APPENDIX 2: PERSONAL PROTECTIVE EQUIPMENT (PPE)

TYPE OF PPE	CLINICAL STAFF (nurses, doctors, EMS) Providing direct care to COVID-19 patients or patients with respiratory symptoms	NON-CLINICAL STAFF (admin staff, catering staff) Coming into distant contact with COVID-19 patients and contaminated surfaces	NON-CLINICAL STAFF (cleaners) Coming into distant contact with COVID-19 patients and contaminated surfaces	PATIENTS with or without RESPIRATORY symptoms
Gloves	Non-sterile gloves. Change between patients	Non-sterile gloves. Change when leaving COVID-19 area	Reusable long rubber utility cleaning gloves (ideally up to elbow) Change after completed cleaning contaminated area	None
Face cover type	**Surgical Mask** for general care of COVID-19 patients **N95 respirator** for aerosol generating procedures* on COVID-19 suspects/cases**	**Surgical mask** when within <1m of a patient with respiratory symptoms (one per shift, if integrity maintained)	**Surgical mask** when within <1m of a patient with respiratory symptoms	**Surgical mask** worn when in contact with others
Aprons or gowns	Change between patients	Change when leaving COVID-19 area	After each work session (in absence of clinical contact)	None
Face shields, or visors, or goggles, or other eye covers	Wash clean, disinfect and reuse	None	Wash clean, disinfect and reuse	None

* Aerosol-generating procedures in children include: collection of nasopharyngeal and oropharyngeal swabs for SARS-CoV-2 testing, clinical examination of the pharynx, nebulization, nasal/oral/tracheostomy suctioning, insertion of a nasogastric tube, blood-taking & intravenous cannula placement in young children, chest physiotherapy, non-invasive CPAP or HFNC ventilation, manual bag-mask ventilation, endotracheal intubation, tracheal aspirate, bronchoalveolar lavage, bronchoscopy, endoscopy, ENT procedures, dental procedures, maxillo-facial procedures and cardiopulmonary resuscitation.

** N95 respirator must still be used for all other non-COVID-19 indications (e.g. when attending to a patient with confirmed or suspected TB)

GUIDELINES FOR USE OF A N95 RESPIRATOR FOR COVID-19

FOR AER0SOL GENERATING-PROCEDURES ONLY

- Seal tests should be performed each time a N95 respirator is used (i.e. when it is first put on)



Perform the seal test with every use to ensure the respirator fits properly around the face and nose

Negative seal check
Cone-shape: cup hands over respirator lightly. Breathe in sharply. No air should leak in around the face. to- Duck-bill + V-flex: Breathe in sharply. The respirator should collapse inwards

Positive seal check
Cone-shape: Cup hands over respirator. Blow out. A build-up of air should be felt with no air leaks.
Duck-bill + V-flex: Breathe out forcefully; the respirator should expand on the exhale.

How to wear a N-95 respirator:



- The N95 respirators should ideally be used once only and should be discarded once safely removed. However, as there is a global shortage of N95 respirators, reuse is strongly encouraged and is preferable to having no respirator.
- If HCWs are performing aerosol-generating procedures (e.g. sample collection) on several COVID-19 patients sequentially, they may use the same N95 respirator and eye protection for the session; **they must however change apron and gloves between patients.**
- As the outside surface of the N95 respirator will become heavily contaminated with the virus during aerosol-producing procedures, HCWs should take great care not to touch the outside surface and must perform careful hand hygiene after removing it.
- For reuse, carefully remove the N95 respirator using a clean paper towel and store the respirator in a clean paper bag. The paper bag must be labelled with the staff member's name. Do not crush or crumple. It can be reused for up to 1 week.
- Do NOT attempt to disinfect the N95 respirator as that destroys its integrity.
- Note that obviously damaged and visibly contaminated respirators cannot be reused.

GUIDELINES FOR SURGICAL MASK USE FOR COVID-19

- At any time if surgical masks are touched by unwashed hands, get wet, are soiled, or are removed from the face, they will become contaminated and will no longer provide effective protection. They should then be discarded.
- Masks that are not wet, were not touched by unwashed hands and were not removed from the face, can be worn for up to 8 hours.
- COVID-19 patients when inside a dedicated COVID-19 ward, where staff are wearing PPE, do not need to wear masks.
- COVID-19 patients when outside a dedicated COVID-19 ward must always wear a surgical mask. The mask can be used for up to 8 hours.

FOR HOW LONG CAN PPE BE USED?

TYPE OF PPE	CLINICAL HCW	NON-CLINICAL HCW	SYMPTOMATIC PATIENTS
Gloves	Change after each clinical contact	End of work session	N/A
Surgical Face Masks	Mask can be used up to the end of a shift if it remains dry and has not been removed from the face.	Mask can be used up to the end of a shift if it remains dry and has not been removed from the face.	When in contact with others
N95 respirator	As long as integrity is maintained and it is safely stored, it can be reused for up to 1 week.	N/A	N/A
Aprons	Change after each clinical contact	After each work session (in absence of clinical contact)	N/A
Face shields/ visors	Clean and disinfect before reuse	N/A	N/A
Goggles	Clean and disinfect before reuse	Cleaners may use same googles for each work session. Clean and disinfect before reuse	N/A

VIDEO DEMONSTRATION OF DONNING AND DOFFING OF PPE

A demonstration video for safely putting on and taking off PPE (donning and doffing of PPE) is available at:
https://player.vimeo.com/external/400607941.hd.mp4?s=af075e8c9647a23114424834c1e73f866a73e5f7&profile_id=174

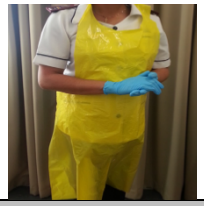
INSTRUCTIONS FOR PUTTING ON AND TAKING OFF PPE (DONNING AND DOFFING PPE)

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (DONNING)

Wash your hands before putting on the PPE. PPE should be put on in an order that minimises contamination. The apron, mask, goggles and gloves must be put on in that order. See guidance on each below.

Apron

- ***Wash hands***
- Slip it over the head and tie the stings behind the back

Mask or N95 Respirator

- Secure each tie or elastic at the middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator by blowing into it (air should not leak out)



Goggles or Visor

- Place over face and eyes
- Adjust band to fit comfortably



Gloves

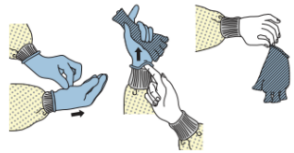
- Hold the edge of the glove as you pull it over your hand
- Extend to cover wrist
- Once gloved, do not touch other surfaces

SEQUENCE FOR TAKING OFF PERSONAL PROTECTIVE EQUIPMENT (DOFFING)

Wash your hands before taking off the PPE. PPE should be removed in an order that minimises contamination. The gloves, apron, goggles/visor, and mask must be removed in that order.* **Wash your hands after taking off the PPE.** Discard PPE in infectious waste container. See guidance below.

Gloves

- ***Wash hands***
- Securely grasp the outside of glove with the gloved hand; peel off; discard as infectious
- Slide the fingers of the un-gloved hand under the remaining glove at the wrist; peel off; discard as waste



opposite

waste

infectious

Apron or Gown* (See Note)

- ***Wash hands***
- Unfasten or break apron/gown ties
- Pull the apron away from the neck and shoulders, touching the inside of the apron bring it forward and over the head
- Turn the apron inside out, fold or roll into a and discard as infectious waste



only and

bundle

Goggles or Visor* (See Note)

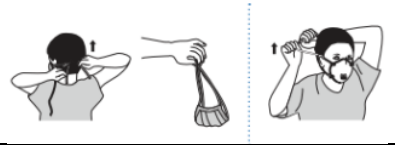
- Remove goggles/visor from the back by head band or ear pieces
- Place in designated receptacle for disinfecting



lifting

Mask or N95 Respirator

- Untie or break bottom ties, followed by or elastic.
- Remove by handling the ties only and as infectious waste.
- ***Wash hands***



top ties

discard

***Note.** When it is practically difficult to remove the apron/gown before the visor/goggles, then the visor/goggles may be removed before the apron/gown.

Dispose of all PPE in an infectious waste container.

WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITISER AFTER REMOVING GLOVES AND AFTER REMOVING ALL PPE

6. How to transition between home and work

- Follow these principles to protect yourself at work and to protect your family by not bringing COVID-19 home.

What must I do before leaving home and arriving at work?



Clothes

- Wear dedicated simple clothing (like short-sleeved t-shirt and pants) and cheap/old, dedicated work shoes. If long sleeves, keep them rolled up.
- Hot wash and dry clothes daily (or alternate 2 sets if unable to dry daily).
- Avoid wearing a belt, jewellery and a lanyard.
- Avoid a cloth surgical cap, use a disposable cap instead.



Phone, wallet and keys

- Leave wallet at home – bring essentials (like access card, drivers licence, bank card) in sealable plastic (Ziploc) bag.
- Remove protective case from phone. Consider keeping phone in closed, sealable plastic (Ziploc) bag and change this daily.



- Keep your phone in your pocket/bag, avoid placing it on work surfaces. Leave it on loud volume.
- If able, wipe phone down between each patient.
- Keep your keys in your pocket/bag and do not remove until after you have washed hands when leaving work.

Food and drink



- Bring lunch from home in reusable fabric shopping bag, avoid bought lunches from canteen/tearoom.
- Use own water bottle, avoid water coolers, kitchens and bought drinks.

What can I do to protect my family when leaving work and arriving home?

- Leave pen at work. Frequently coat it with alcohol hand rub throughout the day.

When leaving work:

- Remove work clothes and place in plastic bag to take home.
- Perform thorough hand and arm wash.





- Keep alcohol hand rub in car/bag and use to clean hands.

When you arrive home:

- Remove shoes and leave outside before entering home.



- If not already changed, remove work clothes at front door. Put these (or clothes in bag if changed already) straight into a hot wash, along with reusable fabric shopping bag. Then thoroughly wash hands.



- Immediately have hot shower/ bath/wash.
- Avoid hugs, kisses and direct contact with family members until after shower/bath/wash.

