

MINISTRY OF HEALTH

GUIDANCE ON THE RATIONAL USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) FOR COVID-19 IN HEALTH CARE SETTINGS

UPDATED 28TH MAY 2020

PERSONAL PROTECTIVE EQUIPMENT IN THE HEALTH CARE SETTINGS

Personal Protective equipment (PPE) should be used based on the risk of exposure (e.g., type of activity) and the transmission dynamics of the pathogen (e.g., contact, droplet or aerosol). The following observations should be ensured for rational use of PPE:

Minimize the need for PPE

- Consider using telemedicine to evaluate suspected cases of COVID-19, thus minimizing the need for these persons to go to health care facilities for evaluation.
- Use physical barriers to reduce exposure to the COVID-19 virus, such as glass or plastic windows. This approach can be implemented in areas of the health care setting where patients will first present, such as triage areas, the registration desk at the emergency department, or at the pharmacy window where medication is collected.
- Restrict health care workers from entering the rooms of COVID-19 patients if they are not involved in direct care.
- Consider bundling activities to minimize the number of times a room is entered (e.g. check vital signs during medication administration or have food delivered by health care workers while they are performing other care) and plan which activities will be performed at the bedside.
- Visitors will not be allowed but if this is not possible, restrict the number of visitors to areas where COVID-19 patients are being isolated; restrict the amount of time visitors are allowed to spend in the area; and provide clear instructions about how to

put on and remove PPE and perform hand hygiene to ensure that visitors avoid self-contamination. Such visitors should wear a face mask.

The following aspects are new considerations in this guidance

- Postpone elective, non-urgent procedure, and hospitalizations, reduce frequency of visits for chronic patients, apply telemedicine and telephone solutions where possible so that health care workers, wards, and PPE can be redistributed to services in which COVID-19 patients receive care.
- Cohort confirmed COVID-19 patients without coinfection with other transmissible microorganisms in the same room in order to streamline the workflow and facilitate extended use of PPE (see below).
- Designate dedicated health care workers/teams only for COVID-19 patient care so that they can use PPE for longer periods of time (extended use of PPE), if necessary (see considerations section below for details).
- Restrict the number of health care workers from entering the rooms of COVID-19 patients if they are not involved in providing direct care. Streamline the workflow and reduce to a safe level care that requires face-to-face interaction between health worker and patient. To do so, consider bundling activities to minimize the number of times a room is entered (e.g. check vital signs during medication administration or have food delivered by health care workers while they are performing other care) and plan which activities will be performed at the bedside.
- Consider using specific PPE only if in direct close contact with the patient or when touching the environment (e.g. wearing a medical mask and face shield, not using gloves or gown over the scrub suit, if entering the patient's room only to ask questions or make visual checks).

Ensure PPE use is rational and appropriate

PPE should be used based on the risk of exposure (e.g. type of activity or procedure) and the transmission dynamics of the pathogen (e.g. contact, droplet or aerosol). The overuse of PPE will have a further impact on supply shortages. Observing the following recommendations will ensure rational use of PPE.

- The type of PPE used when caring for COVID-19 patients will vary according to the setting, type of personnel, and activity (Table 1)
- Health care workers involved in the direct care of patients should use PPE according to indications
- Specifically, for aerosol-generating procedures and support treatments (tracheal intubation, noninvasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation, and bronchoscopy) health care workers should use respirators, eye protection, gloves and gowns; aprons should also be used if gowns are not fluid resistant.
- Among the general public, persons with symptoms suggestive of COVID-19 or those caring for COVID-19 patients at home should receive medical masks and instructions on their use. For additional information, see Home care for patients with COVID-19 presenting with mild symptoms and management of their contacts.

RISK ASSESSMENT FOR PPE SELECTION		IF YES
Perform a quick risk assessment by asking yourself the following questions	1. Am I at risk of exposure to blood or body fluids?	Q 2-5
	2. Is my face at risk?	Face Protection
	3. Are my hands at risk?	Gloves
	4. Are my clothes at risk?	Gown/Apron
	5. Is the patient known or suspected to have infectious disease	Additional precautions e.g. Coverall, N95 respirator

TABLE 1: RECOMMENDED TYPE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) TO BE USED IN THE CONTEXT OF COVID-19 DISEASE, ACCORDING TO THE TYPE OF ACTIVITY

POINTS OF ENTRY (POEs)

Setting	Target personnel or patients	Activity	Type of PPE or procedure
Administrative areas	All staff	Any	Surgical Mask
Screening area	P.O.E Staff and healthcare workers	First screening (temperature measurement) not involving direct contact	<ul style="list-style-type: none"> • Maintain spatial distance of at least 1.5 m. • Surgical mask
		Second screening (i.e., interviewing passengers with fever for clinical symptoms suggestive of COVID-19 disease and travel history).	<ul style="list-style-type: none"> • N95 respirator • Disposable gown • Gloves • Googles/face shields
Screening Area	Cleaners	Cleaning the area where passengers are being screened.	<ul style="list-style-type: none"> • Spatial distancing • Surgical Mask • Waterproof Gown/ Apron • Heavy duty gloves • Eye protection (if risk of splash from organic material or chemicals). • Gumboots
Temporary quarantine area	P.O.E Staff and healthcare workers	Entering the quarantine area, but not providing direct assistance.	<ul style="list-style-type: none"> • Maintain spatial distance of at least 1.5 m. • Surgical mask
		Assisting passenger being transported to a healthcare facility.	<ul style="list-style-type: none"> • N95 respirator • Disposable impermeable Gown • Gloves • Eye protection
	Cleaners	Cleaning temporary quarantine area	<ul style="list-style-type: none"> • Surgical masks • Disposable impermeable Gown and Apron • Heavy duty gloves • Eye protection • Gumboots

	Patients	all	<ul style="list-style-type: none"> • Surgical mask • Spatial distance
Ambulance or transfer vehicle	Healthcare workers	Transporting suspected COVID-19 patients to the quarantine facilities.	<ul style="list-style-type: none"> • N95 respirator if sharing same compartment otherwise use surgical mask • Disposable impermeable Gown • Gloves • Eye protection
		Transporting confirmed COVID-19 patients to the isolation facilities.	<ul style="list-style-type: none"> • N95 respirator if sharing same compartment otherwise use surgical mask • Disposable impermeable Gown • Gloves • Eye protection
	Driver	Involved only in driving the patient with suspected/confirmed COVID-19 disease and the driver's compartment is separated from the COVID-19 patient.	<ul style="list-style-type: none"> • Maintain spatial distance of at least 1.5m. • Surgical mask
		Assisting with loading or unloading patient with suspected/confirmed COVID-19 disease.	<ul style="list-style-type: none"> • N95 respirator • Disposable impermeable Gown • Gloves • Eye protection
		No direct contact with patient with suspected/confirmed COVID-19, but no separation between driver's and patient's compartments.	<ul style="list-style-type: none"> • N95 respirator • Disposable impermeable Gown • Gloves • Eye protection
	Patient with suspected/confirmed COVID-19 disease.	Transport to the referral healthcare facility.	Surgical mask if tolerated

	Cleaners of conveyances	Cleaning after and between transport of patients with suspected/confirmed COVID-19 disease to the referral healthcare facility.	<ul style="list-style-type: none"> • Surgical mask • Impermeable • Gown/Apron • Heavy duty gloves • Eye protection • Gumboots
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TABLE 2: SPECIAL CONSIDERATIONS FOR RAPID RESPONSE TEAMS ASSISTING WITH PUBLIC HEALTH INVESTIGATIONS AT THE COMMUNITY

Setting	Target personnel or patients	Activity	Type of PPE or procedure
Field	Rapid response team investigators.	Remote Interview suspected or confirmed COVID-19 patients or their contacts.	No medical PPE Face Mask as per National Regulation
			Remote interview is the preferred method.
Field	Rapid response team investigators.	In-person interview of suspected or confirmed COVID-19 patients without direct contact.	<ul style="list-style-type: none"> • N95 respirator • Maintain spatial distance of at least 1.5 m.
			The interview should be conducted outside the house or outdoors, and confirmed or suspected COVID-19 patients should wear a surgical mask if tolerated.
Field	Rapid response team investigators.	In-person interview with asymptomatic contacts of COVID-19 patients.	<ul style="list-style-type: none"> • Spatial distance 1.5m • N95 Mask

			<p>The interview should be performed outside the house or outdoors. If it is necessary to enter the household environment, use a thermal imaging camera to confirm that the individual does not have a fever, maintain spatial distance of at least 1.5 m and do not touch anything in the household environment.</p>
Field	Rapid response team	Sample collection from contacts of COVID-19 patients	<ul style="list-style-type: none"> • N95 respirator • Coveralls • Gloves • Eye protection

TABLE 3: OUTPATIENT FACILITIES

Setting	Target personnel or patients	Activity	Type of PPE or procedure
Screening	Health care workers	Preliminary screening not involving direct contact	<ul style="list-style-type: none"> • Maintain spatial distance of at least 1.5 m • Surgical mask
	All patients	Any	Face mask
Triage (History taking and Physical examination)	All patients	Any	<ul style="list-style-type: none"> • Face mask • Spatial distance
	Healthcare workers triaging Patients with respiratory symptoms.	Any	<ul style="list-style-type: none"> • N95 respirator • Eye protection • Impermeable Gown/apron • Gloves
	Healthcare workers triaging Patients without respiratory symptoms.	Any	<ul style="list-style-type: none"> • Surgical mask/ N95 if conducting physical exam • Impermeable Gown/apron • Gloves

	Cleaners	After and between consultations with patients with respiratory symptoms.	<ul style="list-style-type: none"> • Surgical mask • Disposable impermeable Gown and Apron • Heavy duty gloves • Eye protection (if risk of splash from organic material or chemicals). • Gumboots
Waiting room	Patients with respiratory symptoms.	Any	<ul style="list-style-type: none"> • Spatial distance • Surgical mask
			<ul style="list-style-type: none"> • Immediately move the patient to a separate area away from others; if this is not feasible, ensure spatial distance of at least 1.5 m from other patients.
	Patients without respiratory symptoms.	Any	<ul style="list-style-type: none"> • Spatial distancing • Face mask
Administrative areas	All staff, including healthcare workers.	Administrative tasks	<ul style="list-style-type: none"> • Spatial distancing • Face mask

Setting	Target personnel or patients	Activity	Type of PPE or procedure
Healthcare facilities Inpatient facilities Isolation room	Healthcare workers	Providing direct care to COVID-19 patients.	<ul style="list-style-type: none"> • N-95 mask • Coverall • Gloves • Eye protection (goggles or face shield). • Boots
		Aerosol-generating procedures performed on COVID-19 patients.	<ul style="list-style-type: none"> • N-95 mask • Coverall • Gloves • Eye protection (goggles or face shield). • Boots

	Cleaners	Entering the room of COVID-19 patients.	<ul style="list-style-type: none"> • N-95 mask • Coverall • Gloves • Eye protection (goggles or face shield). • Boots
	Visitors (Highly discouraged)	Entering the room of a COVID-19 patient	<ul style="list-style-type: none"> • N95 • Coverall • Gloves • Eye protection (goggles or face shield). • Boots
Other areas of patient transit (e.g., wards, corridors).	All staff, including healthcare workers.	Any activity that does not involve contact with COVID-19 patients.	<ul style="list-style-type: none"> • Spatial distancing • Surgical mask
Screening and Triage	Health care workers	Screening and triage involving direct contact	<ul style="list-style-type: none"> • N95 • Gown • Gloves
	Patients without respiratory symptoms.	Any	Face mask
	Patients with respiratory symptoms.	Any	<ul style="list-style-type: none"> • Maintain physical distance of at least 1.5m in between patients • Provide surgical mask
Laboratory	Lab technologist	Manipulation of respiratory samples.	<ul style="list-style-type: none"> • N95 masks • Gown • Gloves • Eye protection
Administrative areas	All staff, including healthcare workers.	Administrative tasks that do not involve contact with COVID-19 patients.	<ul style="list-style-type: none"> • Surgical mask* • Spatial distance • * consider face masks for those not in direct contact with patients eg kitchen staff, stores

Community			
Home	Patients with respiratory symptoms.	Any	<ul style="list-style-type: none"> • Surgical mask • Maintain spatial distance of at least 1.5 m.

	Caregiver	Entering the patient's room, but not providing direct care or assistance.	Surgical mask Spatial distancing
	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"> • Gloves • Gown • Surgical Mask • Apron (if risk of splash) • Eye protection
	Healthcare workers	Providing direct care or assistance to a COVID-19 patient at home	<ul style="list-style-type: none"> • N95 respirator • Gown • Gloves • Eye protection
Public areas (e.g., schools, shopping malls, bus and train Stations, parliament).	Individuals without respiratory symptoms	Any	Face mask Spatial distancing


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.

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