

# Use of PPE for staff working in The Operating Theatre and Recovery

Version 5.5

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Recent previous versions

7 Sept 2022: updated to reflect NHSE Guidance reducing testing requirements.

28 July 2022: Added recommendation to wear surgical face mask in clinical areas

29 June 2022: Changes to PPE requirements and COVID 19 testing

7 March 2022: supraglottic airway insertion and removal no longer classed as AGP for patients on Green pathway only

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## 1. Introduction

Note: this document should be used in conjunction with the detailed guidance on personal protective equipment (PPE) requirements for specific infections/organisms that are given in the [Trust's Infection Prevention Policies](#).

Due to the rapid rise in COVID cases in the local community, it is recommended that staff wear a type IIR surgical face mask at all times in clinical (patient facing) areas. This includes all wards, outpatient departments, the Urgent Treatment Centre and the Emergency Department. Signage across our buildings will be changed to reflect this advice.

For the avoidance of doubt the entire theatre estate should be treated as a clinical area.

However, based on personal preference or Health Work and Well Being risk assessment, for staff who do wish to continue to wear masks when at work in scenarios other than those described below, type IIR surgical masks will continue to be available in all clinical and non-clinical areas. There is also no longer a requirement to socially distance when not wearing PPE.

## 2. Aerosol generating procedures (AGPs)

Aerosol generating procedures (AGPs) are medical procedures that can result in the release of aerosols from the respiratory tract. The criteria for an AGP are a high risk of aerosol generation and increased risk of transmission (from patients with a known or suspected respiratory infection).

The NHS England [National Infection Prevention and Control Manual for England](#) defines the following as AGPs:

- Awake\* bronchoscopy
- Awake\* ear, nose, and throat (ENT) airway procedures that involve respiratory suctioning
- Awake\* upper gastro-intestinal endoscopy
- Dental procedures (using high speed or high frequency devices, for example ultrasonic scalers/high speed drills)
- Induction of sputum
- Open respiratory tract suctioning
- Surgery or post-mortem procedures (like high speed cutting / drilling) likely to produce aerosol from the respiratory tract (upper or lower) or sinuses.
- Tracheostomy procedures (insertion or removal)

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\*Awake includes 'conscious' sedation (excluding anaesthetised patients with secured airway).

In addition, for practical purposes, the following are also considered AGPs:

- Cardiopulmonary resuscitation (CPR) – UK Health Security Agency (UKHSA)/NHS England (NHSE) guidance do not regard chest compressions as an AGP based on currently available evidence, however the Resuscitation Council UK (RCUK) states otherwise. This is reflected in the Trust PPE recommendations for CPR.
- Tracheal extubation and intubation – UKHSA/NHSE guidance do not regard tracheal extubation and intubation in anaesthetised patient as AGPs however, given the potential for the requirement for respiratory suctioning as well as most patients being extubated not being under anaesthesia, both tracheal intubation and extubation should be regarded as AGPs from a PPE point of view.

### **The following are NOT considered to be AGPs:**

- Manual facemask ventilation
- Administration of pressurised humidified oxygen
- Non-invasive ventilation (NIV) including CPAP
- High flow nasal oxygen (HFNO)
- Insertion or removal of supraglottic airways
- Administration of Entonox
- Administration of medication via nebulization
- Taking a nasopharyngeal swab

Please seek advice from the Infection Prevention Team regarding any procedures listed above if you are unclear whether they are AGP or not.

### 3. Non-theatre activity by theatre staff and anaesthetists

For non-theatre activity by theatre staff and anaesthetists, follow the trust guidelines, but in particular note the enhanced requirements for:

- Providing direct clinical care (within 2m of patient) to untriaged patients in whom potential for respiratory infection is high (i.e. on ED/SDEC and Bevan Court 1 Ambulatory Care, AMU and 5C); Section 5: Trust PPE Guidance Setting B
- Staff attending COVID outbreak wards, 2A, Satchi Suite and Lilac Centre; Section 5: Trust PPE Guidance Setting G
- Staff attending the delivery suite must follow the guidance contained in; Section 5: Trust PPE Guidance Setting F

**Extract from Trust PPE Guidance** (Full and latest version on the intranet: <https://covid.sthk.nhs.uk/what-to-wear-and-when>)

Clinical areas – NO aerosol generating procedures (AGPs)						
Setting	Disposable gloves	Disposable plastic apron	Disposable fluid resistant gown	Fluid-resistant (Type IIR) surgical mask	FFP3 mask	Eye protection (goggles/visor)
B Providing direct clinical care (within 2m of patient) to untriaged patients in whom potential for respiratory infection is high (i.e. on ED/SDEC and Bevan Court 1 Ambulatory Care)	X	X	X	√ Sessional use	X	X
F. Delivery Suite – staff attending 2 <sup>nd</sup> /3 <sup>rd</sup> stage of labour	√ Single use	√ Single use	√ Single use if there is significant risk of bodily fluid exposure or instrumental deliveries	√ Single use if patient is known or suspected to have respiratory infection	X	√ Single use if patient is known or suspected to have respiratory infection and/or significant splash risk.

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Clinical areas – NO aerosol generating procedures (AGPs)						
Setting	Disposable gloves	Disposable plastic apron	Disposable fluid resistant gown	Fluid-resistant (Type IIR) surgical mask	FFP3 mask	Eye protection (goggles/visor)
G. When on current COVID-19 outbreak wards (and not providing direct patient care)	X	X	X	✓ <b>Sessional use</b> Visiting staff including theatre staff should remove or change their mask when they leave the ward	X	X

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#### 4. Patient screening for COVID-19

##### 4.1. inpatient admissions

As of 1 September 2022, **there is no longer a requirement** to test all asymptomatic patients requiring inpatient admission (i.e. at least admission overnight) for COVID-19 **except for the following groups of patients who must still be tested for COVID-19 on admission even if they are asymptomatic:**

1. Any immunocompromised\* patients requiring inpatient admission, to be tested on admission.
2. Any immunocompromised\* patients requiring transfer between inpatient wards – to be screened by the receiving ward.
3. All inpatient admissions to wards 2A, 4D and 4E on admission to those wards (patient do not need to await a COVID result before being admitted into these areas).

\*See appendix I: Definition of immunocompromised

In the above cases, even if the patient does not have any symptoms of COVID-19 detailed above, **send samples for COVID-19 testing**, in addition to usual investigations appropriate to the patient's clinical condition.

The test must be carried out without delay at the point where decision to admit is made.

For asymptomatic patients, a COVID-19 test can be requested on CareFlow (under test name COVID-19 Novel Coronavirus PCR and on the 'Test required' drop down, select '**Asymptomatic admission screen [COVA]**').

Patients who are tested on admission but do not have clinical features of COVID-19 do NOT need isolation in side rooms (unless they also have another reason to require this e.g. another infectious disease requiring isolation precautions or infection alert such as MRSA/VRE/CPE).

Symptomatic inpatient admissions still require PCR testing.

**See [Current case definition and assessment guidance – STHK COVID-19 Guidance](#)** full guidance on clinical assessment and testing.

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### 4.2. Planned activity

Patients having planned admission will be tested as follows:

Activity type	Then	Then	Result	Day of admission
Patients undergoing surgery/procedural intervention (e.g. endoscopy or biopsy) under <b>local anaesthesia or no anaesthesia</b>	Do not test	Symptom screening on day of admission only	See 'Day of admission' section	COVID Symptom screening on day of admission.
Patients undergoing surgery/procedural intervention under <b>general anaesthesia, sedation or regional anaesthesia</b>	Is patient Immuno-compromised*?	<b>Lateral Flow test:</b> Patient to do test at home within 72 hours of admission. If not done by patient or an endoscopy day case, then LFD on admission and add to shared drive spreadsheet for reporting to NHSE. G:\GM\Shared\Lateral Flow\LFD Patient Test Results\22-23	<b>Positive:</b> Clinical decision to proceed if urgent  <b>Negative:</b> Proceed	<b>If Symptomatic:</b>  <b>Day case -</b> Do Lateral Flow Test (LFT)  <b>Inpatient –</b> Do PCR as per inpatient guidance <sup>[1]</sup>
	Not immuno-compromised*?	Symptom screening on day of admission only	See 'Day of admission' section	If positive clinical decision to proceed if urgent.

\* Link to: [Current case definition and assessment guidance – STHK COVID-19 Guidance](#)



## 5. PPE, location and Terminal cleaning selection

The following information and table will help you select the correct minimum PPE to be worn in theatre and related areas, tell you where the patient may be recovered and how to clean the patient areas once they have left.

- PPE requirements are the minimum needed; staff may wear enhanced PPE if they wish or have been advised to do so by HWWB.
- All Endotracheal Extubation must be undertaken in theatre. Anaesthetists must not move a patient needing a side room out of theatre until recovery confirms one is available. The patient can then move to recovery as soon as clinically appropriate once a room is available.
- Recovery PPE requirements may differ and should be re-assessed on admission to recovery.
- Supraglottic airway insertion and removal are not AGPs and can be carried out in theatre or the specified recovery location.

Patients coming to theatre should be treated as follows:

- Known or suspected COVID-19 or respiratory infection: **Scenario A**
- For immunocompromised patients:
  - If surgery is urgent, a lack of COVID test result should not delay surgery.
  - For non-urgent surgery, surgery should be delayed until the COVID test result is known.
  - In both situations, manage these patients as follows:
    - If symptomatic, or COVID positive Use **Scenario A**
    - If asymptomatic, patient should be managed using **scenario B or C** determined by other infection risks
- All other non-immunocompromised and asymptomatic patients should be treated using **Scenario B or C**, determined by other infection risks

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### 5.1. PPE, location and cleaning selection

Scenario	If	Then if	PPE Setting for theatre and recovery	Recovery	Post-operative Cleaning of Theatre/recovery		
					Laminar Air Flow	Non-laminar Air Flow	Recovery
<b>A</b>	Known or suspected COVID-19 or respiratory infection or Symptomatic but not yet screened or for whom no result available for COVID-19 including all Direct and Urgent admissions	AGP?	PPE Setting H	Extubate in theatre and then move to recovery Side room	Staff can enter 5 minutes after last AGP performed wearing Surgical face mask, Apron, Gloves, eye protection	Staff can enter 20 minutes after last AGP performed wearing Surgical face mask, Apron, Gloves, eye protection	Staff can enter 20 minutes after last AGP performed wearing Surgical face mask, Apron, Gloves, eye protection
		No AGP?	PPE Setting A	recovery Side room	As soon as the patient leaves staff can enter to clean the theatre wearing PPE. (Surgical face mask, Apron, Gloves and eye protection)	As soon as the patient leaves staff can enter to clean the theatre wearing PPE. (Surgical face mask, Apron, Gloves and eye protection)	As soon as the patient leaves staff can enter to clean the room wearing PPE (Surgical face mask, Apron, Gloves and eye protection)
<b>B</b>	Non-respiratory cross infection hazards e.g. MRSA, CDI, VRE, CPE (not an exhaustive list) including COVID asymptomatic patients not requiring COVID testing prior to surgery	AGP?	PPE setting I	Side room	As soon as the patient leaves staff can enter to clean the theatre/room wearing PPE. (FFP3 mask, Apron, Gloves and eye protection).		
		No AGP?	PPE setting E	Side room	As soon as the patient leaves staff can enter to clean the theatre/room wearing PPE. (Surgical face mask, Apron, Gloves and eye protection).		
<b>C</b>	Neither respiratory or other infection risk including COVID asymptomatic patients not requiring a COVID test prior to surgery	AGP?	PPE setting I	Side room	As soon as the patient leaves staff can enter to clean the theatre/room wearing PPE. (FFP3 mask, Apron, Gloves and eye protection).		
		No AGP?	PPE Setting C	Main recovery area	As soon as the patient leaves staff can enter to clean the theatre/room wearing PPE. (Surgical face mask, Apron, Gloves and eye protection).		

## 6. Correct use of FFP3 masks and respiratory hoods:

### 6.1. Fit testing

Ensure you have been face fit tested for the mask you are using. Fit testing is available via key trainers in each clinical area or via the central fit testing service (call Ext 1781 or email [fit.test@sthk.nhs.uk](mailto:fit.test@sthk.nhs.uk)).

### 6.2. valved/unshrouded FFP3 masks or respirator hood

If a valved, un-shrouded FFP3 respirator is used then it should be accompanied by full face protection. For 3M 1873V and 8833 masks (shown below) or any other type of FFP3 mask with a valve visible from the outside, additional protection must be used to reduce the risk of droplet splashing onto the mask and also to reduce the risk to others by any droplets in the unfiltered exhaled breath. If you are wearing such a mask, always wear a full face visor over the mask. Note that wearing a water repellent surgical mask over a valved FFP3 mask is no longer recommended



The respiratory hoods used in the trust also have unfiltered exhalation valves. If using a hood, **a type IIR surgical mask should be worn underneath the hood.**

### 6.3. Use of valved/unshrouded FFP3 masks or respirator hood for aseptic/sterile procedures

**Valved/unshrouded FFP3 masks or hoods should only be worn for aseptic or sterile procedures if there is no alternative (i.e. the user does not fit any un-valved FFP3 mask).** This is because there is a theoretical risk (albeit it small) of an FFP3 mask/hood with an exhalation valve exposing the patient to risk of potential contamination from normal bacteria present on the skin, mouth or respiratory tract of the operator due to condensation forming on the valve then leaking onto the aseptic/sterile field.

If a valved/unshrouded FFP3 or hood is worn for such procedures, be vigilant of condensation forming at the valve (more likely during prolonged periods of wear and/or during hot/humid weather). If there are signs of condensation, remove mask/hood immediately outside of the AGP area and replace with new mask (if using single use valved mask) or clean reusable mask/hood as below before donning again.

## 7. Single/Reusable/Sessional use PPE explained:

Based on STHK guidance for appropriate PPE use in hospital and community care setting (<https://covid.sthk.nhs.uk/what-to-wear-and-when/>)

**Single use PPE:** dispose after each patient contact or episode of patient care.

**Reusable PPE:** decontaminate reusable items (e.g. eye protection or reusable FFP3 respirator) after each patient and/or following completion of a procedure. Goggles can be re-used and cleaned using 1000 parts per million chlorine (Chlorclean) or Sani-cloth Chlor (orange top) wipes. Some visors can be cleaned and reused. Please check each model before attempting to decontaminate/re-use.

**Sessional use PPE:**

For type IIR surgical masks this means, change every 3 hours or when moving from one clinical department to another.

- **PPE should be changed if damaged, moist, visibly soiled, or uncomfortable.**
  - **Remove PPE before going on comfort breaks or visiting the toilet.**
- **Avoid touching your face even when in PPE as much as possible – if you do, clean your hands.**

**ALWAYS clean hands after removing PPE.**

- **Dispose of PPE as infectious waste (orange bin).**
- **Do not come out of clinical areas in used PPE unless accompanying a patient to a different clinical area. And then dispose of PPE as soon as possible.**

## 8. Bibliography

1. National infection prevention and control manual for England 8 June 2022 V 2.0 . (NHS England » National infection prevention and control)
2. STHK. (2022). STHK guidance for appropriate PPE use in hospital and community care setting (<https://covid.sthk.nhs.uk/what-to-wear-and-when/>).
3. Association of Anaesthetists and Royal College of Anaesthetists; the use of Supraglottic airway (SGA) during the COVID-19 pandemic. An Update: November 2021.

## Appendix I: Definition of immunocompromised

Definition of immunocompromised is below (note that this is not an exhaustive list, further details are available at

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/655225/Greenbook\\_chapter\\_6.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/655225/Greenbook_chapter_6.pdf):

1. Any haematological malignancy e.g. leukaemia/lymphoma/myeloma
2. HIV/AIDS
3. Cellular immune deficiencies (e.g. Severe combined immunodeficiency, Wiskott-Aldrich syndrome, 22q11 deficiency/DiGeorge syndrome)
4. Bone marrow transplant (allogeneic or autologous)
5. Solid organ transplant
6. Received any chemotherapy or radiotherapy in the past 6 months
7. Received immunosuppressive biological therapy (e.g. anti-TNF therapy such as alemtuzumab, ofatumumab and rituximab) in the past 12 months
8. Received steroids in the last 3 months - high dose (>40mg prednisolone per day or 2mg/ kg/day in children under 20kg) for more than 1 week OR lower dose corticosteroids (>20mg prednisolone per day or 1mg/kg/day in children under 20kg) for more than 2 weeks
9. Received non-biological oral immune modulating drugs e.g. methotrexate >25mg per week, azathioprine >3.0mg/kg/day or 6-mercaptopurine >1.5mg/kg/day

In the above cases, even if the patient does not have any symptoms of COVID-19 detailed above, **send samples for COVID-19 testing**, in addition to usual investigations appropriate to the patient's clinical condition.

The test must be carried out without delay at the point where decision to admit is made. For asymptomatic patients, a COVID-19 test can be requested on CareFlow (under test name COVID-19 Novel Coronavirus PCR and on the 'Test required' drop down, select '**Asymptomatic admission screen [COVA]**').

## 9. Appendix II: Summary PPE guidance for STHK staff (including Medirest and Vinci): what is required, where and when

Note: this document should be used in conjunction with the detailed guidance on personal protective equipment (PPE) requirements for specific infections/organisms are given in the [Trust's Infection Prevention Policies](#).

There is no longer requirement for universal mask wearing for staff when on Trust premises. However, based on personal preference or Health Work and Well Being risk assessment, staff who do wish to continue to wear masks when at work in scenarios other than those described below. Type IIR surgical masks will continue to be available in all clinical and non-clinical areas. There is also no longer a requirement to socially distance when not wearing PPE.

Clinical areas – NO aerosol generating procedures (AGPs)						
Setting	Disposable gloves	Disposable plastic apron	Disposable fluid resistant gown	Fluid-resistant (Type IIR) surgical mask	FFP3 mask	Eye protection (goggles/visor)
A. Known or suspected COVID-19 or other respiratory infection	✓ Single use	✓ Single use	X	✓ Single use	X	✓ Single use
B. Providing direct clinical care (within 2m of patient) to untriaged patients in whom potential for respiratory infection is high (i.e. on ED/SDEC and Bevan Court 1 Ambulatory Care)	X	X	X	✓ Sessional use	X	X
C. Care of patients with no known or suspected respiratory infection or other cross infection hazard (excluding 2A and Lilac Centre)	X	X	X	X	X	X
D. Patients with no respiratory or other cross infection hazard on 2A and Lilac Centre when providing direct clinical care (i.e. within 2m of patient)	X	X	X	✓ Sessional use	X	X
E. Patients with non-respiratory cross infection hazards e.g. MRSA, CDI, VRE, CPE (note that this is <u>not</u> an exhaustive list)	✓ Single use	✓ Single use	X Use only if risk of significant bodily fluid exposure	X	X	X Use only if risk of significant bodily fluid exposure



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Clinical areas – NO aerosol generating procedures (AGPs)						
Setting	Disposable gloves	Disposable plastic apron	Disposable fluid resistant gown	Fluid-resistant (Type IIR) surgical mask	FFP3 mask	Eye protection (goggles/visor)
F. Delivery Suite – staff attending 2 <sup>nd</sup> /3 <sup>rd</sup> stage of labour	✓ Single use	✓ Single use	✓ Single use if there is significant risk of bodily fluid exposure or instrumental deliveries	✓ Single use if patient is known or suspected to have respiratory infection	X	✓ Single use if patient is known or suspected to have respiratory infection and/or significant splash risk.
G. When on current COVID-19 outbreak wards (and not providing direct patient care)	X	X	X	✓ Sessional use	X	X

Aerosol generating procedures (AGPs)						
Setting	Disposable gloves	Disposable plastic apron	Disposable fluid resistant gown	Fluid-resistant (Type IIR) surgical mask	FFP3 mask	Eye protection (goggles/visor)
H. Known or suspected COVID-19 or other respiratory infection	✓ Single use	X	✓ Single use	X	✓ Single use	✓ Single use [Use visor NOT goggles]
I. Not known to have suspected or confirmed respiratory infection	✓ Single use	✓ Single use	X Use only if risk of significant bodily fluid exposure	X	✓ Single use	✓ Single use [Use visor NOT goggles]
Cardiopulmonary resuscitation (CPR)						
J. CPR: First responder	✓ Single use	✓ Single use	X	✓	X	✓

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Aerosol generating procedures (AGPs)						
Setting	Disposable gloves	Disposable plastic apron	Disposable fluid resistant gown	Fluid-resistant (Type IIR) surgical mask	FFP3 mask	Eye protection (goggles/visor)
K. CPR: Emergency Team	✓ Single use	✓ Single use NB: use gown instead if patient with known respiratory infection)	X Use instead of plastic apron only if patient with known respiratory infection	X	✓ Single use	✓ Single use [Use visor NOT goggles]

Non-clinical areas						
Setting	Disposable gloves	Disposable plastic apron	Disposable fluid resistant gown	Fluid-resistant (Type IIR) surgical mask	FFP3 mask	Eye protection (goggles/visor)
L. Working in non-patient facing areas including offices	X	X	X	X	X	X