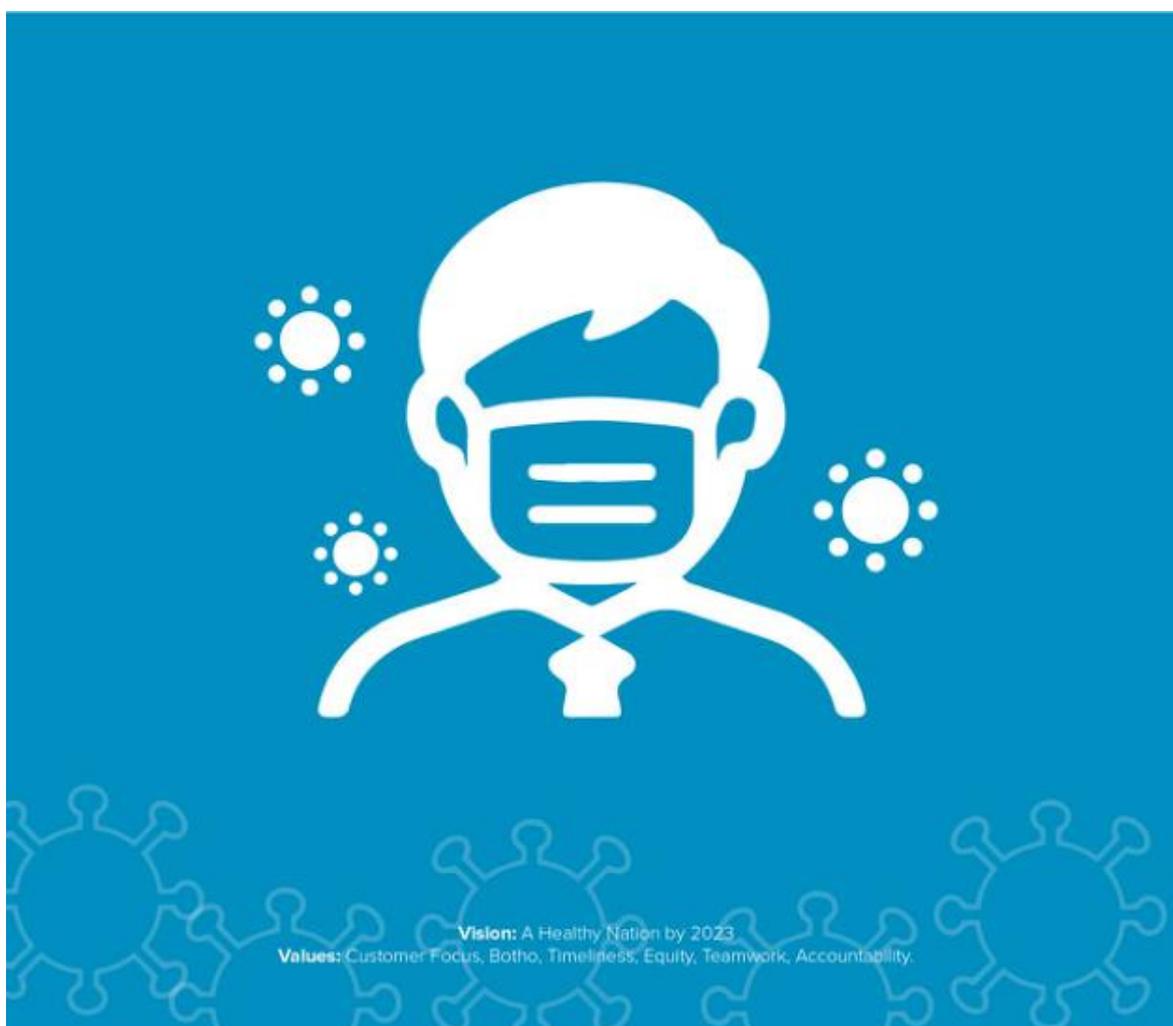




Republic of Botswana

MINISTRY OF HEALTH & WELLNESS

## Botswana COVID-19 Guideline 2: Personal Protective Equipment



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

# 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.

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## WHAT HAS CHANGED IN THIS VERSION?

Version 1.0	First version
Version 2.0, 5 <sup>th</sup> May 2020	Clarification on the difference between medical masks and respirator masks PPE edited to note that respirator masks are only required for aerosol generating procedures Summary of guidance regarding face covers for members of the public

# 1. INTRODUCTION

The guidance is intended to be used in planning for Personal Protective Equipment (PPE) needs in the care of suspected or confirmed COVID-19 patients. It is to be used for all health care workers at all levels in Botswana. The use of PPE should be based on exposure risk (e.g. activity type) and the transmission dynamics of the pathogen (e.g. contact, droplet, or aerosol). The overuse of PPE will further impact supply shortages.

## **Key IPC strategies to limit or prevent transmission in healthcare settings**

- Application of standard precautions for all patients at all times
- Ensuring triage, early recognition, and source control (isolating) of patients with suspected COVID-19 infections.
- Implementation of empiric additional precautions – droplet and contact in the care of suspected and confirmed cases of COVID-19 and airborne precautions (in certain situation when aerosol generating procedures are carried out on COVID-19 patients).
- Implementing administrative controls.
- Use of environmental and engineering controls such as adequate spatial separation of patients, appropriate ventilation and appropriate cleaning of the environment.

## **Standard precautions**

The goal of standard precautions is to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection. They should be used every time health care is delivered and be part of healthcare practice. When correctly implemented, the spread of the COVID-19 can be prevented or minimised. Standard Precautions are very important in the care of all patients including those with respiratory infections such as COVID-19 infections.

## **Elements of Standard Precautions to be strictly adhered to are:**

- Hand hygiene
- Respiratory hygiene
- Appropriate use of PPE according to the risk
- Safe injection practices, sharps management and injury prevention
- Safe handling, cleaning and disinfection of patient care equipment
- Environmental cleaning
- Safe handling and cleaning of soiled linen
- Waste management

## 2. OVERVIEW OF PPE

Personal protective equipment (PPE) are designed to protect the wearer's skin, eyes, mucous membranes and airways from coming into contact with infectious agents. It is important to note that the use of PPE is not a substitute for proper infection prevention and control practice: for example, the use of gloves is not a substitute for hand hygiene.

Healthcare workers who provide care to COVID-19 patients must be proficient in donning and doffing of PPE. This requires specific training.

PPE is selected based on risk assessment: The assessment helps to determine the personal protective equipment (PPE) that is needed for adequate protection in the performance of activity.

COVID-19 is a respiratory disease which is different from Ebola Virus Disease (EVD) that is transmitted through infected bodily fluids. **Due to these differences in transmission, the PPE requirements for COVID-19 are different to those for EVD. Specifically, coveralls or moonsuits (sometimes called 'Ebola PPE') are not required when managing COVID-19 patients.**

In this document, two different types of personal protective facemasks are referred to: medical masks and respirator masks:

**Medical masks** are defined as surgical or procedure masks that are flat or pleated; they are affixed to the head with straps and are loose fitting. They are tested according to a set of standardized test methods (ASTM F2100, EN 14683, or equivalent) that aim to balance high filtration, adequate breathability and optionally, fluid penetration resistance. They protect the wearer against large droplets, splashes and sprays, and protect other's from the wearer's respiratory emissions.

**Respirator masks** are defined as N95, FFP2 or FFP3 masks, and are labelled with this information. They reduce the wearer's exposure to particles including small particle aerosols and large droplets. The masks are tight fitting and require a fit-check on the wearer before use. They provide more protection than a medical mask as outlined above, and (in the context of COVID-19 disease) are only recommended for healthcare workers when performing aerosol generating procedures on patients with suspected or confirmed COVID-19 disease.

NB. N95 or FFP2 respirator use in COVID-19 patient's direct care is single use. The respirator can be reused where there is no direct care of COVID-19 patients, as long

as it maintains its structural and functional integrity and the filter material is not physically damaged or soiled (day use). If working in a COVID-19 cohort area, a single respirator mask may be used for up to six hours, however, must be replaced if damaged/soiled/wet.

**\*Note:** On 1<sup>st</sup> May 2020 the Government of Botswana issued legislation mandating that it is compulsory to wear masks/face coverings in public places, businesses, and common areas or residential buildings. Cloth face masks are recommended to preserve medical masks for healthcare worker use. This legislation is outside the scope of these guidance on PPE use in healthcare settings. These guidelines do not replace or alter the legislation.

### 3. TYPE OF PERSONAL PROTECTIVE EQUIPMENT

**Table 1: Recommended type of PPE to be used in the context of COVID-19 disease according to setting, personnel and type of activity.**

Type of setting	Target personnel in setting	Type of activity	Type of PPE
<b>Health facilities</b>			
<b>Inpatient facilities</b>			
Screening/ triage	Healthcare workers	Preliminary screening not involving direct contact	<ul style="list-style-type: none"> <li>Maintain physical distance of 2m.</li> <li>Ideally, build a glass/plastic screen to create a barrier between health care workers and patients.</li> <li>No PPE required.</li> <li>When physical distance is not feasible, use a medical mask and eye protection (goggles or face shield)</li> </ul>
	Patients with symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> <li>Maintain spatial distance of 2m.</li> <li>Provide medical mask if tolerated.</li> <li>Immediately move the patient to an isolation room or area away from others.</li> </ul>
	Patients without symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> <li>No PPE required.</li> </ul>
Patient room/ward	Health care workers	Direct care of COVID-19 patient(s) in the absence of aerosol generating procedures	<ul style="list-style-type: none"> <li>Medical mask</li> <li>Gown (not coverall)</li> <li>Gloves</li> <li>Eye protection (goggles or face shield)</li> </ul>
		Aerosol generating procedures (AGP) on COVID-19 patient(s)	<ul style="list-style-type: none"> <li>Respirator mask</li> <li>Gown</li> <li>Gloves</li> <li>Eye protection (goggles or face shield)</li> <li>Apron</li> </ul>
	Cleaners	Entering room of COVID-19 patient(s)	<ul style="list-style-type: none"> <li>Medical mask</li> <li>Gown</li> <li>Heavy duty gloves</li> <li>Eye protection (if risk of splash of organic material or chemicals)</li> <li>Boots or closed work shoes</li> </ul>
	Visitors	Entering the room of COVID -19 patient	<ul style="list-style-type: none"> <li>Maintain physical distance of at least 2m</li> <li>Medical mask</li> <li>Gown</li> <li>Gloves</li> <li>Eye protection (if risk of splash of organic material or chemicals)</li> </ul>

Other areas of patient transit (wards, corridors)	All staff, including health care workers	Any, not involving contact with COVID-19 patient(s)	<ul style="list-style-type: none"> <li>Maintain physical distance of at least 2m</li> <li>No PPE required</li> </ul>
Laboratory	Lab Technician	Manipulation of respiratory samples	<ul style="list-style-type: none"> <li>Medical mask</li> <li>Gown</li> <li>Gloves</li> <li>Eye protection (goggles or face shield)</li> </ul>
Laundry	Laundry staff	Handling of linen used by COVID- 19 suspects or confirmed case	<ul style="list-style-type: none"> <li>Medical mask</li> <li>Gown</li> <li>Heavy duty gloves</li> <li>Eye protection (if risk of splash of organic material or chemicals)</li> <li>Boots or closed work shoes</li> </ul>
Administrative areas	All staff, including healthcare workers.	Administrative tasks that do not involve contact with COVID-19 patients.	<ul style="list-style-type: none"> <li>Maintain spatial distance of 2m.</li> <li>No PPE required</li> </ul>
<b>Outpatient</b>			
Screening/ triage	Healthcare workers	Preliminary screening not involving direct contact	<ul style="list-style-type: none"> <li>Maintain physical distance of 2m.</li> <li>Ideally, build a glass/plastic screen to create a barrier between health care workers and patients.</li> <li>No PPE required.</li> <li>When physical distance is not feasible, use a medical mask and eye protection (goggles or face shield)</li> </ul>
	Patients with symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> <li>Maintain spatial distance of 2m.</li> <li>Provide medical mask if tolerated.</li> <li>Immediately move the patient to an isolation room or area away from others.</li> </ul>
	Patients without symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> <li>No PPE required.</li> </ul>
Waiting room	Patients with symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> <li>Provide medical mask if tolerated.</li> <li>Immediately move the patient to an isolation room or separate area away from others; if this is not feasible, ensure spatial distance of at least 1m from other patients.</li> </ul>
	Patients without symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> <li>No PPE required</li> </ul>
Consultation room	Healthcare workers	Physical examination of patient with symptoms suggestive of COVID-19	<ul style="list-style-type: none"> <li>Medical mask</li> <li>Gown</li> <li>Gloves</li> <li>Eye protection (goggles or face shield)</li> </ul>

	Healthcare workers	Physical examination of patient without symptoms suggestive of COVID-19	<ul style="list-style-type: none"> <li>• PPE according to standard precautions and risk assessment</li> </ul>
	Patients with symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> <li>• Provide medical mask if tolerated</li> </ul>
	Patients without symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> <li>• No PPE required</li> </ul>
	Cleaners	After and between consultations with patients with respiratory symptoms.	<ul style="list-style-type: none"> <li>• Medical mask</li> <li>• Gown</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>
Administrative areas	All staff, including healthcare workers.	Administrative tasks	<ul style="list-style-type: none"> <li>• Maintain spatial distance of at least 2m.</li> <li>• No PPE required</li> </ul>
<b>Community</b>			
Home	Patients with symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> <li>• Maintain physical distance of at least 2m.</li> <li>• Provide medical mask, except when sleeping.</li> </ul>
	Caregiver	Entering the patient's room, but not providing direct care or assistance.	<ul style="list-style-type: none"> <li>• Maintain physical distance of at least 2m.</li> <li>• Medical mask</li> </ul>
	Caregiver	Providing direct care or when handling stool, urine or waste from COVID-19 patient being cared for at home.	<ul style="list-style-type: none"> <li>• Medical mask</li> <li>• Gown</li> <li>• Gloves</li> <li>• Eye protection (goggles or face shield)</li> </ul>
	Healthcare workers	Providing direct care or assistance to a COVID-19 patient at home	<ul style="list-style-type: none"> <li>• Medical mask</li> <li>• Gown</li> <li>• Gloves</li> <li>• Eye protection (goggles or face shield)</li> </ul>
Public areas (e.g., schools, shopping malls, train stations).	Individuals without symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> <li>• No PPE required</li> </ul>
<b>Ports of entry</b>			
Administrative areas	All staff	Any	<ul style="list-style-type: none"> <li>• No PPE required</li> </ul>

Screening area	Staff	First screening (temperature measurement) not involving direct contact.	<ul style="list-style-type: none"> <li>• Maintain physical distance of 2m.</li> <li>• Ideally, build a glass/plastic screen to create a barrier between health care workers and patients.</li> <li>• No PPE required.</li> <li>• When physical distance is not feasible, use a medical mask and eye protection (goggles or face shield)</li> </ul>
	Staff	Second screening (i.e. interviewing passengers with fever or symptoms suggestive of COVID-19 disease and travel history).	<ul style="list-style-type: none"> <li>• Maintain physical distance of 2m.</li> <li>• Medical mask</li> <li>• Eye protection (goggles or face shield)</li> <li>• Gloves</li> </ul>
	Cleaners	Cleaning the area where passengers with fever are being screened.	<ul style="list-style-type: none"> <li>• Medical mask</li> <li>• Gown</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>
Temporary isolation area	Staff	Entering the isolation area, but not providing direct assistance.	<ul style="list-style-type: none"> <li>• Maintain physical distance of at least 2m.</li> <li>• Medical mask</li> <li>• Gloves</li> </ul>
	Staff, healthcare workers	Assisting or caring for a passenger being transported to a healthcare facility as a suspected COVID-19 case.	<ul style="list-style-type: none"> <li>• Medical mask</li> <li>• Gown</li> <li>• Gloves</li> <li>• Eye protection (goggles or face shield)</li> </ul>
	Cleaners	Cleaning isolation area	<ul style="list-style-type: none"> <li>• Maintain physical distance of at least 2m.</li> <li>• Medical mask</li> <li>• Gown</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>
Ambulance or transfer vehicle	Healthcare workers	Transporting suspected COVID-19 patients to the referral healthcare facility.	<ul style="list-style-type: none"> <li>• Medical mask</li> <li>• Gowns</li> <li>• Gloves</li> <li>• Eye protection (goggles or face shield)</li> </ul>
	Driver	Involved only in driving the patient with suspected COVID-19 disease and the	<ul style="list-style-type: none"> <li>• Maintain spatial distance of at least 2m.</li> <li>• No PPE required</li> </ul>

		driver's compartment is separated from the COVID-19 patient.	
		Assisting with loading or unloading patient with suspected COVID-19 disease.	<ul style="list-style-type: none"> <li>• Medical mask</li> <li>• Gowns</li> <li>• Gloves</li> <li>• Eye protection (goggles or face shield)</li> </ul>
		No direct contact with patient with suspected COVID-19, but no separation between driver's and patient's compartments.	<ul style="list-style-type: none"> <li>• Medical mask</li> </ul>
	Patient with suspected COVID-19 disease.	Transport to the referral healthcare facility.	<ul style="list-style-type: none"> <li>• Medical mask if tolerated</li> </ul>
	Cleaners	Cleaning after and between transports of patients with suspected COVID-19 disease to the referral healthcare facility	<ul style="list-style-type: none"> <li>• Medical mask</li> <li>• Gown</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>Care of the deceased</b>			
Community/ Hospital	Any	Packing and transport of the body with confirmed or suspected COVID-19	<ul style="list-style-type: none"> <li>• Medical mask</li> <li>• Gloves</li> <li>• Gown</li> <li>• Eye protection (if risk of splash from organic material or chemicals).</li> <li>• Do not kiss the deceased</li> </ul>
Mortuary	Mortuary Staff	Mortuary Care	<ul style="list-style-type: none"> <li>• Medical mask</li> <li>• Gloves</li> <li>• Gown</li> <li>• Eye protection (goggles or face shield)</li> </ul>
	Pathologist	Autopsy	<ul style="list-style-type: none"> <li>• Respirator mask (N95 or FFP2 or FFP3)</li> <li>• Gloves</li> <li>• Gown</li> <li>• Eye protection (goggles or face shield)</li> <li>• Rubber Gloves</li> <li>• Boots or closed work shoes</li> </ul>
	Religious practitioners, family members or friends of the deceased	Religious Observation – care of the body after death	<ul style="list-style-type: none"> <li>• Medical mask</li> <li>• Gloves</li> <li>• Gown</li> <li>• Eye protection (if risk of splash from organic material or chemicals).</li> <li>• Do not kiss the deceased</li> </ul>

**Special considerations for rapid-response teams assisting with public health investigations**

Anywhere	Rapid response team investigators.	Remote interview of suspected or confirmed COVID-19 patients or their contacts.	<ul style="list-style-type: none"> <li>• No PPE if done remotely (e.g., by telephone or video conference).</li> <li>• Remote interview is the preferred method.</li> </ul>
		In-person interview of suspected or confirmed COVID-19 patients or contacts without direct contact.	<ul style="list-style-type: none"> <li>• Maintain spatial distance of at least 2m.</li> <li>• Medical mask</li> <li>• The interview should be conducted outside the house or outdoors, and confirmed or suspected COVID-19 patients should wear a medical mask if tolerated.</li> <li>• If it is necessary to enter the household environment, use a non - contact thermometer to confirm that the individual does not have a fever, and do not touch anything in the household environment.</li> </ul>

## **4. STEPS OF DONNING & DOFFING OF PPE**

### **4.1 Steps for donning PPE**

Don in the following order:

- Perform hand hygiene
- Gown
- Mask
- Goggles or face shield
- Gloves

### **4.2 Steps for doffing PPE**

- Doffing of PPE begins in the patient room at the exit.
- Position yourself close to the exit with a waste container and linen hamper within reach.

Doff PPE in the following order:

- Remove gown and gloves
- Perform hand hygiene
- Remove goggles or face shield
- Exit patient room (only PPE remaining is your mask)
- Perform hand hygiene
- Take off mask
- Perform hand hygiene

## **5. TAKE PRECAUTIONS TO KEEP FROM CONTAMINATING YOURSELF OR YOUR PPE**

- In addition to using the appropriate PPE, frequent hand hygiene and respiratory hygiene should always be performed. PPE should be discarded in an appropriate waste container after use, and hand hygiene should be performed before putting on and after taking off PPE.
- The number of visitors should be restricted. If visitors must enter a COVID-19 patient's room, they should be provided with clear instructions about how to put on and remove PPE and about performing hand hygiene before putting on and after removing PPE; this should be supervised by a healthcare worker.
- All rapid response team members must be trained in performing hand hygiene and how to put on and remove PPE to avoid self-contamination.

## 6. REFERENCES

1. WHO Interim guidance: Rational use of personal protective equipment for coronavirus disease (COVID-19) and considerations during severe shortages 6<sup>th</sup> April 2019. Available at: [https://apps.who.int/iris/bitstream/handle/10665/331695/WHO-2019-nCov-IPC\\_PPE\\_use-2020.3-eng.pdf](https://apps.who.int/iris/bitstream/handle/10665/331695/WHO-2019-nCov-IPC_PPE_use-2020.3-eng.pdf) Accessed: 8<sup>th</sup> April 2020
2. WHO Interim guidance: Advice on the use of masks in the context of COVID-19 6<sup>th</sup> April 2020. Available at: [https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-\(2019-ncov\)-outbreak](https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak) Accessed: 8<sup>th</sup> April 2020
3. <https://www.who.int/emergencies/what-we-do/prevention-readiness/disease-commodity-packages/dcp-ncov.pdf?ua=1>