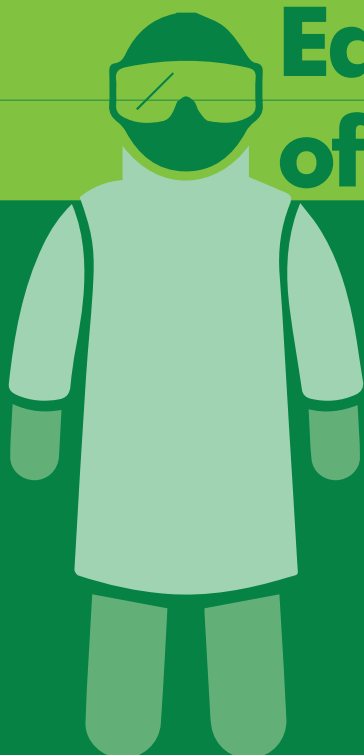


COVID-19



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



**NCDC Toll-free Number: 080097000010**



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

- Where equipment must be re-used, such equipment should be properly disinfected. Otherwise, single-use/disposable equipment should be utilised
- Maintain visitors log to record details of all visitors into COVID-19 wards (including health care workers) to support with contact-tracing when necessary
- 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)
  - Appropriate PPE should be utilised (e.g. eye protection such as a facemask, long sleeve/water-proof gowns)
  - All procedures should be performed in rooms with sufficient ventilation
  - 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.

**RATIONAL USE OF PERSONAL PROTECTIVE EQUIPMENT IN THE CARE OF COVID-19 CASES***Table 1: PPE recommendations for the care and management of suspected or confirmed cases of COVID-19*

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

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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
<b>Consultation room</b>	<b>Health care workers</b>	<b>Physical examination of a patient with respiratory symptoms</b>	<b>Medical mask Protective gown Gloves Eye protection (goggles/ face shields)</b>
	<b>Healthcare workers</b>	<b>Physical examination of patients without respiratory symptoms</b>	<b>PPE according to standard precautions and risk assessment</b>
	<b>Patients with respiratory symptoms</b>	<b>Any</b>	<b>Provide medical mask if tolerated</b>
	<b>Patients without respiratory symptoms</b>	<b>Any</b>	<b>No PPE required</b>
	<b>Cleaners</b>	<b>Cleaning processes after and between consultations with patients with respiratory symptoms</b>	<b>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</b>

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

<b>AREAS WITHIN THE HEALTH FACILITY</b>	<b>TARGET PERSONNEL</b>	<b>ACTIVITY</b>	<b>TYPE OF PPE OR IPC PRECAUTION</b>
<b>Waiting room/ area</b>	<b>Patients with respiratory symptoms</b>	<b>Any</b>	<p><b>Provide a medical mask</b></p> <p><b>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</b></p> <p><b>Give priority attention</b></p>
	<b>Patients without respiratory symptoms</b>	<b>Any</b>	<p><b>No PPE required</b></p> <p><b>Hand hygiene should be encouraged</b></p>
<b>Laboratory</b>	<b>Lab technician</b>	<b>Manipulation of respiratory samples</b>	<p><b>Medical mask</b></p> <p><b>Lab gown ± apron</b></p> <p><b>Gloves</b></p> <p><b>Eye protection (goggles or face shield)</b></p>
	<b>Lab technician</b>	<b>Collection of other samples</b>	<p><b>Lab coat/gown</b></p> <p><b>Gloves</b></p>
<b>Other service access points e.g. radiology, physiotherapy, etc</b>	<b>Service provider</b>	<b>Non-respiratory manipulation</b>	<p><b>Patient to also put on a medical mask</b></p> <p><b>Gloves</b></p> <p><b>Medical mask</b></p> <p><b>Hand hygiene</b></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
<b>IN-PATIENT SETTINGS</b>			
<b>Patient room</b>	<b>Healthcare workers</b>	<b>Providing direct care to COVID-19 patients</b>	<b>Medical mask Scrubs and gown Gloves Eye protection (goggles or face shield)</b>
		<b>Aerosol-generating procedures performed on COVID-19 patients</b>	<b>Respirator N95 or FFP2 Standard or equivalent gown Scrubs and protective gown Gloves Eye protection (goggles or face shield) Apron</b>
	<b>Cleaners</b>	<b>Entering the room of COVID-19 patients Cleaning toilets and shower rooms</b>	<b>Medical mask Gown Heavy-duty gloves Face shields (if the risk of splash from organic material or chemicals) Covered work shoes or boots</b>
	<b>Caregiver when necessary</b>	<b>Entering the room of a COVID-19 patient</b>	<b>Medical mask Gown Gloves</b>
	<b>All other hospital staff, including healthcare providers</b>	<b>Any activity that does not involve contact with COVID-19 patients</b>	<b>No PPE required</b>



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

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