

**Caring Today, Planning for
Tomorrow**



Personal Protective Equipment Update

**Jointly issued on behalf of:
NIAS and NIAS Trade Unions**

UNISON

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**To consistently
show compassion,
professionalism
and respect to the
patients we care for**

This communication covers the use of Personal Protective Equipment (PPE) for the management and transfer of a patient with possible or confirmed COVID-19.

At the outset we wish to acknowledge the incredible effort, dedication and commitment shown by all staff in responding to COVID-19 to date. Please be assured that ensuring that frontline staff have adequate PPE and an appropriate level of protection is a top priority for the Trust.

Guidance on PPE to be worn by staff has changed over the duration of this pandemic, and we recognise that naturally this has caused concern amongst staff. Changes in guidance on PPE have been informed by the emerging evidence and experiences both within the UK and other countries, staff should be reassured that this guidance has been advised on

and developed by experts in Infection Prevention and Control. All HSC Trusts are following the latest Public Health England guidance regarding PPE and will continue to apply current guidance if and when it is updated.

The latest guidance can be accessed via this link

[LATEST GUIDANCE](#)

In NIAS a PPE group has been established with a focus on providing supplies for staff. It is essential that PPE products are used in line with the latest guidance and that supplies are not over-ordered, stockpiled or wasted. Constant vigilance will be needed across the organisation to support this and to ensure that supplies of PPE are available for the staff in line with the guidance when they need them.

Level of PPE recommendation

The Ambulance sector PPE for COVID-19 is categorised by level:

Level 2:

- *Disposable gloves*
- *Disposable apron – with or without sleeves dependent on risk assessment/availability*
- *Fluid repellent surgical mask*
- *Eye protection (if risk of splashing)*

Level 3:

- *Disposable gloves*
- *Fluid repellent coveralls / long sleeved apron / gown*
- *FFP3 mask or powered respirator hood*
- *Eye protection*

There is currently sustained community transmission of COVID-19 throughout the UK, which means that it is likely that any patient may have coronavirus infection and therefore level 2 PPE is recommended for all direct patient care (within 2m). Unless an Aerosol generating procedures (AGP) is undertaken, a fluid-repellent surgical mask provides the necessary level 2 protection as per the national guidance.

The following table shows the required level of PPE that is recommended to be used as a minimum for the care of all possible COVID-19 cases. Staff should perform a dynamic risk assessment which should include information provided prior to arrival at scene as well

as any additional information gained on arrival. Where the risk assessment indicates a requirement for PPE crews should don the appropriate level before being within two metres of the patient. If staff have used up their supply of PPE they should be returned to station to replenish PPE supplies before being mobilised to any further calls. If staff have used up their vehicle supply of PPE they should be facilitated to replenish supplies before being mobilised to any further calls.

However, following completion of a thorough risk assessment, if the appropriate level of PPE is not available, then staff should defer AGPs until a suitably equipped responder is in attendance.



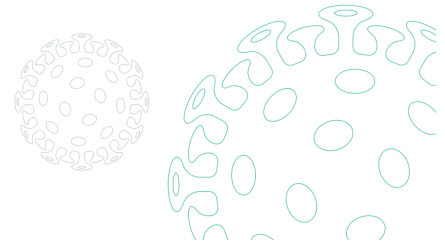
Recommended PPE for ambulance staff, paramedics, other patient transport services

Setting	Context	Disposable Gloves	Disposable Plastic Apron	Disposable fluid-repellent coverall/gown	Surgical mask	Fluid-resistant (Type IIR) surgical mask	Filtering face piece respirator	Eye/face protection ¹
Ambulance staff/paramedic/pre-hospital critical care/Helicopter Emergency Medical Service/hospital transport services	Performing an aerosol generating procedure e.g. intubation, suctioning ^{2,3} on a possible or confirmed case(s) ³	✓ single use ⁴	✗	✓ single use ⁴	✗	✗	✓ single use ²	✓ single use ⁴
	Direct patient care – possible or confirmed case(s) ³ (within 2 metres)	✓ single use ⁴	✓ single use ⁴	✗	✗	✓ single use ⁴	✗	✓ single use ⁴
	Driver conveying possible or confirmed case(s) ³ in vehicle with a bulkhead, no anticipated direct care ⁷	✗	✗	✗	✗	✗	✗	✗
	Driver conveying possible or confirmed case(s) ³ in vehicle without a bulkhead, no direct patient care and within 2 metres ⁷	✗	✗	✗	✗	✓ single or sessional use ^{4,5}	✗	✗

Table 3

- This may be single or reusable face/eye protection/full face visor or goggles.
- The list of aerosol generating procedures (AGPs) is included in section 8.1 at: www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control-covid-19-personal-protective-equipment-ppe. (Note APGs are undergoing a further review at present)
- A case is any individual meeting case definition for a possible or confirmed case: <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-initial-investigation-of-possible-cases-investigation-and-initial-clinical-management-of-possible-cases-of-wuhan-novel-coronavirus-wncov-infection>
- Single use refers to disposal of PPE or decontamination of reusable items e.g. eye protection or respirator, after each patient and/or following completion of a procedure, task, or session; dispose or decontaminate reusable items after each patient contact as per Standard Infection Control Precautions (SICPs).
- A single session refers to a period of time where a health care worker is undertaking duties in a specific care setting/exposure environment e.g. on a ward round; providing ongoing care for inpatients. A session ends when the health care worker leaves the care setting/exposure environment. Sessional use should always be risk assessed and considered where there are high rates of hospital cases. PPE should be disposed of after each session or earlier if damaged, soiled, or uncomfortable.
- Non clinical staff should maintain 2m social distancing, through marking out a controlled distance; sessional use should always be risk assessed and considered where there are high rates of community cases.
- In communal waiting areas and during transportation, it is recommended that suspected or confirmed cases wear a surgical face mask if this can be tolerated. The aim of this is to minimise the dispersal of respiratory secretions, reduce both direct transmission risk and environmental contamination. A surgical facemask should not be worn by patients if there is potential for their clinical care to be compromised (e.g. when receiving oxygen therapy).
- Non clinical staff conveying patients are not required to change or upgrade PPE for the purposes of patient handover.

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Aerosol Generating Procedures (AGPs)

The transmission of COVID-19 is through respiratory droplets generated by coughing and sneezing, and through contact with contaminated surfaces. Due to their size and weight droplets only travel a short distance through the air before falling. Level 2 PPE will protect the wearer from the risk of contamination with respiratory droplets, a fluid repellent surgical mask is a physical barrier that will protect the nose and mouth of the wearer which are our most vulnerable parts.

Certain medical and patient care activities can result in the release of aerosols, these are known as Aerosol Generating Procedures (AGPs). AGPs can create a risk of airborne transmission of infections that are usually only

spread by droplet transmission, therefore additional precautions must be implemented when performing AGPs on a suspected or confirmed case of COVID-19. If an AGP is to be performed, all crew members must don level 3 PPE before being within two metres of the patient. The FFP3 mask will effectively shield the wearer from the risk of aerosol as it filters smaller particles than a Fluid Repellant Surgical Mask.

AGPs relevant to the ambulance service, which have been determined as an AGP by Public Health (England, Scotland, Wales & N Ireland) and The New and Emerging Respiratory Virus Threat Assessment Group (NERVTAG) include:

- *Procedures related to cardiopulmonary resuscitation e.g. advanced airway procedures including laryngoscopy, intubation, extubation, surgical airway*
- *Manual ventilation*
- *Suctioning*
- *Management of Choking and foreign body airway obstruction removal*

The following are not considered as an AGP:

- *Chest compressions*
- *Defibrillation*
- *Nebulisation*

PPE

Some procedures or equipment e.g. nebulisation of medication or administration of Entonox may generate an aerosol from material other than patient secretions but are not considered to represent a significant infectious risk. NERVTAG advised that during nebulisation, the aerosol derives from a non-patient source (the fluid in the nebuliser chamber) and does not carry patient-derived viral particles. If a particle in the aerosol coalesces with a contaminated mucous membrane, it will cease to be airborne and therefore will not be part of an aerosol. Staff should continue to use appropriate hand hygiene when helping patients to remove nebulisers and oxygen masks.

JRCALC guidance (updated Feb 2020) states that where possible in less severe asthma attacks, a patient's own B2 agonist should be given (ideally using a spacer) as first line treatment. Increase the dose by two puffs every 2 minutes according to response up to ten puffs.

Out-of-hospital cardiac arrest

Out-of-hospital cardiac arrest is frequently associated with a poor clinical outcome, particularly when presenting with a non-shockable rhythm. Resuscitation for cardiorespiratory arrest related to COVID-19 has a very low chance of success due to the underlying disease processes. At the outset of any resuscitation, check the existence of any current DNAR / Advanced

Directive and consider the normal criteria for ROLE.

Whilst chest compressions and defibrillation are not considered AGPs, full resuscitation will require procedures that do involve potential for aerosol generation.

Therefore the following approach to patients who require resuscitation is recommended.

First person attending scene

- In order to minimise any delay attending a time critical cardiac arrest, it is acceptable for the first person to enter the scene wearing level 2 PPE (fluid repellent surgical mask, apron, gloves and eye protection).*

Where trained and equipped to use level 3 PPE, this may be used where it will not cause a delay.

- Commence resuscitation where this is indicated by local clinical guidance. If resuscitation is not commenced, or is terminated before the arrival of other resources, provide an early SitRep to reduce the number of responders who need to enter the scene*
- Do not place your face near the patient to assess breathing*

- Where available, place a surgical mask or oxygen mask on the patients face*
- Commence chest compressions, attach the defibrillator and defibrillate if indicated. None of these tasks are considered aerosol generating procedures (AGPs)*

Subsequent attendance at scene of responder(s) trained and equipped to use level 3 PPE

- Don level 3 PPE*
- Enter scene and determine whether the resuscitation should be continued according to local clinical guidance.*
- If resuscitation is to be continued, take over patient management from any responder wearing level 2 PPE*
- All responders wearing level 2 PPE are to leave the scene (more than 2m away from the patient) prior to the commencement of any airway management, ventilation or other AGPs. Responders may later re-enter if trained and equipped to wear level 3 PPE*
- Level 3 PPE responders to continue the resuscitation, including airway management and ventilation where clinically indicated.*

Conveyance

If conveyance of a cardiac arrest patient is indicated by local clinical guidance, once AGPs are being conducted, only staff wearing level 3 PPE must be within 2 metres of the patient. In practice, this means that all responders in the patient compartment of the ambulance must be in level 3 PPE. The ambulance may be driven by someone who is not trained / equipped to use level 3 PPE, but

they must remain in the cab whilst the patient is unloaded

Ambulance clinicians may also encounter the following wider list of AGPs, particularly during inter-hospital transfers:

- Tracheotomy or tracheostomy procedures (insertion or open suctioning or removal)
- Non-invasive ventilation (NIV)
- Bi-level Positive Airway

- Pressure Ventilation (BiPAP)
- Continuous Positive Airway Pressure Ventilation (CPAP)
- High Frequency Oscillatory Ventilation (HFOV)
- High flow nasal oxygen (HFNO – a hospital procedure utilising flow rates well in excess of what is delivered via normal nasal specs)

FFP3 Masks

FFP3 facemasks are only required when AGPs are performed and must only be used by staff who have been fit tested for their use and staff must complete a fit check before being in close proximity to the patient's environment. Staff who haven't been fit tested with an FFP3 mask must inform their line manager and inform control prior accepting the call.

There are a number of FFP3 masks (shown below) in use within NIAS currently. When worn correctly, all of these meet the same standard of protection.

- 1895V+ / 8835+
- 8833
- 1863
- 1873V

Some products may appear to have out-of-date 'use by/expiration' dates or have relabelled 'use by/expiration' dates. These are being issued to all Trusts across Northern Ireland and have passed stringent tests that demonstrate they are safe. The PPE is exposed to extreme conditions for prolonged periods, to see how the product deteriorates. All that are not up to standard are destroyed and not distributed to trusts.

COVID-19 is generating unprecedented global demand for FFP3 masks which presents a challenge with supply. The Department is working closely with BSO and HSC Trusts, as well as national colleagues, to ensure a continuous supply of PPE, however we also have a responsibility to ensure that they are used in line with the guidance and your dynamic risk assessment. Unnecessary or over-use may lead to shortages as both call demand and prevalence of COVID increase. A competent risk assessment must be carried out prior to upgrading / downgrading PPE. This risk assessment should be reasonable and proportionate.

KEY POINTS

- There is currently sustained community transmission of COVID-19 throughout the UK, which means that it is likely that any patient may have coronavirus infection and therefore PPE is recommended for all direct patient care (within 2m).
- The appropriate level of PPE should be worn following the risk assessment of the presenting risks, and staff should not wear a higher level of PPE than is indicated by their risk assessment.
- The patient should be provided with a surgical face mask to wear for the duration of the care (if tolerated) unless oxygen therapy is indicated.
- Where possible, only one crew member would need to don PPE if the patient can be managed by a single person, this leaves the driver free to perform the transfer and/or admission without having to remove PPE and decontaminate before driving.
- Unless absolutely essential, AGPs should be avoided during the transportation of patients with COVID-19.
- Care should be taken to ensure that PPE is donned and doffed correctly to avoid inadvertent contamination.
- If the vehicle has a closed bulkhead between the patient compartment and cab then PPE must NOT be worn whilst driving or within the vehicle cab.
- If there is no closed bulkhead between the patient compartment and cab then it may be necessary to wear a fluid repellent surgical mask, if the patient will be within 2m of the driver whilst being conveyed.
- All single use PPE must be disposed of as category B clinical waste (orange bag).
- FFP3 facemasks are only required when AGPs are performed and must only be used by staff who have been fit tested for the mask they are using, and staff must complete a fit check every time they are required to wear one.
- Powered respirator checks must be performed before each use, in accordance with the Trust instructions, including a battery check.
- Although FFP3 masks are effective for longer periods, the general recommendation would be to wear the FFP3 face masks for up to 3 hours. However, the duration of wear is dependent on the outcome of a dynamic risk assessment conducted by the staff member taking into consideration a number of factors such as the environment, personal comfort/tolerance and the activity/task that is being undertaken.
- Where FFP3 facemasks are worn they should be accompanied by a full face shield/ visor.
- Fluid Repellent surgical facemasks can be worn for the entire patient care episode, the HSE have confirmed that the masks can be worn until damaged or wet.
- In addition to wearing PPE, staff should practice usual infection prevention and control measures, including environmental cleaning and hand hygiene extended to the forearms to reduce the risk of onward transmission.

PPE