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NHS
North East
Ambulance Service
NHS Foundation Trust

IPC Event Information for ALL Local Authority SAG/Event Promotors

North East Ambulance Service NHS Foundation Trust

Contents

Key Message: Personal Protective Equipment during COVID-19 Pandemic

The following guidance/advice is based Public Health England (PHE) guidance last updated on 18th May 2020 relating to pre-hospital setting/ambulance services PHE guidance relating to PPE last updated and supersedes all previous guidance. The guidance is available in full below and can be access via this link.

This guidance is to assist and support ambulance services/pre-hospital medical/clinical services including doctors, operational staff, volunteers and third-party providers in various scenarios faced in connection with suspected and confirmed COVID-19 patients where a treatment/transport response is needed. It is also pertinent for event medical services in the pre-hospital setting of which the NHS would expect to be adopted for a safe environment.

The transmission of COVID-19 is thought to occur mainly through respiratory droplets generated by coughing and sneezing and through contact with contaminated surfaces. The predominant modes of transmission are assumed to be droplet and contact. This is consistent with a recent review of modes of transmission of COVID-19 by the World Health Organization (WHO).

There is currently sustained transmission of COVID-19 throughout the UK so there is an increased likelihood of any patient having coronavirus infection. Therefore, while in this phase all patient contacts require level 2 PPE in accordance with Table 4

This guidance covers Infection Prevention & Control (IPC), the use of personal protective equipment (PPE) and decontamination of vehicles and equipment where an ambulance/pre-hospital response is required, including both emergency and non-emergency provision.

Identification of possible cases – Initial Screening

COVID-19 infection should be considered in all cases of respiratory infection. A travel history is no longer a requirement for determining a possible case. If patients meet the below criteria they are to be classified as a possible case.

a. Acute respiratory distress syndrome

or

b. High temperature (of 37.8°C or higher)

or

c. New onset continuous cough

or

d. A loss of, or change in, normal sense of taste or small (anosmia)

Where possible or confirmed cases are identified, this information must be passed to the other health care workers that may come into contact with the patient including responding resources (ambulance, response car etc) prior to arrival on scene. Wherever possible maintain a safe social distance (2 metres) from your patient prior to communication with them.

On-scene Clinical Precautions

This guidance covers the use of personal protective equipment (PPE) for the management and transfer of a patient with possible or confirmed COVID-19. Staff should perform a dynamic risk assessment which should include information provided prior to arrival at scene (at the event site or with the patient). Where the risk assessment indicates a requirement for PPE responders/ambulance crews, they ***MUST*** don the appropriate level before being within 2 metres of the patient.

The risk assessment should include information provided prior to arrival at scene as well as any additional information gained on arrival. See section 3 for the appropriate level of PPE to be worn. 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. The masks must be provided by the responsible medical provider on site/scene.

Where possible, only one responder/crew member would need to don PPE if the patient can be managed by a single person, this leaves the second responder/driver free to perform the transfer and/or admission without having to remove PPE and decontaminate before driving (if applicable).

Key Points

- PPE must be worn by all staff who have direct contact with a possible or confirmed COVID- 19 patient and within 2 metres of the patient
- If the vehicle has a closed bulkhead between the patient compartment and cab then PPE must NOT be worn while driving or within the vehicle cab
- If there is no closed bulkhead (or modification) between the patient compartment and cab then it may be necessary to wear a fluid repellent surgical mask, if the patient will be within 2 metres of the driver while being conveyed
- Unless essential, AGPs should be avoided during the transportation of patients with COVID-19

Personal Protective Equipment (PPE) Guidance

The appropriate level of PPE should be worn following a risk assessment of the presenting risks, and staff should not wear a higher level of PPE than is indicated by their risk assessment and reference to the national guidance (dependent on the current status of transmission).

Use of PPE as described below should not detract from the usual infection prevention and control (IPC) risk assessments that staff carry out routinely to underpin all clinical practice and decision making. Staff should also ensure the correct level of PPE is worn dependant on the patient presentation and the clinical skills that are required during patient care.

NHS ambulance Trust sector PPE for COVID -19 is categorised by level:

Level 1: Standard infection control precautions

Consider if any PPE is required based on risk of contact or splashing with blood or bodily fluids.

Level 2:

- disposable gloves
- disposable apron
- fluid repellent surgical mask
- eye protection (if risk of splashing)

Level 3:

- disposable gloves
- fluid repellent coveralls/long sleeved apron/gown
- FFP3* or powered respirator hood
- eye protection

*Where an FFP3 mask with a non-shrouded valve is worn, it should be accompanied by a full-face visor. If a visor is not available, then a risk assessment should be carried out regarding the risk of splash to the valve. If a large splash (as opposed to droplets) does occur, then the FFP3 mask should be replaced immediately.

The required level of PPE that is recommended to be used as a minimum for the care of all possible or confirmed COVID-19 cases, can be found in Table 3 of the PPE guidance.

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).

Correct Use of PPE

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.
Care should be taken to ensure that PPE is donned and doffed correctly to avoid inadvertent contamination.

All used PPE must be disposed of as category B clinical waste and any reusable items (for example eye protection or powered respirator hoods) must be decontaminated according to manufacturer or Trust instructions.

FFP3 face masks 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 or task that is being undertaken.

Where an FFP3 mask with a non-shrouded valve is worn, these are not fully protected from splash of bodily fluids (they still provide full protection for aerosols) and should be accompanied by a full-face shield/ visor. Where this is not available a risk assessment of the risk of splashing should be undertaken; it is not advised to wear a fluid resistant surgical mask over the FFP3 facemask. If a large splash (as opposed to droplets) does occur, then the FFP3 mask should be **replaced immediately**.

Fluid repellent surgical face masks can be worn for the entire patient care episode, the Health and Safety

Executive (HSE) has confirmed that the masks can be worn until damaged or wet.

Donning PPE

PPE is required for all possible or confirmed COVID-19 patients and should be donned in the following order:

Level 2 PPE

1. Disposable apron.
2. Fluid repellent surgical mask.
3. Eye protection if risk of splashing to the face and eyes.
4. Disposable gloves.

Level 3 PPE (FFP3 and eye protection)

1. Fluid repellent coverall.
2. FFP3 face mask.
3. Eye protection.
4. Disposable gloves – double glove if wearing a coverall (this reduces risk of contamination when removing the coverall).

Level 3 PPE (powered respirator hood)

1. Fluid repellent coverall.
2. Powered respirator hood.
3. Disposable gloves – double glove if wearing a coverall (this reduces risk of contamination when removing the coverall).

Doffing PPE

It is important that the PPE is removed in an order that minimises the potential for cross-contamination.

When doffing PPE, follow the order below with the support and observation of your crew mate to ensure the risk of cross-contamination is minimised.

Hand decontamination helps to prevent the spread of infection. Use alcohol hand rub between removing items of PPE and wash your hands, wrists and forearms once all PPE is removed.

Level 2 PPE

1. Disposable gloves
2. Hand decontamination
3. Disposable apron
4. Eye protection (if worn)
5. Hand decontamination
6. Fluid repellent surgical mask
7. Hand decontamination

Level 3 PPE (FFP3 face mask and eye protection)

1. Outer pair of gloves
2. Coveralls
3. Inner pair of gloves
4. Hand decontamination
5. Eye protection
6. Hand decontamination
7. FFP3 face masks
8. Hand decontamination

Level 3 PPE (powered respirator hood)

1. Outer pair of gloves
2. Respirator hood
3. Coveralls
4. Inner pair of gloves
5. Hand decontamination

Aerosol Generating Procedures (AGP)

AGPs generate tiny particles, small enough to remain in the air for extended periods, travel long distances and may be inhaled.

If an AGP is to be performed, all crew members must don level 3 PPE before being within 2 metres of the patient.

AGPs relevant to the ambulance service, which have been determined as an AGP by Public Health (England, Scotland, Wales and Ireland) and NERVTAG include:

- procedures related to cardiopulmonary resuscitation, for example advanced airway procedures such as laryngoscopy, intubation, extubation and 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

Sessional Use

PHE has advised sessional use of face masks and eye protection can be considered during COVID-19 Pandemic. If PPE is used for a session, then this would be undertaken at the discretion / risk assessment of the crew. A session would be classed as part of the shift before a break or lunch e.g. a facemask could be worn for the first two to three hours of a shift for transporting multiple patients before requiring changing.

Table 1

Context	Disposable gloves	Disposable plastic Apron	Disposable fluid repellent coverall/gown	Surgical fluid repellent face mask	FFP3 Respirator mask	Eye/face Protection
Driver conveying possible or confirmed cases in vehicle with bulkhead no anticipated direct care	No X	No X	No X	No X	No X	No X
Driving when conveying without a bulkhead no direct patient care and within 2 metres	No	No	No	Yes √ Single use or sessional use	No	No

Table 2: Additional PPE consideration in addition to standard IPC precautions

Context	Disposable gloves	Disposable plastic Apron	Disposable fluid repellent coverall/ gown	Surgical fluid repellent face mask	FFP3	Eye/face Protection
Direct patient care assessing an individual that is not currently a possible or confirmed case (within 2 metres)	Yes √	Yes √	No x	Yes √ **sessional use**	No x	Yes √ **sessional use**
Patient transport service driver conveying any individual to essential healthcare appointment that is not currently a positive or confirmed case in a vehicle without a bulkhead, no direct patient care and within 2 metres	No x	No x	No x	Yes **sessional use**	No x	No x

This use of PPE as described in this document should not detract from the usual infection prevention and control (IPC) risk assessments that staff carry out routinely to underpin all clinical practice and decision making. Staff should also ensure the correct level of PPE is worn dependent on the patient presentation and the clinical skills that are required during patient care.

All Operational staff should wear a fluid repellent face mask when in any health or social care provider premises (even if they have no patient).

All Operational staff when on vehicles should wear a fluid repellent face mask if they are within 2 metres of any person, including NEAS crew mate. Operational staff should always also consider sitting front and rear of the vehicle to maintain 2 metres social distancing.

When social distancing cannot be achieved whilst delivering care (within 2 metres) for example when crew member is in the vehicle with a patient and when crew are transporting a patient on a stretcher the recommendations is to wear PPE as in table 2.

As volunteers and taxis are conveying patients in an enclosed space in a car or taxi, it is recommended that the driver wears a surgical face mask and the patient wears a face mask or face covering.
After each journey it is recommended the volunteer / taxi driver to wipe down high touch points with Clinell wipes.

The required level of PPE that is recommended to be used as a minimum for the care of all possible or confirmed COVID-19 cases, can be found in the infection prevention and control guidance.

Patient Use of Face Masks

During transportation and where tolerable, **symptomatic and positive** patients should wear a surgical face mask. The aim of this is to minimise the dispersal of respiratory secretions and reduce environmental contamination.

- Patient should wear a surgical facemask for the duration of the journey and advised that this should be left on for the entire time if tolerated (not pulled up or down).
- Ensure patients have a supply of tissues and a waste bag for disposal for the duration of the journey.
- Vehicle windows should be (at least partially) open to facilitate a continuous flow of air

Non-Emergency Third Party Providers

Due to the nature of different fleet sizes and carrying capabilities, the same IPC principles above applies.

Accompanying Relatives/Friends

Accompanying relatives (escorts) or close friends should only attend if patient has a medical need e.g. dementia. Escorts should be kept at an absolute minimum at this time. All escorts must wear a mask during transport. There will be the requirement to potentially convey carer's or family members to support patients.

Hand Hygiene

Hand hygiene is essential to reduce the transmission of Covid-19. All staff should decontaminate their hands with alcohol-based hand rub (ABHR) or with soap and water wherever possible when entering and leaving areas where patient care is being delivered.

Hand hygiene must be performed immediately before every episode of direct patient care and after any activity or contact that potentially results in hands becoming contaminated, including the removal of personal protective equipment (PPE), equipment decontamination and waste handling.

Before Performing Hand Hygiene for Effective Hand Decontamination

- Expose forearms (bare below the elbows)
- Hand and wrist jewellery should not be worn (plain wedding band allowed)
- Ensure finger nails are clean, short and that artificial nails or nail products are notworn
- Cover all cuts or abrasions with a waterproof dressing

If wearing an apron rather than a gown (bare below the elbows), and it is known or possible that forearms have been exposed to respiratory secretions (for example cough droplets) or other body fluids, hand washing should be extended to include both forearms. Wash the forearms first and then wash the hands.

A surgical face mask should not be worn by patients if there is potential for their clinical care to be compromised (such as when receiving oxygen therapy).

Some hospital units are using masks during transport. This provides added protection during the journey.

Care of the Deceased

Those handling bodies should be aware that there is likely to be a continuing risk of infection from the body fluids and tissues of cases where COVID-19 is identified. The usual principles of standard infection control precautions and transmission-based precautions apply for bodies that are possible or confirmed COVID-19. As a minimum, the PPE required for handling a deceased possible or confirmed COVID-19 patient is gloves, apron and fluid repellent surgical mask (level 2). For more information, see guidance for care of the deceased.

Conveyance and Patient Handover

If the patient requires conveyance it is important to contact the receiving unit to have a discussion regarding where to take the patient as this may not be the usual area within the hospital.

- If possible COVID-19 patients require conveyance, they must be conveyed in isolation and are not permitted to be cohorted, unless they are members of the same household.
- If required, confirmed COVID-19 patients may be cohorted with other confirmed patients (numbers dependent on vehicle size and limitations).
- If community screening is available within the area, then follow the local protocol.
- If the patient requires conveyance they will require conveying to, and assessment at, an infectious disease unit (IDU) or emergency department (ED), as per local agreements, and with an appropriate pre-alert and discussion before leaving the scene.
- 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.

Utilising the Most Appropriate Conveying Resource

Possible cases must not be conveyed by rapid response vehicle.

For vehicles where there is no closed bulkhead:

- If the patient is over 2 metres away from the driver there is no requirement for the driver to wear PPE during conveyance
- The patient must, wherever possible, wear a surgical mask during transportation

The following guidance applies whenever a patient is conveyed;

1. Consider the removal of non-essential equipment from the vehicle or moving non-essential equipment to a closed compartment prior to loading the patient in the vehicle
2. Avoid opening cupboards and compartments unless essential, if equipment is likely to be required then remove from the cupboard prior to loading patient
3. Consider if alternative transport options are available in liaison with the Emergency Operations Control
4. Air conditioning or ventilation on vehicles must be set to extract and not recirculate the air within the vehicle (where possible)
5. Non-essential persons (such as observers, family members) are not to travel within the patient compartment with a possible or confirmed case, unless the patient is a child who requires conveyance, in this case it is acceptable for a parent or guardian to accompany the child
6. Family members and relatives of these patients must be asked to remain at the event site and not attend the hospital. They should be left with contact details for the hospital you are conveying the patient to and asked to phone later for an update before visiting

Pre-Alert

Crews are required to notify the receiving hospital to the fact that they are conveying a possible or confirmed COVID-19 patient and provide an expected time of arrival (ETA) to ensure the receiving unit can prepare for arrival and patient isolation. The receiving hospital will advise the crew where the patient should be brought, as it may not be the emergency department.

NEAS are asking staff NOT to follow this aspect of national guidance, being suspected or confirmed COVID-19 does not require a pre-alert but if the patient is acute unwell then follow standard procedures for a pre-alert. Pre-alerting all COVID-19 patients would over burden the system, possibly to the extent that crews could not pre-alert critically unwell patients.

On Arrival

The driver is to inform the receiving unit of their arrival prior to off-loading the patient. The receiving unit is required to support the offloading of the patient into the department, ensuring the route is clear.

All staff entering the Emergency Departments should don level 2 PPE prior to entering the department. This is due to the high viral load that is expected to be in those areas and to protect the staff.

Post Conveyance

All linen should be managed as per local policy for the management of infectious linen at the receiving unit.

All waste should be disposed of as category B clinical waste, as per local policy, at the receiving unit.

The crew are to remove PPE in the designated area identified within the receiving unit.

All disposable PPE is to be disposed of as category B clinical waste, as per local policy, at the receiving unit.

Decontamination

As coronaviruses have a lipid envelope, a wide range of disinfectants are effective. PPE and good infection prevention and control precautions are effective at minimising risk but can never eliminate it.

It is possible that these viruses can survive in the environment with the amount of virus contamination on surfaces likely to have decreased significantly by 72 hours, so thorough environmental decontamination is vital.

Where equipment is used on-scene for assessing/ treating patients, which are not conveyed the equipment can be decontaminated using universal sanitising wipes or equivalent approved disinfectant.

Universal wipes for NEAS are green Clinell wipes.

Possible or Confirmed COVID-19 Patient with no AGP Procedures Required

- The vehicle will require an enhanced clean between patients to ensure thorough decontamination of all exposed surfaces, equipment and contact areas before it is returned to normal operational duties, with universal sanitising wipes or a chlorine-based product
- Appropriate PPE must be worn to decontaminate the vehicle - as a minimum, this should include apron and gloves
- Any exposed equipment (that is not within closed compartments) left on the vehicle will require decontamination with universal sanitising wipes or equivalent, as per the standard between patient clean
- All contact surfaces (cupboards, walls, ledges), working from top to bottom in a systematic process, will require decontamination
- Pay special attention to all touch points
- Ensure that the stretcher is fully decontaminated, including the underneath and the base
- The vehicle floor should be decontaminated with a detergent solution, this should be at a minimum of the end of every shift, more frequently where facilities exist
- Where possible, hospitals should support this practice by working with ambulance colleagues to identify access to appropriate sluice facilities and designated mop and bucket storage for ambulance use

Possible or Confirmed COVID-19 Requiring AGP Procedure (Such as intubation, suctioning or cardiopulmonary resuscitation)

- The vehicle will require an enhanced decontamination of all exposed surfaces, equipment and contact areas before it is returned to normal operational duties, with a chlorine-based product (or approved equivalent)
- Appropriate PPE must be worn to decontaminate the vehicle - as a minimum, this should include apron and gloves (follow COSHH guidance for protective equipment when using chlorine)
- Any exposed equipment (that is not within closed compartments) left on the vehicle will require decontamination with a universal detergent followed by chlorine-based solution at 1,000 parts per million (or approved equivalent disinfectant)
- Starting from the ceiling of the vehicle and working from top to bottom in a systematic process, all exposed surfaces will require decontamination with a universal detergent followed by a chlorine-based solution at 1,000 parts per million (or approved equivalent)

- Pay special attention to all touch points
- Ensure that the stretcher is fully decontaminated, including the underneath and the base
- The vehicle floor should be decontaminated with a detergent solution followed by a chlorine-based solution at 1,000 parts per million (or approved equivalent), this should be facilitated by the receiving department
- Where possible hospitals should support this practice by working with ambulance colleagues to identify access to appropriate sluice facilities and designated mop and bucket storage for ambulance use

Associated Legislation

Please note that this guidance is of a general nature and that an employer should consider the specific conditions of each individual place of work and comply with all applicable legislation, including the Health and Safety at Work etc. Act 1974.

1. Where ventilation systems cannot be separated entirely, it may be sufficient to demonstrate a positive air pressure gradient/flow from cockpit to medical cabin (assuming air intake to the cockpit is from a 'clean' source, for example externally derived).
2. Number of air changes per hour as defined in WHO guidance (already referenced in PHE PPE guidance).

Additional considerations, in addition to standard infection prevention and control precautions,

where there is sustained transmission of COVID-19, taking into account individual risk assessment for this new and emerging pathogen, NHS and independent sector

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]
Any setting	Direct patient/resident care assessing an individual that is not currently a possible or confirmed case[2] (within 2 metres)	✓ single use[3]	✓ single use[3]	↘	↘	✓ risk assess sessional use[4,5]	↘	✓ risk assess sessional use[4,5]
Any setting	Performing an aerosol generating procedure[6] on an individual that is not currently a possible or confirmed case[2]	✓ single use[3]	↘	✓ single use[3]	↘	↘	✓ single use[3]	✓ single use[3]

Table 4

1. This may be single or reusable face/eye protection/full face visor or goggles.
2. 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-wn-cov-infection
3. 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).
4. Risk assess refers to utilising PPE when there is an anticipated/likely risk of contamination with splashes, droplets of blood or body fluids. **Where staff consider there is a risk to themselves or the individuals they are caring for they should wear a fluid repellent surgical mask with or without eye protection as determined by the individual staff member for the care episode/single session.**
5. 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 consider the risk of infection to and from patients, residents and health and care workers where COVID-19 is circulating in the community and hospitals. PPE should be disposed of after each session or earlier if damaged, soiled, or uncomfortable.
6. The full list of aerosol generating procedures (AGPs) is within the IPC guidance [note APGs are undergoing a further review at present].