

Guidelines on rational use of PPE for management and control of

COVID- 19

Introduction:


There is a high possibility of getting patients with COVID-19 into healthcare facilities with different clinical manifestations, when considering the current situation in Sri Lanka.

The indications for PPE should be based on the setting, target audience, risk of exposure (e.g. type of activity) and the transmission dynamics of the pathogen (e.g. contact, droplet, or airborne).

Setting	Target personnel or patients	Activity	Type of PPE or procedure
Health care facilities			
Triage	Health care workers	Preliminary screening not involving direct contact Use of no touch thermometers & questioning	<ul style="list-style-type: none">• Medical (Surgical) mask• Maintain spatial distance of at least 1 meter• Physical separations/barriers• Face shield –if distancing & barriers not possible• Hand hygiene
	Patients with or without respiratory symptoms	Preliminary screening not involving direct contact With no touch thermometers & questioning	<ul style="list-style-type: none">• Maintain spatial distance of at least 1 meter• Validated nonmedical fabric mask or a medical mask• Hand hygiene
Sample collection for RAT & PCR	Healthcare workers	Performing nasopharyngeal / oropharyngeal swabbing	<ul style="list-style-type: none">• *Respirator• Eye Protection (goggles or face shield)• Impermeable gown or gown with apron• Gloves• Perform hand hygiene in between patients
Emergency Treatment Unit	Health care workers	Providing care for all the patients who require aerosol generating procedures (**AGP)	<ul style="list-style-type: none">• Separate areas for AGP with better ventilation, or natural ventilation with windows open• To have allocated staff for AGP procedures• *Respirators• Eye Protection (goggles or face shield)• Gloves

			<ul style="list-style-type: none"> • Water proof gown or gown with water proof apron • Gown should be removed when leaving the room
Waiting room	Patients with respiratory symptoms Patients without respiratory symptoms	Waiting	<ul style="list-style-type: none"> • Medical mask or validated nonmedical fabric mask by all patients (unless patient cannot tolerate the mask or need O2 etc.) • Ensure spatial distance of at least 1 meter from other patients
Patient transit (e.g. to the ward or in-between departments/wards)	Health care workers	Taking any patient for a Xray or other investigations	<ul style="list-style-type: none"> • Medical mask • If the patient is on O2 mask - face shield, gown & gloves • Gloves not indicated unless patient handling needed • Hand hygiene
Entrance/corridors/all areas	Security personnel	When performing security related checking etc	<ul style="list-style-type: none"> • Maintain spatial distance of at least 1 meter • Medical mask • Gloves if body checks are needed (avoid as much as possible) • Hand hygiene
• Patient rooms/wards			
Inpatient wards, rooms	Healthcare workers	Providing care in settings without (**AGP) aerosol generating procedures performed	<ul style="list-style-type: none"> • Medical mask • Eye Protection (goggles or face shield) (if risk of splash from organic material or chemicals) • Hand hygiene in between patients
		Providing care where (**AGP) aerosol generating procedures are performed	<ul style="list-style-type: none"> • *Respirator • Impermeable gown • Gloves • Eye Protection (goggles or face shield) • Hand hygiene

Inpatient facilities for COVID-19 patients			
1. Wards with asymptomatic patients	Health care workers	With direct care without **AGP in well ventilated wards with natural airflow	<ul style="list-style-type: none"> • Medical mask • Eye protection (goggles or face shield) • Gown • Hand hygiene • Gloves- depending on the care given
	Health care workers	**Aerosol generating procedures are performed on COVID - 19 patients -with high flow oxygen, nebulisation	<ul style="list-style-type: none"> • *Respirator • Eye protection (goggles or face shield) Impermeable gown • Gloves
2. Wards with symptomatic patients	Healthcare workers	In wards where COVID 19 patients are managed, **AGP are frequently done	<ul style="list-style-type: none"> • *Respirator • Gown or coverall • Gloves • Eye protection (goggles or face shield)
	Cleaning staff	Cleaning the room of COVID-19 patients	<ul style="list-style-type: none"> • *Respirator • Eye protection Impermeable gown • Heavy duty gloves • Boots or closed work shoes and shoe covers • Masks and eye protection can be shared between rooms of confirmed cases or between rooms of suspected cases)
ICU	Health care workers	Providing care	<ul style="list-style-type: none"> • *Respirator • Eye Protection (goggles or face shield Impermeable gown • Gloves
During patient transport for surgeries & back	Staff involved in patient transport	During transportation of patient with COVID-19 to and from surgery	<ul style="list-style-type: none"> • Medical mask • Eye protection (goggles or face shield) Perform hand hygiene
		Assisting patient with COVID-19 from bed to transport or from trolley to bed	<ul style="list-style-type: none"> • Medical mask • Eye protection (goggles or face shield) • Gown • Gloves • Perform hand hygiene

Other hospital facilities			
Laboratory	MLT	Handling specimens other than respiratory samples	<ul style="list-style-type: none"> • Medical mask • Standard precautions should be followed always (No special precautions needed for COVID 19)
	MLT	Processing respiratory samples:(for sputum microbiology & extraction) Specimen handling for molecular testing requires biosafety level BSL 2 or equivalent facilities	Laboratories with BSL-2 but not certified - use <ul style="list-style-type: none"> • *Respirators • Impermeable gown • Gloves • +/-Head cover Laboratories with certified BSL-2 <ul style="list-style-type: none"> • Medical mask
Sample transportation	Health care workers	Transporting specimens to laboratories	<ul style="list-style-type: none"> • Medical mask • Gloves
Administrative areas	All staff, including health care workers	Any activity that does not involve contact with patients	<ul style="list-style-type: none"> • Medical or validated nonmedical fabric mask • Maintain spatial distance of 1 meter • Well ventilated with natural air (windows opened with air conditioners switched off when feasible)
Other areas (E.g. corridors and tea rooms)	All staff, including health care workers	Any activity that does not involve contact with patients	<ul style="list-style-type: none"> • Medical or validated nonmedical fabric mask • Maintain spatial distance of 1 meter • Do not have meals together • Keep the area well ventilated • Eat alone • In between use, keep the mask in a clean paper bag or on a clean piece of paper/tissue  <ul style="list-style-type: none"> • Use own cutleries

Operating theatre e.g. operating theatre, surgical procedure room, dental surgeries			
Operating theatre	Anaesthetist & the surgical team	During spinal or local anesthesia /If the surgery has no aerosol generating procedure	<ul style="list-style-type: none">• Medical mask• Eye protection (goggles or face shield)• Gown• Gloves• Surgical hood or cap• Covered shoes and fluid resistant shoe cover or boots
		Where aerosol generating procedure are performed	<ul style="list-style-type: none">• *Respirator• Eye protection (goggles or face shield)• Impermeable gown or gown with water proof apron• Gloves• Surgical hood or cap• Covered shoes and fluid resistant shoe cover or boots
Outpatient facilities			
Consultation rooms	Health care worker	Physical examination of patients	<ul style="list-style-type: none">• Medical mask• Face shield• Hand-hygiene
	Cleaners	After and between consultations	<ul style="list-style-type: none">• Medical mask• Heavy duty gloves• Eye protection (if risk of splash from organic material or chemicals)• Closed work shoes• Perform hand hygiene
Points of entry / transfers between health care facilities			
Ambulance or transit vehicle	Health care workers	Transporting suspected COVID-19 patients to the referral health care facility in the same compartment of the ambulance (When no AGP performed and/or patient is asymptomatic)	<ul style="list-style-type: none">• Medical mask• Gown• Gloves• Eye protection• With open windows & air conditioners off• Perform hand hygiene
	Driver	Involved only in driving the patient with suspected COVID-19 disease , and the driver’s compartment is separated from the patient	<ul style="list-style-type: none">• Maintain spatial distance of 1 meter• Medical mask to be worn continuously• Gown not indicated (WHO guidelines)• Perform hand hygiene

			<ul style="list-style-type: none"> • With open windows & air conditioners off
		No direct contact with patient with suspected or confirmed COVID-19, but no separation between driver's and patient's compartments	<ul style="list-style-type: none"> • Medical mask • Gown not indicated (WHO guidelines) • With opened windows & air conditioners off • Perform hand hygiene
		No direct contact with patient with suspected or confirmed COVID-19, but no separation between driver's and patient's compartments Patient requiring oxygen or other **AGP	<ul style="list-style-type: none"> • *Respirator • Gown not indicated (WHO guidelines) • With opened windows & air conditioners off • Perform hand hygiene
	Healthcare worker	Assisting with loading or unloading patient with suspected COVID-19	<ul style="list-style-type: none"> • Medical mask • Gown • Gloves • Eye protection • Perform hand hygiene
	Patient with suspected COVID-19 and any accompanying person e.g. mother of a paediatric patient	Accompanying	<ul style="list-style-type: none"> • Medical mask
	Cleaners	Cleaning after and between transport of patients suspected COVID-19 to the referral health care facility	<ul style="list-style-type: none"> • Medical mask • Impermeable gown • Heavy duty gloves • Eye protection (if risk of splash from organic material or chemicals) • Boots or closed work shoes • Hand hygiene

Immunization Clinics/ Antenatal Clinics/ Well women Clinics/ Healthy Life Style Clinics			
Waiting room/ clinic area	Parents/ Clients		<ul style="list-style-type: none"> Validated nonmedical fabric mask or a medical mask
	Health care worker	Physical examination /performing procedures	<ul style="list-style-type: none"> Medical mask Face shield Other PPE according to standard precautions and risk assessment. Perform hand hygiene
Home visits including post-partum mothers			
Homes of patients	Health care worker (Community care – midwife/PHI)	Entering the patient’s room, but not providing direct care or assistance/ patient wearing the mask	<ul style="list-style-type: none"> Maintain physical distance of at least 1 meter Medical mask Perform hand hygiene
		Physical examination /performing procedures	<ul style="list-style-type: none"> Medical mask Eye protection (shield) Gown Gloves Perform hand hygiene
Special considerations for rapid-response teams assisting with public health investigations (e.g. contact tracing, screening follow-up, outbreak investigations)			
Anywhere	Rapid-response team investigations Public health investigation teams	In-person interview of suspected COVID-19 patients or contacts of COVID-19 patients	<ul style="list-style-type: none"> Medical mask Maintain spatial distance of at least 1 meter Interview should be conducted outside the house or outdoors Suspected person should wear a validated nonmedical fabric mask or a medical mask Perform hand hygiene
Anywhere	PHI	Performing nasopharyngeal / oropharyngeal swabbing	<ul style="list-style-type: none"> *Respirator Eye Protection (goggles or face shield) Impermeable gown or gown with apron Gloves Perform hand hygiene

	Teams supporting general COVID prevention measures (health and non-health) (PHIs, Police & armed forces) E.g.: security related functions, supporting public health investigation teams	Security related duties that require body contact such as having to encounter person/s	<ul style="list-style-type: none"> • Medical mask • Face shield • Gown/Impermeable gown • Gloves
Special considerations for vaccinations (Alongside all considerations as referred to in Guidance on developing a national deployment and vaccination plan for COVID-19 vaccine)			
Anywhere	Vaccinator	Vaccination	<ul style="list-style-type: none"> • Medical mask • Face shield • • Perform hand hygiene
	General public	Vaccination	<ul style="list-style-type: none"> • Validated nonmedical fabric mask or a medical mask
Special considerations for points of entry at airports, ports and ground crossing as applicable			
Administrative areas	Staff	Any indoor setting where ventilation is known to be poor, cannot be assessed, or the ventilation system is not properly maintained, regardless of whether physical distancing can be maintained	<ul style="list-style-type: none"> • Medical mask • Perform hand hygiene • Maintain physical distance of at least 1 metre (if feasible)
Screening area	Staff	First screening (temperature measurement) not involving direct contact (no-touch thermometers)	<ul style="list-style-type: none"> • Medical mask • Glass/plexiglass screens to create a barrier between staff and travellers • Maintain physical distance of at least 1 meter • When physical distance is not feasible and/or glass/plexiglass screen is not available use eye protection (goggles or face shield) • Perform hand hygiene

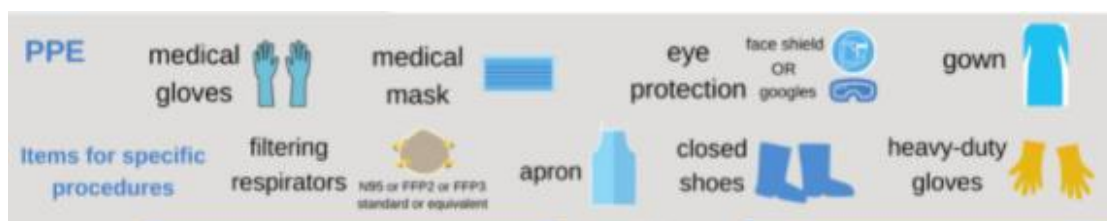
	Staff	Second screening (interviewing passengers with fever for clinical symptoms suggestive of COVID-19 disease and travel history)	<ul style="list-style-type: none"> • Medical mask • Eye protection/face shield • Gown • Perform hand hygiene
	Passengers		<ul style="list-style-type: none"> • Validated non-medical fabric mask or medical mask
	Cleaners	Cleaning the area where passengers with fever are being screened	<ul style="list-style-type: none"> • Maintain physical distance of at least 1 meter • Eye protection (if risk of splash from) • Medical mask • Heavy duty gloves • Boots or closed work shoes • Perform hand hygiene
Temporary isolation area	Staff	Entering the isolation area, but not providing direct assistance	<ul style="list-style-type: none"> • Maintain physical distance of at least 1 metre • Medical mask • Perform hand hygiene
	Staff including healthcare workers	Assisting or caring for traveller being transported to a health care facility as a suspected case of COVID-19	<ul style="list-style-type: none"> • Medical mask • Gown • Gloves • Eye protection • Perform hand hygiene
	Cleaners	Cleaning isolation area	<ul style="list-style-type: none"> • Maintain physical distance of at least 1 metre • Medical mask • Gown (fluid resistant gown or gown + apron) • Heavy duty gloves • Eye protection (if risk of splash from organic material or chemicals) • Closed work shoes • Perform hand hygiene
Handling dead bodies			
In the ward	Staff	Preparation of the dead body	<ul style="list-style-type: none"> • Medical mask • Face shield • Gloves • Impermeable gown or gown & apron • after handling remove gloves, gown & apron, mask, and wash hands

Transport from the ward	Staff	Transporting to the mortuary and loading to the freezer – body in a sealed bag	<ul style="list-style-type: none"> • Medical mask • Heavy duty gloves • Apron or gown • remove gloves & hand hygiene • Boots
Transport from the mortuary to cremation	Personnel handling the body	Transporting to the cemetery- minimal risk (body sealed in a bag and in a closed coffin)	<ul style="list-style-type: none"> • Medical mask • Gloves

- Although PPE is the most visible control used to prevent transmission, it must be used in conjunction with administrative and engineering controls (such as facilities for barrier nursing and work organisation, water and sanitation, hand hygiene infrastructure, waste management and ventilation). PPE must be correctly selected and used in a safe manner; this is especially important when putting on and removing PPE, and decontaminating PPE components.
- **Coveralls, double layering of gloves or gowns, shoe protection or head covers used in the context of Filovirus disease outbreaks (Eg :Ebola) are not required when caring for patients with COVID-19**
- In all the settings – ensure good ventilation when feasible
- Healthcare workers should ideally be vaccinated against COVID-19
- Used PPE should be handled carefully and without excessive manipulation
- Used PPE should be transported in covered, fully enclosed containers that are decontaminated after each use
- All the disposable PPE should be immediately discarded in a bin with a lid and be discarded as clinical waste

****Aerosol generating procedures (AGP):**

- Tracheal intubation and extubation
- Manual ventilation
- Tracheotomy or tracheostomy procedures (insertion or removal)
- Bronchoscopy
- Dental procedures (using high speed devices, for example ultrasonic scalers/high speed drills)
- Non-invasive ventilation (NIV); bi-level positive airway pressure ventilation (BIPAP) and continuous positive airway pressure ventilation (CPAP)
- High flow nasal oxygen (HFNO)
- High frequency oscillatory ventilation (HFOV)
- Induction of sputum using nebulised saline
- Oxygen driven nebulisation
- Respiratory tract suctioning
- Upper ENT airway procedures that involve respiratory suctioning
- Upper gastro-intestinal endoscopy where open suction of the upper respiratory tract occurs beyond the oro pharynx
- High speed cutting in surgery/post-mortem procedures if respiratory tract/paranasal sinuses involved



PPE	Comments
*Respirators: - N95, KN95 or equal	<ul style="list-style-type: none"> • Should be well fitting • Respirators with valves should never be worn
Medical (surgical)masks	<ul style="list-style-type: none"> • Properly worn (tightly) to cover the nose, mouth and the chin
Validated (non-medical) fabric mask	<ul style="list-style-type: none"> • Not for the healthcare staff
Face shield	<ul style="list-style-type: none"> • The use without removal during the shift when caring for a cohort of patients with COVID-19.
Gloves - Medical/disposable - Heavy duty	<ul style="list-style-type: none"> • Double gloving is not recommended as this practice does not provide any additional protective benefit against SARS-CoV2 • Gloves should be discarded, followed by hand hygiene • Gloves must be removed after a single patient encounter when exiting the care area or when providing care to another patient or if they become visibly damaged, sticky or contaminated with body fluids. • Gloves must be discarded as waste immediately after removal
Gowns - Reusable gown - Impermeable isolation gown /Overall/ Disposable impermeable gown	<ul style="list-style-type: none"> • Reusable gown made of fabric, can be used after washing, if washing facilities are available • Disposable gowns should be discarded in a closed bin as clinical waste
Apron	<ul style="list-style-type: none"> • Should be water proof and can either be reused (if washing facilities are available and reusable) or discarded as clinical waste if disposable
Closed shoes	<ul style="list-style-type: none"> • Should be washed with soap and water in-between use