

Scottish COVID-19 Infection Prevention and Control

Addendum for Acute Healthcare Settings

Version History

Version	Date	Summary of changes
V1.0	26/10/20	First publication
V1.1	28/10/20	Update to section 5.7 'Safe Management of the Care Environment' to reflect detail of 2 nd daily clean Update to section 5.5 'Personal Protective Equipment' to be more explicit
V1.2	06/11/20	Update to align references to changing of facemasks between pathways.
V1.3	20/11/20	New section on communications when transferring a suspected/confirmed case New section on car sharing New section on visiting Update to definition of recovered patient
V1.4	09/12/20	New section on PPE requirements for delivery of vaccinations New section on outbreaks
V1.5	17/12/20	New section on COVID-19 testing New section on Patients returning from weekend/day pass New section on Whole Genome Sequencing (WGS) Link to RCPCH paediatric guidance for pre-operative admission assessment and testing requirements New FRSM poster (ways to improve fit)
V1.6	23/12/20	Update to 5.0.3 to reflect changes in stepdown guidance Inclusion of SG link to asymptomatic staff testing information New section on 5.1.1 Non-COVID patient transfers between different wards and hospitals
V1.7	22/01/21	Update to the COVID-19 testing section and associated testing table New section on guidance for the Discontinuation of Infection control precautions and discharging COVID-19 patients from hospital Update to PPE guidance specifically in relation to visors New section on the hierarchy of controls
V1.8	18/02/21	Update to resources and Rapid reviews content Additional wording added to definition of suspected case section to reflect wide variety of presenting symptoms Strengthening of triage question relating to travel history

		Additional paragraph in PPE section reinforcing need for visiting staff to seek clarity on patient pathway and PPE requirements prior to patient contact
V1.9	26/03/21	Sessional PPE use no longer accepted beyond eye protection in the high risk pathway and FRSMs across all pathways. Update to stepdown requirement for inpatient table to recognise need for clinical assessment Useful tools section
V.2.0	07/05/21	Environmental risk assessment
V2.1	14/05/21	Change to AGP list to remove upper airway suctioning during Upper GI Endoscopy and replace with suctioning beyond the oro-pharynx.
V2.2	18/05/21	Update to COVID-19 testing table to reflect the need to test all contacts of confirmed cases.

This addendum has been developed in collaboration with NHS Boards to provide Scottish context to the UK COVID-19 IPC remobilisation guidance, some deviations exist for Scotland and these have been agreed through consultation with NHS Boards and approved by the CNO Nosocomial Review Group. These processes deviate from the National Infection Prevention & Control Manual normal process for sign off due the timescales for COVID-19 guidance approval.

When an organisation adopts practices that differ from those recommended/stated in this national guidance, that individual organisation is responsible for ensuring safe systems of work, including the completion of a risk assessment(s) approved through local governance procedures.

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/Addendum

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IMPORTANT: Whilst guidance contained within this addendum is specific to COVID-19, clinicians must consider the possibility of infection associated with other respiratory pathogens spread by the droplet or airborne route and therefore Transmission Based Precautions (TBPs) should not be automatically discontinued where COVID-19 has been excluded. Any patient who has a coinfection with COVID-19 must not be cohorted with other COVID-19 patients.

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The purpose of this addendum is to provide COVID-19 specific IPC guidance for NHS Scotland on a single platform improving accessibility for users. The guidance within this addendum is in line with the UK IPC remobilisation guidance however some deviations for NHS Scotland exist.

5.0 COVID-19 case definitions and triage questions

IMPORTANT: Whilst these additions are specific to COVID-19, clinicians must consider the possibility of infection associated with other respiratory pathogens spread by the droplet or airborne route and therefore Transmission Based Precautions (TBPs) should not be automatically discontinued where COVID-19 has been excluded. Any patient who has a coinfection with COVID-19 must not be cohorted with other COVID-19 patients.

5.0.1 Definition of a confirmed case

A laboratory confirmed (detection of SARs-CoV-2 RNA in a clinical specimen) case of COVID-19.

5.0.2 Definition of a suspected case

A wide variety of clinical symptoms have been associated with COVID-19: headache, loss of smell, nasal obstruction, lethargy, myalgia (aching muscles), rhinorrhea (runny nose), taste dysfunction, sore throat, diarrhoea, vomiting and confusion; fever may not be reported in all symptomatic individuals. Patients may also be asymptomatic

The definition of a suspected case is as follows; an individual meeting one of the following case criteria taking into account atypical and non specific presentations in older people with frailty (further information on presentations and management of COVID-19 in older people can be found here and in appendix 1), those with pre existing conditions and patients who are immunocompromised;

Community definition:

- Recent onset new continuous cough

OR

fever

OR

loss of/change in sense of taste or smell (anosmia)

Definition for individuals requiring hospital admission:

- Clinical or radiological evidence of pneumonia

OR

Acute Respiratory Distress Syndrome

OR

Influenza like illness (fever $\geq 37.8^{\circ}\text{C}$ and at least one of the following respiratory symptoms, which must be of acute onset; persistent cough (with or without sputum), hoarseness, nasal discharge or congestion, shortness of breath, sore throat, wheezing, sneezing)

OR

A loss of, or change in, normal sense of taste or smell (anosmia) in isolation or in combination with any other symptoms

Patients must be assessed for bacterial sepsis or other causes of symptoms as appropriate.

5.0.3 Triage patients

Triage of patients within all healthcare facilities must be undertaken to enable early recognition of COVID-19 cases. Wherever possible, triage questions should be undertaken prior to arrival at the healthcare facility. For emergency admissions, triage questions should be completed immediately on arrival where it is safe to do so without delaying any necessary immediate life saving interventions. With the emergence of new variants of concern (VOC) it is essential that a travel history is sought and recorded.

The following are examples of triage questions;

- Do you or any member of your household/family have a confirmed diagnosis of COVID-19? If yes, wait until 10 day self isolation period is complete before treatment or if urgent care is required, follow the **high risk** pathway and isolate for 14 days.
- Are you or any member of your household/family waiting for a COVID-19 test result? If yes, ascertain if treatment can be delayed until results are known. If urgent care is required, follow the **high risk** pathway and isolate for 14 days.
- Have you travelled internationally to any country which isn't exempt from self isolation rules in the last 14 days? If yes, wait until 10 days self isolation period is complete before treatment. **Only urgent care should be provided during the self isolation period. The patient must be placed in a single side room on the **amber** or **red** pathway depending on a clinical and individual assessment – see footnote 1 in section 5.1 (See Scottish Government link below for the list of countries exempt from self isolation) and will require 14 days self isolation. Single side room placement is essential to prevent onward transmission of new VOC within healthcare settings.**

- Have you had contact with someone with a confirmed diagnosis of COVID-19, or been in isolation with a suspected case in the last 14 days? If yes, wait until 10 day self isolation period is complete before treatment or if urgent care is required, follow **high risk** pathway and isolate for 14 days unless COVID-19 test is negative and COVID-19 is clinically ruled out.
- Do you have any of the following symptoms?
 - High temperature or fever
 - New, continuous cough
 - A loss or alteration to taste or smellIf yes, provide advice on who to contact (GP/NHS111) or, if admission required, follow **high risk** pathway and isolate for 14 days.
- Is there any reason why you are unable to wear a face covering when attending for your appointment/admission? If No, remind patient to wear face covering on arrival or supply facemask.

Please see link to the Scottish Government website below which details quarantine (self-isolation) rules and information on the process for people entering the UK.

<https://www.gov.scot/publications/coronavirus-covid-19-public-health-checks-at-borders/pages/overview/>

5.1 COVID-19 Testing

All planned adult elective surgical admissions should be tested in line with SIGN Guidance for Reducing the risk of postoperative mortality due to COVID-19 in patients undergoing elective surgery and elective surgical paediatric admissions must be tested in line with RCPCH guidance. A letter was also issued to NHS Scotland Chief Executives on 27th November detailing the staged roll out of the admission testing expansion plan to include;

- All emergency admissions
- All planned admissions to hospitals
- Routine testing of asymptomatic, patient facing healthcare workers

The letter to NHS Scotland Chief Executives can be found here and provides more detail on testing requirements.

A table containing a summary of testing requirements in NHS Scotland can be found here. When using this table the following applies;

- Screening undertaken outwith national programmes which are detailed at the links above should be based on decision of clinical services e.g screening in critical care settings.
- Any patient who has previously tested positive for SARS-CoV-2 by PCR should be exempt from being re-tested within a period of 90 days from their initial symptom onset, unless they develop new possible COVID-19 symptoms. This is because fragments of inactive virus can be

persistently detected by PCR in respiratory tract samples for some time following infection. The exception to this is as follows;

- Discharge to care home/residential facilities where 2 negative tests must be achieved 24 hours apart prior to transfer
- It is recognised that a patient may meet different criteria for testing multiple times in a short period of time (admission screening, transfers to another ward, contact of a case, outbreak management). If an inpatient has undergone a COVID-19 test in the previous 24 hours, there is no need to repeat it and the result can be accepted for any of the testing requirements with the exception of
 - New symptoms onset – a new test should be performed as soon as symptoms are recognised
 - Pre elective screening – where the requirement for a negative test must be within a set time period (48 or 72 hours)

5.1 Patient placement/Assessment of Infection Risk

Defined pathways must be established to ensure segregation of patients determined by their risk of COVID-19. Any other known or suspected infections and the need for any Aerosol Generating Procedures (AGPs) must be considered before patient placement within each of the pathways.

Examples of pathways are described below. Your board may use different names for each of the pathways from those described below and you should familiarise yourself with the pathways in your clinical area that align with those described here. NHS Boards must also undertake risk assessments of clinical areas to help ensure that the high risk pathway is placed appropriately reducing risk to staff, patients and visitors and taking account the hierarchy of controls (see section 5.11 Hierarchy of controls)

- 1. Known as the High Risk COVID-19 pathway in the UK IPC remobilisation guidance and is more commonly known as the Red pathway in many boards within Scotland.**
 - a. Confirmed COVID-19 individuals
 - b. Symptomatic or Suspected COVID-19 individuals (as determined by hospital or community case definition or clinical assessment where there is a suspicion of COVID-19 taking into account atypical and non-specific presentations in older people with frailty those with pre-existing conditions and patients who are immunocompromised),
 - c. Those who are known to have had contact with a confirmed COVID-19 individual and are still within the 14 day self-isolation period and those who have been tested and results are still awaited.
 - d. See footnote 1
- 2. Known as the Low Risk COVID-19 Pathway in the UK IPC remobilisation guidance and may be commonly known as the Green or Super Green pathway in many boards within Scotland.**

- a. Patients who have been triaged and meet the following criteria; asymptomatic AND no known contact with a COVID-19 case AND meet isolation and testing criteria as per SIGN Guidance for Reducing the risk of postoperative mortality due to COVID-19 in patients undergoing elective surgery.

NB: Paediatric services refer to RCPC guidance for pre-operative admission assessment and testing requirements only. All other IPC guidance should be followed as per this addendum.

3. Known as the Medium Risk COVID-19 pathway in the UK IPC remobilisation guidance and may be commonly known as the Amber pathway in many boards within Scotland.

- a. all other patients who have been triaged and who do not meet the criteria for the pathways above and who do not have any symptoms of COVID-19.
- b. Asymptomatic individuals who refuse testing or for whom testing cannot be undertaken for any reason
- c. See footnote 1
- d. Recovered COVID-19 patients – see Discontinuation of IC precautions in section 5.3.9

1. When deciding patient placement for untriated individuals where symptoms are unknown (e.g patient unconscious) or individuals who have returned from a country on the quarantine list in the last 14 days, a full clinical and individual assessment of the patient should be carried out prior to placement in a side room on the **red OR amber** pathway. This assessment should take account of risk to the patient (immunosuppression, frailty) and clinical care needs (treatment required in specialist unit).

5.1.1 Critical care units

Where facilities allow, boards may allocate separate critical care units to each of the defined pathways. It is accepted however that critical care units in some NHS boards may have to house patients from each of the 3 pathways on the one unit. Pathways must be clearly signposted. Where all COVID-19 patients requiring Aerosol Generating Procedures (AGPs) on the High and Medium Risk Pathways can be isolated in a single side room the whole unit does not need to be considered a 'High Risk' area and no longer requires unit wide airborne precautions to be applied. However, consideration may need to be given to unit wide application of airborne precautions where the number of cases of high and medium risk pathway patients requiring AGPs increases and all such patients cannot be managed in a single side room. Where AGPs on any medium and high risk patient is required on the main unit, this presents a risk to the surrounding patients and staff and unit wide airborne precautions would be required. Segregation of patient pathways must continue to reduce exposure risk to medium risk pathway way patients from those in the high risk pathway.

Bed management needs to be considered pre operatively in the event that a critical care bed is required post operatively to ensure there is a bed available on the correct pathway.

Frequently Asked Questions (FAQs) for critical care units can be accessed here.

5.1.2 Split pathways

Where necessary, hospital care areas may designate self contained areas on the same ward for the treatment and care of patients at high and medium risk or patients at medium and low risk of COVID-19 following a risk assessment undertaken in conjunction with the local IPCT and taking into account considerations such as the type of clinical area, the patient group, the ward environment (including single side room capacity) staffing levels and overall bed capacity and demand. Patients on the high and low risk pathways should not be on the same ward unless this is a critical care or regional specialist centre where clinical care cannot be provided anywhere else. This may require discussion with the IPCT. There should be clear physical segregation of pathways with signage in place to support this and staff should be cohorted to the different pathways within the same ward wherever possible.

5.1.3 Staff cohorting

Efforts should be made as far as reasonably practicable to dedicate assigned teams of staff to care for patients in each of the different pathways. There should be as much consistency in staff allocation as possible, reducing movement of staff and the crossover between pathways. Rotas should be planned in advance wherever possible, to take account of different pathways and staff allocation. For staff groups who need to go between pathways, efforts should be made to see patients on the low risk pathways first, then the medium risk pathway, then the high risk pathway. FRSMs should be changed if wet, damaged, soiled or uncomfortable and must be changed after having provided care for a patient isolated with any other suspected or known infectious pathogens and when leaving high-risk (red) pathway areas.

5.1.4 Moving patients between pathways

Any patient on the medium or low pathways who develop symptoms of COVID-19 should be isolated immediately and tested for COVID-19. Any patient who goes on to test positive for COVID-19 (whether symptomatic or asymptomatic) should be transferred to the high risk pathway.

Patients may only move from the medium pathway to the low risk pathway where they have been isolated in a side room for the full 14 days and staff can document that there have been no recorded PPE breaches by staff or visitors who have entered the patient's room during the 14 day period. A high level of suspicion should be applied so as not to expose patients on the low risk pathway to a patient who may potentially be incubating COVID-19.

Patients who have been on the high risk pathway having had confirmed COVID-19, may be moved to the Medium risk pathway after they meet the definition for a 'recovered patient' – see footnote 2 above.

5.1.5 Patient transfers (please also refer to testing table for testing requirements on transfer)

- **Non-COVID patient transfers between wards and departments in the same hospital**
- Patient movement between different bed bays and transfers between different wards should be minimised as far as possible.
- Where transfers are necessary, assess the suitability of the transfer from a COVID-19 perspective; good communication between clinical staff in both wards/departments is key.
 - Consider any cognitive impairment and ability to adhere with COVID-19 measures such as physical distancing, hand hygiene, cough etiquette, wearing of facemask.

- Consider the type of ward to which the patient is being transferred and the vulnerability of the patient cohort. Patients must not transfer from a medium to a low risk pathway unless criteria in 5.1.4 is met.
- In all cases where the transfer occurs either prior to test being carried out, or prior to result becoming available (i.e. the patient's status is unknown), the patient should be isolated on the receiving ward until the result is known.
- Patients should continue to be tested immediately if clinically indicated. A clinical or a public health professional may consider testing even if the definition of a possible case is not met.

- **Non-COVID patient transfers to a new hospital (either within the same Board or new Board)**
- Patient movement between hospitals should be minimised as far as possible.
- Where transfers are necessary, assess the suitability of the transfer from a COVID-19 perspective; good communication between clinical staff in both hospitals is key.
 - Consider any cognitive impairment and ability to adhere with COVID-19 measures such as physical distancing, hand hygiene, cough etiquette, wearing of facemask.
 - Consider the type of ward to which the patient is being transferred and the vulnerability of the patient cohort. Patients must not transfer from a medium to a low risk pathway unless criteria in 5.1.4 is met.
- Patients who are transferred to a new hospital should follow the medium pathway
- If patient is a planned transfer to a **clinically vulnerable area**, then pre-transfer testing must be built into the transfer plan and a test undertaken pre-transfer wherever possible.
- In all cases where the transfer occurs either prior to test being carried out, or prior to result becoming available (i.e. the patient's status is unknown), the patient should be isolated on the receiving ward until the result is known.

NB: A negative test does not mean that the patient is not incubating the virus. Staff should practice vigilance in monitoring for any symptom onset in the patient after transfer and throughout their inpatient stay and reinforce the importance of COVID-19 measures. This includes physical distancing, hand hygiene, wearing of facemasks and respiratory etiquette.

Transferring Suspected/Confirmed COVID-19 patients between wards, departments or hospitals during infectious period

Wherever possible, patients who are confirmed or suspected to have COVID-19 should not be moved from the high risk pathway ward until they have completed 14 days of isolation and meet the definition for a recovered patient as described in footnote 1 and criteria contained within section 5.3.9. There may however be instances where it is necessary to transfer a patient prior to completion of their 14 day isolation period such as;

- The patient no longer requires critical care and the critical care bed is required for another patient
- The patient requires escalation of care to a critical care unit

- The patient requires urgent treatment in a regional specialist unit and postponement would have a detrimental effect on the patient and the care cannot be provided on the ward they currently reside in
- The patient requires an urgent procedure or investigation to be undertaken and postponement would have a detrimental effect on the patient

The local IPCT should be notified of any patient transfer out of a high risk ward where the patient has not yet completed their 14 day isolation period.

Communication with the receiving department/NHS Board is vital to ensure appropriate IPC measures are continued during and after transfer. The patient must continue to be managed as a high risk pathway patient. Communications must include;

- Patient symptom onset date
- Patient positive test date (if confirmed)
- Date when patient will have completed 14 days in isolation
- Current symptom status and any test results still awaited
- Any patient details which prevent or impact on the necessary transmission based precautions required for COVID-19 i.e. falls risk requiring door to remain open, patient does not adhere to isolation
- Confirm if local IPC team has been informed of transfer

Ensure transferring ambulance or portering staff are advised of the necessary precautions required for PPE and decontamination of transfer equipment.

There is no need to test the patient again on transfer provided symptomatic cases have already had a test taken.

5.1.5 Single side room prioritisation

Any patient who has a coinfection with COVID-19 and any other known or suspected infectious pathogen must not be cohorted with other COVID-19 patients.

Any patient who is required to quarantine following arrival to Scotland from overseas should be prioritised for a single side room to reduce the transmission risk of new variants of concern (VOC).

5.1.6 Patients returning from day or overnight pass

Patients who have been allowed to leave the healthcare facility for the day or for an overnight stay should be triaged in advance of their immediate return to the facility and again on arrival at the facility to determine which pathway they should be placed on. Patients should not return to the low risk pathway and as a minimum should be placed on the medium risk pathway.

5.1.6 Discontinuing Infection control precautions and discharging COVID-19 patients from hospital

It is important to note that patients deemed clinically fit for discharge **can and should** be discharged before resolution of symptoms and should continue to self isolate in the community for a total of 10 days.

Before control measures are stepped down for COVID-19, clinical teams must first consider any ongoing need for **transmission based precautions** (TBPs) necessary for any other alert organisms, e.g. MRSA carriage or *C. difficile* infection, or patients with ongoing diarrhoea.

Patient discharge advice leaflets can be found on [COVID: clinical guidance for managing patients](#).

Key notes below to be referred to in conjunction with tables 1-3;

- **Number of isolation days required**– All patients who have been in hospital must complete 14 days isolation if remaining in hospital or being discharged to a residential setting or care home. This is because, in general, those with COVID-19 who are admitted to hospital will have more severe disease than those who remain in the community, especially if they require critical care. In addition, those admitted are more likely to have pre-existing conditions such as severe immunosuppression. In healthcare settings, including residential care facilities, there are considerable numbers of immunocompromised and vulnerable patients who will be at risk of nosocomial infection.

Other household members should complete their 10 day stay at home period (as described in **Stay at Home** guidance). If this did not start before the patient was admitted to hospital, then it should commence from the day the patient returns to the household, unless the patient has already completed their appropriate period of isolation within hospital.

- **COVID-19 clinical requirements for stepdown** – This can be done when the patient’s clinical status is appropriate for discharge and ongoing care needs can be met at home or in the facility to which they will be transferred. Those with COVID-19 additionally require the following; Clinical improvement with at least some respiratory recovery. Absence of fever (>37.8oC) for 48 hours without use of antipyretics. A cough or a loss of/ change in normal sense of smell or taste may persist in some individuals, and is not an indication of ongoing infection when other symptoms have resolved. If inpatient is being discharged home, they must be given clear advice directing them what to do if their symptoms worsen.
- **Testing required for stepdown** –some inpatients may require testing and this should be undertaken as per tables 1-3 below unless there are overriding clinical reasons where this is not appropriate. Where testing is not possible (e.g. patient doesn’t consent or it would cause distress) and if discharged to care facility within the 14-day isolation period then there must first ~~must~~ be a risk assessment of the discharge location and the ability of the individual being discharged to adhere with the required isolation measures in the care facility for the remaining 14 day isolation period.

Table 1: Stepdown requirements for hospital inpatients and positive staff remaining in hospital

Inpatient Cohorts	Number of isolation days required	COVID-19 Clinical requirement for stepdown	Testing required for stepdown
Inpatients - General	14 days from symptom onset (or first positive test if symptom onset undetermined)	Clinical improvement with at least some respiratory recovery. Absence of fever (>37.8oC) for 48 hours without use of antipyretics	Not routinely required
Inpatients - Severely Immunocompromised as determined by Chapter 14a of the Green Book	14 days from symptom onset (or first positive test i symptom onset undetermined)	Clinical improvement with at least some respiratory recovery. Absence of fever (>37.8oC) for 48 hours without use of antipyretics. Individual risk assessment by clinical teams taking account of symptoms, clinical presentation, intended setting for stepdown.	Local clinical teams may consider testing as part of the stepdown process and where undertaken, 1 negative test would be acceptable for stepdown.
Inpatients with severe COVID19 (requiring ITU/HDU for COVID19 treatment)	14 days from symptom onset (or first positive test if symptom onset undetermined)	Clinical improvement with at least some respiratory recovery. Absence of fever for 48 hours without use of antipyretics. Individual risk assessment by clinical teams taking account of symptoms, clinical presentation, intended setting for stepdown.	Local clinical teams may consider testing as part of the stepdown process and where undertaken, 1 negative test would be acceptable for stepdown.
Staff working in healthcare	10 days from symptom onset (or first positive test i symptom onset undetermined)	Clinical improvement with at least some respiratory recovery. Absence of fever (>37.8oC) for 48 hours without use of antipyretics.	Not routinely required. Resume routine testing after 90 days from first positive isolate unless symptoms develop before then in which case test should be repeated.

Table 2: Stepdown requirements for inpatients being discharged from hospital

Discharge cohorts	Number of isolation days required	Does isolation need to be completed in hospital?	COVID-19 Clinical requirement for stepdown	Testing required for stepdown
Patient discharging to a care facility including nursing homes and residential homes	14 days from symptom onset (or first positive test if symptom onset undetermined)	No – patient may be discharged to care home but only after 2 negative tests achieved and must be placed in a single room facility on discharge until 14 day isolation complete. Provide care as per NIPCM COVID-19 Care Home addendum	Clinical improvement with at least some respiratory recovery. Absence of fever for 48 hours without use of antipyretics	2 negative tests required commencing on day 8 & taken 24 hrs apart
Patient discharging to their own home - General	14 days from symptom onset (or first positive test if symptom onset undetermined)	May complete at home and follow Stay at home guidance. Must be given clear advice for what to do if their symptoms worsen	Clinical improvement with at least some respiratory recovery. Absence of fever for 48 hours without use of antipyretics	Not routinely required
Patient discharging to their own home – someone in household is severely immunocompromised or at risk of severe illness	14 days from symptom onset (or first positive test if symptom onset undetermined)	Wherever possible, patient should be discharged to a different household from anyone immunocompromised or at severe risk of infection. If not possible – see ‘testing required’	Clinical improvement with at least some respiratory recovery. Absence of fever for 48 hours without use of antipyretics	Testing for clearance is encouraged

Table 3: Stepdown requirements for outpatients

Other Healthcare cohorts	Number of isolation days required	COVID-19 Clinical requirement for stepdown	Testing required for stepdown
Outpatients	14 days from symptom onset (or first positive test is symptom onset undetermined)	Clinical improvement with at least some respiratory recovery. Absence of fever for 48 hours without use of antipyretics	Virological clearance is encouraged for those severely immunocompromised, at high risk of severe disease and those discharged from critical care. If required to help inform actions at next OP appointment

Other than the limited scenarios described above which indicate testing prior to discontinuation of IPC precautions, any patient who has previously tested positive for SARS-CoV-2 by PCR should be exempt from being re-tested within a period of 90 days from their initial symptom onset, unless they develop new possible COVID-19 symptoms. This is because fragments of inactive virus can be persistently detected by PCR in respiratory tract samples for some time following infection. If testing is undertaken within those 90 days despite this, and the result is COVID-19 positive in the absence of any symptoms, there is no requirement to isolate the patient or place them back on the high risk pathway unless a discussion between clinicians and the IPCT indicates that this is necessary.

Transferring between pathways on stepdown

Regardless of stepdown location remaining in hospital, care facility, home (receiving care at home or attending OPDs) all patients must remain on the high risk pathway until stepdown criteria is met at which point they may be transferred to the medium risk pathway.

Transporting COVID-19 patients home safely when still within the self-isolation period

On discharge, patients should be transferred home by the safest method possible to prevent onward transmission of COVID-19. Transport home can be arranged via a variety of routes, e.g. if the patient has their own car at the hospital, and is well enough, they may drive home. If they are taking shared transport, the need for further isolation of discharged patients with COVID-19 who have not completed their self isolation period and who do not have virological evidence of clearance should be communicated with transport staff (e.g. ambulance crews or relatives). Those transporting them should not themselves be at greater risk of severe infection.

The following guidelines apply to all methods of transport:

- the patient should be given clear instructions on what to do when they leave the ward to minimise risk of exposure to staff, patients and visitors on their way to their transport

- the patient should wear surgical face masks for the duration of the journey, and advised that this should be left on for the entire time if tolerated (not pulled up and down)
- the patient should sit in the back of the vehicle with as much distance from the driver as possible (e.g. the back row of a multiple passenger vehicle), and where possible use vehicles that allow for optimal implementation of physical distancing measures such as those that have a partition between the driver and the passenger, or larger vehicles that allow for a greater distance between the driver and the passenger
- vehicle windows should be (at least partially) open to facilitate a continuous flow of air
- vehicles should be cleaned **appropriately** at the end of the journey using a household detergent active against viruses and bacteria
- ensure the patient has a supply of tissues and a waste bag for disposal for the duration of the journey. The waste bag should then be taken into their house and held for a period of 72 hours before disposal with general household waste

5.2 Hand Hygiene

Hand hygiene is considered one of the most important practices in preventing the onward transmission of any infectious agents including COVID-19. Hand hygiene should be performed in line with section 1.2 SICPs.

5.3 Respiratory and cough hygiene

Respiratory and cough hygiene is designed to minimise the risk of cross transmission of respiratory pathogens including COVID-19. The principles of respiratory and cough hygiene can be found in section 1.3 of SICPs.

5.4 Personal Protective Equipment (PPE)

PPE exists to provide the wearer with protection against any risks associated with the care task being undertaken. PPE requirements as per standard infection prevention and control are detailed in section 1.4 of SICPs. PPE requirements during the COVID-19 pandemic are determined by the care pathways and are detailed in 5.4.3 below.

PPE must not be used inappropriately. It is of paramount importance that PPE is worn at the appropriate times, selected appropriately and donned and doffed properly to prevent transmission of infection.

PPE is the least effective control measure for COVID-19 and other mitigation measures as per the hierarchy of controls must be implemented and adhered to wherever possible. More details on the hierarchy of controls can be found in section ***.

5.4.1 Extended use of Face Masks for staff, visitors and outpatients

New and emerging scientific evidence suggests that COVID-19 may be transmitted by individuals who are not displaying any symptoms of the illness (asymptomatic or pre-symptomatic). The extended use of facemasks by health and social care workers and the wearing of face coverings by visitors is designed to protect staff and patients and the full guidance and associated FAQs can be found at the following link on the Scottish Government's COVID-19 web page;

<https://www.gov.scot/publications/coronavirus-covid-19-interim-guidance-on-the-extended-use-of-face-masks-in-hospitals-and-care-homes/>

A poster detailing the 'Dos and don'ts' of wearing a face mask can be found at the link below and in the resources & tools section (5.12)

<https://www.hps.scot.nhs.uk/web-resources-container/covid-19-wearing-a-face-mask-poster-staff/>

In Scotland, staff are provided with Type IIR masks for use as part of the extended wearing of facemasks.

A poster intended to support the wearing of a non medical face mask/face covering can be found at the link below and in the resources and tools section (5.12).

<https://www.hps.scot.nhs.uk/web-resources-container/covid-19-wearing-a-non-medical-face-mask-or-face-covering/>

5.4.2 Face masks for inpatients

A surgical facemask should be worn by all inpatients across all pathways where it can be tolerated and does not compromise their clinical care for example when receiving oxygen therapy. All patients should be encouraged to adhere to this COVID-19 control measure. The purpose of this is to minimise the dispersal of respiratory secretions and reduce environmental contamination. This should be actively promoted throughout the healthcare setting.

It is recognised that it will be impractical for patients to wear facemasks at all times and these will have to be removed for reasons such as eating and drinking or showering. There is no need for patients to wear a facemask when sleeping provided the beds are at least 2 metres apart.

A surgical facemask should be worn by all patients across all pathways during transfer between departments within the hospital.

Where a patient is isolated in a side room, they do not need to wear a surgical facemask. However, the patient must be asked to don their mask when any staff or visitors enter the room and before they are within a 2 metre distance of the patient.

More information on physical distancing in inpatient settings can be found in section 5.11.

5.4.3 PPE determined by COVID19 care pathway

The PPE worn for direct patient care differs depending on the COVID-19 care pathway and the task being undertaken. It is important that the need for PPE required for any other known or suspected pathogens is also risk assessed.

Table 1 below details the PPE which should be worn when providing direct patient care in each of the COVID-19 care pathways.

Type IIR facemasks should be worn for all direct patient care regardless of the pathway. This is a measure which has been implemented alongside physical distancing specifically for the COVID-19 pandemic. FRSMs can be worn sessionally when going between patients on the medium (amber) and low (green) risk pathways however, FRSMs should be changed if wet, damaged, soiled or uncomfortable and must be changed after having provided care for a patient isolated with any other suspected or known infectious pathogens and when leaving high-risk (red) pathway areas. It is recommended that surgical masks should be well fitting and fit for purpose, covering the mouth and nose in order to prevent venting (exhaled air 'escaping' at the sides of the mask). A poster accessed here provides some suggested ways to wear facemasks to help improve fit.

Healthcare staff entering different pathways to provide patient consultations (AHPs) or undertake patient transfers (portering and theatre staff) throughout the course of their working day must ensure they first clarify with nurse in charge or named nurse what pathway the patient they are attending to is on and what PPE is required.

Table 4: PPE for direct patient care determined by pathway

	Gloves	Apron	Face mask	Eye face protection
Low Risk Pathway	If contact with BBF*1 is anticipated, then <u>Single use</u>	If direct contact with patient, their environment or BBF is anticipated (Gown if extensive splashing anticipated) then <u>single use</u>	Always within 2 metres of a patient - Type IIR fluid resistant surgical face mask <u>Sessional use</u>	If splashing or spraying with BBF including coughing/sneezing, is anticipated <u>Single use or reusable following decontamination</u>
Medium Risk pathway	If contact with BBF is anticipated, then <u>Single use</u>	If direct contact with patient, their environment or BBF is anticipated (Gown if extensive splashing anticipated), then <u>Single use</u>	Always within 2 metres of a patient - Type IIR fluid resistant surgical face mask <u>Sessional use</u>	If splashing or spraying with BBF, including coughing/sneezing, is anticipated <u>Single use or reusable following decontamination</u>
High Risk Pathway	Worn for all direct patient care <u>Single use</u>	Always within 2 metres of a patient (Gown if extensive)	Always within 2 metres of a patient - Type IIR fluid	Always within 2 metres of a patient

		splashing anticipated). <u>Single Use</u>	resistant surgical face mask <u>Sessional use</u>	<u>Single use, sessional*2 or reusable following decontamination</u>
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*1BFF – Blood & Body Fluids

*2 – See section 5.4.7 for details of sessional use

5.4.4 Aerosol Generating procedures (AGPs)

An Aerosol Generating Procedure (AGP) is a medical procedure that can result in the release of airborne particles from the respiratory tract when treating someone who is suspected or known to be suffering from an infectious agent transmitted wholly or partly by the airborne or droplet route.

Below is the list of medical procedures for COVID-19 that have been reported to be aerosol generating and are associated with an increased risk of respiratory transmission:

- tracheal intubation and extubation
- 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 beyond the oro-pharynx occurs
- high speed cutting in surgery/post-mortem procedures if respiratory tract/paranasal sinuses involved

* NB: The available evidence relating to Respiratory Tract Suctioning is associated with ventilation. In line with a precautionary approach open suctioning of the respiratory tract regardless of association with ventilation has been incorporated into the current (COVID-19) AGP list. It is the consensus view of the UK IPC cell that only open suctioning beyond the oro-pharynx is currently considered an AGP i.e. oral/pharyngeal suctioning is not an AGP. . This applies to upper gastro-intestinal endoscopy also and as such it has also been changed to reflect risk associated with suctioning beyond the oro-pharynx.

Certain other procedures or equipment may generate an aerosol from material other than patient secretions but are not considered to represent a significant infectious risk for COVID-19. Procedures in this category include administration of humidified oxygen, administration of Entonox or medication via nebulisation.

The New and Emerging Respiratory Viral Threat Assessment Group (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 use appropriate hand hygiene when helping patients to remove nebulisers and oxygen masks. In addition, the current expert consensus from NERVTAG is that chest compressions are not considered to be procedures that pose a higher risk for respiratory infections including COVID-19.

An SBAR produced by Health Protection Scotland (HPS) and agreed by NERVTAG specific to AGPS during COVID-19 can be found here.

The NERVTAG consensus view is that the HPS document accurately presents the evidence base concerning medical procedures and any associated risk of transmission of respiratory infections and whether these procedures could be considered aerosol generating. NERVTAG supports the conclusions within the document and supports the use of the document as a useful basis for the development of UK policy or guidance related to COVID-19 and aerosol generating procedures (AGPs). **5.4.5 PPE for Aerosol Generating Procedures (AGPs)**

Airborne precautions are not required for AGPs on patients/individuals in the low risk pathway provided the patient has no other infectious agent transmitted via the droplet or airborne route. However, we recognise that some staff remain anxious about performing AGPs on patients during this COVID-19 pandemic and therefore when prevalence is high, and where staff have concerns about potential exposure to themselves, they may choose to wear an FFP3 respirator rather than a FRSM when performing an AGP on a low risk pathway patient. This is a personal PPE risk assessment.

Airborne precautions are required for the medium and high risk pathways where AGPs are undertaken and the required PPE is detailed in table 2 below.

***Work is currently underway by the UK Re-useable Decontamination Group examining the suitability of respirators, including powered respirators, for decontamination. This literature review will be updated to incorporate recommendations from this group when available. In the interim, ARHAI Scotland are unable to provide assurances on the efficacy of respirator decontamination methods and the use of re-useable respirators is not recommended.*

Table 5: PPE for Aerosol generating Procedures determined by pathway

	Gloves	Apron/ Gown	Face mask/Respirator	Eye face protection
Low Risk Pathway*1	Single use	Single use Apron (Gown if splashing spraying anticipated)	Type IIR*2	Single use or re-useable
Medium Risk pathway	Single use	Gown – Single use	FFP3 mask*2 or Powered respirator hood	Single use or re-useable
High Risk Pathway	Single use	Gown – Single use	FFP3 mask or Powered respirator hood	Single use or re-useable

*1 Provided individual has no other known or suspected infectious agent transmitted via the droplet or airborne route.

*2 FFP3 masks must be fluid resistant. Valved respirators may be shrouded or unshrouded. Respirators with unshrouded valves are not considered to be fluid-resistant and therefore should be worn with a full face shield if blood or body fluid splashing is anticipated.

5.4.6 Post AGP Fallow Times (PAGPFT)

Time is required after an AGP is performed to allow the aerosols still circulating to be removed/diluted. This is referred to as the post AGP fallow time (PAGPFT) and is a function of the room ventilation air change rate. The post aerosol generating procedure fallow time (PAGPFT) calculations are detailed in table 3 below and clinical teams will need to undertake a risk assessment in conjunction with estates colleagues and the IPCT for rooms in which AGPs are performed. The duration of AGP is also required to calculate the PAGPFT and clinical staff are therefore reminded to note the start time of an AGP. It is presumed that the longer the AGP, the more aerosols are produced and therefore require a longer dilution time. During the PAGPFT staff should not enter this room without FFP3 masks. Patients, other than the patient on which the AGP was undertaken, must not enter the room until the PAGPFT has elapsed and the surrounding area has been cleaned appropriately as per NHS Scotland Cleaning Standards. As a minimum, regardless of air changes per hour (ACH), a period of 10 minutes must pass before rooms can be cleaned. This is to allow for the large droplets to settle. Staff must not enter rooms in which AGPs have been performed without airborne precautions for a minimum of 10 minutes from completion of AGP. Airborne precautions may also be required for a further extended period of time based on the duration of the AGP and the number of air changes (see table 3). Cleaning can be carried out after 10 minutes regardless of the extended time for airborne PPE

Table 6: Post AGP fallow time calculation:

Duration of AGP (min)	Air change rate (AC/h)									
	1	2	4	6	8	10	12	15	20	25
3	230	114	56	37	27	22	18	14	10	8* (10)
5	260	129	63	41	30	24	20	15	11	8* (10)
7	279	138	67	44	32	25	20	16	11	9* (10)
10	299	147	71	46	34	26	21	16	11	9* (10)
15	321	157	75	48	35	27	22	16	12	9* (10)

- The minimum fallow time (to allow for droplet settling time) is 10 minutes

Post AGP Fallow Times are not required for AGPs undertaken on patients in the low risk pathway provided the patient has no other infectious agent transmitted via the droplet or airborne route.

For more information specific to theatre settings, please see the operating theatre FAQs which can be found here.

It is often difficult to calculate air changes in areas that have natural ventilation only. Natural ventilation, particularly when reliant on open windows can vary depending on the climate. An arbitrary air change rate in these circumstances has been agreed as 1-2 air changes/hour.

If the area has zero air changes and no natural ventilation, then AGPs should not be undertaken in this area.

5.4.7 Sessional use of PPE

During the peak of the pandemic, some PPE was used on a sessional basis and this meant that these items of PPE could be used moving between patients and for a period of time where a healthcare worker was undertaking duties in an environment where there was exposure to COVID-19. A session ended when the healthcare worker left the clinical setting or exposure environment. **Sessional use of PPE is no longer required other than when wearing a visor/eye protection in a communal bay on the high risk pathway and when wearing a fluid resistant surgical face mask (FRSM) across all pathways.** Sessional use of all other PPE is associated with transmission of infection amongst patients and is considered bad practice.

FRSMs can be worn sessionally when going between patients however, FRSMs should be changed if wet, damaged, soiled or uncomfortable and must be changed after having provided care for a patient isolated with any other suspected or known infectious pathogen and when leaving high-risk (red) pathway areas.

Visors/eye protection must be changed if damaged, soiled, compromised or uncomfortable or after having provided care for a patient isolated with any other suspected/known infectious pathogens and when leaving the high risk (red) pathway.

Unit wide Airborne precautions will require sessional use of FFP3 masks throughout the unit however all other AGP PPE should be removed when no longer within 2 metres of a patient or, when within 2 metres of a patient, after the AGP is complete and fallow time has elapsed. It is not necessary to wear sessional gowns moving around a unit or department. Gowns protect against excessive splash and spray which is associated with AGPs and other direct patient care procedures.

5.4.8 PPE for delivery of COVID-19 vaccination

Healthcare workers (HCWs) delivering vaccinations must;

- wear a fluid resistant surgical facemask (FRSM) for all direct patient contact and where 2 metre physical distancing cannot be maintained. This will protect both the HCWs and patient from exposure to COVID-19 should either be pre-symptomatic or an asymptomatic carrier of COVID-19.
- perform hand hygiene regularly including before and after each patient/individual. contact and as per 5 moments for hand hygiene laid out in the National Infection Prevention & Control Manual (NIPCM).
- wear a visor should be worn where there is anticipated splash or spraying to the face. For example, where nasal vaccinations induce sneezing, HCWs may choose to wear a visor to prevent droplet contamination to the face following risk assessment. The individual on whom the nasal vaccination is being administered should be provided with disposable tissues to cover their mouth where any sneezing is likely. They should dispose of the tissues in a suitable waste receptacle and wash hands with warm soap and water. If there are no hand hygiene facilities available, ask the individual to use alcohol based hand rub (ABHR) and wash their hands at the earliest opportunity.

- other items of PPE are unlikely to be required for routine vaccination and a risk assessment should be carried out considering both IPC and COSHH guidance. As per SICPs;
 - Aprons should be worn where there is anticipated contamination to the healthcare workers uniform or clothing.
 - Gloves should be worn where blood and body fluid exposure is anticipated. Tiny amounts of blood resulting from vaccination site pose little risk to a HCW where the skin of the healthcare workers hands is intact. There is therefore no need to wear gloves when delivering a vaccination provided the skin on the HCWs hands is intact and the skin of the person receiving the vaccination is intact. An SBAR which considered the need for HCWs to wear gloves when delivering vaccinations was produced by HPS in 2014 and can be found [here](#).

5.5 Safe management of Care Equipment

Care equipment is easily contaminated with blood, other body fluids, secretions, excretions and infectious agents. Consequently, it is easy to transfer infectious agents from communal care equipment during care delivery. All care equipment should be decontaminated as per Table 4 below.

Table 7 – Equipment cleaning determined by pathway

Pathway	Product
Low Risk Pathway	General purpose detergent for routine cleaning. See Appendix 7 of the NIPCM for cleaning of equipment contaminated with blood or body fluids or it has been used on a patient with a known or suspected infectious pathogen.
Medium Risk pathway	<p>Combined detergent/disinfectant solution at a dilution of 1000 ppm av chlorine or general purpose neutral detergent in a solution of warm water followed by a disinfectant solution of 1000ppm av chlorine.</p> <p>If the item cannot withstand chlorine releasing agents consult the manufacturer's instructions for a suitable alternative to use following or combined with detergent cleaning.</p>
High Risk Pathway	<p>Combined detergent/disinfectant solution at a dilution of 1000 ppm av chlorine or general purpose neutral detergent in a solution of warm water followed by a disinfectant solution of 1000ppm av chlorine.</p> <p>If the item cannot withstand chlorine releasing agents consult the manufacturer's instructions for a suitable alternative to use following or combined with detergent cleaning.</p>

5.6 Safe Management of the Care Environment

During this ongoing pandemic, cleaning frequency of the environment should be increased across all pathways. A minimum of 4 hours should have elapsed between the first daily clean and the second daily clean. Where a room has not been occupied by any staff or patients since the first daily clean was undertaken, a second daily clean is not required.

It is the responsibility of the person in charge to ensure that the care environment is safe for practice (this includes environmental cleanliness/maintenance). The person in charge must **act** if this is deficient.

The care environment must be:

- visibly clean, free from non-essential items and equipment to facilitate effective cleaning
- well maintained and in a good state of repair
- Remove bullet point

The use of general purpose detergent for cleaning in the Low Risk pathway is sufficient with the exception of isolation/cohort areas where patients with a known or suspected infectious agent are being nursed. These areas require to be cleaned twice daily with a chlorine releasing agent containing 1000ppm av chlorine.

Environmental cleaning in the Medium and High Risk COVID19 Pathways should be undertaken using either a combined detergent/disinfectant solution at a dilution of 1000 ppm available chlorine or a general purpose neutral detergent in a solution of warm water followed by a disinfectant solution of 1000ppm.

Cleaning across the pathways is summarised in table 5 below. It is recognised that NHS boards will have local protocols in place to determine the staff groups who have responsibility for cleaning different items and areas.

Table 8 – Environmental cleaning determined by pathway

	1st daily clean	2nd daily clean	Product
Low Risk Pathway*	Full clean	*High Risk Touch Surfaces within clinical inpatient areas	General purpose detergent*
Medium Risk pathway	Full clean	*High Risk Touch Surfaces within clinical inpatient areas	Combined detergent/disinfectant solution at a dilution of 1000 ppm av chlorine or general purpose neutral detergent in a solution of warm water followed by a disinfectant solution of 1000ppm av chlorine.
High Risk Pathway	Full clean	*High Risk Touch Surfaces within clinical inpatient areas	Combined detergent/disinfectant solution at a dilution of 1000 ppm av chlorine or general purpose neutral detergent in a solution of warm water followed by a disinfectant solution of 1000ppm av chlorine.

*Cleaning in the low risk pathway should be carried out with chlorine based detergent for patient rooms where the patient is known to have any other known or suspected infectious agent.

* High risk touch surfaces as a minimum should include door handles/push pads, taps, bed heads/bed ends, cotsides, light switches, lift buttons. Clinical inpatient areas should include the patient bedroom and treatment areas and staff rest areas.

Any areas contaminated with blood and body fluids across any of the 3 pathways require to be cleaned as per Appendix 9 of the National Infection Prevention Control Manual (NIPCM).

5.7 Safe Management of Linen

All linen should be handled as per section 1.7 of SICPs – Safe Management of Linen

Linen used on patients in the High and Medium Risk pathway should be treated as infectious.

5.8 Safe Management of Blood and Body Fluid Spillages

All blood and body fluid spillages across the 3 pathways should be managed as per section 1.8 of SICPs – Safe management of Blood and Body Fluid Spillages and Appendix 9.

5.9 Safe Disposal of waste (including sharps)

Waste should be handled in accordance with Section 1.9 of SICPs. Waste generated in patient bedroom and treatment areas within the High and Medium Risk pathway should be treated as infectious (category B) where clinical waste contracts are in place. Care Home and Community settings - If the facility does not have a clinical waste contract, ensure all waste items that have been in contact with the individual (e.g. used tissues and disposable cleaning cloths) are disposed of securely within disposable bags. When full, the plastic bag should then be placed in a second bin bag and tied. These bags should be stored in a secure location (not an individual's bedroom) for 72 hours before being put out for collection. NB: FRSMs worn as part of the extended use of facemasks policy should be disposed of as clinical waste.

5.10 Occupational Safety

Section 1.10 of SICPs remains applicable to COVID-19 patients.

Occupational risk assessment guidance specific to COVID-19 can also be found here

PPE is provided for occupational safety and should be worn as per Tables 1 and 2.

5.10.1 Car sharing for Healthcare professionals including trainees/students

Wherever possible, car sharing should be avoided with anyone outside of your household or your support bubble. This is because the close proximity of individuals sharing the small space within the vehicle increases the risk of transmission of COVID-19. All options for travelling separately should be explored and considered such as;

- Healthcare staff travelling separately in their own cars
- Geographical distribution of visits – can these be carried out on foot or by bike?
- Use of public transport where social distancing can be achieved via use of larger capacity vehicles

However, it is recognised that there are occasions where car sharing is unavoidable such as;

- Healthcare staff who carry out community visits
- Healthcare staff who are commuting with students as part of supported learning/mentorship
- Healthcare staff working in emergency response vehicles
- Healthcare staff living in areas where public transport is limited and car sharing is the only means of commuting to and from the workplace

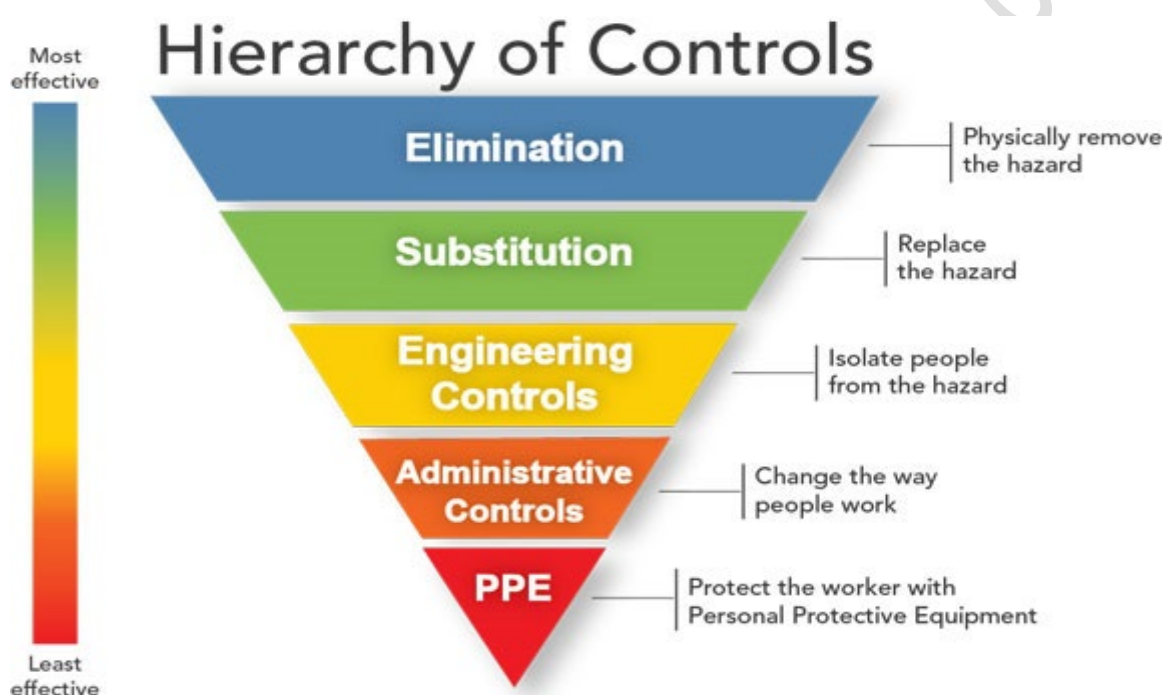
Where car sharing cannot be avoided, individuals should adhere with the guidance below to reduce any risk of cross transmission;

- Staff (and students) must not travel to work/car share if they have symptoms compatible with a diagnosis of COVID-19.
- Ideally, no more than 2 people should travel in a vehicle at any one time
- Use the biggest car available for car sharing purposes
- Car sharing should be arranged in such a way that staff share the car journey with the same person each time to minimise the opportunity for exposure. Rotas should be planned in advance to take account of the same staff commuting together/car sharing as far as possible
- The car must be cleaned regularly (at least daily) and particular attention should be paid to high risk touch points such as door handles, electronic buttons and seat belts. General purpose detergent is sufficient unless a symptomatic or confirmed case of COVID-19 has been in the vehicle in which case a disinfectant should be used.
- Occupants should sit as far apart as possible, ideally the passenger should sit diagonally opposite the driver.
- Windows in the car must be opened as far as possible taking account of weather conditions to maximise the ventilation in the space
- Occupants in the car, including the driver, should wear a fluid resistant surgical mask (FRSM) provided it does not compromise driver safety in any way.
- Occupants should perform hand hygiene using an alcohol based hand rub (ABHR) before entering the vehicle and again on leaving the vehicle. If hands are visibly soiled, use ABHR on leaving the vehicle and wash hands at the first available opportunity
- Occupants should avoid eating in the vehicle
- Passengers in the vehicle should minimise any surfaces touched – it is not necessary for vehicle occupants to wear aprons or gloves
- Keep the volume of any music/radio being played to a minimum to prevent the need to raise voices in the car

Adherence with the above measures will be considered should any staff be contacted as part of a COVID-19 contact tracing investigation.

5.11 Hierarchy of Controls

Controlling exposures to occupational hazards, including the risk of infection, is the fundamental method of protecting healthcare workers. Below is a graphic specifying the general principles of prevention legislated in the Management of Health and Safety at Work Regulations 1999, Regulation 4, Schedule 1. It details the most to the least effective hierarchy of controls and can be used to help implement effective controls in preventing the spread of COVID-19 within healthcare settings. The hierarchy of controls will help protect all users of the NHS facility and not just staff. NHS Boards and NHS staff should first employ the most effective method of control which inherently results in safer control systems. Where that is not possible, all others must be considered in sequence. PPE is the last in the hierarchy of controls.



Hierarchy of Risk Controls

Centers for disease control and prevention. The National Institute for Occupational Safety and Health. Hierarchy of Controls. 2015. <https://www.cdc.gov/niosh/topics/hierarchy/default.html>

Examples of ways in which the hierarchy of controls can be applied in health and social care settings is as follows;

Hierarchy of controls	Examples in practice & Resources
Elimination	<ul style="list-style-type: none"> • Patients must not attend for routine appointments if they have symptoms of COVID-19 or have been advised to self-isolate • Staff must not report to work if they have symptoms of COVID-19 or have been advised to self-isolate

	<ul style="list-style-type: none"> • Staff who have tested asymptotically positive using LFD test must isolate and not report to work further to confirmation via PCR test. • Visitors must not enter the facility if they have symptoms of COVID-19 or have been advised to self-isolate • Staff who can work from home should be supported to do so • Consideration should be given to non-clinical staff who typically enter clinical areas as part of their job role and alternative arrangements made wherever possible • Support adherence with isolation and testing criteria contained within SIGN guidance SIGN Guidance for Reducing the risk of postoperative mortality due to COVID-19 in patients undergoing elective surgery.
<p>Substitution</p>	<ul style="list-style-type: none"> • Consider what aspects of patient care could be performed remotely and undertake consultations over phone or using other digital means as far as possible rather than in person.
<p>Engineering controls</p>	<ul style="list-style-type: none"> • Installations of partitions at appropriate places (e.g reception desks) to separate staff from presenting patients (consideration needs to be given to impact on air flow before installation and any cleaning requirements) • 2 metre physical distancing in all areas of the premises (see section 5.11.4 for further information) and the space requirements necessary to allow adequate bed spacing for patients and physical distancing for staff working within the areas. • Effective mechanical ventilation • Improve ventilation by opening windows on the premises • Optimal bed spacing and chair spacing (see section 5.11.5) for further information) throughout health and care facilities, including clinical and non-clinical areas, eg. Dining and office areas. • Consider availability of single room facilities for performing AGPs <p>Resources Link to CIBSE guidance Link to SAGE documents Link to HFS document</p>
<p>Administrative controls</p>	<ul style="list-style-type: none"> • Reduce waiting time for individuals in clinic and radiology departments e.g outpatients should wait in their car or outdoors if possible until telephoned by the OPD to advise to enter the building for appointment. Inpatient radiology departments should aim to request attendance by inpatients from wards which will limit the time waiting in the department. • Reduce movement of patients where procedures can be performed in their own room rather than requiring transfer to another department. • Make efforts to reduce number of people on premises at any one time e.g consider reduction in number of staff involved in ward rounds.

	<ul style="list-style-type: none"> • Consider whether MDT case conferences be undertaken using digital methods • Reduce number of deliveries to areas by coordinating as many supplies as possible in as few deliveries as possible. Ensure measures in place to prevent wards and clinical departments being used as through corridors. • Reduce number of staff in break areas/changing rooms/offices and display maximum occupancy on entry to and within the room. • Working from behind or at the side of the individual (no face to face close contact) wherever possible • Development of pathways/one way systems on the premises • Use of various COVID-19 related signage • Provision of additional hand hygiene and face mask stations • Increased cleaning as per Scottish COVID-19 addendum
Personal Protection Equipment (PPE)	<ul style="list-style-type: none"> • Use of FRSMs as per extended use of facemasks guidance • Use of face coverings (although not classed as PPE) by patients and visitors – in healthcare they can be provided with a Type IIR mask • PPE when a risk assessment indicates this is required (see section *** for further information)

5.11.1 General organisational Preparedness and COVID-19 Risk Assessment of the healthcare Environment

A structured risk assessment should be undertaken with Health and Safety (H&S) representatives, Estates and Facilities representatives, Occupational Health Services (OHS) Infection Prevention and Control Team (IPCT) and the clinical team to systematically consider potential hazards in the context of COVID-19 which could negatively impact users of that environment including staff, patients and visitors and ensure application of mitigation measures to eliminate, reduce or control risk.

Due to the wide variance in the lay out, structure and fabric of NHS facilities across Scotland it is not possible to be descriptive in exactly how these should be applied and a full risk assessment should be undertaken locally. Environmental considerations should take account of;

- Ventilation within the building/room/space (see section 5.11.3 for more information)
- Ways in which patient and staff numbers within the area can be reduced (NB: visiting guidance - in areas with high numbers of suspected/confirmed COVID19 cases (high risk pathway) then previous guidance on limiting support to “essential visits only” may need to apply in this area)

- Spacing to adequately allow for physical distancing and related room occupancy (see section 5.11.4) in clinical areas, non-clinical areas and staff only areas e.g office spaces, dining rooms, changing rooms. This should take account of circulating space for staff
- Partitions and individual positioning (consideration needs to be given to impact on air flow and necessary cleaning regimes before installation of partitions)
- Inpatient bed spacing and OPD chair spacing (see section 5.11.5)
- Signage and one way systems
- Administrative controls (e.g. Hand Hygiene stations, Facemask stations, waste bins)
- The planned patient cohort e.g. consider the planned COVID-19 pathway for that setting and clinical group - patients with cognitive impairment present a higher risk of transmission in care settings
- Previous IPC healthcare incidents and outbreaks within the area

5.11.2 Organisational Preparedness and COVID-19 Risk Assessment when determining appropriate location for High Risk Pathway

Some clinical environments present a greater risk in terms of COVID-19 transmission if used to care for cohorts of suspected and/or confirmed COVID-19 cases. NHS Boards must seek to identify and prepare the most suitable clinical area for planned placement of patients requiring care on the high risk (red) pathway. This is not required for areas used for the medium and low risk pathways where sporadic cases of 'unexpected' positive COVID-19 cases may arise.

Prior to determining areas for placement of the high risk pathway a full risk assessment of the proposed area must be carried out led by Health and safety teams and involving Estates and Facilities representatives, Occupational Health Services (OHS) Infection Prevention and Control Team (IPCT) and the clinical team. This should be undertaken using the hierarchy of controls and recognise that there is lowest risk where elimination can be achieved and highest risk where PPE is the only control in place. Risk assessments should be undertaken regularly as determined by the NHS Board to ensure no change to the level of risk.

The risk assessment should take account of the following questions;

- Which COVID-19 risk pathway is the proposed area to be used for?
- Does the bed spacing in the area meet requirements as per SHPNs in section 5.12.3 below?
- As a minimum, can windows in the area be opened and realistically remain open whilst the space is occupied?

If the risk assessment concludes that an unacceptable risk of transmission remains within the environment after rigorous application of the hierarchy of controls (e.g. inadequate bed spacing AND natural ventilation where windows cannot be opened) and only if there are no other more optimal low risk clinical areas suitable for the high risk pathway cohort then the NHS Boards should consider utilising the area for this purpose with provision of Respiratory Protective Equipment (RPE) for the staff working in this area.

The evidence continues to support the most likely route of COVID-19 transmission being via the droplet and contact route. However, it is accepted that in some high risk environments housing COVID-19 cases where mitigations in line with the hierarchy of controls cannot be applied, the level of risk is unknown and as a precautionary approach, the use of RPE by staff in the designated area may be considered by the organisation. This takes account of interim guidance issued by the World Health Organisation (WHO) occupational health and safety for healthcare workers.

The following subsections provide information to help support risk assessments.

5.11.3 Ventilation in the healthcare setting

Adequate ventilation reduces how much virus is in the air by dilution. It helps reduce the risk of COVID-19 transmission - the risk is greater in areas that are poorly ventilated. A number of studies have linked transmission to recirculating air conditioners, with the high velocities created by these units potentially allowing larger viral aerosols to remain airborne over longer distances. It is also possible that directional flow from desk fans could have a similar effect however the evidence of this is weak. Fans should be avoided as much as possible and should not be used without prior risk assessment.

Mechanically ventilated areas

NHS Scotland Boards should seek assurance that their ventilation systems must comply with current guidance, including:

[Best practice guidance for healthcare engineering policies and principles \(SHTM 00\)](#)

[Ventilation for Healthcare - Design and validation \(SHTM 03-01 Part A\)](#)

[Ventilation for Healthcare - Operational and verification \(SHTM 03-01 Part B\)](#)

Ensure ventilation systems are well maintained ensuring functionality of air handling units and correct delivery of assigned air change rates. Controls should be set to maximise the amount of fresh air coming into the space and avoid recirculation of air as much as possible. Dampers should also be opened as far as possible.

Specific guidance applies to specialist ventilation areas such as theatres, ICU, isolations rooms and endoscopy suites. See here for more information.

Naturally ventilated areas (No mechanical ventilation)

Ensure areas are as ventilated as much as possible by opening windows if temperature/weather conditions allow. NHS organisations should consider any other risks with opening the windows where adjacent building works are in progress. If possible open windows at different sides to get a cross flow of ventilation. Where it is safe to do so, doors may be opened. NB fire doors should NEVER be propped open. Airing rooms as frequently as you can will help improve ventilation.

Aerosol Generating Procedures (AGPs) should be avoided in rooms with natural ventilation unless it is a single side room and all staff are wearing appropriate PPE, AGP fallow times are adhered to and door remains closed during the AGP and resulting AGP fallow time.

Air scrubbers (also known as HEPA units)

The Board may consider using portable industrial grade air filtration units containing HEPA filters where air-supply systems to high-risk clinical settings are suboptimal following risk assessment including assurance of the efficacy and safety of the filtration unit. As yet, evidence on the use of air scrubbers is limited and as such these should be used with caution. The units should be capable of recirculating all of the room air, without interfering with the existing pressure differential of the room and should provide the equivalent of ≥ 12 air changes per hour. The unit must be sized appropriately for the room in which it will be utilised and maintenance contracts should be procured to accompany the unit. It should be noted that these units do not provide additional fresh air into a space and there is no standard to measure the efficacy of these devices. NHS Boards should satisfy themselves that these devices are suitable and if required, seek advice from NHS Assure. Boards should also assess (not limited to) the noise levels, power requirements, heat gains and potential trip hazards

Currently, the CIBSE and SAGE resources below provide the best available independent views of air cleaning devices.

“Air purifiers” should not be used.

More information on ventilation in the context of COVID19 can be found at the following resources;

CIBSE: [Covid-19 Guidance: Ventilation](#)

SAGE: [Role of ventilation in controlling SARS-CoV-2](#)

SAGE: [Potential applications of air cleaning devices](#)

5.11.4 Spacing and Physical distancing

NHS Boards should have a process in place for all occupied rooms within wards and departments and healthcare settings to be risk assessed for maximum occupancy using the guide provided by Health Facilities Scotland (HFS) and taking into account the need for all staff working with NHS Scotland healthcare facilities to maintain 2 metres physical distancing (NB: does not apply to the provision of direct patient care where appropriate PPE should be worn in line with section 5.4).

Outbreaks amongst staff have been associated with a lack of physical distancing in changing areas and recreational areas during staff breaks and it is particularly important to utilise all available rooms and spaces to allow staff to change and have rest breaks without breaching maximum occupancy in any single area. Staff must ensure they are wearing face masks/coverings in line with the extended use of facemasks 5.4.1 outside of all clinical care unless exempt or eating/drinking.

5.11.5 Inpatient bed spacing and day patient chair spacing

Health Facilities Scotland have undertaken an assessment of bed and chair spacing within NHS Scotland facilities taking account of compounding factors applied in conjunction with physical distancing. The purpose of this document aims to help support boards in reviewing bed spacing to ensure 2 metre (m) physical distancing can be maintained for inpatient beds and treatment chairs. The summary document and the detailed technical diagrams can be accessed here including;

NHSS Social Distancing Guidance & Signage (nhsnss.org) DL(2021)09 & NSS 29 Jan 21 – NHS Scotland COVID-19 remobilisation –Built Environment incl. physical distancing support diagrams (IM/2020/024) 18 Sep 20
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Current NHSScotland Guidance on bed spacing include:

Core guidance - General design for healthcare buildings (HBN 00-01)
Core guidance - Clinical and clinical support spaces (HBN 00-03)
Critical care units (HBN 04-02)
HAI-SCRIBE Manual information for project teams (SHFN 30 Part A)
HAI-SCRIBE Implementation strategy and assessment process (SHFN 30 Part B)
HAI-SCRIBE questionsets and checklists (SHFN 30 Part C)
Adult in-patient facilities (SHPN 04-01)
In-patient accommodation - supp 1 - Isolation facilities in acute settings (SHPN 4 sup 1)

Guidance consistently recognises that bed spacing requirements contribute towards the control of healthcare associated infections. Adult in-patient facilities designed post 2010

should achieve 3.6m (width) x 3.7m (depth) dimensions of SHPN 04-01, HBN 00-03 and SHFN 30. Width of 3.6m is measured from bed centre to bed centre.

Since 2014, HBN 00-03 (Figure 45) states a day treatment bay should achieve 2.45m width. Assuming a 0.5m diameter zone for the patient head, this bay size achieves the minimum 2.5m centre-to-centre dimension between each day treatment couch or chair.

For older facilities, designed post 1995, HBN 40 bed bay minimum of 2.7 x 2.9m, the preferred minimum bed centre is 2.9m. Facilities designed pre 1995, or for clinical specialties e.g. Mental Health (SHPN 35 / HBN 03-01) or Care of Older People (HBN 37), had a bed bay minimum of 2.4 x 2.9m. For this specific group, the pragmatic minimum of 2.7m bed centres should be adhered to, and/or reduction to total patient numbers/ occupation per multi-bed room and ventilation enhancements should be considered where practicable.

5.11.6 Local data to inform risk assessment

Organisations should have local systems in place for monitoring COVID-19 cases in their NHS Board, triggers and a defined escalation process which takes account of bed capacity, COVID-19 cluster data and risks associated with disruption to elective services. These considerations may be site specific or board wide.

As case numbers of COVID-19 fluctuate, so too will the volume of patients on each of the pathways. Where critical care units need to expand, this action plan should include allocated areas for additional ITU beds and sufficient staffing and equipment to support the expansion.

5.12 Visiting

The Scottish Government have produced guidance to support the safe reintroduction of visitors into hospital settings and NHS boards should familiarise themselves with the content to ensure patient, staff and visitor safety. Visitors must;

- Not visit if they have suspected or confirmed COVID-19 or if they have been advised to self-isolate for any reason
- Wear a face covering on entering the hospital
- Be provided with appropriate PPE (see table 6)
- Perform hand hygiene at the appropriate times;
 - on entry to the hospital and when leaving the patient's room/ward.
 - Prior to putting on PPE
 - After removing PPE
- Observe physical distancing

- Not move around the ward and should stay at the bedside of the person they are visiting.
- Not visit other patients in the hospital
- Not touch their face or face covering/mask once in place
- Not eat whilst visiting
- Avoid sharing mobile phone devices with the patient unnecessarily – if mobile devices are shared to enable communications with other friends and family members, the phone should be cleaned between uses using manufacturer's instructions

Table 9 – visitor PPPE

	Gloves	Apron	Face covering/mask	Eye/Face Protection
Low Risk Pathway	Not required*1	Not required*2	Face covering or provide with FRSM if visitor arrives without a face covering	Not required*3
Medium Risk pathway	Not required*1	Not required*2	Face covering or provide with FRSM if visitor arrives without a face covering	Not required*3
High Risk Pathway	Not required*1	If within 2 metres of patient	FRSM	If within 2 metres of patient
Unit Wide AGP Zone	Not required*1	Apron Required	FRSM *4	Required to be worn alongside FRSM (or FFP3 where NHS Boards can fit test) on entry to area

*1 unless providing direct care to the patient which may expose the visitor to blood and/or body fluids i.e toileting.

*2 unless providing care to the patient resulting in direct contact with the patient, their environment or blood and/or body fluid exposure i.e toileting, bed bath.

*3 Unless providing direct care to the patient and splashing/spraying is anticipated.

*4 Patients should not receive visitors whilst undergoing an AGP or during the Post AGP fallow time that follows the procedure. Where a unit has unit wide airborne precautions in place, visitors may be allowed to enter the room but must be informed that there is a higher degree of risk due to the potential exposure to infectious aerosols. The following additional mitigation measures should be in place;

- Visitor should not enter whilst the individual they are visiting is undergoing an AGP or during the post AGP fallow time.
- Ask visitor to remain 2 metres from all other patients

- Provide the visitor with PPE as described in the table above
- Guide and supervise visitors when donning and doffing PPE and remind them of the appropriate times when hand hygiene should be undertaken.
- Ensure visitors perform hand hygiene on leaving the ward

5.13 Outbreaks

It is essential that staff remain vigilant and report any concern that there may be a possible outbreak of COVID-19 developing in their clinical area. Where two or more patients or staff members in the low or medium risk pathways develop symptoms of suspected COVID-19 or test positive for COVID-19 (regardless of symptom status) and where the cases were not confirmed or suspected COVID-19 on admission, there may be a possible outbreak occurring. A high degree of suspicion should be applied and staff should contact their local IPCT if they suspect an outbreak may be occurring in their area. Further COVID-19 outbreak guidance can be found within chapter 3 of the NIPCM.

5.13.1 Whole Genome Sequencing

Public Health Scotland now offer a sequencing service to expedite outbreak investigations and address important clinical and epidemiological questions. More information can be found [here](#).

5.13 Resources & Tools

This section contains resources and tools which can be used by clinical teams and IPCTs during the COVID19 pandemic.

- PPE poster – Low risk pathway
- PPE poster - Medium Risk Pathway
- PPE poster - High Risk pathway
- COVID-19 Safe Practice in acute healthcare settings poster
- COVID-19 Wearing a facemask poster (staff)
- Wearing a non medical face mask or face covering
- COVID-19 Frequently Asked Questions for critical care
- COVID-19 Frequently asked questions for Operating theatres
- COVID-19 Outbreak checklist
- Key messages in the workplace poster
- COVID-19 testing requirements table
- Stop the Spread – COVID-19 Good Practice Points

5.13 Rapid Reviews

This sections contains rapid reviews of the literature undertaken to support the Infection prevention and Control response to the COVID-19 pandemic.

- Rapid Review of the Literature: Assessing the Infection Prevention and Control Measures for the Prevention and Management of COVID-19 in Healthcare Settings
- Review of the National and International Guidance on Infection Prevention and Control Measures for Personal Protective Equipment (PPE) and Aerosol Generating Procedures (AGPS) for COVID-19
- Eye protection in health and care settings for the prevention of COVID-19 transmission
- Infrared Thermal Imaging in Health and Care Settings
- SBAR: Assessing the evidence base for medical procedures which create a higher risk of respiratory infection transmission from patient to healthcare worker
- Provision of gloves for COVID-19 in health and care settings
- Respirators in health and care settings for the prevention of COVID-19 transmission
- Rapid review of the literature - SARS-CoV-2 variants VOC-202012/01 (B.1.1.7) and 501Y.V2 (B.1.351) – implications for infection control within health and care settings
- Rapid review of the literature – Respirators in health and care settings for the prevention of COVID-19 transmission
- Rapid review of the literature – Ultraviolet light technology for decontamination of health and care settings in the context of COVID-19

5.14 COVID19 Education resources

This section contains a number of educational resources to support the COVID-19 response in partnership with a range of stakeholders

- Correct use of Alcohol Based Hand Rub
- Correct Hand Hygiene Technique using soap and water
- COVID19 an overview
- Correct order for putting on, the safe order for removal, and the disposal of PPE

5.15 COVID19 Compendium

This section contains links to current national and international policy, guidance and resources on COVID-19 from key organisations.

- COVID-19 compendium

5.16 Useful tools for IPCTs

Below is a list of tools in use by IPCTs in NHS Boards across NHS Scotland in the context of COVID-19. NHS Boards have given permission for these to be shared here however these documents are not endorsed by ARHAI Scotland, nor do ARHAI Scotland hold any responsibility for updating these documents.

- NHS A&A – COVID19 de-escalation checklist (added 26/3/21)
- NHS Grampian – Coronavirus Anxiety Workbook (added 26/3/21)
- NHS Tayside – COVID19 Incidents Reporting Template (added 26/3/21)
- NHS Tayside – COVID19 PAG IMT checklist (added 26/3/21)
- NHS Tayside – COVID19 Protocols (added 26/3/21)
- NHS Tayside – IPC COVID19 Assurance Audit Tool (added 26/3/21)
- NHS Tayside – Scoring proposals for COVID19 Impact (added 26/3/21)

Archived for information only