# Contents

Background ......................................................................................................................... 4

Personal Protective Equipment (PPE) for Healthcare Facilities ................................................... 5

Personal Protective Equipment for Evaluating Persons Under Investigation (PUI) in Home Settings and Management in Community Settings ..................................................... 8

Personal Protective Equipment for Drive-through Mobile Laboratory .................................................. 9

Personal Protective Equipment for Autopsy and Burial ................................................................. 10

General consideration .............................................................................................................. 10

Standards for PPE .................................................................................................................. 12

References .............................................................................................................................. 15
Background

This document provides guidance to African Union Member States based on a specific request from Member States for a checklist/guidance of the required personal protective equipment (PPE) needed by healthcare workers and care givers for the coronavirus disease 2019 (COVID-19) pandemic. This document has been synthesised from currently available evidence (1-6), with consideration to the African context, and as such, can be adapted to the country context.

As the COVID-19 cases continue to increase across Africa, Member States are encouraged to provide sufficient PPE for their healthcare workers and other staff whose duties require PPE. Member States should optimally utilise PPEs and make adequate plans for stockouts that could occur due to disruptions in the global supply chain of PPE.

Healthcare facilities should assign COVID-19 treatment units and implement administrative and engineering controls for COVID-19 within these units and facility-wide. In addition to preventive measures for COVID-19\(^1\), healthcare workers and healthcare personnel must adopt standard and transmission-based precautions.

---

1 2019 Novel Coronavirus Disease Outbreak: What Health Care Workers Should Know
## Personal Protective Equipment (PPE) for Healthcare Facilities

<table>
<thead>
<tr>
<th>Health workforce/patient</th>
<th>Activity/procedure</th>
<th>Type of PPE required</th>
</tr>
</thead>
</table>
| Healthcare workers       | Preliminary screening not involving direct contact (triage) | • No PPE[^2] required if physical distancing is maintained  
                           |                    | • Otherwise, medical mask should be worn |
| Healthcare workers       | Providing direct care (e.g. physical observations, investigations, and medications) | • Medical mask  
                           |                    | • Gown  
                           |                    | • Gloves  
                           |                    | • Eye protection |
| Healthcare workers       | Entering the isolation area, but not providing direct assistance | • Medical mask  
                           |                    | • Gloves |
| Laboratory technician    | Collection of laboratory samples/ diagnostic respiratory specimens (e.g., via nasopharyngeal swab) | • Medical mask  
                           |                    | • Gown  
                           |                    | • Gloves  
                           |                    | • Eye protection[^3] |
| Healthcare workers       | **Aerosol generating procedures**  
                           | • intubation, extubation and related procedures; for example, manual ventilation  
                           |                    | • N-95  
                           |                    | • Gown  
                           |                    | • Gloves  
                           |                    | • Eye protection  
                           |                    | • Apron  
                           |                    | • Face shield  
                           | • and open suctioning  
                           |                    | • Surgery and post-mortem procedures in which high-speed devices are used  
                           | • cardiopulmonary resuscitation  
                           | • bronchoscopy (unless carried out through a closed-circuit ventilation system)  
                           | • dental procedures |

---

[^2]: Maintaining a distance of at least 1 m is essential if no PPE is worn.

[^3]: if risk of splash, particularly in obtaining and manipulating respiratory samples.
<table>
<thead>
<tr>
<th>Health workforce/patient</th>
<th>Activity/procedure</th>
<th>Type of PPE required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare workers (continuous)</td>
<td>• non-invasive ventilation (NIV) (e.g. bilevel positive airway pressure ventilation (BiPAP))&lt;br&gt;• continuous positive airway pressure ventilation (CPAP)&lt;br&gt;• high frequency oscillatory ventilation (HFOV)&lt;br&gt;• induction of sputum (6)</td>
<td></td>
</tr>
<tr>
<td>Administrative staff</td>
<td>Administrative tasks that do not involve contact with COVID-19 patients</td>
<td>• No PPE required, if physical distancing is maintained.&lt;br&gt;• Non-medical masks may be considered.</td>
</tr>
<tr>
<td>Cleaners</td>
<td>Entering a room with a COVID-19 suspect of confirmed case, and routine cleaning of laboratory facilities</td>
<td>• Medical mask&lt;br&gt;• Gown&lt;br&gt;• Heavy duty gloves&lt;sup&gt;4&lt;/sup&gt;&lt;br&gt;• Eye protection&lt;br&gt;• Boots or closed work shoes</td>
</tr>
<tr>
<td>Healthcare workers and staff (assistants)</td>
<td>Patient transportation inside and outside the treatment facility&lt;sup&gt;4&lt;/sup&gt; (e.g. laboratory and radiology testing, etc.)</td>
<td>• Medical mask&lt;br&gt;• Gown&lt;br&gt;• Gloves&lt;br&gt;• Eye protection</td>
</tr>
<tr>
<td>Healthcare workers and staff (assistants)</td>
<td>Assisting patient being transported to a health care facility</td>
<td>• Medical mask&lt;br&gt;• Gown&lt;br&gt;• Gloves&lt;br&gt;• Eye protection</td>
</tr>
<tr>
<td>Driver (ambulance or transfer vehicle)&lt;sup&gt;5&lt;/sup&gt;</td>
<td>Driving a transportation vehicle/ambulance</td>
<td>• Medical Mask</td>
</tr>
</tbody>
</table>

---

<sup>4</sup> Heavy duty gloves should be used cleaning equipment and other items, environmental cleaning, handling soiled textile items, and handling contaminated waste to conserve other gloves for patient care

<sup>5</sup> Divers involved only in driving the patient with suspected COVID-19 disease
<table>
<thead>
<tr>
<th>Health workforce/patient</th>
<th>Activity/procedure</th>
<th>Type of PPE required</th>
</tr>
</thead>
</table>
| Cleaners                | Cleaning ambulance after and between transport of patients | • Medical mask  
• Gown  
• Heavy duty gloves  
• Eye protection  
• Boots or closed work shoes |
| Patients with respiratory symptoms | Especially if transiting through general areas (e.g. for a radiograph) | • Medical mask (Essential) |

In addition to using the appropriate PPE, frequent hand hygiene and respiratory hygiene should always be performed.

- Hand hygiene should be performed before putting on and after taking off PPE
- Staff should remove all PPE and perform hand hygiene when leaving the patient care area
- PPE should be discarded in an appropriate waste container after use
- PPE should not be worn in the nonclinical areas such as staff respite area
- Some items of PPE should be changed after every patient, (e.g. gloves, disposable aprons) to facilitate good hygiene.
- For healthcare workers who are working in COVID-19 wards or treatment centres, other items of PPE should be changed after each ‘session’ in the treatment area. This includes masks, eye protection and gowns. These only need to be changed after each patient if they become contaminated with body fluid.
## Personal Protective Equipment for Evaluating Persons Under Investigation (PUI) in Home Settings and Management in Community Settings

<table>
<thead>
<tr>
<th>Healthcare worker/personnel</th>
<th>Activity</th>
<th>Type of PPE required</th>
</tr>
</thead>
</table>
| Healthcare workers, rapid response team and community health workers | Direct contact when providing care | • Medical mask  
  • Gown  
  • Gloves  
  • Eye protection |
| Healthcare workers, rapid response team and community health workers | Interviewing and assessing persons without symptoms (asymptomatic) and no direct contact | • Medical mask |
| Healthcare workers | Providing direct care to a COVID-19 patient at home | • Medical mask  
  • Gown  
  • Gloves  
  • Eye protection |
| Healthcare workers | Collection of laboratory samples | • Medical mask  
  • Gown  
  • Gloves  
  • Eye protection |
| Rapid response team and community health workers | Interviewing and assessing persons with symptoms | • Medical mask  
  • Gloves  
  • Apron  
  • Eye protection |
| Caregivers | Non-professionals (e.g. family members) providing direct care or assistance for patients | • Gloves  
  • Medical mask |

---

6 Aprons may be safely substituted for gown in situations where minimal person to person contact is envisaged.
# Personal Protective Equipment for Drive-through Mobile Laboratory

<table>
<thead>
<tr>
<th>Healthcare worker/ personnel</th>
<th>Activity</th>
<th>Type of PPE required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic control (volunteer or community health workers)</td>
<td>Checking in the PUI (e.g. holding signs directing the PUI to the sampling station and to not to roll down the window until at the sampling station)</td>
<td>• Medical mask</td>
</tr>
</tbody>
</table>
| Healthcare workers, community health workers | Collection of laboratory samples | • Medical mask  
• Gown  
• Gloves  
• Eye protection |
| Healthcare workers and community health workers | Assisting during collection of laboratory samples | • Medical mask  
• Gown  
• Gloves  
• Eye protection |
| Caregivers | Providing direct care or assistance for patients | • Gloves  
• Gown  
• Medical mask |

**Special consideration**

If anyone inside the participant vehicle rolls down the window before instructed, any workers in the vicinity should step back 1 m and instruct the participant to roll the window back up.

If anyone inside the participant vehicle exits the car, any workers in the vicinity should step back and maintain 1 m distance and instruct the participant to get back inside the vehicle.

At no point should there be any contact with the participant or anyone from the vehicle. If any accidental exposure has occurred, they should doff any affected PPE and don fresh PPE.

---

7 For these roles one pair of gloves is the minimum necessary; however, gloves should be doffed after each patient and hands should be washed or sanitized.
Personal Protective Equipment for Autopsy and Burial

General consideration

Except in cases of viral haemorrhagic fevers (such as Ebola, Marburg) and cholera, dead bodies are generally not infectious. Only the lungs of patients with pandemic influenza, if handled improperly during an autopsy, can be infectious. Otherwise, cadavers do not transmit disease. To date, there is no evidence of persons having become infected from exposure to the bodies of persons who died from COVID-19.

The safety and well-being of everyone who attends to bodies should be the priority. Before attending to a body, people should ensure that the necessary hand hygiene and PPE supplies are available.

While performing the rites during the burial, it is important that social distancing is maintained. The dignity of the dead, their cultural and religious traditions, and their families should be respected and protected throughout.
<table>
<thead>
<tr>
<th>Key personnel</th>
<th>Activity</th>
<th>Type of PPE required</th>
</tr>
</thead>
</table>
| Healthcare workers/ Mortician | Preparing the body for transfer from a patient room to an autopsy unit, mortuary, crematorium, or burial site | • Disposal (heavy duty) gloves  
• Long sleeved gown  
• Medical Mask  
• Eye protection
| Healthcare workers            | Autopsy                           | • Disposal gloves  
• Long sleeved gown  
• Medical mask  
• N95 (to be worn if there are any aerosol generating procedures during the autopsy).  
• Face shield  
• Rubber gloves  
• Apron
| Mortician/ mortuary attendant | Mortuary care                      | • Disposal gloves  
• Long sleeved gown  
• Medical mask  
• Face shield
| Mortician/ family members     | Religious observation – care of body by family members e.g. body washing | • Disposal gloves  
• Long sleeved gown or Apron  
• Medical mask  
• Eye protection  
• Face shield

Adhere to the national and local requirements that dictate the handling and disposition of the remains.

A minimum number of people should be involved in preparations. Those preparing the body for viewing and burial should wear PPE. Others may observe without touching the body at a minimum distance of 1 m.

Family and friends may view the body after it has been prepared for burial, in accordance with customs. They should not kiss the body,
but the body may be touched if gloves are worn. Family and friends must wash hands thoroughly with soap and water after the viewing.

Those tasked with placing the body in the grave, on the funeral pyre, etc. should wear gloves and wash hands with soap and water after removal of the gloves once the burial is complete.

**Standards for PPE**

All PPE should conform to specific standards to ensure that it is able to protect healthcare workers as intended.

Here follows a more detailed description and standards for each of the items of PPE listed above.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Relevant testing standards</th>
</tr>
</thead>
</table>
| Apron              | • Straight apron with bib, Fabric: 100% polyester with PVC coating, or 100% PVC, or 100% rubber, or other fluid resistant coated, or waterproof material.  
• Sewn strap for neck and back fastening.  
• Minimum basis weight: 300g/m² covering size: 70-90 cm (width) X 120-150cm (height)  
• Reusable (provided appropriate arrangements for decontamination are in place) | Acceptable standards  
• EN ISO 13688  
• EN 14126-B and partial body protection (EN 13034 or EN 14605)  
• EN 343 for water and breathability or equivalent |
| Boots or closed toe shoes | • Nonslip, with a PVC sole that is completely sealed  
• Rubber, etc.  
• Reusable | |
| Face shield | • Made of clear plastic and provides good visibility to both the wearer and the patient | • EU PPE regulation 2016/425  
• EN 166  
• ANSI/ISEA Z87.1, or equivalent set of standards |
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Relevant testing standards</th>
</tr>
</thead>
</table>
| Face shield (continuous) | - Adjustable band to attach firmly around the head and fit snugly against the forehead  
- Fog resistant (preferable). Completely cover the sides and length of the face.  
- May be re-usable (made of robust material, which can be cleaned and disinfected) or disposable | |
| Gloves | - Gloves, examination, nitrile, powder-free, non-sterile. Single use (e.g. minimum 230mm total length)  
- EU MDD Directive 93/42/EEC Category III  
- EU PPE Regulation 2016/425 Category III  
- EN 455  
- EN 374  
- ANSI/ISEA 105  
- ASTM D6319, or equivalent set of standards | |
| Goggles | - Good seal with the skin of the face  
- Flexible PVC frame to easily fit with all face contours with even pressure  
- Enclose eyes and the surrounding areas and accommodate wearers with prescription glasses  
- Clear plastic lens with fog and scratch resistant treatments  
- Adjustable band to secure firmly so as not to become loose during clinical activity  
- Indirect venting to avoid fogging  
- May be re-usable (provided appropriate arrangements for decontamination are in place) or disposable | - EU PPE Regulation 2016/425  
- EN 166  
- ANSI/ISEA Z87.1, or equivalent |
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Relevant testing standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gown</td>
<td>Single use or reusable, disposable, length mid-calf.</td>
<td>• EU PPE Regulation 2016/425 and EU MDD directive 93/42/EEC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• FDA class I or II medical device, or equivalent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• EN 13795 any performance level, or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• AAMI PB70 all levels acceptable, or equivalent</td>
</tr>
<tr>
<td>Heavy duty gloves/disposal</td>
<td>Outer glove should have long cuffs, reaching well above the wrist, ideally to mid-forearm. Cuff length preferably reach mid-forearm (e.g. minimum 280mm total length). Reusable</td>
<td>• Puncture resistant, FDA compliant EN374</td>
</tr>
<tr>
<td>Medical masks</td>
<td>Medical mask, good breathability, internal and external faces of mask should be clearly identified</td>
<td>• EU MDD Directive 93/42/EEC Category III, or equivalent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• EN 14683 Type II, IR, IIR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ASTM F2100 minimum Level I or equivalent</td>
</tr>
<tr>
<td>Respirators</td>
<td>N95 or FFP2 respirator, or higher (N99 or FFP3). Good breathability with design that does not collapse against the mouth. May or may not have an exhalation valve.</td>
<td>• Minimum “N95” respirator according to FDA Class II, under 21 CFR 878.4040, and CDC NIOSH, or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Minimum “FFP2” according to EN 149, EU PPE Regulation 2016/425 Category III, or equivalent</td>
</tr>
<tr>
<td>Scrubs</td>
<td>Top or tunic: short sleeves Trousers: drawstring waist enclosure</td>
<td>• Tightly woven</td>
</tr>
<tr>
<td></td>
<td>Uniform, woven, cotton, unisex, reusable</td>
<td>• Minimum linting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Quick dry material</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Medical purpose</td>
</tr>
</tbody>
</table>
References


4. COVID-19 Personal Protective Equipment https://kstatic.googleusercontent.com/files/054354dff5471eebe02c9599688afe25fe66d712080968cf14e5e75851e6eabdb866bc8b27057f43b372986cf5009ab42f5aebcb650d0eb354ff8810f24b91e434


i Africa CDC Guidance on Community Use of Face Masks
ii Movement of patients should be limited
iii If risk of splash, particularly when manipulating the body