash from organic material or chemicals)
  - Heavy duty gloves
- Open all windows and outside doors to improve air circulation
- Prepare disinfectant solutions 0.5% chlorine hypochlorite for disinfection of object and surfaces.

#### **6.2 During cleaning and disinfection of areas**

- Gloves should be removed and discarded if they become soiled or damaged, and a new pair worn. Perform hand hygiene immediately after gloves are removed.
- Use a moistened cloth during cleaning and disinfection of areas and do not use spray applications which may create splashes and further spread the virus
- Avoid touching face, especially mouth, nose, and eyes when cleaning.

#### **6.3 Procedure Of Cleaning and Disinfection Of Health Facility and Isolation Room**

##### **Cleaning:**

Always clean surfaces prior to use of disinfectants in order to reduce soil and remove germs. Dirt and other materials on surfaces can reduce the effectiveness of disinfectants.

- Clean dirty surfaces using a detergent and water prior to disinfection.
- Dry sweeping with a broom should never be done. Rags holding dust should not be shaken out and surfaces should not be cleaned with dry rags.
- Damp dusting should be used for cleaning surfaces
- Change window curtains fortnightly in addition to being cleaned when soiled.
- Carry out cleaning from "clean" areas to "dirty" areas, in order to avoid contaminant transfer.

- Change cleaning solutions and refresh equipment frequently while being used during the day, as they will quickly become contaminated.

### **6.3.1 Disinfection procedure of:**

Cleaning of soiled areas must be completed prior to disinfection to ensure the effectiveness of the disinfectant product

#### a) Floors and walls

- Disinfect thoroughly by mopping floor and walls with precept
- Carry out the disinfection in 6 hour intervals and repeat the procedure at any time when there is contamination.

#### b) Frequently touched surfaces- This includes but not limited to doorknobs, telephones, table surface, chairs, medical equipment, locker tops, keypads, light switches over bed tables and bed rails.

- Visible pollutants should be completely removed before disinfection.
- Wipe the surfaces of objects with precept disinfectant allow contact time for 30 minutes.

#### c) Reusable Medical Devices

- Soak the reusable medical devices and valves in a disinfectant for at least 30 minutes.
- After drying, pack and fully enclose the devices.

**NB:** Following patient discharge, clinical equipment must be cleaned and disinfected, moved to the door of the room for removal to central supply or to the sterile processing department.

#### d) After cleaning and disinfection of areas

- Cleaning equipment that are made of cloths/absorbent materials (eg mop head and wiping cloths) used for cleaning and disinfection of COVID 19 areas must be kept away or separate from other cleaning materials.
- Remove all used PPE and discard in a double-bagged biohazard bag, which should then be securely sealed and labelled.
- Wash hands with soap and water immediately after removing the PPE, and when cleaning and disinfection work is completed.

**NB:** If reusable gloves are used, those gloves should be dedicated for cleaning and disinfection of surfaces for COVID-19 and should not be used for other purposes. The gloves should be disinfected each time after use.

## 7.0 DISPOSAL PROCEDURES FOR SPILLS OF COVID-19 PATIENT BLOOD/FLUIDS

### 7.1 For spills of a small volume (< 10 mL) of blood/bodily fluids:

(1) Option 1: The spills should be covered with chlorine-containing disinfecting wipes (containing 5000 mg/L effective chlorine) and carefully removed, then the surfaces of the object should be wiped twice with chlorine-containing disinfecting wipes (containing 500 mg/L effective chlorine);

(2) Option 2: Carefully remove the spills with disposable absorbent materials such as gauze, wipes, etc., which have been soaked in 5000 mg/L chlorine-containing disinfecting solution.

### 7.2 For spills of a large volume (> 10 mL) of blood and bodily fluids:

(1) First, place signs to indicate the presence of a spill;

(2) Perform disposal procedures according to Option 1 or 2 described below:

Option 1: Absorb the spilled fluids for 30 minutes with a clean absorbent towel (containing 0.5% peroxyacetic acid that can absorb up to 1 L of liquid per towel) and then clean the contaminated area after removing the pollutants.

Option 2: Completely cover the spill with disinfectant powder or bleach powder containing water-absorbing ingredients or completely cover it with disposable water-absorbing materials and then pour a sufficient amount of 10,000 mg/L chlorine-containing disinfectant onto the water-absorbing material (or cover with a dry towel which will be subjected to high-level disinfection). Leave for at least 30 minutes before carefully removing the spill.

- Faecal matter, secretions, vomit, etc. from patients shall be collected into special containers and disinfected for 2 hours by a 20,000 mg/L chlorine-containing disinfectant at a spill-to-disinfectant ratio of 1:2.
- After removing the spills, disinfect the surfaces of the polluted environment or objects.
- The containers that hold the contaminants can be soaked and disinfected with 5,000 mg/L active chlorine-containing disinfectant for 30 minutes and then cleaned.
- The collected pollutants should be disposed of as medical waste.
- The used items should be put into double-layer medical waste bags and disposed of as medical waste

## 8.0 HANDLING INFECTED LINEN

- Wear protective clothing:
  - Closed work shoes or boots
  - Disposable gown
  - Medical mask
  - Goggle or face shield (if risk of splash of organic material or chemicals)
  - Heavy duty gloves
- Collect linen in disposable water soluble plastic bags and seal the bag
- Do not hold linen close to the body instead laundry baskets or bins should be used.
- Pack the bag into another water soluble plastic bag and seal.
- Finally pack the plastic bag into a yellow plastic bag, seal and label as infectious linen.
- Infectious fabrics/linen should be separated from other infectious fabrics/linen (non-COVID-19) and washed in a dedicated washing machine.
- Wash and disinfect these fabrics with chlorine-containing disinfectant at 90°C for at least 30 minutes.
- All linen must be ironed as the final process of infection control.

**NB:** Special transport tools such as wheelie bins should be used specifically for transporting infectious fabrics/linen.

(2) The tools shall be disinfected immediately each time after being used for transporting infectious fabrics.

(3) The transport tools should be wiped with chlorine-containing disinfectant (with 1000 mg/L active chlorine). Leave disinfectant for 30 minutes before wiping the tools clean with clean water.

## 9.0 WASTE MANAGEMENT

### 9.1 Waste Segregation and Packaging Procedure

Waste should be segregated at the point of generation to enable appropriate and safe handling. All waste generated from rooms occupied by people in quarantine shall be managed and treated as hazardous waste-clinical waste.

#### **PROCEDURE:**

##### **In a room:**

- Line appropriate-sized rigid waste containers with a leak-proof biohazard bag.
- Bags should not be filled beyond two thirds full to allow safe closure
- Close the bag with a method that will not tear or puncture the bag (e.g., tying the neck of bag with a goose-neck knot) and will ensure no leaks.
- Sharp objects (e.g. needles, syringes and glass articles) should be placed inside sharps containers with a disinfectant containing 0.5% sodium hypochlorite (that is, equivalent to 5000 ppm or 1-part household bleach with 5% sodium hypochlorite to 9 parts water) or 70% ethyl alcohol
- Transfer and deposit the waste to a temporary storage container.
- Wash hands with soap and water

##### **Temporary Storage container:**

- Line appropriate-sized rigid waste containers with a leak-proof biohazard bag.
- Containers should not be filled beyond two thirds full to allow safe closure.
- Close the bag with a method that will not tear or puncture the bag (e.g., tying the neck of bag with a goose-neck knot) and will ensure no leaks.
- Disinfect the exterior of the bag by spraying with a disinfectant containing 0.5% sodium hypochlorite (that is, equivalent to 5000 ppm or 1-part household bleach or with 5% sodium hypochlorite to 9 parts water) or 70% ethyl alcohol.
- Label each bag clearly with its place of origin and date
- Store the disinfected closed bags in a designated area to await removal.
- Spray the exterior of the box with a disinfectant containing 0.5% sodium hypochlorite (that is, equivalent to 5000 ppm or 1-part household bleach or 5% sodium hypochlorite to 9 parts water) or 70% ethyl alcohol.
- Waste must be temporarily stored for a period not more than 24 hours.

## **9.2 Waste Transportation**

### **9.2.1 Onsite Transportation**

- Infectious solid waste should not be transported by hand due to the risk of accident or injury from infectious material or incorrectly disposed sharps.
- Personnel wearing appropriate PPE should safely transfer waste in a wheeled bin for onsite incineration or temporary secure storage area while awaiting collection by a designated clinical waste van.
- Personnel removing the waste from the care area should only handle the outer container/wheeled bin and should never open the bagged waste.
- The trolleys should be decontaminated after each waste load and should not be used for any other purpose.
- Trolleys and carts used for the movement of waste within premises should be designed and constructed as stipulated in the Botswana Clinical Waste Management Code of Practice of 1998.

### **9.2.2 Offsite Transportation**

A dedicated clinical waste collection vehicle should be used for the transportation of Covid-19 packaged waste to the offsite treatment facility and should be as per the specifications of the Botswana Clinical Waste Management Code of Practice of 1998.

## **9.3 Waste disposal**

- The remains of treated Covid-19-associated waste is not infectious as such and should be disposed of at engineered landfill sites.
- Demarcate a dedicated area or cell for disposal of Covid-19 remains.
- Its location within the landfill should be clearly identified and recorded.

## **9.4 Safety precautions**

- Use appropriate protective equipment when handling waste at all times
- Check that the bags and sharp containers are effectively sealed.
- Handle the bags away from the body and avoid throwing or dropping the bags where possible.

## 9.5 Managing Waste Spillages

**Cleaning of spills should be supervised by nurse in charge of the isolation centre.**

- Wear appropriate PPE:
  - Closed work shoes or boots
  - Disposable gown
  - Medical mask
  - Goggles or face shield (if risk of splash from organic material or chemicals)
  - Heavy duty gloves
- Isolate the area of the spill; do not let other individuals access the area until disinfection is complete.
- Place absorbent material on the spill (a solidifier agent can be used). Pour precept with a minimum concentration of 0.1% (1000 ppm) sodium hypochlorite (bleach), or 70% ethanol over the spill and allow sufficient contact time (15 - 30 minutes)
- Use disposable absorbent towels to remove bulk spill material. Dispose of the towels in a biohazard bag as specified above.
- A brush and dustpan should be used to gather up the solid waste and on no account should sharps be picked by hand.
- Use disposable cleaning cloths or wipes to wipe the treated area.
- Follow handling of solid waste protocol as described above to discard materials used for containing the spill and for cleaning and disinfection.
- Follow recommended procedures for disinfecting visibly soiled PPE and taking off PPE.
- Perform hand washing with clean water and soap regularly after handling waste.

## **10.0 MANAGEMENT (HANDLING, MOVEMENT, STORAGE AND BURIAL) OF HUMAN REMAINS OF A PERSON WHO DIED OF COVID-19 OR SUSPECT CASE.**

### **Purpose**

This serves as guidance for all those, including managers of health care facilities and mortuaries, religious and public health authorities, and families, who tend to the bodies of persons who have died of suspected or confirmed COVID-19. Except in cases of haemorrhagic fevers (such as Ebola, Marburg) and cholera, dead bodies are generally not infectious.

Before attending to a body, people should ensure that the necessary hand hygiene and personal protective equipment (PPE) supplies are available (see Annexure 2):

- **Packing and transport of the body**
  - Disposable gloves
  - Gown
  - Medical mask (if there is risk of splashes from body fluids or secretions)
  - Goggles or face shield (if there is risk of splashes from body fluids or secretions)
- **Mortuary care**
  - Disposable gloves
  - Medical mask
  - Gown
  - Goggles or face shield
- **Autopsy**
  - Disposable gloves
  - Respirator mask (N95 or FFP2)
  - Gown
  - Goggles or face shield
  - Rubber gloves
  - Boots or closed work shoes
- **Religious observation – care of body by family members**
  - Disposable gloves
  - Gown
  - Surgical mask
  - Goggles or face shield

- The dignity of the dead, their cultural and religious traditions, and their families should be respected and protected throughout.
- Hasty disposal of a dead from COVID-19 is not necessary.
- Practice hand hygiene at all times; before handling the corpse and after burial procedure.

### **Corpse care**

- Fill all openings or wounds the patient may have, such as mouth, nose, ears, anus and tracheotomy openings, by using cotton balls or gauze dipped in 3000-5000 mg/L chlorine-containing disinfectant or 0.5% peroxyacetic acid.
- Keep both the movement and handling of the body to a minimum
- Wrap body in cloth and transfer it as soon as possible to the mortuary area
- There is no need to disinfect the body before transfer to the mortuary area
- Body bags are not necessary, although they may be used for other reasons (e.g. excessive body fluid leakage)
- Remove gloves if they become visibly soiled, perform hand hygiene and put on a new set of gloves.
- Place the body in a coffin if one is available.
- Family members should put on masks and gloves for viewing of the body and no touching or kissing shall be allowed.
- No special transport equipment or vehicle is required.

## **BURIAL BY FAMILY MEMBERS OR FOR DEATHS AT HOME**

### **Purpose**

To guide burial by family members or for deaths at home in contexts where mortuary services are not standard or reliably available, or where it is usual for ill people to die at home, families and traditional burial attendants can be equipped and educated to bury people under supervision.

- Please note family and friends may view the body after it has been prepared for burial, in accordance with customs.
- Do not touch or kiss the body.
- Thoroughly wash hands with soap and water following the viewing; physical distancing measures should be strictly applied (at least 2 m between people)
- Wear gloves before preparing the deceased (e.g. family member and religious leader washing, cleaning or dressing body, tidying hair, trimming nails or shaving).
- For any activity that may involve splashing of bodily fluids, eye and mouth protection (face shield or goggles and medical mask) should be worn.

- Clothing worn to prepare the body should be immediately removed and washed after the procedure, or an apron or gown should be worn;
- Family members should reduce their exposure as much as possible.
- Children, older people (>60 years old), and anyone with underlying illnesses (such as respiratory illness, heart disease, diabetes, or compromised immune systems) should not be involved in preparing the body.
- A minimum number of people should be involved in preparations.
- Others may observe without touching the body at a minimum distance of 1 meter
- Anyone who has assisted in preparing the body should thoroughly wash their hands with soap and water when finished. After burial disinfect the vehicle as per the SOP for disinfection of ambulances.

**Please note that:**

- People with respiratory symptoms should not participate in the viewing or at least wear a medical mask to prevent contamination of the place and further transmission of the disease to others.
- Those tasked with placing the body in the grave, on the funeral pyre, etc. should wear gloves and wash hands with soap and water once the burial is complete.
- Cleaning of reusable PPE should be conducted in accordance with manufacturer's instructions for all cleaning and disinfection products (e.g. concentration, application method and contact time, etc.).
- Although burials should take place in a timely manner, in accordance with local practices, funeral ceremonies not involving the burial should be postponed, as much as possible, until the end of the epidemic. If a ceremony is held, the number of participants should be limited. Participants should observe physical distancing at all times, plus respiratory etiquette and hand hygiene.
- The belongings of the deceased person do not need to be burned or otherwise disposed of. However, they should be handled with gloves and cleaned with a detergent followed by disinfection with a solution of at least 70% ethanol or 0.1% (1000 ppm) bleach.
- Clothing and other fabric belonging to the deceased should be machine washed with warm water at 60–90°C (140–194°F) and laundry detergent. If machine washing is not possible, linens can be soaked in hot water and soap in a large drum using a stick to stir and being careful to avoid splashing. The drum should then be emptied, and the linens soaked in 0.05% chlorine for approximately 30 minutes. Finally, the laundry should be rinsed with clean water and the linens allowed to dry fully in the sun.

## **11.0 CLEANING AND DISINFECTION OF PUBLIC SETTINGS, INCLUDING SCHOOLS, PUBLIC TRANSPORT, COLLEGES/UNIVERSITIES AND OTHER WORKPLACES**

- Commonly used disinfectants are effective against COVID-19
- Frequently touched surfaces are mostly likely to be contaminated.

### **11.1.1 Cleaning and Disinfection Procedure**

- Wear PPE
  - Closed work shoes or boots
  - Disposable gown
  - Medical mask
  - Goggles or face shield (if risk of splash from organic material or chemicals)
  - Heavy duty gloves
- Perform routine cleaning by damp dusting all surfaces, furniture and fittings
- Mop floors with disinfectant
- Surfaces that have frequent contact with hands should be cleaned and disinfected twice per day and when visibly dirty.
- Remove all used disposable PPE and discard in designated hazardous waste bins.
- Discard all disposable wipes used to clean or disinfect in designated hazardous waste bins.

### **11.1.2 Safety precautions for workplaces and the public**

- Keep workplaces clean and hygienic
- Promote regular and thorough hand washing
- Provide access to facilities where everyone can wash their hands with soap and water
- Put sanitizing hand rub dispensers in prominent places.
- Promote good respiratory hygiene
- Comply with any local restrictions on travel, movement or large gatherings.
- Consult national travel advice before going on business travel
- Advise those who are sick to stay home
- Consider options for teleworking (this will help businesses keep operating while employees stay safe)
- Wipe frequently touched surfaces (desks, tables,) and objects regularly with disinfectant

## **12.0 STANDARD OPERATING PROCEDURE FOR HOUSEHOLDS WITH QUARANTINED OR ISOLATED CASE.**

### **12.1.1 Cleaning and Disinfection Procedure**

- Wear PPE:
  - Closed work shoes or boots
  - Disposable gown
  - Medical mask
  - Goggles or face shield
  - Heavy duty gloves
  
- Perform routine cleaning using regular household detergent and damp dusting all surfaces, furniture and fittings and after rising begin the disinfection procedure.
- Prepare regular household disinfectant (bleach-containing 5% chlorine solution) according to manufacturer's instructions.
- Mop floors with the prepared disinfectant
- Wipe frequently touched surfaces with the disinfectant using paper towel and repeat twice a day and when visibly dirty.
- Remove all used disposable PPE and discard it together with paper towels in a general waste bag and label it "biohazard".

## 13.0 ISOLATION FACILITY

### **Purpose:**

This is the guidance on infection prevention and control (IPC) SOP for use when COVID-19 is suspected to prevent or limit transmission in health care settings.

- a. Establish a well-equipped triage station at the entrance to the facility, supported by trained staff;
- b. Administer screening questionnaires according to the updated case definition. Please refer to the Global Surveillance for human infection with coronavirus disease (COVID-19) for case definitions,
- c. Offer a medical mask to patients with suspected COVID-19 while they are in waiting/public areas or in consultation rooms;
- d. Perform hand hygiene after contact with respiratory secretions.

### **1. Isolation rooms**

- a. Place patients in adequately ventilated single rooms.
- b. When single rooms are not available, patients suspected of having COVID-19 should be grouped together;
- c. Place patients' beds at least 2 meter apart regardless of whether they are suspected to have COVID-19;
- d. Designate a team of HCWs to care exclusively for suspected or confirmed cases to reduce the risk of transmission;
- e. Personal protective equipment should be used as outlined in the Guideline for Recommended Personal Protective Equipment During Healthcare Delivery for Patients with Suspected or Confirmed COVID-19
- f. N95 or FFP2 masks must be available for aerosol generating procedures;
- g. When caring for patients with suspected or confirmed COVID-19, HCWs should wear: eye protection (goggles) or facial protection (face shield) to avoid contamination of mucous membranes; a clean, non-sterile, long-sleeved gown; gloves; medical mask.
- h. the use of boots, coverall, and apron are not required during routine care;
- i. ensure that all patients cover their nose and mouth with a tissue or elbow when coughing or sneezing;
- j. implementing empiric additional precautions (droplet and contact and, whenever applicable, airborne precautions) for suspected cases of COVID-19;
- k. in addition to using standard precautions, all individuals, including family members, visitors and HCWs, should use contact and droplet precautions before entering the room of suspected or confirmed COVID-19 patients;

- l. Patients should be placed in adequately ventilated single rooms. For general ward rooms with natural ventilation, adequate ventilation is considered to be 60 L/s per patient;
- m. when single rooms are not available, patients suspected of having COVID-19 should be grouped together;
- n. All patients' beds should be placed at least 2 meter apart regardless of whether they are suspected to have COVID-19;
- o. where possible, a team of HCWs should be designated to care exclusively for suspected or confirmed cases to reduce the risk of transmission;
- p. After patient care, appropriate doffing and disposal of all PPE and hand hygiene must be carried out.
- q. Put on a new set of PPE when care is given to a different patient;
- r. Equipment should be either single-use and disposable or dedicated equipment (e.g. Stethoscopes, blood pressure cuffs and thermometers).
- s. If equipment needs to be shared among patients, clean and disinfect it between use for each individual patient (e.g. by using ethyl alcohol 70%);
- t. Use designated portable X-ray equipment or other designated diagnostic equipment. If transport is required, use predetermined transport routes to minimize exposure for staff, other patients and visitors, and have the patient wear a surgical mask;
- u. Notify the area receiving the patient of any necessary precautions as early as possible before the patient's arrival;
- v. Clean and disinfect surfaces with which the patient is in contact;
- w. Maintain a record of all persons entering a patient's room, including all staff and visitors
- x. Wear a clean, non-sterile, long-sleeved gown and gloves. If gowns are not fluid-resistant, HCWs should use a waterproof apron for procedures expected to create high volumes of fluid that might penetrate the gown
- y. Follow cleaning and disinfection procedures consistently and correctly. Cleaning environmental surfaces with water and detergent and applying commonly used hospital disinfectants (such as sodium hypochlorite) is effective and sufficient.

## **2. Collection and handling laboratory specimens from patients with suspected COVID-19**

- a. Put on appropriate PPE when collecting specimens from patients with suspected COVID-19
- b. Place specimens for transport in leak-proof specimen bags (secondary containers) that have a separate sealable pocket for the specimen (a plastic biohazard specimen bag), with the patient's label on the specimen container (the primary container), and a clearly written laboratory request form

- c. Deliver all specimens by hand whenever possible. DO NOT use pneumatic-tube systems to transport specimens
- d. Document clearly each patient's full name, date of birth and "suspected COVID-19" on the laboratory request form. Notify the laboratory as soon as possible that the specimen is being transported.

**NB:**

- a. Post signs in public areas reminding symptomatic patients to alert HCWs.
- b. HCWs must not touch eyes, nose, or mouth with potentially contaminated gloved or bare hands;
- c. Avoid moving and transporting patients out of their room or area unless medically necessary.
- d. Ensure that HCWs who are transporting patients perform hand hygiene and wear appropriate PPE as described in this section;
- e. Limit the number of HCWs, family members, and visitors who are in contact with suspected or confirmed COVID-19 patients;
- f. Perform procedures in an adequately ventilated room – that is, natural ventilation with air flow of at least 160 L/s per patient or in negative-pressure rooms with at least 12 air changes per hour and controlled direction of air flow when using mechanical ventilation;
- g. Manage laundry, food service utensils and medical waste in accordance with safe routine procedures.
- h. ensure that all personnel who transport specimens are trained in safe handling practices and spill decontamination procedures;
- i. Ensure that laboratories in health care facilities adhere to appropriate biosafety practices and transport requirements, according to the type of organism being handled.

## 14.0 STANDARD OPERATING PROCEDURES FOR SOCIAL DISTANCING

Social distancing measures are steps you take to reduce social interaction between people. It is deliberately increasing the physical space between people to avoid spreading illness. This helps reduce the transmission of COVID-19.

### 14.1.1 Safety precautions for individuals and the public

- Avoid contact with someone who is displaying symptoms of coronavirus (COVID-19). These symptoms include high temperature and/or new and continuous cough.
- If you have had close contact with a confirmed case of coronavirus (COVID-19) in the previous 14 days or have travelled to an affected country you must self-isolate.
- Avoid non-essential use of public transport when possible. Walk or cycle to work if possible.
- Stay home if you have symptoms such as fever, cough, or shortness of breath.
- Seek medical care only for severe symptoms such as difficulty in breathing
- Avoid sharing drinks or food with others.
- Use disposable cups and utensils and safely dispose of them after use.
- Avoid greeting with handshakes, hugs and kisses, stick to non-contact greetings.
- Cancel or postpone all international travel plans.
- Work from home, where possible.
- Keep in touch with family and friends using remote technology such as phone, internet, and social media.
- Funerals should not be longer than 2 hours
- Use telephone or online services to contact your GP or other essential services.
- Ensure a distance of at least 2 meters is kept between yourself and others in service areas (banks, supermarkets, post offices etc)
- Visits shops, cafes and restaurants sparingly. Where possible, consider home/office delivery and home take-aways.
- Where possible, use debit and credit cards instead of cash and make use of online and self-serve transactions.
- Consider cancelling or postponing small family and community events.

## 15.0 STANDARD OPERATING PROCEDURES FOR ENTRY SCREENING

### 15.1.1 ENTRY SCREENING

All travellers entering the country undergo a screening process.

#### **Procedure:**

- Health Officer should wear appropriate PPE (medical mask, eye protection and gloves)
- Passenger fills a screening form which determines their travel history
- The health officer assesses the form
- Health officer checks and records the temperature of the passenger using a thermometer or heat scanner.
- If any of the above indicates that the passenger (s) is a suspected case, the passenger is transferred to the temporary holding centre or isolation centre for secondary screening. The normal arrival process will continue for passengers that do not show signs of a communicable disease.
- Once the suspected passenger (9) is in isolation area, notification is relayed to the following agencies:
  - Immigration-shift leader: to process entry immigration requirements for the passenger
  - BURS-shift leader: to process clearance of the goods for the passenger
  - Public transport driver (if passenger was using public transport) to prepare information for contact tracing
  - Other passengers on the same vehicle if using private transport.
- The Emergency Medical Service or designated ambulance on standby will evacuate the suspect to the designated health facility.
- Feedback will be relayed by Ministry of Health and Wellness from the designated health facility to the officer in charge (BURS/ Immigration).

#### **SUSPECTS ON PUBLIC TRANSPORT**

- The traveller informs the driver and port health officer on arrival.
- The port health officer isolates the suspect(s) case onsite and performs screening as per the entry screening steps above.
- The port health officer identifies contacts and advise them to home quarantine for 14 days

**Appendix 1:** Summary of how to prepare disinfectant solution for different scenarios using chlorine disinfectant tablets

<b>Kinds of infections &amp; other protective usage</b>	<b>Dilution rate/measurements for precept</b>			<b>Additional instructions &amp; procedures</b>
	<b>0.5grms</b>	<b>2.5grms</b>	<b>5.0grms</b>	
Blood Spillage / Body Fluids.	18 Tablets in 0.5 litres water	7 Tablets in 1 litres water	9 Tablets in 2.5 litres water	Pour over blood. Using gloves wipe up with disinfectant saturated disposable cloth
Pipette Jars	9 Tablets in 1 litre of water	9 Tablets in 5 litres of water	9 Tablets in 10 litres of water	Drop tablets into water filled pipette jar. Discard daily
Gen. Laboratory / Environmental use	Use 4 Tablets in 1 litre of water	4 Tablets in 5 litres of water	3.5 Tablets in 10 litres of water	Wipe down surfaces with disposable disinfectant saturated disposable cloth.
Stainless Steel Instruments 1	1 Tablet in 0.5 litres water	1 Tablet in 2.5 litres of water	1 tablet in 10 litres of water	Immerse for 1 hour
Eating Utensils & Crockery	1 Tablet in 2 litres of water	1 Tablet in 10 litres of water	1 Tablet in 20 litres of water	Rinse for 1 to 2 minutes
Soiled or Infected Linen	1 Tablet in 2 litres of water	1 Tablet in 10 litres of water	1 Tablet in 20 litres of water	Immerse for 1 hour prior to washing
Work Surfaces, Closets, Floors, etc..	1 Tablet in 2 litres of water	1 Tablet in 10 litres of water	1 Tablet in 20 litres of water	Wash down
Dish Cloths, Mops, etc	1 Tablet in 4.6 litres of water (1 gal.)	1 Tablet in 23 litres of water (5 gals.)	1 Tablet in 46 litres of water (10 gals.)	Soak to bleach clean and deodorize

**Appendix 2: Summary of recommended Personal Protective Equipment**

Items	Disinfection	Spillage cleaning	Waste management	Laundry	Entry Screening	Isolation Facility	Corpse management			
							Packing & transporting body	Mortuary	Autopsy	Religious observation & care of body by family members
Eye protection	√	√	√	√	√	√	√	√	√	√
Disposable gloves					√	√	√	√	√	√
Heavy duty gloves	√	√	√	√						
Medical Mask	√	√	√	√	√	√	√	√		√
Respirator mask									√	
Gown	√	√	√	√		√	√	√	√	√
Closed work shoes or boots	√	√	√	√					√	
<b>Additional items</b>										
Absorbent material/paper towel	√	√				√	√	√	√	
Detergent solution	√	√		√		√		√	√	√
Masking tape	√	√	√	√		√	√	√	√	
Disinfectant	√	√	√	√		√	√	√	√	√
Back pack sprayer	√									
Signage		√	√	√						

## Appendix 3: Hand washing technique

# How to Handwash?

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB

 **Duration of the entire procedure: 40-60 seconds**



0 Wet hands with water;



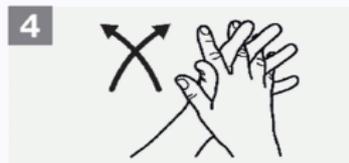
1 Apply enough soap to cover all hand surfaces;



2 Rub hands palm to palm;



3 Right palm over left dorsum with interlaced fingers and vice versa;



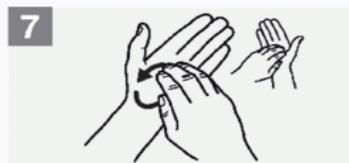
4 Palm to palm with fingers interlaced;



5 Backs of fingers to opposing palms with fingers interlocked;



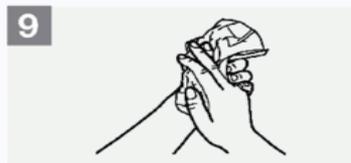
6 Rotational rubbing of left thumb clasped in right palm and vice versa;



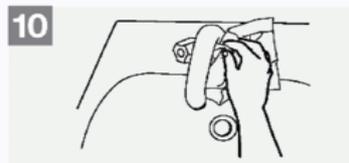
7 Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



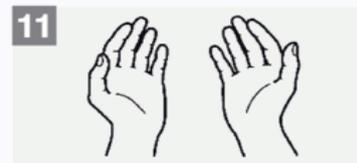
8 Rinse hands with water;



9 Dry hands thoroughly with a single use towel;



10 Use towel to turn off faucet;



11 Your hands are now safe.



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SAVE LIVES

Clean Your Hands

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## Appendix 4: Cough Etiquette

1.



Cover your mouth and nose with a paper tissue when you cough or sneeze.



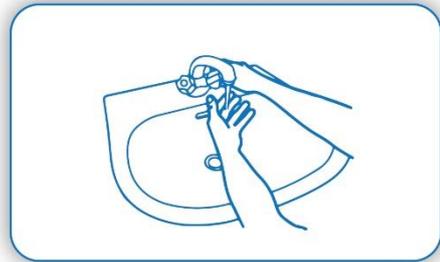
If you don't have a paper tissue, cough/sneeze into your upper sleeve.

2.



Dispose of the tissue in a waste bin after every use.

3.



Wash your hands with soap and water after coughing/sneezing.

## REFERENCES

1. Coronavirus-SARS-CoV-2 ,Environmental cleaning guidance for health care facilities  
<https://www.ecdc.europa.eu/sites/default/files/documents/> (Accessed 4<sup>th</sup> April 2020)
2. Cleaning and Disinfection for COVID 19  
<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cleaning-disinfection;>(Accessed 4<sup>th</sup> April 2020)
3. How to put on and take off PPE  
<https://www.who.int/csr/resources/publications/putontakeoffPPE/en/>(Accessed 3<sup>rd</sup> April 2020)
4. Infection Prevention and Control for the safe management of a dead body in the context of COVID-19, Interim Guidance (Accessed 24 March 2020)
5. Waste management for COVID 19  
<https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19>(Accessed 23<sup>rd</sup> February 2020)
6. Infection Prevention and Control for COVID 19  
<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/infection-prevention-and-control>(Accessed 23<sup>rd</sup> February 2020)
7. Corona virus Disease 2019 Infection  
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control.html>(Accessed 23<sup>RD</sup> February 2020)
8. Liang T et al .Handbook of COVID 19 Prevention and Treatment, 2019.