

A2 Aerosol Generating Appendix 1

Extra Care Housing Service	Support at Home Service	OA Day Services	Residential Services	DMH Day Services	DMH Supported Living Services	Community Equipment Services	Shared Lives Service
✓	✓	✓	✓	✓	✓	✓	✓

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1. Introduction Sub-heading

Aerosol generating procedures (AGP) are procedures that generate the production of air-borne particles (aerosols) that create potential for airborne transmission. These particles are microscopic and stay in the air longer than standard droplets.

It is essential that staff receive the correct training before undertaking AGPs and are fit tested and are able to fit check an FFP3 face mask prior to performing the task. If these requirements are not in place, then the procedure will be deemed unsafe practice, as there will be an increased risk from infection transmission.

2. Procedure that are Considered to be AGP

- Tracheal intubation and extubating
- 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
- 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

NB. When procedures marked * are not currently taking place and have not taken place in the previous 60 minutes standard droplet PPE is required.

3. Routes of Transmission

Respiratory infections can be spread in multiple ways

- Contact can be via direct or indirect transmission.
- Respiratory infections can be spread in multiple ways
- Direct- Physical contact with the Infectious person e.g., shaking hands, hugging
- Indirect- No physical contact with infected host however the environment is contaminated. The susceptible host's hands or mucous membranes become contaminated through contact with an infectious surface and transmission of infection can occur.

Droplet

Droplets are generated in the respiratory tract and released from the body during coughing, sneezing, or talking. They travel around one to two metres. These droplets do not remain in the air for long periods before dropping on surfaces in the wider environment and the floor. When these droplets come into contact with a new host, transmission of infection can occur via mucous membranes.

Airborne transmission

Aerosol generating procedures have a greater risk of passing infection in comparison to droplet due to the aerosols being much smaller. The aerosols remain in the air for longer periods of time, potentially transmitting infection via mucus membranes or inhalation.

4. Cohorting of Staff

Staff should be assigned to a specific group of people we support.

Staff should not go between different groups of people we support.

5. Hand Hygiene

Hand Hygiene is one of the most effective ways to prevent transmission. Hand hygiene must be performed in line with the 5 moments of hand hygiene as a minimum.

1. Before touching a service user
2. Before a clean/ aseptic procedure
3. After blood or body fluid exposure or risk
4. After touching a service user
5. After touching service user's surroundings

Hand Hygiene must be performed before putting on and after taking off PPE.

The use of alcohol hand rub/ gel to decontaminate hands that are not visually soiled is acceptable. Liquid soap and water must be used if visually soiled when there has been potential or risk of exposure to body fluid and after removing gloves.

6. Ventilation

- During an AGP rooms must be well ventilated
- Doors must be closed and remain closed for a minimum of 60 minutes
- Staff must not enter the room without an FFP3 face mask for a minimum of 60 minutes after the AGP procedure

The rate of clearance of aerosols in an enclosed space is dependent on the extent of any mechanical or natural ventilation and the size of the droplets created – the greater the number of air changes per hour (ventilation rate), the sooner any aerosol will be cleared. The time required to clear aerosols, and thus the time after which the room can be entered without a filtering face piece (FFP3) respirator, can be determined by the number of air changes per hour as outlined in WHO guidance; in general wards and single rooms there should be a minimum of 6 air changes per hour.

Where feasible, environmental decontamination should be performed when it is considered appropriate to enter the room or area following an AGP without infection. A single air change is estimated to remove 63% of airborne contaminants, after 5 air changes less than 1% of airborne contamination is thought to remain. Clearance of infectious particles after an AGP is dependent on the ventilation and air change within the room. In an isolation room with 10-12 air changes per hour, a minimum of 20 minutes is considered pragmatic. In a single room with 6 ACH this would be approximately one hour.

7. PPE for during and within 60 minutes of an AGP finishing without more than 6 air changes per hour.

Staff must wear the correct PPE-

- a. Long sleeved gown
- b. FFP3 respirator mask (fit tested & fit checked)
- c. Eye protection
- d. Gloves

8. Donning and Doffing AGP PPE

Staff must follow strict donning and doffing procedures in line with public health England issued guidelines.

*Video demonstrating donning and doffing AGP PPE






[COVID-19: personal protective equipment use for aerosol generating procedures - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/COVID-19-personal-protective-equipment-use-for-aerosol-generating-procedures)

Donning and doffing resident / service user positive or suspected Covid-19:

Public Health England COVID-19
Quick guide – gown version
Removal of (doffing) personal protective equipment (PPE) for aerosol generating procedures (AGPs). Airborne Precautions

PPE should be removed in an order that minimises the potential for cross contamination.

The order of removal of PPE is as follows:

- 1 Gloves –** the outsides of the gloves are contaminated

 Clean hands with alcohol gel
- 2 Gown –** the front of the gown and sleeves will be contaminated

- 3 Eye protection –** the outside will be contaminated

- 4 Respirator**
 Clean hands with alcohol hand rub. Do not touch the front of the respirator as it will be contaminated

- 5 Wash hands with soap and water**


Public Health England COVID-19
Quick guide – gown version
Putting on (donning) personal protective equipment (PPE) for aerosol generating procedures (AGPs). Airborne Precautions

This is undertaken outside the patient's room.

Pre-donning instructions

- ensure healthcare worker hydrated
- tie hair back
- remove jewellery
- check PPE in the correct size is available

Perform hand hygiene before putting on PPE

- 1 Put on the long-sleeved fluid repellent disposable gown**

- 2 Respirator**
 Perform a fit check.

- 3 Eye protection**

- 4 Gloves**


Donning and doffing PPE AGP resident not suspected or confirmed Covid-19:

Public Health England
Putting on personal protective equipment (PPE) for non-aerosol generating procedures (AGPs)*

Pre-donning instructions:

- Ensure healthcare worker hydrated
- Tie hair back
- Remove jewellery
- Check PPE in the correct size is available

- 1 Perform hand hygiene** before putting on PPE.
- 2 Put on apron and face mask.**
- 3 Put on face mask –** position lower about on the sides of your face, make sure it covers your nose.
- 4 With both hands, reach the middle strap over the bridge of your nose.**
- 5 Don eye protection if required.**
- 6 Put on gloves.**

Public Health England
Taking off personal protective equipment (PPE) for non-aerosol generating procedures (AGPs)*

Please see donning and doffing sites to support this guidance: <https://phe.org.uk/covid-19>

PPE should be removed in an order that minimises the risk of self-contamination.

Shoes, aprons and eye protection if used should be taken off in the patient's room or cohort area.

- 1 Remove gloves.** Grip the wrist of glove with the opposite gloved hand. Lift the remaining glove off from the first glove and discard.
- 2 Clean hands.**
- 3 APR:** Unhook straps at the back and get the apron end down to floor.
- 4 Remove eye protection if used.** Use both hands to grip the strap by pulling away from face and around.
- 5 Clean hands.**
- 6 Remove face mask.** Hold on back of mask, untied by the back straps, and remove by pulling it away from face and around.
- 7 Clean hands with soap and water.**

*For the PPE guide for AGPs please visit: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/536666/AGPs_PPE_guide.pdf

PPE for during and within 60 minutes of an AGP finishing without more than 6 air changes per hour with positive resident*.

Caring for user who is positive or suspected Covid-19 PPE-

- a) Long sleeved gown
- b) FFP3 respirator mask (fit tested & fit checked)
- c) Eye protection
- d) Gloves

Caring for a user who is not suspect or is negative for Covid-19-

1. Apron (long sleeve gown should be risk assessed if risk of extensive splashing)
2. IIR mask (single use only)
3. Gloves
4. Eye Protection

9. Environmental Cleaning and Decontamination

Evidence shows some respiratory infectious agents can live on surfaces for up to 72 hours after leaving the host's body. It is therefore essential environmental cleaning and decontamination is managed and recorded in line with The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance. This requires that registered providers of health and social care:

“Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections”.

Increased frequency of decontamination/ cleaning must be incorporated into daily cleaning. Frequently touched surfaces should be cleaned more than twice per day. For example.

Surfaces within the service users' rooms, doorbells, light switches, bathrooms handrails, electronic equipment.

12. Waste

Large volumes of waste may be generated by frequent use of PPE, advice from the local waste management team should be sought prospectively on how to manage this. If no orange waste stream available, then yellow can be used for infectious waste, as long as it is identified, double bagged and labelled “COVID-19 WASTE” and stored for 72 hours before disposal.

10. Person requiring AGP Regularly

Cleaning and decontamination should be completed by specially trained staff. In some instances, care staff may need to undertake cleaning duties.

After cleaning with neutral detergent, a disinfectant should be used with the appropriate dilution. **See Safe management of the care environment policy.** The person we support's room should be cleaned twice daily and separately to other people whom we support in line with infection risk.

11. When the person we support has left the room

All surfaces must be cleaned and disinfected.





Dedicated or disposable equipment must be used and discarded in infectious waste.

Equipment must not be reused unless decontaminated in line with manufactures instructions.

*Further guidance can be found COVID-19: infection prevention and control guidance, also safe management of care setting guidance

12. Waste

The waste government guidance procedure must be followed:

Waste stream guide for Care Home settings	
Colour*	Description
	<p>Infectious waste: items contaminated with urine, faeces, vomit, sputum, pus or wound exudate, from a known, suspected or at risk of infection source. Items may include personal protective equipment (PPE), continence pads, urine bags, single use items, single use bowls and dressings.</p> <ul style="list-style-type: none"> Waste from blood and/or body fluid spillages. Infectious waste may be treated to render it safe prior to disposal, or alternatively incinerated in a licensed facility.
	<p>Offensive/hygiene waste: items contaminated with urine, faeces, vomit, sputum, pus or wound exudate, from residents with no risk of, known or suspected infection. Items may include PPE, continence pads, urine bags, single use items, single use bowls, dressings, feminine hygiene, nappies and any other items assessed to be non-infectious, such as uncontaminated PPE.</p> <ul style="list-style-type: none"> Liquids, e.g. urine, faeces, vomit, should be discarded into a foul sewer (sluice or toilet). They can, however, be absorbed onto a disposable cloth, e.g. paper towel, and placed in the offensive waste stream, ensuring there is no free-flowing liquid present. Offensive/hygiene waste may be land filled in a permitted or licensed facility.
	<p>Domestic waste: items which do not contain infectious materials, sharps or medicinal products, e.g. paper towels from hand washing, packaging, newspapers.</p> <ul style="list-style-type: none"> Clear or opaque waste bags can also be used for domestic waste. Recycling options should be considered where available. Domestic waste may be land filled in a permitted or licensed facility.
	<p>This waste stream is rarely used in care home settings.</p> <p>Cytotoxic and cytostatic waste: items contaminated with hormone or oxytocin-based agents.</p> <ul style="list-style-type: none"> Cytotoxic and cytostatic waste must be incinerated in a permitted or licensed facility.

13. After AGP Procedure

After conducting an AGP, staff are required to follow correct doffing practice and perform hand hygiene. After completing all necessary infection prevention and control practices staff can continue to work in a normal manner, they do not need to wait for additional time to elapse before then can be in contact with other staff or service users.

References

Department of Health (2015) The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance

[COVID-19 infection prevention and control guidance \(hee.nhs.uk\)](https://www.hee.nhs.uk)

[CH 23 Safe management of the care environment August 2020 Version 3.00 pdf.pdf \(cumbria.gov.uk\)](https://www.cumbria.gov.uk)

[COVID-19 supplement to the infection prevention and control resource for adult social care - GOV.UK \(www.gov.uk\)](https://www.gov.uk)