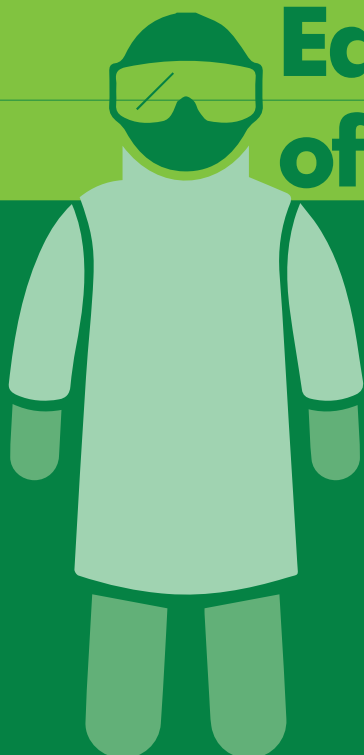


COVID-19



Rational Use of Personal Protective Equipment in the Care of COVID-19 Cases



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RATIONAL USE OF PERSONAL PROTECTIVE EQUIPMENT IN THE CARE OF COVID-19 CASES

This document guides health care workers, healthcare managers and IPC teams on the rational selection of personal protective equipment when handling a confirmed or suspected case of COVID-19.

Summary of key infection prevention and control (IPC) strategies to limit or prevent the transmission of COVID-19 in healthcare settings are as follows:

1. Ensure early triage, recognition, and source control at the entry point of the facility:

- Ensure the availability of a triage station at the entrance of the facility with trained personnel
- Request information on recent travel history and pre-existing disease profile of the patient to determine the patient's risk level
- Evaluate clinical symptoms of COVID-19 to ensure early recognition
- Ensure source control (isolation) of patients with suspected SARS COV-2 (COVID-19) infections in a designated area with a defined approach for further assessments

2. Application of standard precautions for all patients at the entry point of the facility:

None of the IPC protocols should be bypassed under any circumstances to reduce the likelihood of viral transmission to healthcare workers and other patients within the healthcare setting. These protocols include the following:

- Hand and respiratory hygiene for healthcare workers and patients
- Visibility of IEC materials that communicate the symptoms of COVID-19 and prevention measures, clearly stating that some cases may be asymptomatic
- Appropriate use of PPE, safe waste disposal practices, sterilisation of medical equipment and surfaces

3. Implementation of empiric additional precautions:

- Droplet and contact in the care of suspected and confirmed cases of COVID-19
 - o Confirmed cases of COVID-19 should be housed together with enough ventilation
 - o The physical distancing between all patients should be adhered to in all facilities with at least 1-meter distance
 - o Appropriate PPE should be utilised based on a risk assessment (*Refer to Table 1*)
 - o Proper disposal and waste management of all PPE, equipment, and consumables used on patients

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- o Where equipment must be re-used, such equipment should be properly disinfected. Otherwise, single-use/disposable equipment should be utilised
- o Maintain visitors log to record details of all visitors into COVID-19 wards (including health care workers) to support with contact-tracing when necessary
- o Disinfect all surfaces that patients come in contact with
- Airborne precautions (in a certain situation when aerosol-generating procedures are carried out on COVID-19 patients)
 - o Appropriate PPE should be utilised (e.g. eye protection such as a facemask, long sleeve/water-proof gowns)
 - o All procedures should be performed in rooms with sufficient ventilation
 - o For aerosol-generating procedures, limit the number of people present

4. Implementing administrative controls:

Healthcare settings require infrastructure to address COVID-19 cases such as adequate PPE, sensitisation materials for patients and health care workers, adequate health care worker training, designated waiting for areas for asymptomatic patients, isolation facilities for confirmed cases amongst others.

5. Use of environmental and engineering controls such as adequate spatial separation of patients, appropriate ventilation and appropriate cleaning of the environment

- **Ventilation:** Natural ventilation may be utilised. For artificial ventilation, it is appropriate to use of filters for air conditioning
- **Spatial separation:** At least 1 m of physical distancing should be observed between patients
- **Cleaning:** Thorough cleaning and disinfection of surfaces as well as laundry protocols
- Frequent monitoring of the adherence to necessary standards for the above

Note: The choice and combination of PPE ensemble to be worn in dealing with COVID-19 patients should be based on a careful risk assessment that considers the risk of exposure and extent of contact anticipated with respiratory droplets, blood, body fluids, and/or open skin. Where possible, it may also be advisable to bundle similar services to reduce inefficient use of PPE however the quest to minimise inefficient use of PPE should not come at the expense of standard protocols and precaution.

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Table 1: PPE recommendations for the care and management of suspected or confirmed cases of COVID-19

AREAS WITHIN THE HEALTH FACILITY	TARGET PERSONNEL	ACTIVITY	TYPE OF PPE OR IPC PRECAUTION
Administrative areas	All staff, including clinical staff	Administrative tasks	No PPE required Hand hygiene Spatial distance
Other areas of patient transit (e.g. wards, corridors)	All staff, including healthcare workers	Any activity that does not involve close contact with COVID-19 patients	No PPE required Hand hygiene Spatial distance
OUT-PATIENT SETTINGS			
Triage	Healthcare workers	Preliminary screening not involving direct contact	Maintain a spatial distance of at least 1 metre no PPE required Hand hygiene
	Patients with respiratory symptoms	Any	Provide a medical mask to the patient to use immediately Maintain a spatial distance of >1 metre Patient to perform hand hygiene if not seriously distressed
	Patients without respiratory symptoms	Any	No PPE required Hand hygiene Spatial distance

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AREAS WITHIN THE HEALTH FACILITY	TARGET PERSONNEL	ACTIVITY	TYPE OF PPE OR IPC PRECAUTION
Consultation room	Health care workers	Physical examination of a patient with respiratory symptoms	Medical mask Protective gown Gloves Eye protection (goggles/ face shields)
	Healthcare workers	Physical examination of patients without respiratory symptoms	PPE according to standard precautions and risk assessment
	Patients with respiratory symptoms	Any	Provide medical mask if tolerated
	Patients without respiratory symptoms	Any	No PPE required
	Cleaners	Cleaning processes after and between consultations with patients with respiratory symptoms	Medical mask Cleaning uniform aprons Heavy-duty gloves Eye protection (if the risk of splash from organic material or chemicals is anticipated) Covered work shoes or boots

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AREAS WITHIN THE HEALTH FACILITY	TARGET PERSONNEL	ACTIVITY	TYPE OF PPE OR IPC PRECAUTION
Waiting room/ area	Patients with respiratory symptoms	Any	<p>Provide a medical mask</p> <p>Immediately move the patient to a separate area away from others; if this is not feasible, ensure the spatial distance of at least 1 metre from other patients</p> <p>Give priority attention</p>
	Patients without respiratory symptoms	Any	<p>No PPE required</p> <p>Hand hygiene should be encouraged</p>
Laboratory	Lab technician	Manipulation of respiratory samples	<p>Medical mask</p> <p>Lab gown ± apron</p> <p>Gloves</p> <p>Eye protection (goggles or face shield)</p>
	Lab technician	Collection of other samples	<p>Lab coat/gown</p> <p>Gloves</p>
Other service access points e.g. radiology, physiotherapy, etc	Service provider	Non-respiratory manipulation	<p>Patient to also put on a medical mask</p> <p>Gloves</p> <p>Medical mask</p> <p>Hand hygiene</p>

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Table 1: PPE recommendations for the care and management of suspected or confirmed cases of COVID-19

AREAS WITHIN THE HEALTH FACILITY	TARGET PERSONNEL	ACTIVITY	TYPE OF PPE OR IPC PRECAUTION
IN-PATIENT SETTINGS			
Patient room	Healthcare workers	Providing direct care to COVID-19 patients	Medical mask Scrubs and gown Gloves Eye protection (goggles or face shield)
		Aerosol-generating procedures performed on COVID-19 patients	Respirator N95 or FFP2 Standard or equivalent gown Scrubs and protective gown Gloves Eye protection (goggles or face shield) Apron
	Cleaners	Entering the room of COVID-19 patients Cleaning toilets and shower rooms	Medical mask Gown Heavy-duty gloves Face shields (if the risk of splash from organic material or chemicals) Covered work shoes or boots
	Caregiver when necessary	Entering the room of a COVID-19 patient	Medical mask Gown Gloves
	All other hospital staff, including healthcare providers	Any activity that does not involve contact with COVID-19 patients	No PPE required

References

1. European Centre for Disease Prevention and Control. Personal protective equipment (PPE) needs in healthcare settings for the care of patients with suspected or confirmed 2019-nCoV. ECDC: Stockholm; 2020.
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3. World Health Organization. Rational use of personal protective equipment (PPE) for coronavirus disease (COVID-19) Interim guidance 19 March, 2020.
4. <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/covid-19-personal-protective-equipment-ppe> accessed 11 April, 2020.