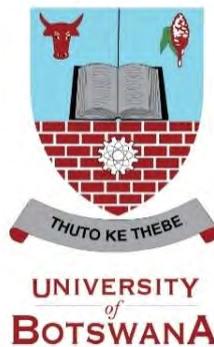




Republic of Botswana

MINISTRY OF HEALTH & WELLNESS

# **Botswana COVID-19 Guideline 7: Management of Healthcare Workers exposed to COVID-19**



**Version: 1.0 8<sup>th</sup> May 2020**

## FOREWORD

Coronavirus disease 2019 (COVID-19) is an infectious disease that has newly appeared in the human population. It may result in morbidity of different severities and may cause sustained community outbreak or proceed to a pandemic.

Globally, there has been an increase in the number of COVID-19 cases. On 30 January 2020, the Director-General of the World Health Organization, following the advice of the Emergency Committee convened under the International Health Regulations (2005), declared the current outbreak of COVID-19 a public health emergency of international concern (PHEIC). This called for global coordination and temporary recommendations were issued under International Health Regulations (IHR). Through the advice, all countries are called to prepare for containment by adopting the following strategies:

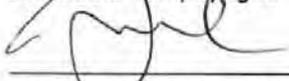
- i. active surveillance
- ii. early detection
- iii. case management
- iv. contact tracing

Botswana has trade and travel relations with many countries which will directly or indirectly impact the risk of transmission in the country. There is also limited capacity at Points of Entries (PoEs) which makes the country more vulnerable. There are social events such as mass gatherings, personal events and unsatisfactory health seeking behaviors hence risk of transmission is high in the event of the COVID-19 infection reaching the country.

It is in this view, that the country preparedness and response to COVID-19 outbreak has become imperative in the light of exponential increase in number of cases in China and the spread to multiple countries across continents. In order to strengthen the country preparedness and response efforts, there is need to document a systematic approach to coordinate the COVID-19 outbreak.

This document therefore presents comprehensive guideline in management of healthcare workers exposed to COVID-19.

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## Abbreviations and acronyms

COVID-19	Coronavirus disease-19
DHMT	District Health Management Team
HCW	Healthcare Worker
ICU	Intensive Care Unit
IPC	Infection Prevention and Control
MoHW	Ministry of Health and Wellness
PPE	Personal Protective Equipment
SARS-CoV-2	Severe Acute Respiratory Syndrome Coronavirus-2
WHO	World Health Organization

## 1. Scope

SARS-CoV-2 is transmitted between people through close contact and droplets. People most at risk of acquiring the disease are therefore those who are in contact with or care for patients with COVID-19. This inevitably places healthcare workers (HCWs) at high risk of infection. Protecting HCWs is of paramount importance.

The purpose of this guideline is to:

- Outline the **TYPES OF EXPOSURE** that may put a HCW at risk of acquiring COVID-19.
- Detail the **STEPS TO BE TAKEN IF A HCW BECOMES EXPOSED** to a suspected, probable or confirmed COVID-19 case.
- Describe **HOW TO APPROACH A HCW WITH SYMPTOMS** of COVID-19 including isolation, diagnosis, management and return to work.
- Provide a framework for the **ROUTINE MONITORING OF HCWS** working with suspected, probable and confirmed COVID-19 cases.

## 2. Types of exposure

A healthcare worker or other persons providing direct care to a suspected, probable or confirmed COVID-19 case or laboratory workers handling specimens from a COVID-19 case without wearing the minimum recommended Personal Protective Equipment (PPE) or using PPE incorrectly are defined as close contacts of COVID-19. Please refer to Guideline 2: Personal Protective Equipment.

In addition, the following are classified as exposure to COVID-19 when acquired during the care of a suspected, probable or confirmed COVID-19 case:

1. Splash of biological fluids/respiratory secretions in the mucous membranes of the eyes, mouth or nose.
2. Splash of biological fluids/respiratory secretions on non-intact skin.
3. Puncture or sharp accident with any material contaminated with biological fluid/respiratory secretions.

## 3. Steps to take if a HCW becomes exposed

A HCW who reports to have been exposed to COVID-19 should be interviewed by a senior staff member or designated Occupational Health professional using the World Health Organisation exposure risk assessment tool (Appendix 1)<sup>1</sup>.

This tool will enable the interviewer to determine if the HCW exposure is high-risk or low-risk.

### **High-risk exposure**

- Stop all healthcare interactions with patients immediately and go into quarantine. Please refer to Guideline 5: Quarantine and Isolation.
- HCWs should receive full-pay as usual during this time.
- Provide refresher training in Infection Prevention and Control (refer to SOP 1) and Personal Protective Equipment (refer to Guideline 2).

### **Low-risk exposure**

- HCWs are advised to self-monitor for symptoms, including temperature check, daily for 14 days (Appendix 2) after the last day of exposure.
- HCWs with a low-risk exposure are not required to undergo quarantine and can continue to work.
- HCWs should notify a senior member of staff and the DHMT if they develop symptoms of COVID-19 during this time.
- Provide refresher training in Infection Prevention and Control (refer to SOP 1) and Personal Protective Equipment (refer to Guideline 2).

## **4. How to approach a HCW with symptoms of COVID-19**

All HCWs reporting symptoms of COVID-19 should report their symptoms to a senior member of staff and cease clinical duties immediately.

Whether at work, home or elsewhere, they should apply a surgical mask, isolate themselves from others, and contact the DHMT to arrange testing and to commence contact tracing.

The subsequent investigation, management and approach to de-isolation should be carried out in accordance with Guideline 4: Interim clinical guidance for the management of COVID-19 in Botswana.

All HCW reporting symptoms of COVID-19 should also be interviewed using the WHO risk assessment tool, if not already done so, in order to identify any potential exposure and to outline areas for improvement in terms of IPC and PPE.

HCWs are able to return to work once they are clinically recovered and they have met the criteria to be released from isolation<sup>2</sup>.

HCWs should be paid their usual salary during this time.

Take care to note that HCWs may fall sick from non-COVID conditions. In these cases, follow usual sick leave procedures<sup>3</sup>.

## 5. Routine monitoring of HCWs

All healthcare workers should be monitored for COVID-19 in line with current guidance from the government. At the time of writing this includes twice daily monitoring of temperature whilst at their place of work. Symptom monitoring should also be performed daily. Individuals with a temperature  $\geq 37.4$  need to be assessed to determine if they meet the suspected case definition.

For individuals **working in areas where suspected, probable or confirmed COVID-19 cases are being managed** e.g. isolation facility, designated COVID-19 cohort area or treatment hospital, we recommend staff undergo PCR testing of combined nasopharyngeal and oropharyngeal swabs at least once per week. This does not apply to routine care staff caring for non-COVID patients.

## 6. References

<sup>1</sup>WHO. Risk assessment and management of the exposure of healthcare workers in the context of COVID-19. Interim guidance, 19<sup>th</sup> March 2020. Available from: <https://apps.who.int/iris/handle/10665/331496>

<sup>2</sup>CDC. Criteria for return to work for healthcare personnel with confirmed or suspected COVID-19 (Interim Guidance). US Centers for Disease Control. Available from: <https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/hcp-return-work.html>)

<sup>3</sup>NICD. Guidelines for symptom monitoring and management of essential workers for COVID-19 related infection. Available from: <https://www.nicd.ac.za/wp-content/uploads/2020/04/Guidance-for-symptom-monitoring-and-management-of-essential-staff-with-COVID-19-related-illness-final-2.pdf>

## Appendix 1. WHO Exposure Risk Assessment Tool

### Part 1: COVID-19 virus exposure risk assessment form for HCWs

1. Interviewer information	
A. Interviewer name:	
B. Interview date (DD/MM/YYYY):	__/__/____
C. Interviewer phone number:	
D. Does the HCW have a history of staying in the same household or classroom environment with a confirmed COVID-19 patient?	<input type="checkbox"/> Yes <input type="checkbox"/> No
E. Does the HCW have history of traveling together in close proximity (within 1 meter) with a confirmed COVID-19 patient in any kind of conveyance?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Yes, to questions 1 D – 1E is considered **community exposure to COVID-19**. HCWs should be managed as such. The management recommendations in Part 2: Management of health workers exposed to COVID-19 virus apply only to exposure in health care settings.

2. Health worker information	
A. Last name:	
B. First name:	
C. Age	
D. Sex:	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Prefer not to answer
E. City:	
F. Country:	
G. Contact details (phone number):	
H. Type of health care personnel:	<input type="checkbox"/> Medical doctor <input type="checkbox"/> Physician assistant <input type="checkbox"/> Registered nurse (or equivalent) <input type="checkbox"/> Assistant nurse, nurse technician (or equivalent) <input type="checkbox"/> Radiology /X-ray technician <input type="checkbox"/> Phlebotomist <input type="checkbox"/> Ophthalmologist <input type="checkbox"/> Physical therapist <input type="checkbox"/> Respiratory therapist <input type="checkbox"/> Nutritionist/dietitian <input type="checkbox"/> Midwife <input type="checkbox"/> Pharmacist <input type="checkbox"/> Pharmacy technician or dispenser <input type="checkbox"/> Laboratory personnel <input type="checkbox"/> Admission/reception clerk <input type="checkbox"/> Patient transporter <input type="checkbox"/> Catering staff <input type="checkbox"/> Cleaner <input type="checkbox"/> Other (specify):
I. Type of health care facility:	Tick all that apply: <input type="checkbox"/> Outpatient <input type="checkbox"/> Emergency <input type="checkbox"/> Medical unit <input type="checkbox"/> Intensive care unit <input type="checkbox"/> Cleaning services <input type="checkbox"/> Laboratory <input type="checkbox"/> Pharmacy <input type="checkbox"/> Other, specify:

3. Health worker interactions with COVID-19 patient information	
A. Date of health worker first exposure to confirmed COVID-19 patient:	Date (DD/MM/YYYY): ___/___/____ <input type="checkbox"/> Not known
B. Name of health care facility where patient received care:	
C. Type of health care setting:	<input type="checkbox"/> Hospital <input type="checkbox"/> Outpatient clinic <input type="checkbox"/> Primary health centre <input type="checkbox"/> Home care for patients with mild symptoms <input type="checkbox"/> Other (specify):
D. City:	
E. Country:	
F. Multiple COVID-19 patients in health care facility	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If yes, number of patients (approximate if exact number not known):

4. HCW activities performed on COVID-19 patient in health care facility	
A. Did you provide direct care to a confirmed COVID-19 patient?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
B. Did you have face-to-face contact (within 1 metre) with a confirmed COVID-19 patient in a health care facility?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
C. Were you present when any aerosol-generating procedures were performed on the patient? See below for examples - If yes, what type of procedure?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Tracheal intubation <input type="checkbox"/> Nebulizer treatment <input type="checkbox"/> Open airway suctioning <input type="checkbox"/> Collection of sputum <input type="checkbox"/> Tracheotomy <input type="checkbox"/> Bronchoscopy <input type="checkbox"/> Cardiopulmonary resuscitation (CPR) <input type="checkbox"/> Other (specify):
D. Did you have direct contact with the environment where the confirmed COVID-19 patient was cared for? E.g. bed, linen, medical equipment, bathroom etc	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
E. Were you involved in health care interaction(s) (paid or unpaid) in another health care facility during the period above?	<input type="checkbox"/> Other health care facility (public or private) <input type="checkbox"/> Ambulance <input type="checkbox"/> Home care <input type="checkbox"/> No other health care facility

If the health worker responds ‘Yes’ to any of the Questions 4A – 4D the health worker should be considered as being **exposed to COVID-19 virus**.

5. Adherence to IPC procedures during health care interactions	
For the following questions, please quantify the frequency with which you wore PPE, as recommended: 'Always, as recommended' means more than 95% of the time; 'Most of the time' means 50% or more but not 100%; 'occasionally' means 20% to under 50% and 'Rarely' means less than 20%.	
A. During a health care interaction with a COVID-19 patient, did you wear personal protective equipment (PPE)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
- If yes, for each item of PPE below, indicate how often you used it:	
- 1. Single-use gloves	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
- 2. Medical mask	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
- 3. Face shield or goggles/protective glasses	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
- 4. Disposable gown	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
B. During a health care interaction with the COVID-19 patient, did you remove and replace your PPE according to protocol (e.g. when medical mask became wet, disposed the wet PPE in the waste bin, performed hand hygiene, etc.)?	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally
C. During a health care interaction with the COVID-19 patient, did you perform hand hygiene before and after touching the COVID-19 patient (whether or not you were wearing gloves)?	<input type="checkbox"/> Rarely <input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
D. During a health care interaction with the COVID-19 patient, did you perform hand hygiene before and after any clean or aseptic procedure was performed (e.g. while inserting a peripheral vascular catheter, urinary catheter, intubation, etc.)?	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
E. During a health care interaction with the COVID-19 patient, did you perform hand hygiene after exposure to body fluid?	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
F. During a health care interaction with the COVID-19 patient, did you perform hand hygiene after touching the patient's surroundings (bed, door handle, etc.), regardless of whether you were wearing gloves?	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
G. During a health care interaction with the COVID-19 patient, were high-touch surfaces decontaminated frequently (at least three times daily)?	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely

6. Adherence to IPC measures when performing aerosol-generating procedures (e.g. tracheal intubation, nebulizer treatment, open airway suctioning, collection of sputum, tracheotomy, bronchoscopy, cardiopulmonary resuscitation (CPR), etc.).	
For the following questions, please quantify the frequency with which you wore PPE, as recommended: 'Always, as recommended' means more than 95% of the time; 'Most of the time' means 50% or more but not 100%; 'occasionally' means 20% to under 50% and 'Rarely' means less than 20%.	
A. During aerosol-generating procedures on a COVID-19 patient, did you wear personal protective equipment (PPE)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
- If yes, for each item of PPE below, indicate how often you used it:	
- 1. Single-use gloves	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
- 2. N95 mask (or equivalent respirator)	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
- 3. Face shield or goggles/protective glasses	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
- 4. Disposable gown	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely
- 5. Waterproof apron	<input type="checkbox"/> Always, as recommended <input type="checkbox"/> Most of the time <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely

7. Accidents with biological material	
A. During a health care interaction with a COVID-19 patient, did you have any type of accident with body fluid/respiratory secretions? See below for examples	<input type="checkbox"/> Yes <input type="checkbox"/> No
- If yes, which type of accident?	<input type="checkbox"/> Splash of biological fluid/respiratory secretions in the mucous membrane of eyes <input type="checkbox"/> Splash of biological fluid/respiratory secretions in the mucous membrane of mouth/nose <input type="checkbox"/> Splash of biological fluid/respiratory secretions on non-intact skin <input type="checkbox"/> Puncture/sharp accident with any material contaminated with biological fluid/respiratory secretions

#### Risk categorization of health workers exposed to COVID-19 virus

##### 1. High risk for COVID-19 virus infection

The HCW did not respond 'Always, as recommended' to Questions:

- 5A1 – 5G, 6A – 6F
- Or responded 'Yes' to 7A.

##### 2. Low risk for COVID-19 virus infection

All other answers

