Acute Hospital Infection Prevention and Control Precautions for Possible or Confirmed COVID-19 in a Pandemic Setting

V.1.6 23.12.2020
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<td>1.1</td>
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<td>- Decision by NPHET dated 22nd April 2020 in relation to use of surgical masks in healthcare settings;</td>
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<td>o Surgical masks should be worn by healthcare workers when they are providing care to people and are within 2m of a person, regardless of the COVID-19 status of the person</td>
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<td>o Surgical masks should be worn by all healthcare workers for all encounters, of 15 minutes or more, with other healthcare workers in the workplace where a distance of 2m cannot be maintained</td>
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<td>- Information on recommended concentration of alcohol in ABHR (minimum 60%)</td>
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<td>- Specific recommendation not to double glove or clean gloved hands with ABHR</td>
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<td>- Recommendation that if non fluid resistant gowns are worn a disposable plastic apron should be worn over or underneath the gown</td>
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<td>- Sequence of donning and doffing PPE updated to include ear loop masks</td>
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<td>- Decision at NPHET that 2m should replace 1 m as the requirement for social distancing Section on Dialysis units added</td>
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<td>- Section on Maternity units added</td>
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<td>- Recommendation to assess the risk associated with transmission of COVID-19 associated with communal water coolers and reusable drinking receptacles</td>
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<td>- Additional recommendation in relation to duration of transmission based precautions</td>
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<td>- Appendices on ventilation settings removed – local assessment recommended.</td>
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<td>- Checklist to support management of COVID-19 outbreak in an acute healthcare setting.</td>
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<td>- Change to the title of the document to clarify that it relates to the Acute Hospital setting</td>
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<td>- Additional details on transmission including pre-symptomatic and asymptomatic transmission</td>
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<td>- Advice against routine use of testing in people with a diagnosis of COVID-19 to assess infectious risk or in advance of scheduling treatment</td>
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<td>- Updated guidance on the role of testing in patients without clinical suspicion of COVID-19 (surveillance testing).</td>
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<td>- Update to the section on COVID-19 and pregnancy.</td>
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Drafted by HPSC
- Update to the section on immunity after recovery
- Update to Patient Placement heading to refer to surveillance
- Update to Patient placement section to refer to setting to caution against over-reliance on laboratory test results and to reference surveillance testing
- Update to section on PPE to refer to indicate that new items of PPE should be reviewed by hospital IPC team
- Deleted- Patients who are being transferred from a hospital experiencing an outbreak of COVID-19 who have not been identified as contacts of COVID-19 and are asymptomatic do not require isolation for 14 days on return to residential care setting or home.
- Reference to guidelines from Institute of Obstetrics & Gynaecology added and deleted line on pg. 64- Immediate skin to skin contact post-delivery is not recommended.
- Additional information on PAPRS
- Additional information about handling personal effects of deceased persons
- Section on Mental Health Acute Approved Centre
- Note regarding the limited PPE required for cleaning activities when not in the patient zone
- Reference to NPHET recommendation on cloth face coverings in the context of OPD attendance
- Reference to extended period of additional IPC precautions for recovered immunocompromised patients in OPD removed.

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<td>- Specify testing for all adult admissions to hospital</td>
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<td>- Include 12 week exclusion from surveillance testing after confirmed infection</td>
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<td>- Link to guidance on interpretation of RT-PCR results with high Ct values</td>
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<td>- Reference to the cumulative exposure for more than 15 minutes the context of contact tracing.</td>
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<td>- Changes to table 1 to clarify use of eye protection, and surgical mask use when transferring a patient within the hospital and external transfer.</td>
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<td>- Indication that re-testing at 14 days before extending duration of transmission based precautions is generally not useful as the result generally does not change the decision</td>
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<td>- Statement that cystoscopy and colposcopy are not AGPs associated with increased risk of infection</td>
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<td>- Inclusion of brief guidance on ventilation</td>
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<td>- Revision of guidance with respect to visits home as part of the discharge planning for acute mental health services</td>
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<td>- Change to Appendix 4 (updated numbering) to reflect that testing of asymptomatic people who had COVID-19 is now required if they are more than 12 weeks post COVID-19</td>
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Introduction

This document replaces the previously issued Acute Hospital Infection Prevention and Control Precautions for Possible or Confirmed COVID-19 in a Pandemic Setting Version 1.5. This document should be used in association with “V1.2 Interim Guidance on Infection Prevention and Control for the Health Service Executive 2020” https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/infectionpreventionandcontrolguidance/hseinfectionpreventionandcontrolguidanceandframework/Interim%20HSE%20Guidance%20on%20IPC.pdf

In the context of the continuing pandemic it remains clear that the fundamental principles of basic IPC remain the core defence we have for protecting patients, our colleagues and ourselves from acquiring this disease and that it possible to manage the risk of spread of COVID-19 without compromising the delivery of timely and appropriate care to the patient.

This document was informed by guidance from the Department of Health and Social Care (DHSC), Public Health Wales (PHW), Public Health Agency (PHA) Northern Ireland, Health Protection Scotland (HPS) Public Health England (PHE), European Centre for Disease Control (ECDC) and the World Health Organisation (WHO). The HPSC appreciates the support of international infection prevention and control colleagues at this time.

There is variation in detail between national guidance on infection prevention and control (IPC) issued in different countries. Similarly, many specialist societies have issued recommendations, which differ in some details from national or international IPC guidelines. Although differences in detail are a focus of considerable debate and can create a very challenging environment for IPC practice, it is important to focus on the clear consensus on all the most critical aspects of IPC and to continue to work together to manage those areas of difference and to look to emerging evidence to resolve those differences.
Scope

This guidance applies to acute hospitals settings, including acute mental health services and to facilities providing inpatient acute rehabilitation services. It also applies to specialist in-patient palliative care services that have assessed the service they deliver as very similar to that provided in an acute hospital setting. Guidance on visiting in acute hospitals is not addressed in this document, as this is addressed separately. Please see the following link https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/infectionpreventionandcontrolguidance/visitorsvisiting/

Residential care facilities (RCF) where residents are provided with overnight accommodation, including long-term nursing home, long-term mental health residences and shorter-term respite and convalescence care are advised to refer to the Public Health and Infection Prevention and Control Guidelines on the Prevention and Management of COVID-19 Cases and Outbreaks in Residential Care Facilities https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/infectionpreventionandcontrolguidance/residentialcarefacilities/

COVID-19 (SARS-CoV-2)

The virus which causes COVID-19 infection is called SARS-CoV-2 and belongs to the broad family of viruses known as coronaviruses. Global efforts to further our understanding of this pathogen have been ongoing since it was first identified in the Wuhan province of China in December 2019.

Please see the HPSC website for the up-to-date case definition of COVID-19.

Transmission

The transmission of COVID-19 occurs mainly through respiratory droplets. Respiratory droplets are generated from the nose and mouth by actions such as, breathing, coughing, sneezing, talking or laughing. Transmission to others may result from direct impact of infectious droplets
on the mucosa of persons in proximity and through contact with surfaces contaminated with infectious respiratory droplets and subsequent transfer of infectious material to the mucous membranes. Current estimates suggest a median incubation period from five to six days for COVID-19 (range = 1 – 14 days). Individuals are usually considered most infectious to others around the time they develop symptoms. How infectious an individual is can be related to the severity and stage of illness. There is also a significant body of research on the risk of airborne/aerosol transmission of COVID-19. This is an accepted risk in the healthcare setting when aerosol generating procedures (AGP) associated with an increased risk of infection are performed on those with suspected or confirmed infectious COVID-19. There is some evidence that points to airborne transmission in other specific circumstances. However, the World Health Organisation (WHO) states that “Recent clinical reports of health workers exposed to COVID-19 index cases, not in the presence of aerosol-generating procedures, found no nosocomial transmission when contact and droplet precautions were appropriately used, including the wearing of surgical masks as a component of the personal protective equipment (PPE). These observations suggest that aerosol transmission did not occur in this context. Further studies are needed to determine whether it is possible to detect viable SARS-CoV-2 in air samples from settings where no procedures that generate aerosols are performed and what role aerosols might play in transmission.” https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions
Higher levels of virus have been detected in patients with severe illness compared to mild cases. Like influenza, peak levels of virus are found around the time of symptom onset. There is general acceptance that some people can be infectious before they develop symptoms (pre-symptomatic spread) and that some people who never notice symptoms may be infectious (asymptomatic spread). The overall importance of spread of infection from pre-symptomatic and asymptomatic people in driving the pandemic remains uncertain.

- For hospitalised patients, the infectious period is **14 days with no fever for the last five days of that period**. This also applies to residents of long-term residential care facilities (LTRCF) and or patients who may intend to transfer to LTRCF.

- People in the community with COVID-19 are now asked to self-isolate for **10 days from the date of onset of symptoms, with no fever for the last five days of that period**.

- In the case of an asymptomatic COVID-19 infection in a person in the community (for example, a person, tested as a close contact of a case or as an outpatient prior to a scheduled procedure), the person should self-isolate for **10 days from the day the test was performed, with no fever for the last five days of that period**.

Repeat testing for SARS-CoV-2 at the end of the isolation period is generally not appropriate, though exceptions may arise in the context of discussion with Microbiology, Infectious Disease or Public Health Clinicians. It is important to note that SARS-CoV-2 ribonucleic acid (RNA) remains detectable in respiratory secretions of some patients for extended periods (months in some cases). This does not equate to presence of viable virus.

**Testing for SARS-CoV-2 RNA in a person diagnosed with COVID-19 is not appropriate in order to declare that the infectious period is over. This assessment is based on clinical criteria as above.**

**Testing for SARS-CoV-2 RNA in an asymptomatic person previously diagnosed with COVID-19 is generally not appropriate before scheduling treatment (surgery or other treatment) until 12 weeks have elapsed since their primary infection.**

SARS-CoV-2 RNA has also been detected in faeces, urine and blood from infected individuals, although there is no indication that this is significant in terms of transmission.
Transmission in the Healthcare Setting

The spread of COVID-19 in the healthcare setting is a specific concern. Experience in Ireland and elsewhere indicates that transmission in acute hospitals and other healthcare settings can occur readily when the virus is introduced from the community into the hospital. Transmission typically occurs when an unrecognised infectious person (patient staff or visitor) enters the hospital. Control of entry to minimise risk of unrecognised introduction is therefore a key priority in preventing outbreaks. This requires a particular focus when rates of infection in the community served are high.

Outbreaks of infection involving both patients and healthcare workers (HCW) have been reported. However, the experience in many acute hospital settings dedicated to the care of patients with COVID-19 indicates that the risk can be managed effectively. Where cases of COVID-19 are detected promptly and IPC precautions, including appropriate use of PPE are implemented fully, the risk of spread can be kept to a low level. It is therefore important that acute hospital settings have systems in place to ensure that, to the greatest extent possible, patients with COVID-19 are rapidly identified at presentation and are cared for with appropriate IPC precautions. A self-assessment checklist for measures that have been found useful in controlling and responding to hospital transmission of COVID-19 is here


Processes for identification of patients presenting with COVID-19 must take account of the growing experience that a significant number of patients do not have respiratory symptoms on presentation and some may not have any specific clinical features that point to a diagnosis of COVID-19. Hospital surveillance activities related to COVID-19 should include identifying incidents of late recognition of community-acquired (CA) COVID-19 and identifying cases of hospital-acquired (HA) COVID-19 among patients and HCW. Hospitals should review their plans for management of outbreaks of infectious disease, to ensure that they address early detection and rapid response to outbreaks of COVID-19.
Testing

It is useful to distinguish two categories of testing for COVID-19 with respect to people admitted to healthcare facilities.

1. **Diagnostic testing:** This is testing for COVID-19 in patients where there is a clinical suspicion of COVID-19, based on identified clinical features that suggest a diagnosis of COVID-19 (for example fever, shortness of breath, cough, sudden loss of taste or smell) or because the patient is an identified contact of a person with COVID-19. Refer to the HPSC website for the up-to-date case definition of COVID-19. When diagnostic testing is required, the patient should be cared for with contact and droplet precautions pending the test result. Contact and droplet precautions should **NOT** be withdrawn solely on the basis of a test reported as SARS-CoV-2 “not detected”, as this result is not sufficient to exclude infection. The continuing requirement for contact and droplet precautions should be reviewed, with appropriate IPC advice. In the context of clinical evidence of severe respiratory disease in the absence of an established alternative diagnosis, contact and droplet precautions should generally be continued.

2. **Surveillance testing:** This is testing for COVID-19 in patients where there is no clinical suspicion of COVID-19. In this case, the patient should be cared for with standard precautions PLUS use of a surgical mask, as per NPHET recommendation, pending the test result. A surveillance test reported as ‘SARS-CoV-2 not detected’ does not exclude the possibility of COVID-19 infection. Therefore, regular monitoring for clinical features suggestive of COVID-19 is required in all hospital inpatients.

A surveillance test should be offered to all adult patients, including maternity patients, who are expected to require overnight accommodation in the hospital, with the exceptions of those who were tested in the three days before admission and those who have had laboratory-confirmed COVID-19 in the previous 12 weeks. Testing should be offered as soon as is practical after presentation and in all cases within 24 hours.

Scheduled admissions tested within the three days before admission do not require retesting on admission as a routine, other than if admitted to critical care areas.
Surveillance testing is generally not required for children requiring unscheduled admission and elective procedures for which overnight admission is not anticipated. In certain paediatric surgical procedures (for example, where critical care is anticipated post-operatively), surveillance testing may be indicated based on institutional risk assessment.

See also the HSE document “Service Continuity in a COVID-19 Environment; a Strategic Framework for Delivery”. 
Interpretation of results

Interpretation of a positive result from surveillance testing results for COVID-19 can be challenging, as the test is applied in the absence of clinical features. It is apparent that SARS-CoV-2 RNA can remain detectable in the nasopharynx of people infected with COVID-19 for months after recovery and that detection of viral RNA is not a reliable indicator of infectivity. In general terms, low Ct values are more likely to reflect current infection. High Ct values (typically above 30) are more likely to reflect resolved infection.

Laboratories performing surveillance testing should consider defining what constitutes a high and very high Ct value for the platform or platforms they are using, with reference to the range of values they have observed on patients with a clinical history consistent with recent infection and values observed on any patients who have had repeated positive tests over a period of time. Typically, Ct values of 30 or greater are considered high and Ct values of 35 or greater are considered very high. Laboratories that are able to define a high Ct value for the platform or platforms in use should consider the following approach to reporting:

a) report the sample as weak positive or equivocal and subject to confirmation on a second platform if there is a high Ct value OR if only one of two targets is detected

b) after testing on a second platform report the sample as either weak positive confirmed by a second method OR as not confirmed, with a request for a repeat sample

c) include an interpretative comment on confirmed weak positive results to the effect that “A weak positive result was detected. Correlation with the clinical history is recommended. This result may reflect resolved/resolving infection, as weak positive results may persist for some weeks. In the absence of a clinical history of illness, the result may reflect any stage of infection from early pre-symptomatic infection through to resolving/resolved infection. The possibility that this is a false positive result should also be considered”

d) Detailed guidance on the interpretation of high Ct values is available at https://www.hpsc.ie/az/respiratory/coronavirus/novelcoronavirus/guidance/outbreakmanagementguidance/PCR%20weak%20results%20guidance.pdf
COVID-19 and Pregnancy

Recent evidence suggests that some pregnant women may be somewhat more likely to develop severe disease compared with non-pregnant women. However, in a limited case series in China, no evidence of the virus was found in the amniotic fluid, cord blood or breast milk of six women with COVID-19 who were delivered by Caesarean section and none of the infants developed infection. To date, no evidence has been found to suggest that the virus is present in the breast milk of mothers with COVID-19. Some possible cases of vertical transmission have now been reported, so this may be possible, but is not common and neonatal outcomes have been good in the absence of other neonatal conditions.

COVID-19 and Immunity after Recovery

There is still limited experience with immunity after recovery and therefore caution is required in interpretation. In general, patients who have recovered from COVID-19 have evidence of an immune response and they appear unlikely to acquire infection that makes them infectious for others, at least in the short-term (up to 12 weeks following recovery). However, it is recommended that healthcare workers who have recovered from COVID-19 continue to follow the same IPC precautions as all other HCW to reduce the risk of transmission of COVID-19.

Currently, antibody testing is generally not recommended to assess immunity to infection, as there is no consensus on how to interpret the results.

Survival in the Environment

The SARS-CoV-2 virus is an RNA virus with a lipid envelope. The presence of the lipid envelope means that virus is less robust than a non-enveloped virus. Survival on environmental surfaces is dependent on the surface type and the environmental conditions. One experimental study using a SARS-CoV-2 strain reported viability on plastic for up to 72 hours, for 48 hours on stainless steel and up to eight hours on copper. However, the levels of virus declined very quickly over the time period.
Limiting Exposure of Staff to COVID-19

- Minimise the number of HCWs caring for patients with possible or confirmed COVID-19.
- Ensure there are adequate numbers of HCWs to allow them time to adhere to the necessary IPC precautions, in particular to adhere to hand hygiene and safe donning and doffing of personal protective equipment (PPE).
- In general, one-to-one care is not essential for a single patient with suspected or confirmed COVID-19 in a non-critical care setting, provided there is adequate staffing to allow staff to safely apply contact and droplet precautions, with addition of airborne precautions when aerosol-generating procedures (AGP) are performed.
- However, recent experience suggests that transmission in hospital has been associated with placement of individual infectious patients in general wards outside of COVID-19 cohort areas. Therefore, is it important to avoid placing infectious patients outside of COVID-19 cohort area unless it is considered essential to their clinical care. When this cannot be avoided the inherent risk must be recognised and a specific plan to manage that risk is required.
- Wherever possible, for the duration of each shift, assign designated HCW to care for patients with confirmed COVID-19 who may be accommodated in isolation room(s)/cohort bay(s)/areas of a ward. The allocation of HCWs should be reviewed regularly and depends on the number of patients, their care needs and the ward’s case mix. Designating HCW, whenever there are sufficient staffing levels will minimise the likelihood of a HCW caring for patients with COVID-19 and without COVID-19 during the same shift.
- Where possible, designated extra catering support should be provided to HCW in COVID-19 cohort areas, to minimise their need to travel to communal eating facilities.
- In order to ensure appropriate care for the patient with COVID-19 with the minimum of risk, HCWs who enter the patient’s room or cohort area should plan to deliver as much of the care required as possible at each entry. Where appropriate, some communications may be performed with the patient remotely through use of a mobile telephone or other similar device.
• Group meetings and social interaction among staff should be restricted and alternative methods of communication arranged (for example, e-mail, teleconference, and videoconference). In particular, social interaction between HCWs who do not have to work with each other should be avoided, as it introduces an additional avoidable risk. Where meetings are essential, select a meeting space that can facilitate the anticipated number of attendees, so that physical distancing can be observed. Note the NPHET recommendation regarding use of masks in settings where a distance of 2m cannot be maintained and encounters between staff are expected to last for longer than 15 minutes.

• Rooms used for staff breaks or meetings should be assessed for maximum occupancy bearing in mind requirements for physical distancing. The maximum occupancy should be displayed on the door, so that all are made aware of when that capacity is reached or exceeded. The maximum number must not be exceeded, even if all present are wearing masks. Surfaces in break, rest or meeting rooms should be kept free of clutter to facilitate regular cleaning.

• At the start of each shift, all staff should be asked to confirm that they do not currently have symptoms of viral respiratory infection, such as fever, cough, shortness-of-breath, recent loss of taste or smell or myalgia. In the event new symptoms develop during a shift, the HCW should report immediately to the person-in-charge. Recording of staff temperatures upon presenting for work may also be considered as an additional measure to detect possible infection in some settings. Recording of temperatures cannot be considered as an alternative to checking for symptoms as many symptomatic people do not have a fever.

Guidance in relation to occupational health issues for HCW is available on [www.hpsc.ie](http://www.hpsc.ie)
Staff movement across facilities

- The movement of staff between facilities should be minimised. It is recognised that some staff have to work across multiple sites to ensure service provision.
- All staff should ensure that they only attend work if they are symptom-free and are not a known contact of a confirmed case of COVID-19 (Unless a specific derogation has been granted in the context of other risks associated with the absence of that staff member. Staff should adhere to standard precautions, including hand hygiene, physical distancing, and all current guidance on IPC practice, as appropriate.
- HCWs and other essential service providers who are required to attend at healthcare facilities to provide essential services or assessments, for example public health nurse assessments, assessments for outpatient parenteral antimicrobial therapy (OPAT), discharge planning to LTRCFs or legal representatives should not be regarded as visitors in the general sense and should be facilitated. See guidance for visitors, referred to previously.

External Contractors & Product Representatives

- Guidance on visitation to acute healthcare settings should apply to attendance by pharmaceutical and product representatives to clinical areas. These are not essential or important service providers and as such, should not be present in patient care areas while an area is under Framework Level 3, 4 or 5 restrictions.
- At Levels 1 and 2, attendance in patient care areas should be by prior invitation from a senior staff member and in line with any local institutional policy for attendance of company representatives.
- Product or technical representatives who attend to support the delivery of essential healthcare to a patient or group of patients may be viewed as essential service providers and as such could be facilitated to attend as needed, to deliver that healthcare (for example technical experts required for fitting of prostheses).
• To provide additional assurance, essential medical and technical experts who, of necessity, travel from outside the jurisdiction to provide services and who cannot observe 14 days of restricted movement before commencing work should be monitored for clinical features of COVID-19 twice on each working day and should be tested for SARS-CoV-2 on arrival and again at day seven if they are still working in the hospital at that point.

• All hospitals should have pathways in place to ensure that services provided by external contractors, including deliveries of supplies can be provided in a safe manner, with minimal risk to the contractors, staff and patients.

• The hospital should have processes in place to manage the risk that symptomatic external contractors and those delivering goods with COVID-19 could enter the facility.

• All external contractors and delivery persons should be required to perform hand hygiene on entering and leaving the facility.

• Appropriate instruction in IPC practice and access to alcohol-based hand rub and PPE should be provided to external contractors where it is necessary to facilitate the service provision. However, a requirement for external contractors or delivery persons to wear additional PPE should be very exceptional. They should not normally be working within two metres of a patient with COVID-19. Note the NPHET recommendation regarding use of masks in settings where a distance of 2m cannot be maintained and encounters between staff/contractors are expected to last for longer than 15 minutes.

Standard Precautions

Patient placement, surveillance & assessment for infection risk

• All patients must be promptly assessed for COVID-19 risk on arrival at a healthcare setting. Patients with COVID-19 may not have respiratory symptoms on presentation. In all healthcare settings, patients with symptoms of COVID-19 should be separated from patients without symptoms of COVID-19, as soon as possible.
• Patients who are identified as COVID-19 contacts should also be separated from the general patient population as soon as possible, but should not be cohorted in an area with patients with suspected or confirmed COVID-19.

• Where there is a clinical suspicion of COVID-19, single-room placement, contact and droplet precautions must NOT be discontinued solely on the basis of a single test result reported as ‘SARS-CoV-2 RNA not-detected’. A clinical assessment is required, as well as laboratory data.

• In the event that a patient presents with suspected COVID-19, but SARS-CoV-2 RNA is not detected from a properly-obtained specimen tested by a validated and sensitive method, contact and droplet precautions should continue until such time as:
  (a) a plausible alternative pathogen or diagnosis that explains the presenting complaint is identified and any other pathogen identified does not require contact and droplet precautions
  (b) further investigation, such as obtaining a repeat specimen for testing and appropriate imaging make a diagnosis of COVID-19 very unlikely and
  (c) a senior clinical decision maker with experience in managing patients with COVID-19 has determined that contact and droplet precautions are no longer required.

• Patients should be continuously reviewed throughout their inpatient stay for the development of symptoms that suggest COVID-19.

• HCWs should not discount the possibility that new symptoms suggest COVID-19, on the basis of a recent test result reported as SARS-CoV-2 not-detected /negative, because a patient could still be in the incubation period at the time of testing or could acquire infection after admission (HA-COVID-19).

Hand hygiene

Alcohol-based hand rub


Respiratory hygiene and cough etiquette


Personal protective equipment (PPE)


Safe management of linen (Laundry)


Staff Uniforms/Clothing

- See Interim Infection Prevention and Control Guidance for the Health Service Executive 2020. Staff should avoid bringing personal items, including mobile phones into cohort/isolation areas.
Management of blood and body fluid spills

  

Management of waste

- See Interim Infection Prevention and Control Guidance for the Health Service Executive 2020 and (Appendix 2).
  

Transmission-based precautions for COVID-19

  

- The key elements of transmission-based precautions for COVID-19 are outlined in the sections below.

Patient Placement for Inpatient Care

- Patients with COVID-19 should be accommodated in the same clinical area wherever possible, for example by identifying COVID-19 wards/units.

- Signage must be placed at the entrance to the designated COVID-19 ward/unit and at the entrance to the patient’s isolation room or the designated cohort area, to restrict entry and indicate the level of transmission-based precautions required, namely contact and droplet precautions. The doors should remain closed if it is safe to do so.

- Patients should be cared for in a single room with en suite facilities. If there is no en suite toilet, a designated commode should be used, with arrangements in place for safe removal
of a bedpan/urinal to an appropriate disposal point. Alternatively, arrange for safe access to a toilet close by that is assigned for the use of that patient only. Patients with COVID-19 may also be considered for accommodation in a designated COVID-19 cohort area, with a toilet allocated for the use of those patients only.

- In the event of a commode being used, the HCW should leave the single room wearing full PPE, transport the commode directly to the nearest sluice and remove PPE in the sluice after placing the contents directly into the bed pan washer or pulp disposal unit. A second HCW should be available to assist with opening and closing doors to the single room and sluice room.

- Avoid storing any unnecessary equipment or supplies in the patient’s room or cohort area.

- Take time to explain to the patient the importance of the precautions that are in place to manage their care and advise them against leaving the room without HCW guidance. Listen and respond to any concerns they may have, to ensure support and optimal adherence is achieved during their care.

- The allocation of patients for available single rooms should be decided locally, based on safety, need, capacity for cohorting of patients with confirmed COVID-19 infection, ward infrastructure and available resources.

Patient placement for aerosol generating procedures on patients with suspected or confirmed COVID-19

- Further information on aerosol generating procedures (AGP) associated with an increased risk of infection is available here. Where an AGP that is consistently recognised or accepted by many as associated with an increased risk of infection (see table 1) is necessary on a patient with suspected or confirmed COVID-19, it should ideally be undertaken in a negative-pressure or neutral pressure room, using recommended airborne precautions.

- If a negative/neutral pressure room is not available, an AGP that is consistently recognised or accepted by many as associated with an increased risk of infection on a patient with suspected or confirmed COVID-19 should be undertaken using a process and environment that minimises the exposure risk for HCWs and ensures that
patients, visitors, and others in the healthcare setting are not exposed for example, in a single room, with the door kept closed, away from other patients and staff.

- HCW and visitors should leave the patient’s room during an AGP, unless it is necessary for them to remain to assist with the patient’s care during the AGP. Those present in the room during the AGP must wear the recommended PPE for an AGP situation. This applies for the duration of the procedure and for 20 minutes afterwards in rooms with mechanical ventilation and for up to one hour in a room with natural ventilation.

**Cohorting and Streaming**

- At entry to the hospital, patients presenting for assessment should be segregated into ‘possible COVID’ and ‘non-COVID’ parallel streams. This should take account of criteria set out in the latest version of the [COVID-19 Hospital pathway](#). The use of clinical judgement is also critical, as some patients may present with atypical features.
- The requirement for discrete inpatient ward/wards and staffing for the “possible COVID” stream will depend on the number of patients identified as “possible COVID”.
- Patients with suspected or confirmed COVID-19 should be isolated in single rooms with *en suite* facilities. However, where single room capacity is exceeded, it is necessary to cohort patients.
- It is generally not practical or necessary to institute transmission-based precautions on all those patients where there is no clinical suspicion of COVID-19 while awaiting surveillance testing results. However, it is important that the patient is encouraged to wear a mask while waiting for the result, if tolerated, that laboratory turnaround times are as short as possible, that there are local systems in place to ensure a positive test result is promptly recognised and communicated to staff and that transmission-based precautions are immediately implemented for any patient whose test result is reported as SARS-CoV-2 RNA detected.
- Patients with **confirmed COVID-19 can be cohort together**

AGPs on patients with confirmed COVID-19 should only be performed in multi-occupancy cohort areas if there is no practical alternative. If this is unavoidable, every practical effort must be made to minimise the number of staff present in
the area during the procedure and to maximise ventilation. All staff present in the area must wear appropriate PPE.

- Patients with suspected COVID-19 should not be cohorted with those who are confirmed positive.

- **Cohorting of suspected COVID-19 cases should be avoided if at all possible.** The risk of cohorting **suspected cases** in multi-occupancy areas is much greater than that of cohorting confirmed positive patients together, as the suspect cohort is likely to include patients with and without COVID-19. This is most likely to occur in the assessment stage, where laboratory confirmation of COVID-19 is pending.

- When **suspected cases of COVID-19 are cohorted in multi-occupancy areas:**
  - An AGP should not be undertaken in a multi-occupancy area accommodating patients with suspected COVID-19, unless absolutely necessary, as there is an increased risk of cross-transmission to other patients.
  - Patients with suspected COVID-19 requiring an AGP should be prioritised for negative pressure or single isolation rooms.
  - Every effort should be made to minimise cross-transmission risk.
  - Maintain as much physical distance as possible between beds. If required, reduce the number of patients/beds in the area to facilitate adequate physical distancing.
  - The patient should wear a surgical face mask where tolerated, particularly if they are away from their bed space and whenever physical distance cannot be maintained.
  - Patients should remain in these multi-occupancy areas for as short a period of time as is possible.
  - Use privacy curtains between the beds to minimise opportunities for close contact.

- There should be clear signage indicating an area is a designated cohort area to alert staff. Cohort areas may include an area within a ward or extend to an entire ward. Cohort areas may have multi-occupancy rooms or a series of single rooms.

- A designated cohort area should be separated from non-cohort areas by closed doors.
• Minimise movement of staff in cohort areas and ensure that the number of staff entering the cohort area is kept to a minimum, for example during clinical ward rounds. Maintain a record (for example a sign in sheet) for all staff entering the cohort area.

• Staff assigned to work in a cohort area should not be re-assigned to work in non-COVID-19 areas during the same shift. However, it may be unavoidable that staff who visit a cohort ward to provide specific care may also need to work on other wards on the same shift.

• Movement of staff and activities in cohort areas should ideally be linear (from clean to dirty zone), allowing staff to enter and exit the designated contaminated area through separate entrances. However, it is recognised that this may not always be feasible. The area should not be used as a thoroughfare by other patients, visitors or staff, including patients being transferred, staff going for meal breaks, and staff and visitors entering and exiting the building.

Personal Protective Equipment (PPE)

• The requirement for PPE is based on the tasks that a HCW is likely to perform.

• The hospital IPC team should review any new items of PPE for suitability and consider if existing guidance for staff requires updating, to ensure it is compatible with the new item of PPE.

• On April 21st 2020, the National Public Health Emergency Team (NPHET) decided to extend the use of surgical masks in healthcare settings to the following:
  o Surgical masks should be worn by HCW when they are providing care to people and are within 2m of that person, regardless of the COVID-19 status of the person.
  o Surgical masks should be worn by all HCW for all encounters, of 15 minutes or more, with other HCW in the workplace where a distance of 2m cannot be maintained.

• For the purpose of this guidance, HCW should don a mask if they anticipate being within 2m or more of other HCW for a continuous period of 15 minutes or longer. It is not intended that the HCW should attempt to estimate in the morning the total duration of a sequence of very brief encounters that may occur during the day.
As of September 2020, HCW are also required to wear a surgical mask when in busy public areas of healthcare facilities, even if they do not expect to be within a distance of 2m of another person for 15 minutes or more.

Wearing of masks when providing care for certain categories of patient, for example patients who may need to lip-read, can present practical difficulties for patient care. In such circumstances, it is appropriate to perform an institutional risk assessment and to consider alternatives to mask use, such as use of a perspex screen/barrier or visor that manages the risk of transmission of COVID-19.

PPE must be worn by ALL staff entering a room or cohort area where a patient with suspected or confirmed COVID-19 is being cared for.

PPE should be readily available outside the patient’s room or cohort area.

Have a colleague observe donning and doffing of PPE where practical.

Extended use of PPE

Extended use of PPE for the sole purpose of limiting demand for PPE is not appropriate, as adequate supplies of PPE are available.

It is recognised that in certain circumstances such as when working in a cohort areas or ward dedicated to patients with COVID-19, extended use of certain items of PPE when moving between patients may be considered to facilitate working and to reduce potential HCW exposure related to very frequent donning and removal of PPE. Where measures vary from usual practice, it is necessary to ensure the lowest possible risk to patients and HCW. Extended use means that certain items of PPE (gown, face mask, eye protection) may be used while attending to a series of patients with COVID-19 in succession in a single period of clinical activity in one ward or unit.

Gowns should normally be changed between patients and after completion of a procedure or task. However, if necessary to cope with workload and to reduce exposure risk associated with very frequent changes of PPE:

- Extended use of gowns in confirmed COVID-19 cohort areas may be considered for HCW engaged in low contact activities although for these activities, a disposable apron is often appropriate.
Where HCW are engaged in high contact activities, then gowns should be changed between patients, to minimise risk of cross-transmission of other pathogens commonly encountered in healthcare settings (e.g., antimicrobial resistant organisms, such as CPE, MRSA, VRE or C. difficile).

- If PPE is wet, soiled or torn it must be doffed and disposed of.
- It is not appropriate to continue to wear PPE that was used in care of patients with COVID-19 when moving between wards or units or when moving from a clinical care area to a designated office space or break area on the ward or unit.
- Extended use of gloves is not appropriate. Gloves must be changed and hand hygiene performed between patients and sometimes between different care activities on the same patient.
- Double-gloving is not appropriate in the context of caring for patients with COVID-19.
- Cleaning gloves with ABHR is not appropriate. If there is a concern that gloves are contaminated, they must be removed safely, hand hygiene performed and a fresh pair of gloves donned if required to continue that task.

Types of PPE

Gloves

All gloves are disposable, single-use items. Gloves can be made of latex or non-latex material such as nitrile. Nitrile gloves are used routinely in the HSE to avoid risks associated with latex hypersensitivity. Gloves should be powder free. Vinyl gloves should not be used unless there are no acceptable alternatives as they are prone to leakage and tearing. Polythene i.e. plastic gloves are not suitable for clinical use.

Disposable plastic aprons are recommended to protect staff uniform and clothes from contamination when providing direct patient care and when carrying out environmental and equipment decontamination. Disposable plastic aprons are suitable for low contact activity.

Fluid resistant gowns are recommended when there is a risk of extensive splashing of blood and other body fluids, and a disposable plastic apron does not provide adequate cover to protect a HCW’s uniform or clothing.
**Fluid resistant coveralls** provide equivalent protection to fluid resistant long-sleeved gowns if worn, donned and doffed correctly. However, they can be more challenging to doff correctly and specific training is required for HCW who may need to use these items of PPE.

If **non-fluid resistant gowns** are used and there is a risk of splashing with blood or other body fluids, a disposable plastic apron should be worn over or underneath the gown.

**Eye protection** should be worn when there is a risk of contamination to the eyes from splashing of blood, body fluids, excretions or secretions (including respiratory secretions). For example, full face shield/visor or goggles/safety spectacles. Eye protection is required if present during an AGP associated with an increased risk of infection. At other times eye protection is required when there is a splash risk or when delivering personal care to a person who is coughing or sneezing. Use of eye protection is not required as a routine every time a healthcare worker enters the room of a person with COVID-19 or a COVID-19 cohort area. The absence of eye protection does not of itself represent a breach of appropriate PPE use in this context but it is significant if the healthcare worker was delivering personal care to a coughing or sneezing patient provide a mask was worn appropriately.

**Face visors as an alternative to surgical face masks in low-risk scenarios**

In low risk situations, such as when caring for people who are not suspected or confirmed to have COVID-19, and where the wearing of a surgical face mask by the HCW creates a significant barrier to the delivery of effective clinical care, then use of a correctly worn face visor rather than a surgical mask may be considered. The visor or face shield should be sufficient in width and length to cover the face (e.g. extends below the chin and provides cover to the side). For use in a healthcare setting, the visor or face shield should conform to the required specifications (EU PPE Regulation 2016/425, EN 166, ANSI/ISEA Z87.1 or equivalent)

However, as face visors are generally not considered to afford the same level of protection as a surgical facemask against droplet transmitted infection, they should not be worn as a substitute for a surgical mask in high risk scenarios. For example, when caring for a patient with suspected/confirmed COVID-19.
When performing or assisting with an AGP on a person with suspected/confirmed COVID-19 a respirator mask is always required in addition to a visor or goggles.

**Surgical face masks**

- The WHO recommends surgical facemasks should have good breathability, internal and external faces which can be clearly identified, and meet EN14683 standard for Type II or higher. This applies to masks used by HCWs and patients.
- Type IIR masks should be worn where there is a high risk of splashing by bodily fluids for example in the operating theatre, critical care unit and emergency department setting, where a patient’s condition may be unstable or acutely deteriorating.

**Tips for surgical face masks:**

- The mask must be donned appropriately, to allow for easy removal without touching the front of the mask
- Must cover the nose and mouth of the wearer
- Must not be allowed to dangle around the HCW’s neck
- Must not be touched once in place
- Must be changed when wet or torn or if removed to eat, drink or use a phone
- Perform hand hygiene after the surgical face mask is removed

**Respirator masks**

- Respirator masks are routinely recommended for the care of patients with known airborne infectious diseases, including; varicella (chickenpox) and measles viruses and pulmonary tuberculosis (TB).
- COVID-19 is not considered to be an airborne pathogen. However, when AGPs associated with an increased risk of infection are performed, FFP2 masks, in addition to eye protection are required. Properly-fitted cone shaped masks also provide appropriate protection. There is no reason to consider that cone shaped masks or FFP3 masks afford a higher degree of protection in practice than duckbill-style FFP2 masks.
- Check to ensure that respirator masks are fluid repellent. If respirator masks are not
fluid repellent, additional protection, such as a visor, is required in situations where there is a splash risk.

**Valved Respirator Masks**

It is preferable to avoid valved respirator masks. The purpose of a respirator’s exhalation valve is to reduce the breathing resistance during exhalation. The valve is designed to open during exhalation to allow exhaled air to exit the respirator and then close tightly during inhalation, so inhaled air is not permitted to enter the respirator through the valve. A person who may have COVID-19 should not wear a valved respirator, because there is a possibility that exhaled particle may leave the respirator via the valve and enter the surrounding environment.

Valved respirators are also not recommended where there is a risk of splashes with blood or body fluid.

If there is no alternative but to use a valved mask, where there is a risk of splashing for example arterial spray, then a facial visor, which covers the mask, should be worn.

**Face coverings – patients**

In line with NPHET recommendations, patients and anyone accompanying them arriving at the hospital should be reminded to wear a cloth face covering (unless they are under 13 years or cannot tolerate wearing the face covering). If they do not have a cloth face covering, they should be provided with a facemask at reception/registration.

Patients who present with respiratory symptoms should be asked to wear a surgical facemask, pending clinical assessment. If they are tested for SARS-CoV-2, they should continue to wear the mask if tolerated until their respiratory viral test result is available to inform an assessment of further precautions required.

Patients in whom there is no clinical suspicion of COVID-19, but who are tested for COVID-19 for surveillance purposes should be encouraged to continue to wear the surgical face mask until the admission test result is available, if it is feasible to do so.
Patients accommodated in a single room are not required to wear a surgical face mask while in the room, but should wear it when outside of the room.

Patients accommodated in multi-occupancy accommodation are not required to wear a surgical face mask while in their bed space, as it would likely not be feasible for all patients in that space to wear a surgical face mask at all times (for example during eating, drinking, sleeping, patients with behavioural disturbance or underlying respiratory conditions etc.). However, if a patient expresses their preference to wear a surgical face mask or face covering for most of the time while they are accommodated in multi-occupancy accommodation, they should be facilitated to do so. Patients who are leaving their bed-space in a multi-occupancy accommodation should be asked to wear a surgical facemask if tolerated until they return to their bed-space.

In the event that patients refuse to use a cloth face covering or mask in situations where they are recommended healthcare workers should try to determine the nature of the person’s objection and ensure that they understand that they are being asked to wear the mask to protect patients and staff. If they insist that they will not wear a mask consider if they are willing to wear a visor which may reduce risk to some degree. Patients cannot be refused care on the basis that they decline to wear a mask. If that situation arises the risk must be managed by other elements of good infection prevention and control practice.

**Fit testing**

The Health and Safety Authority indicate that where a risk assessment indicates that HCW need to use a close-fitting respirator mask for their protection that every effort should be made to comply with the requirement for fit testing of the worker, as far as is reasonably practicable. When fit testing of all staff is not immediately possible, then fit testing should be prioritised for those at greatest risk. Priority groups for fit testing include the following:

- HCW most likely to be involved in performing AGPs, in particular endotracheal intubation.
• HCWs most likely to have the most prolonged exposure to COVID-19 in settings where AGPs are performed.

Tips for respirator facemasks:
• The wearer must undertake a fit check each time a respirator is worn, to ensure there are no gaps between the mask and face for unfiltered air to enter.
• Respirator masks can remain effective when worn continuously for extended periods of time, but must be changed if wet or damaged.

**Powered Air Purifying Respirators (PAPRs)**

A powered air purifying respirator (PAPR) encloses the entire head in a hood. Protection is provided against droplets (head is enclosed) and aerosols (air is pumped by a battery-powered pump though an appropriate filter into the hood). As the entire head is enclosed, a PAPR does not require a seal against the skin. The protection afforded is not reduced by facial hair. PAPRs are not generally used in Ireland and are not widely available.

There may be significant challenges in relation to their use. Staff training on safe use and cleaning and maintenance is required, in accordance with the manufacturer’s instructions, along with issues of user comfort. [Link to document on PAPR]

**Theatre caps/hoods and shoe covers**

• There is no evidence that contamination of hair is a significant route of transmission for SARS-2-CoV. Outside of surgical procedures involving high-speed drilling, where there may be a risk of splashing and extended coverage is desirable, (for example neurosurgery), head covers are not required and are not recommended.
• For a HCW with long hair, hair should be tied up and off their face when working in clinical settings.
• Theatre shoe covers are not recommended outside of the operating theatre area.

**Plastic/Perspex ‘intubation boxes’**

The use of plastic ‘intubation boxes’ is **not recommended**. If they are considered for use in a
healthcare facility, the facility must perform a risk assessment and have a defined process for
the use of this item of equipment and for the performance and tracing of decontamination of
the item between each patient use. The policy should also address storage of these items when
not in use.
Table 1: Recommendations for the use of PPE during COVID-19 pandemic (updated following NPHEC recommendation 22.04.20)

- Surgical masks should be worn by HCW when they are providing care to people and are within 2m of a person, regardless of the COVID-19 status of the person.
- Surgical masks should be worn by all HCW for all encounters, of 15 minutes or more, with other HCW in the workplace where a distance of 2m cannot be maintained.
- For the purpose of this guidance, HCW should don a mask if they anticipate being within 2m of one or more other HCW for a continuous period of 15 minutes or longer. For practical reasons it is not intended that HCW should attempt to estimate in the morning the total duration of a sequence of very brief encounters that may occur with a person during a working day however cumulative exposure is relevant in determining a person contact status in the event of an exposure incident.
- Wearing of masks when providing care for certain categories of patient, for example patients who may need to lip-read, can present practical difficulties for patient care. In such circumstances, it is appropriate to perform an institutional risk assessment and to consider alternatives to mask use that manage the risk of transmission of COVID-19 (as above).
### Table 1: Recommendations for the use of PPE during COVID-19 pandemic (updated following NPHET Recommendations April & September 2020)

<table>
<thead>
<tr>
<th>1.0</th>
<th>Non clinical areas such as administrative areas, medical records, staff restaurant and any other area where tasks do not involve contact with patients</th>
</tr>
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<tbody>
<tr>
<td>1.1</td>
<td>All Activities</td>
</tr>
<tr>
<td></td>
<td>Surgical masks should be worn by all HCW for all encounters, of 15 minutes or more, with other HCW in the workplace, where a distance of 2m cannot be maintained. From September 2020, HCW are also required to wear a surgical mask when in busy public areas of healthcare facilities, even if they do not expect to be within a distance of 2m of another person for 15 minutes or more.</td>
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<tr>
<th>2.0</th>
<th>Receptions Areas</th>
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<tbody>
<tr>
<td>2.1</td>
<td>Administrative activities in reception areas where staff are separated by at least two metres from patients and work colleagues.</td>
</tr>
<tr>
<td></td>
<td>Surgical face mask if unable to maintain a 2 metre distance from patients and work colleagues. (This does not apply if a physical barrier e.g. Perspex screen is in place)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.0</th>
<th>Patient transit areas, for example; corridors, elevators, stairwells, escalators, waiting areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Transfer of patients through public areas</td>
</tr>
<tr>
<td></td>
<td>The patient should be asked to wear a surgical face mask if they can tolerate it. Those transferring the patient should wear appropriate PPE, as per their level of contact (section 5.0).</td>
</tr>
</tbody>
</table>

| 3.2 | All other activities (e.g. providing security, moving equipment etc.)                           |
|     | Surgical masks should be worn by all HCW for all encounters, of 15 minutes or more, with other HCWs in the workplace where a distance of 2m cannot be maintained |

<table>
<thead>
<tr>
<th>4.0</th>
<th>Pathology/Laboratory Areas</th>
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<tbody>
<tr>
<td>4.1</td>
<td>All activities</td>
</tr>
<tr>
<td></td>
<td>Surgical masks should be worn by all HCW for all encounters, of 15 minutes or more, with other HCW in the workplace where a distance of 2m cannot be maintained. Additional PPE as per laboratory biosafety guidance</td>
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<th>5.0</th>
<th>Clinical Areas</th>
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<tr>
<th>5.1</th>
<th>Providing Care</th>
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<tbody>
<tr>
<td>5.1.1</td>
<td>Patients with respiratory symptoms/suspected/confirmed COVID-19 who require an aerosol generating procedure (AGP)*</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> In situations where staff are in the room with a patient and there is a significant risk that an unplanned AGP may need to be performed urgently, for example accidental extubation, it may be appropriate to wear an FFP2 mask while in the room</td>
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<tr>
<td></td>
<td>• Hand hygiene</td>
</tr>
<tr>
<td></td>
<td>• Disposable single use nitrile gloves</td>
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<tr>
<td></td>
<td>• Long sleeved disposable gown</td>
</tr>
<tr>
<td></td>
<td>• FFP2 respirator mask</td>
</tr>
<tr>
<td></td>
<td>• Eye protection</td>
</tr>
</tbody>
</table>
### 5.0 Clinical Areas

### 5.1.2 Patients with respiratory symptoms/suspected/confirmed COVID-19 and COVID-19 Contacts who do not require an AGP, but do require high contact patient care activities that provide increased risk for transfer of virus and other pathogens to the hands and clothing of healthcare workers including (but not limited to):

- Close contact for physical examination/physiotherapy
- Changing incontinence wear
- Assisting with toileting
- Device care or use
- Wound care
- Providing personal hygiene
- Bathing/showering
- Transferring a patient for example from bed to chair
- Care activities where splashes/sprays are anticipated

- Hand hygiene
- Disposable single use nitrile gloves
- Long sleeved disposable gown
- Surgical facemask
- Eye protection*

*Eye protection is recommended as part of standard infection control precautions when there is a risk of blood, body fluids, excretions or secretions splashing into the eyes. Individual risk assessment must be carried out before providing care. This assessment will need to include

- Whether patients with possible COVID-19 are coughing
- Does the task you need to perform expose you to a risk that the patient will cough or sneeze in your face or present other risk of blood or body fluid splash

### 5.1.3 Patients with respiratory symptoms/suspected/confirmed COVID-19 where the tasks being performed are unlikely to provide opportunities for the transfer of virus/other pathogens to the hands and clothing. Low contact activities, for example:

- Initial clinical assessments
- Taking a respiratory swab
- Recording temperature
- Checking urinary drainage bag
- Inserting a peripheral IV cannula
- Administering IV fluids
- Helping to feed a patient

- Hand hygiene
- Disposable single use nitrile gloves
- Disposable plastic apron
- Surgical facemask
- Eye protection*

*Eye protection is recommended as part of standard infection control precautions when there is a risk of blood, body fluids, excretions or secretions splashing into the eyes. Individual risk assessment must be carried out before providing care. This assessment will need to include

- Whether patients with possible COVID-19 are coughing
- Does the task you need to perform expose you to a risk that the patient will cough or sneeze in your face or present other risk of blood or body fluid splash.

### 5.1.4 All other patients where COVID-19 or other respiratory infectious pathogen is not confirmed or suspected

- Surgical masks should be worn by HCW when they are providing care to people and are within 2m of a person, regardless of the COVID-19 status of the person
- Hand Hygiene
- Additional PPE required, as per standard precautions or transmission based precautions where they apply e.g. Norovirus

### 5.2 Cleaning

### 5.2.1 Cleaning where patient is present

- Hand hygiene
- Disposable plastic apron
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>5.2.2</strong></td>
<td>Cleaning when patient is not present. For example, after the patient has been discharged or the procedure is complete. Ensure adequate time has been left before cleaning, as per guidelines.</td>
<td></td>
</tr>
</tbody>
</table>
|   | • Surgical facemask  
   • Household or disposable single use nitrile gloves | • Hand hygiene  
   • Disposable plastic apron  
   • Household or disposable single use nitrile gloves |

**6.0 Internal transfer of patients**

<p>| | | |</p>
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<thead>
<tr>
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</tr>
</thead>
</table>
| **6.1** | Accompanying a patient between areas within the same facility (e.g. when moving a patient from a ward to radiology / theatre, GP waiting area to assessment room) | Hand hygiene  
Surgical mask |

**7.0 External transfer for example between home and dialysis unit, inter hospital transfer, hospital to LTCF**

<p>| | | |</p>
<table>
<thead>
<tr>
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</thead>
</table>
| **7.1** | Accompanying a patient but no direct contact is anticipated | Hand hygiene  
Surgical mask (required unless physical distance can be maintained)  
If direct contact is unlikely, **NO ADDITIONAL PPE REQUIRED** for staff accompanying the patient |
| **7.2** | Accompanying a patient and likely to have direct contact | Hand hygiene  
Surgical mask  
Additional PPE as per section 5.0 |

**8.0 Involved only in driving a patient, not loading or unloading from transport vehicle**

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<table>
<thead>
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<th></th>
</tr>
</thead>
</table>
| **8.1** | No direct contact with patient and no separation between driver and the patient compartments | Surgical masks should be worn by HCW when they are providing care to people and are within 2m of a person, regardless of the COVID-19 status of the person  
Surgical masks should be worn by all HCW for all encounters, of 15 minutes or more, with other HCW in the workplace where a distance of 2m cannot be maintained |
| **8.2** | No direct contact with patient and the driver’s compartment is separated from the patient | Hand hygiene  
Maintain a physical distance of at least 2m  
**NO PPE REQUIRED** |
### Individuals who may be visiting or accompanying patients (e.g., close family members)

<table>
<thead>
<tr>
<th>9.0</th>
<th>9.1 Visiting in acute hospitals should be managed in accordance with HSE Guidance on Visitations to Inpatient Areas of Acute Hospitals*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Hand hygiene</td>
</tr>
<tr>
<td></td>
<td>• Disposable plastic apron</td>
</tr>
<tr>
<td></td>
<td>• Disposable single use nitrile gloves</td>
</tr>
<tr>
<td></td>
<td>• Surgical face mask</td>
</tr>
</tbody>
</table>

Donning PPE

Where to don PPE

- Don PPE in a designated area. This may be outside a room or a cohort area. If the entire ward is a cohort ward and extended used of PPE is adopted, then an area should be designated for this, at or near the entrance to the ward.
- Adequate supplies of ABHR and PPE should be available and stored securely.
- Placement of a mirror in the donning area should be considered, so a HCW can use the mirror to verify the integrity of their PPE and help to identify potential breaches in PPE, in the absence of a colleague being present to check.
- PPE must be comfortable and secure before leaving the donning area.
- Signage highlighting key steps in the donning sequence, including instructions how to undertake a fit check of a respirator mask, where its use is indicated, must be clearly displayed.

What to do before you put on your PPE

- Remove all jewellery
- Remove mobile phones and pagers from pockets/belts and leave in a safe place
- Ensure you are well-hydrated and have availed of toilet facilities (in particular where prolonged patient care is anticipated)
- Tie hair neatly back away from the face
- Perform hand hygiene

Sequence of donning PPE

Videos on donning procedures are available on www.hpsc.ie

- Put on disposable gown and secure with ties
- Put on surgical face mask, secure ties/straps to crown of the head. Fit flexible band to bridge of nose. Fit snug to face and below chin
- If ear loop masks are used fit flexible band to bridge of nose. Fit snug to face and
pull the loops over the ear lobes

- For an AGP, put on a respirator face mask (FFP2) instead of surgical mask and fit check. Please note this will require that the straps are placed to the middle back of head and neck
- Put on eye protection (if required) – and adjust to fit
- Put on gloves – pull glove wrist over the gown cuff
  - Double gloving is not appropriate in isolation rooms or cohort areas

**Doffing PPE**

- The procedure for removing PPE may vary across organisations, depending on the layout of the facility and availability of PPE.
- The most important thing when removing PPE is to avoid self-contamination and to pay close attention to hand hygiene.

**Where to doff PPE**

- Where a patient is in a single room with an ante-room all PPE should be removed and discarded in the ante-room.
- When a patient is in a single room with no ante-room, remove gloves, gown and eye protection in the patient room. Do not remove the surgical facemask/respirator until outside the patient room.
- Where patients with confirmed COVID-19 are being cared for in a cohort area, the location for doffing PPE will vary depending on the layout of individual facilities.

**Sequence of doffing PPE**

**When all items can be discarded**

- Remove gloves and dispose in healthcare risk waste bin.
- Perform hand hygiene.
- Remove eye protection and dispose in healthcare risk waste bin.
- Remove gown (avoid touching the front of the gown) and dispose in healthcare risk waste bin.
- Perform hand hygiene.
• Remove mask/respirator. Grasp and lift mask ties from behind your head and remove surgical facemask or respirator mask if worn, away from your face.

• Alternatively, if ear loop face masks are worn, remove by grasping each loop on either side of the face beneath the ear lobes and gently pull the bands out and off the ear lobes away from your face.

• Avoid touching the front of the mask or respirator and use ties to discard in healthcare risk waste bin.

• Perform hand hygiene.
Duration of Transmission-Based Precautions

- Where possible patients should be discharged from hospital as soon as clinically appropriate.

- If a patient is discharged home and they are still in their isolation period, they should be advised to self-isolate. Advice for self-isolation is available

- A test of clearance of SARS-CoV-2 RNA is not appropriate for COVID-19 patients. For hospitalised patients, transmission-based precautions can be discontinued fourteen days after symptom onset, where they have been fever-free for five days.

- In exceptional circumstances, where a Consultant Microbiologist or Infectious Disease Physician is concerned on clinical grounds that there may be an ongoing risk of transmission beyond 14 days, it may be appropriate to extend the period of transmission-based precautions for up to seven additional days (that is for a total of 21 days). Repeat testing at 14 days may be considered in advance of ending transmission-based precautions. In such circumstances, repeat testing for viral nucleic acid is sometimes performed but is highly likely to be positive and is not necessary unless the result is likely to influence the decision on extending duration of precautions. If transmission-based precautions are extended to 21 days no further testing is required at that time in advance of ending transmission-based precautions. This includes patients who are immunocompromised or require haemodialysis, where care can be provided with standard precautions plus surgical mask after that time.

- Note some patients who meet the above criteria (14 days post onset with five days fever free) have a persistent cough. There is no evidence that such patients pose a specific infection risk or that transmission-based precautions should be continued. However, an extended period of contact and droplet precautions may be considered in some such cases if there is clinical concern. In such cases, the period of contact and droplet precautions
should not be extended beyond 28 days.

- Persons who attend hospital for outpatient or inpatient care who have had laboratory-confirmed or clinically-diagnosed COVID-19 do not require transmission-based precautions if the following criteria are met;
  - the infectious periods appropriate for their COVID-19 status has passed (10 days if not hospitalised and 14 days if hospitalised or resident in a LTRCF) and they have been fever free for the last five days of that period (note; if date of onset of symptoms is not clear or the patient had asymptomatic infection, use the date on which the sample for testing was taken)
  - There are no other indications for applying transmission-based precautions, for example they are not colonised with a multi-drug resistant organism

- Persons who attend hospital who are known to have had close contact with a laboratory-confirmed or clinically-suspected case of COVID-19 within the 14 days of exposure should be isolated (or physically separated from other patients if attending essential OPD/day services) and managed with transmission-based precautions, even if they are asymptomatic.

- In general, persons who attend hospital who are known to have had close contact with a laboratory-confirmed or clinically-suspected case of COVID-19 do not require transmission-based precautions if the following criteria are met;
  - They have no symptoms of COVID-19 (this should be confirmed before attendance and again at reception)
  - 14 days have elapsed since their last exposure to the COVID-19 case
  - There are no other known indications for applying transmission-based precautions, for example known to be colonised with multi-drug resistant organisms
Aerosol Generating Procedures

Aerosol generating procedures (AGPs) are defined as medical and patient care procedures that result in the production of airborne particles ≤5 μm in size, which can remain suspended in the air, travel over a distance and may cause infection if they are inhaled. AGPs create the potential for airborne transmission of infections that may normally be transmissible primarily by the droplet route. A list of AGPs and recommended PPE is outlined in Tables 2-6.

- Where an AGP that is consistently recognised or accepted by many as associated with an increased risk of infection is necessary on a patient with suspect or confirmed COVID-19, it should ideally be undertaken in a negative-pressure or neutral pressure room, using recommended airborne precautions.

- If a negative/neutral pressure room is not available, an AGP that is consistently recognised or accepted by many as associated with an increased risk of infection should be undertaken using a process and environment that minimises the exposure risk for HCWs, ensuring that patients, visitors, and others in the healthcare setting are not exposed. For example, in a single room, with the door kept closed, away from other patients and staff.

- The risk associated with performing procedures categorised below as “Plausible hypothesis- no evidence” outside of a negative pressure or neutral pressure room is low if performed with appropriate infection control precautions including use of appropriate PPE.

- Essential personnel only should be present in a room/area where an AGP associated with increased risk of infection is being performed.

- HCW and visitors should leave the patient’s room during an AGP, unless it is necessary for them to remain to undertake the AGP or to assist with the patient’s care during the AGP. Those present in the room during the AGP must wear the recommended PPE for an AGP situation for the duration of the procedure and for 20 minutes afterwards in rooms with mechanical ventilation and for up to one hour in a room with natural ventilation.

- In critical care settings, where there is additional risk that an unanticipated AGP (e.g.,
due to accidental extubation or requirement for suctioning) may need to be performed urgently, it may be appropriate for all HCW present the area to wear an FFP2 mask.
Table 2: Aerosol generating procedures (AGP) which have been associated with an increased risk of transmission of respiratory infection

<table>
<thead>
<tr>
<th>Procedures</th>
<th>AGP-related increased risk of pathogen transmission</th>
<th>PPE for those with CONFIRMED OR SUSPECTED COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intubation</td>
<td>Consistently recognised</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FFP2 RESPIRATOR MASK</td>
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<tr>
<td></td>
<td></td>
<td>Eye protection</td>
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<td></td>
<td></td>
<td>Gloves</td>
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<tr>
<td></td>
<td></td>
<td>Long-sleeved gown</td>
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<tr>
<td>Front of neck airway procedures – Insertion of tracheostomy, cricothyroidotomy</td>
<td>Consistently recognised</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FFP2 RESPIRATOR MASK</td>
</tr>
<tr>
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<td>Eye protection</td>
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<td>Gloves</td>
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<td></td>
<td></td>
<td>Long-sleeved gown</td>
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<tr>
<td>Tracheal extubation</td>
<td>Consistently recognised</td>
<td>Hand hygiene</td>
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<tr>
<td></td>
<td></td>
<td>FFP2 RESPIRATOR MASK</td>
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<td>Eye protection</td>
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<td></td>
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<td>Gloves</td>
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<tr>
<td></td>
<td></td>
<td>Long-sleeved gown</td>
</tr>
<tr>
<td>Bronchoscopy</td>
<td>Consistently recognised</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FFP2 RESPIRATOR MASK</td>
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<td>Eye protection</td>
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<td></td>
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<td>Gloves</td>
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<td></td>
<td></td>
<td>Long-sleeved gown</td>
</tr>
<tr>
<td>Procedures</td>
<td>AGP-related increased risk of pathogen transmission</td>
<td>PPE for those with CONFIRMED OR SUSPECTED COVID-19</td>
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<tr>
<td>----------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Positive pressure ventilation with inadequate seal*</td>
<td>Consistently recognised</td>
<td>Hand hygiene</td>
</tr>
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<td></td>
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<td>FFP2 RESPIRATOR MASK</td>
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<td>Eye protection</td>
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<td>Gloves</td>
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<td></td>
<td></td>
<td>Long-sleeved gown</td>
</tr>
<tr>
<td>CPR (pre intubation due to manual ventilation )¹</td>
<td>Consistently recognised</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FFP2 RESPIRATOR MASK</td>
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<td>Eye protection</td>
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<td>Gloves</td>
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<td></td>
<td></td>
<td>Long-sleeved gown</td>
</tr>
<tr>
<td>High Frequency Oscillatory Ventilation (HFOV)</td>
<td>Consistently recognised</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FFP2 RESPIRATOR MASK</td>
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<td></td>
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<td>Eye protection</td>
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<td>Gloves</td>
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<td></td>
<td></td>
<td>Long-sleeved gown</td>
</tr>
<tr>
<td>Manual Ventilation</td>
<td>Consistently recognised</td>
<td>Hand hygiene</td>
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<tr>
<td></td>
<td></td>
<td>FFP2 RESPIRATOR MASK</td>
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<td>Eye protection</td>
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<td></td>
<td></td>
<td>Gloves</td>
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<td></td>
<td></td>
<td>Long-sleeved gown</td>
</tr>
<tr>
<td>Open Suctioning-procedure where a single-use catheter inserted into the ETT either by disconnecting the ventilator tubing or via a swivel connector</td>
<td>Consistently recognised</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FFP2 RESPIRATOR MASK</td>
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<td></td>
<td></td>
<td>Eye protection</td>
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<td>Gloves</td>
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<td></td>
<td></td>
<td>Long-sleeved gown</td>
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</tbody>
</table>

*High Frequency Oscillatory Ventilation (HFOV) is a form of mechanical ventilation used to deliver air to the lungs of a patient who is unresponsive to conventional ventilation.**
<table>
<thead>
<tr>
<th>Procedures</th>
<th>AGP-related increased risk of pathogen transmission</th>
<th>PPE for those with CONFIRMED OR SUSPECTED COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction of Sputum</td>
<td>Consistently recognised</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FFP2 RESPIRATOR MASK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye protection</td>
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<td></td>
<td></td>
<td>Gloves</td>
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<tr>
<td></td>
<td></td>
<td>Long-sleeved gown</td>
</tr>
<tr>
<td>High Flow Nasal Oxygen (HFNO)</td>
<td>Accepted by many</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td>including AIRVO</td>
<td></td>
<td>FFP2 RESPIRATOR MASK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye protection</td>
</tr>
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<td></td>
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<td>Gloves</td>
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<td></td>
<td></td>
<td>Long-sleeved gown</td>
</tr>
<tr>
<td>Non-invasive ventilation – CPAP/BiPAP</td>
<td>Accepted by many</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FFP2 RESPIRATOR MASK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye protection</td>
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<td></td>
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<td>Gloves</td>
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<td></td>
<td></td>
<td>Long-sleeved gown</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedure</th>
<th>AGP-related increased risk of pathogen transmission</th>
<th>PPE for CONFERMED OR SUSPECTED COVID-19</th>
</tr>
</thead>
</table>
| Instruments used in Autopsy Procedures | Consistently recognised | Hand hygiene  
  FFP2 RESPIRATOR MASK  
  Eye protection  
  Gloves  
  Long-sleeved gown |
| Instruments used in Dental Procedures  
  e.g. the use of a high-speed hand piece or ultrasonic instruments aerosolise patient’s respiratory secretions, saliva | Consistently recognised | Hand hygiene  
  FFP2 RESPIRATOR MASK  
  Eye protection  
  Gloves  
  Long-sleeved gown |
| Instruments used in surgical procedures e.g. the use of a high-speed drill in neurosurgery & major maxillofacial or ENT procedures traversing sinuses | Consistently recognised | Hand hygiene  
  FFP2 RESPIRATOR MASK  
  Full face visor  
  Gloves  
  Long-sleeved gown  
  Hood |
Table 4: Procedures, which may be associated with increased risk due to levels of droplet dispersion, proximity to airway, duration of procedure +/- where installation of fluid or suctioning may be part of the procedure

<table>
<thead>
<tr>
<th>Procedures</th>
<th>AGP-related increased risk of pathogen transmission</th>
<th>PPE for CONFIRMED OR SUSPECTED COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laryngoscopy</td>
<td>Plausible hypothesis- no evidence</td>
<td>FFP2 RESPIRATOR MASK Eye protection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gloves Long-sleeved gown</td>
</tr>
<tr>
<td>Laryngeal Mask Airway (placement and removal)</td>
<td>Plausible hypothesis- no evidence</td>
<td>FFP2 RESPIRATOR MASK Eye protection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gloves Long-sleeved gown</td>
</tr>
<tr>
<td>Upper GI endoscopy</td>
<td>Plausible hypothesis- no evidence</td>
<td>FFP2 RESPIRATOR MASK Eye protection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gloves Gown/plastic apron</td>
</tr>
<tr>
<td>Transoesophageal Echo</td>
<td>Plausible hypothesis- no evidence</td>
<td>FFP2 RESPIRATOR MASK Gloves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye protection Gown/plastic apron</td>
</tr>
<tr>
<td>Fibreoptic endoscopic evaluation of swallowing (FEES).</td>
<td>Plausible hypothesis- no evidence</td>
<td>FFP2 RESPIRATOR MASK Gloves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye protection Gown/plastic apron</td>
</tr>
</tbody>
</table>
Table 5: Procedures which are unlikely to be of increased risk, as there are low levels of droplet dispersion, HCW is not in direct proximity to airway, duration of procedure is short and where instillation of fluid or suctioning is not part of the procedure.

<table>
<thead>
<tr>
<th>Procedures</th>
<th>AGP-related increased risk of pathogen transmission</th>
<th>PPE for CONFIRMED OR SUSPECTED COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collecting a nasopharyngeal swab</td>
<td>Not supported by evidence or plausible hypothesis and not recognised by most national bodies.</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Surgical face mask</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gloves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gown/plastic apron*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Risk assessment re: eye protection</td>
</tr>
<tr>
<td>Delivery of nebulised medications via simple face mask</td>
<td>Not supported by evidence or plausible hypothesis and not recognised by most national bodies.</td>
<td>Hand hygiene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Surgical face mask</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gloves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gown/plastic apron*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Risk assessment re: eye protection</td>
</tr>
<tr>
<td>Closed suction systems (CSS) enable patients to be suctioned by a suction catheter enclosed within a plastic sleeve, without the need for ventilator disconnection</td>
<td>Not supported by evidence or plausible hypothesis and not recognised by most national bodies.</td>
<td>Hand hygiene</td>
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<td></td>
<td>Surgical face mask</td>
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<td>Gloves</td>
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<td></td>
<td>Gown/plastic apron*</td>
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<tr>
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<td></td>
<td>Risk assessment re: eye protection</td>
</tr>
<tr>
<td>Chest physiotherapy in absence of other AGPs</td>
<td>Not supported by evidence or plausible hypothesis and not recognised by most national agencies.</td>
<td>Hand hygiene</td>
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<td>Surgical face mask</td>
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<td>Risk assessment re: eye protection</td>
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<tr>
<td>Procedures</td>
<td>AGP-related increased risk of pathogen transmission</td>
<td>PPE for CONFIRMED OR SUSPECTED COVID-19</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Clinical dysphagia examinations- this examination includes orofacial assessment and administration of food and/or fluids to evaluate swallowing ability</td>
<td>Not supported by evidence or plausible hypothesis and not recognised by most national agencies.</td>
<td>Hand hygiene</td>
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<td>Surgical face mask</td>
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<td>Risk assessment re: eye protection</td>
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<tr>
<td>Insertion of a nasogastric tube</td>
<td>Not supported by evidence or plausible hypothesis and not recognised by most national agencies.</td>
<td>Hand hygiene</td>
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<td>Surgical face mask</td>
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<td>Gown/plastic apron*</td>
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<td>Risk assessment re: eye protection</td>
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</tbody>
</table>

*Refer to National Guidelines on PPE

Table 6: Lower GI Procedures

<table>
<thead>
<tr>
<th>Procedure</th>
<th>AGP-related increased risk of pathogen transmission</th>
<th>PPE for CONFIRMED OR SUSPECTED COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower GI endoscopy and similar procedures involving the urogenital tract (for example cystoscopy, colposcopy LLETZ)</td>
<td>Not supported by evidence or plausible hypothesis and not recognised by most national agencies RNA detected in faeces but no cases of COVID-19 transmission by this route reported to date</td>
<td>Gloves</td>
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<td>Apron</td>
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<td></td>
<td>Surgical facemask</td>
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<tr>
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<td>Risk assessment re: eye protection</td>
</tr>
</tbody>
</table>
Cleaning an area after an AGP has been performed on a patient with suspected or confirmed COVID-19

- Clearance of infectious particles after an AGP is performed will depend on the mechanical/natural ventilation and air changes per hour (ACH) within the room.
- A single air change is estimated to remove 63% of airborne contaminants; after five air changes, less than 1% of airborne contamination remains.
- In an isolation room with mechanical ventilation (10-12 ACH), it is advisable to wait for 20 minutes after the patient leaves following an AGP before entering the room to clean. A surgical face mask is not required if the patient is no longer in the room.
- A room with no mechanical ventilation is likely to have fewer ACH (5-6). Therefore, it is advisable to leave the room for approximately one hour before cleaning after an AGP has been performed.

Patient Care Equipment/Instruments/Devices

- Reusable non-invasive medical devices should as far as it is possible be allocated to the individual patient or for use by a designated cohort of patients with appropriate decontamination between each patient use.
- These items (including stethoscopes) can be reused, with appropriate decontamination after patient use, after blood and body fluid contamination and at regular intervals, as part of the equipment cleaning schedule.
- Manufacturer’s instructions should be followed for cleaning and disinfecting of reusable medical equipment after use.
- Increase the frequency of cleaning/disinfection for reusable non-invasive care equipment when used in isolation or cohort areas.
- Single-use items must be discarded after use, in line with standard procedures.
- Staff should increase the frequency of cleaning of electronic equipment, such as mobile and desk phones, tablets, desktop touch screens, keyboards, printer touch screens. A supply of wipes should be available in areas where the devices are most commonly used.
Mobile healthcare equipment

- The following advice applies to devices that cannot be left in the isolation room, such as portable X-ray machines and portable electronic devices used in patient care:
  - The use of mobile healthcare equipment should be restricted to essential functions, as far as possible to minimise the range of equipment taken into and later removed from the room.
  - The operator of the device must have had training in IPC procedures, including hand hygiene and use of PPE.
  - The operator should perform hand hygiene and wear PPE, as described earlier in this document, when in the isolation room or cohort area.
  - Any equipment taken into the room, which must be subsequently removed, needs to be cleaned and disinfected immediately after leaving the area.
  - Any additional items, such as a digital detector or a cassette will also need to be cleaned and disinfected in a similar fashion, regardless of whether there has been direct contact with the patient or not. This is due to the risk of environmental contamination of the equipment within the isolation room.
- Personal digital assistants (PDAs) that are used with electronic blood tracking systems.
  - PDAs and wireless printers, where used should be dedicated for use in cohort areas for confirmed/suspected COVID-19 patients and should not be used in non-COVID-19 areas.
  - The operator of the device must be trained and supervised in IPC procedures, including hand hygiene and use of PPE.
  - The operator should perform hand hygiene and wear PPE, as described earlier in this document, when in the isolation room or cohort area.
  - Due to the requirement for HCW to wear PPE, they will be unable to scan their ID badge. Therefore, they should bring a photocopy of their badge to the bedside for the PDA. The photocopy should be discarded in the healthcare risk waste bin in the room.
• After use, devices should be decontaminated in line with usual local policy. No additional precautions are required.
• It is important to check the cleaning guidelines accompanying each device. If a particular device is not capable of being adequately decontaminated (e.g., PDA with touch pads/buttons), they should not be used in these areas. If their use is unavoidable, consider using a single-use, self-adhesive protective film to cover the device and dispose of film after use.

**Mobile Device Use in the Clinical Setting**

Although there is limited evidence that directly links the use of mobile devices with an increase in healthcare-associated infections, a number of studies have shown that mobile devices can act as potential sources for pathogenic bacteria, including *Staphylococcus aureus, Klebsiella spp.* and other organisms.

The increasing use of mobile phones and tablets present unique challenges in the healthcare setting, because they are frequently touched by the hands of HCWs (with and without gloves), they are used in multiple patient rooms and other potentially contaminated environments or are carried in pockets or on lanyards.

It is important that all mobile devices, including tablet computers, mobile phones and personal digital assistant devices (PDAs) are used and managed safely, to minimise the risk of cross-infection and ensure patient care and safety is not compromised.

• Do not bring personal mobile devices with you when attending to a patient who requires transmission-based precautions, when performing any activity that requires extended close patient contact or when performing an aseptic technique.
• HCWs must perform hand hygiene (HH) as per the ‘WHO 5 moments’ before and after each patient interaction and before and after touching any device.
• Before using a mobile device, remove your gloves and perform hand hygiene.
• Avoid placing mobile devices on a patient’s bed or locker (consider IT stands or trolleys).
• Avoid inappropriate use of a mobile device during clinical procedures. If a HCW has to take a call or text, they should remove themselves from the activity, remove their gloves and clean their hands.
• Mobile devices should not be used inside isolation rooms, home or cohort zone of infected patients/people, unless for essential use, when a risk assessment will be required.
• If a mobile device must be used inside the isolation or cohort zone of patients with suspected/confirmed COVID-19, ensure the device is cleaned and disinfected before, in between patients and after use.
• Alternatively, consider the use of a protective cover, bag or film where appropriate.
• Ensure all mobile devices are intact to allow effective cleaning/disinfection.
• Mobile devices for use in the clinical environment should be of a design that allows them to be appropriately decontaminated. For example, an intact case/cover that will withstand cleaning and disinfection.
• HCWs should adhere to local policies about which cleaning product (wipe or solution) to use for decontaminating mobile devices.
• Devices should be intact to allow effective cleaning/disinfection. For example, without cracked screen, casing or cover.
• Accessories including charging lead and bluetooth keypads are intact, with no wires bare, no cracks in plugs or case, to allow effective cleaning/disinfection.
• Devices used for clinical care/treatment/management must be cleaned/disinfected before, in between patients and after use.
• Devices given to an inpatient for use must be cleaned at least twice daily and cleaned/disinfected before use by another patient.
• Tablets or touch screens located in public places with open access must be cleaned at least twice daily or more frequently if the device is visibly contaminated.
• Charging cabinets should be included in the cleaning schedule, as per manufacturer’s instructions.
• HCWs should always clean their own personal devices at least daily or at the beginning and end of each shift.

• Mobile devices should not be used in an isolation room or cohort area for suspected or confirmed COVID-19 patients without assessing the risk.

General Environment

• The care environment should be kept clean and clutter-free to facilitate cleaning.

• All non-essential items should be removed. This is to prevent unnecessary waste of essential supplies, which may occur if unused items in an area become contaminated.

• Only the minimum amount of equipment and supplies essential to patient care each day should be stored within an isolation room, ante-room or cohort area. Consider increasing the frequency of topping-up stock to achieve this.

• Patient observation charts, medication prescription and administration records (drug kardexes) and healthcare records should not be taken into the isolation room or patient zone within a designated cohort area to minimise the risk of contamination.

• The risk of acquiring infection from contact with surfaces is low and risk from interacting with healthcare records or paper charts is thought to be extremely low. This low risk can be mitigated by staff cleaning hands after touching surfaces. In this case, staff would be advised to clean hands before and in particular after handling the charts or paper records. There is no recommendation or need to hold paper charts or records in any form of quarantine.

• If an electronic patient health record (EHR) is used in the facility, a mobile workstation for the EHR should remain in the cohort area.

• Avoid the use of fans that re-circulate the air.

Routine cleaning

• General deployment of new technologies for cleaning and disinfection of the healthcare environment is not recommended in the absence of evidence that the impact on the transmission of COVID-19.
Terminal Cleaning

Terminal cleaning is performed after the patient has vacated the room and is not expected to return (e.g., following patient discharge or transfer). In addition to the routine cleaning protocols, a terminal clean requires:

- Removal of all detachable objects from a room or cohort area, including laundry and curtains
- Removal of disposable items, including paper towels and toilet paper
- Removal of waste
- Cleaning (wiping) of lighting and ventilation components on the ceiling
- Cleaning of curtain rails and the upper surfaces of hard-to-reach fixtures and fittings
- Cleaning of all other sites and surfaces, working from higher up downwards to floor
- A terminal clean checklist is good practice to support cleaning or household staff to effectively complete all environmental cleaning tasks, which should be signed off by the cleaning supervisor before the room reopens for occupancy by a new patient.

Ventilation

Airborne transmission of COVID-19 is an accepted risk in the context of AGPs associated with an increased risk of infection. Airborne transmission may also be a factor in certain other circumstances. In the general clinical environment strict adherence to contact and droplet precautions is generally effective in managing the risk of transmission. However, it is prudent to maximise ventilation to the greatest extent that is practical consistent with comfort and without introducing other potentially greater risks.

There is little or no clinical evidence that deployment of novel air handling systems in the healthcare environment effectively reduces the risk of transmission of COVID-19. In the absence of such evidence deployment of such systems is not generally recommended but may be a consideration in certain settings subject to risk assessment.

In this context the following is recommended
1. In clinical areas where there is established mechanical ventilation that has been appropriately commissioned, meets current standards for the healthcare environment and is well maintained no modification of the operation of this system is required.

2. In areas where there is no mechanical ventilation it is appropriate to increase natural ventilation in clinical area by opening windows and doors in so far as practical and consistent with comfort of patients and staff.

3. In circumstances where entry of unfiltered external air is assessed as associated with a high risk for introduction of aspergillus spores into an environment where there are vulnerable patients the exclusion of aspergillus spores takes priority over increasing natural ventilation with a view to reducing the risk of transmission of COVID-19.

4. If exhaust fans are used they must be installed so that the air is released directly outdoors. The number and technical specification of exhaust fans must take account of the size of the room and the desired ventilation rate. Positioning the exhaust fan should be done so that it is not close to a ventilation air intake.

5. Installation of whirlybirds (for example whirligigs, wind turbines) may be useful to increase air flow in settings where they can be deployed.

6. Ceiling mounted or portable single-space air cleaners HEPA filters have not been demonstrated to reduce the incidence of infection.

7. When appropriately selected, deployed and maintained, single-space air cleaners with HEPA filters (either ceiling mounted or portable) can be effective in reducing/lowering concentrations of infectious aerosols in a single space however they have not been shown to reduce the risk of transmission of COVID-19 in a healthcare setting.

**Unused Medication, Blood Products and PPE**

- Do not discard unused medicines or PPE that have been in close proximity to a COVID-19 case (for example contents of a crash tray or wrap or an intubation kit). If necessary, decontaminate medicine boxes/outer packaging with alcohol 70% wipes or disinfectant wipes. A partially-consumed medication tray-wrap/kit should be refurbished or replenished, as per local hospital arrangements.

- Unused blood components that were brought into an isolation room or cohort area
should not be discarded due to concerns about COVID-19, so long as they meet local haemovigilance criteria for return. If there is concern about surface contamination, then decontaminate the outer surface of the blood component bag using alcohol 70% wipes or disinfectant wipes.
Catering

- There is no need to use disposable plates or cutlery. Crockery and cutlery can be washed in a dishwasher, or by hand using household detergent and hand-hot water after use.
- Where practical, catering staff should not bring the catering trolley into a cohort area.
- If a HCW is already in a cohort area and wearing PPE, that person could take the meal trays from the catering staff member at the entrance to the area and deliver them to each patient, so that catering staff do not need to enter the cohort area.
- If catering staff do need to enter the cohort area and will be within two metres distance of a patient, they should wear appropriate PPE.

Water coolers

- Hospitals should assess the risk associated with transmission of COVID-19 associated with communal water coolers and reusable drinking receptacles particularly in clinical areas. Where there is an identified risk, the water coolers should be decommissioned and an alternative drinking water supply provided.

A suspected case of hospital-acquired COVID-19 in an inpatient

- The usual principles of detection and management of a cluster or outbreak of a transmissible pathogen in acute healthcare settings apply to COVID-19, including the legal obligation to notify the Department of Public Health.
- The number of hospital-acquired cases of COVID-19 (HA-COVID-19) in acute public hospitals must be reported weekly to the Business Information Unit (BIU) of HSE Acute Hospital Operations. HA-COVID-19 must be recorded as an incident on the National Incident Management System and an incident analysis should be performed.
- A local surveillance system should be implemented in each ward/clinical area, whereby early detection of an admitted patient with new symptoms which may be consistent with COVID-19 is part of the routine daily assessment and handovers.
- IPC teams should ask about patients or HCW with new symptoms or signs of COVID-19 on their regular visits to wards.
• Any HCW with symptoms consistent with COVID-19 infection should not attend work and report illness following established local protocol.
• Detection of COVID-19 in a HCW requires an assessment as to whether they form part of a hospital-associated chain of transmission, involving patients and HCWs or primarily involving HCWs.
• At the start of each shift, all HCWs assigned to a clinical area should be asked to confirm that they do not currently have symptoms of COVID-19.
• In the event that any new symptoms develop during a shift, the HCW must report immediately to the person-in-charge and go off duty.
• Where an inpatient develops new symptoms consistent with COVID-19, apply the recommended IPC precautions for a patient with suspected COVID-19, a nasopharyngeal swab should be taken and a test ordered for SARS-CoV-2 (COVID-19).
• Inform the infection prevention and control team (IPCT) that an inpatient is being investigated for COVID-19.
• If the patient is already in a single room, apply all the additional elements of transmission-based precautions required for a patient with suspected COVID-19.
• If the patient is accommodated in a multi-occupancy room/bay with other patients at the time that new symptoms develop, all patients in the room should be clinically evaluated, with ongoing close monitoring for new symptoms consistent with COVID-19. If any additional patients have or develop new symptoms, they should also be tested for SARS-CoV-2 (COVID-19).
• The multi-occupancy room or bay should be closed to new admissions pending receipt of the test result(s).
• A risk assessment must be undertaken, with regard to decisions to move patients who are awaiting a test result. This needs to take into account duration of the contact of the patients in the multi-occupancy room prior to symptom onset, the dependency and case mix of the patients currently in the room, whether there is availability of single room(s) for patient(s) with symptoms awaiting test results on that ward, the anticipated turnaround time for receipt of a laboratory test result and the availability of staffing on the ward for day and night shifts. It may be prudent to avoid moving
patients to another ward, unless clinical need dictates transfer to another department for escalation of care.

- If a patient is fit for discharge, they may be discharged, with advice for the patient to self-monitor for 14 days and contact their GP via telephone for advice in the event new symptoms develop. Information for self-isolation is available on the HPSC website.

- If it is deemed appropriate for all of the patients to remain in the affected multi-occupancy room/bay pending receipt of laboratory test result(s), the recommended IPC precautions for a patient with suspected COVID-19 should be applied to all patients in the bay, with nursing staff designated for the care of those patients for the duration of the shift.

- The test results should be reviewed as soon as available to inform next steps.

- If an inpatient is confirmed to have COVID-19, clinical care should be continued following the recommended IPC precautions for patients with confirmed COVID-19 and they should be moved to a single room, if not already accommodated in a single room OR if there are two or more patients with COVID-19 on the ward, they may be cohort together.

**A confirmed case of hospital-acquired COVID-19 on a ward:**

Close the ward to new admissions. If this is not considered possible because of other clinical risks a documented risk assessment should be performed. A risk assessment process is outlined at the following


1) Transfer out only based on clinical need or to designated cohort area of hospital

2) All contacts to be identified

3) Any patient and HCW contacts within 48 hours prior to symptom onset in the HA case or test date if case is asymptomatic to be identified and have D0 and D7 tests for SARS-CoV-2
4) Additional testing of in patient contacts between day 0 and day 7 is appropriate, for example an additional test on day 2, 3 or 4

5) All remaining patients on the ward (i.e. even those who are not contacts) to be tested

6) All other HCW who normally work on the ward to be tested

7) The details of any discharged contacts that remain within seven days of last contact with the case, and any close contacts who had already left the hospital before they were identified as a close contact should be provided to Public Health for recommended follow-up testing for contacts in the community.

8) For any patients identified as contacts who remain as inpatients to end of incubation period, there may be value in repeat testing at day 14 based on local risk assessment.

9) If the case is considered a probable or confirmed HA-COVID-19, in addition to testing identified patient and staff contacts, all patients in the ward at the time and all staff substantially based on the ward and who have been on duty in the previous 14 days should be offered testing.

A self-assessment checklist for readiness to respond to healthcare onset cases and healthcare transmission of COVID19 can be found here


Managing a cluster or outbreak of COVID-19 in an Acute Hospital Setting

- Each IPCT should have a robust system in place for early detection of inpatients with COVID-19 diagnosed after admission, as this may indicate hospital-acquisition and transmission.

  The European Centre for Disease Control (ECDC) has published surveillance definitions for COVID-19 including definitions for determination of source of infection.
The case source definitions are as follows:

**Community-associated COVID-19 (CA-COVID-19):**

- Symptoms present on admission or with onset on day 1 or 2 after admission.
- Symptom onset on days 3-7 and a strong suspicion of community transmission.

**Indeterminate association (IA-COVID-19):**

- Symptom onset on day 3-7 after admission, with insufficient information on the source of infection to assign to another category.

**Probable healthcare-associated COVID-19 (HA-COVID-19):**

- Symptoms onset on day 8-14 after admission
- Symptom onset on day 3-7 and a strong suspicion of healthcare transmission.

**Definite HA-COVID-19:**

- Symptom onset on day ≥14 after admission

Please note that for cases of COVID-19 with symptom onset within 14 days of discharge, case-by-case determination is advised. The definitions above do not apply to HCW for whom case-by-case determination is advised. For purposes of reporting data to the HSE’s Acute Operations BIU, the categories of Probable and Definite are combined.

A self-assessment checklist for [IPC measures to manage the risk of spread of COVID-19 in the acute hospital setting](https://www.hpsc.ie/az/respiratory/coronavirus/novelcoronavirus/guidance/infectionpreventionandcontrolguidance/Acute%20Hospital%20Checklist%20for%20COVID-19%20Control%20Measures.pdf) can be found at here

- It is important that the IPCT and Occupational Health Department are in close contact to rapidly detect if there are HCWs with confirmed COVID-19 who have any epidemiological links to wards with suspected cross-transmission.
- If the test results indicate there are COVID-19 acquisitions associated with a ward or unit, an outbreak should be declared and an outbreak control team convened.
• An outbreak of COVID-19 notified to the Department of Public Health in addition to the standing obligation for dual notification of all cases of COVID-19 (laboratory and clinical).

• All of the usual outbreak control measures apply (checklist [https://www.hpsc.ie/az/respiratory/coronavirus/novelcoronavirus/guidance/outbreakmanagementguidance/in]

• Contacts of patients with confirmed COVID-19 should be cohorted together and monitored for new symptoms, with clinical care to include contact and droplet precautions.

• Avoid cohorting confirmed COVID-19 patients with patients who are not confirmed to have COVID-19.

• Wherever feasible, try to avoid moving inpatients between wards where transmission of COVID-19 is suspected, unless patient movement is required to support clinical care.

• Closing an outbreak; an outbreak can be closed following consultation with the Department of Public Health once 28 days have elapsed (that is two incubation periods after the onset of symptoms in the last case).

Guidance in relation to occupational health issues for HCW is available: www.hpsc.ie

**Care of the Dying**

• A compassionate, pragmatic and proportionate approach is required in the care of the dying.

• The presence of a person close to the individual should be facilitated, but they should be aware of the potential infection risk.

• Pastoral care team where requested by the person or their family should NOT be restricted from entering an isolation room or cohort area.

• All persons in attendance should be advised to wear a surgical face mask and plastic
apron.

- Gloves are not essential for skin-to-skin contact, so long as those in attendance understand the risks; perform hand hygiene after touching the person and before leaving the room.

- Visitors should be instructed on how to put on and take off the PPE & how to perform hand hygiene. Where practical, visitors should be supervised when donning and doffing PPE.

- If specific religious rites require direct transient physical contact with the skin, gloves are not necessary, so long as hand hygiene is performed after touching the person.
Specific settings

The following guidance is given to assist specific care settings to implement the principles of standard precautions and transmission-based precautions described in this document, which apply in all care settings. This section will be updated as further information becomes available.

Critical Care Setting

- If admitted to a critical care unit, the patient should be nursed in a negative pressure isolation room where available, or if not available, a single room. If the patient requires ventilation a closed ventilator circuit should be used.
- The door to the room must remain securely closed, except when entering or leaving.
- All respiratory equipment must be protected by a filter with high efficiency (e.g., BS EN ISO 23328-1:2008).
- Disposable respiratory equipment should be used wherever possible. Reusable equipment must be decontaminated in accordance with the manufacturer’s instructions.
- Ventilator circuits should not be broken, unless absolutely necessary.
- Ventilators must be placed on stand-by when carrying out bagging.
- Water humidification should be avoided and a heat and moisture exchange should be used if possible.
- Use only closed system suction.

Operating theatres

- The decision that surgery is essential during the period of infectivity for a patient with confirmed COVID-19 should be made by senior surgeons and anaesthetists.
- When the period of infectivity has passed (for hospitalised patients and residents of a LTRCF this is 14 days with no fever for the last five days of that period, for patients who are in the community, the infectious period is 10 days with no fever for the last five days of that period), retesting for SARS-CoV-2 RNA in advance of scheduling surgery is not
appropriate. Timing of surgery should take account not only of the infectious period but also evidence regarding the likely impact of recent COVID-19 on surgical outcomes.

- Ventilation in both laminar flow and conventionally-ventilated theatres should remain fully on during surgical procedures where patients have suspected or confirmed COVID-19 infection.
  - Aerosols which may be generated as a result of AGPs will be localised and rapidly diluted by operating theatre ventilation.
  - Air passing from operating theatres to adjacent areas will be highly diluted and is not considered to be a significant risk.
- Local risk assessment may dictate that a neutral pressure theatre or negative pressure theatre is preferred for COVID-19 procedures. The patient should be transported directly into the operating theatre and should wear a surgical mask if it can be tolerated.
- The operating theatre staff must be informed in advance of a patient transfer of a confirmed or possible COVID-19 case.
- The patient should be reviewed, anaesthetised, intubated, extubated and recovered in the operating theatre.
- Appropriate IPC precautions including hand hygiene and use of appropriate PPE should be followed by staff present in the theatre when AGPs are performed (for example intubation, extubation). If the operative procedure is anticipated to involve an AGP, as described in the section on AGP, all staff present in the theatre for the duration of the surgery must wear appropriate PPE for an AGP scenario.
- Entry and exit from the room should be minimised during the procedure.
- Disposable anaesthetic equipment should be used where possible.
- The anaesthetic machine must be protected by a filter with viral efficiency to 99.99%.
- The operating theatre should be cleaned, as per local policy, paying particular attention to hand contact points (for example on the anaesthetic machine).
- Instruments and devices should be decontaminated in the normal manner, in accordance with manufacturer’s advice.

*Theatre areas may be temporarily converted to critical care units to provide surge capacity*
for COVID-19. Any healthcare organisation which is undertaking this assessment or provision should seek to obtain specialist advice both internally from the organisation’s own multi-disciplinary team (estates (AP(V), IPC, Clinical leads, Decontamination leads, Medical Gas AP(MPGS), Estates etc....) but also from an appropriately qualified and experienced Authorising Engineer (Ventilation) or other suitable professional design consultants with Healthcare Ventilation experience. Details on the technical aspects of this are beyond the scope of this guidance.

Outpatient Department (OPD) or Day Service

Refer to the HSE Acute Operations Guidance on Scheduled Care for further information

Radiology

• Refer to the section on mobile medical equipment for guidance on mobile X-ray devices.
• Refer to the section on PPE for guidance on requirements when undertaking procedures for those with known or confirmed COVID-19 infection.
• All patients should be asked to wear a surgical face mask while waiting for and during their procedure, where tolerated.
• Appointments should be scheduled so that patients are not kept waiting in communal areas.
• If a patient with suspected or confirmed COVID-19 infection attends the radiology department, all surfaces and equipment that the patient has been in direct contact with should be cleaned and disinfected after the patient has left, as per standard protocol.
• The room can be cleaned once the patient has left and used once surfaces are dry, unless an AGP was performed.
• Pay special attention to thorough cleaning of frequently-touched sites, such as the trolley, chair handles and horizontal surfaces.
• For CT scanning – once the patient has left the room, the area can be immediately cleaned and disinfected as per standard protocols.
Dialysis

General preparedness

- All dialysis patients should be provided with information on the signs and symptoms of COVID-19 infection and general measures, including; respiratory hygiene and cough etiquette, hand hygiene and physical distancing available on www.hse.ie.
- Review patient pathways to the dialysis unit;
  - Ensure that arrangements are in place for individuals who do not have access to private transport to attend for their dialysis if they have symptoms of viral respiratory infection
  - If a symptomatic individual attends the unit, IPC measures should immediately be applied. Arrangements should be in place for a nasopharyngeal swab sample to be collected and tested for SARS-CoV-2 as swiftly as possible.
- Review patient pathways within the dialysis unit;
  - Ensure a designated isolation area has been identified for dialysis
  - Ensure that processes are in place for rapid triage and isolation of patients with symptoms of suspected COVID-19 or another respiratory viral infection
  - Minimise patient-to-patient contact. For example, stagger arrival times, extend waiting areas or bring patients directly to their dialysis station.
- Provide access to alcohol-based hand rub and tissues.
- Provide surgical face masks to patients, so that they can be used when they attend the unit. A mask need not be worn when they are in their assigned space for dialysis.

Before arrival to the Dialysis Unit

- Dialysis patients should be instructed to contact the dialysis unit if they have symptoms of COVID-19 or fever, in advance of attending for dialysis.
- Dialysis patients who have been in close contact with someone who has suspected or confirmed COVID-19 infection should be instructed to advise the dialysis unit in advance of attending.
- Patients should be advised to check their temperature before getting dialysis transport.
Transport

• **Asymptomatic patients** can travel by their usual means.

• **Asymptomatic patients who have been informed that they are close contacts** of person with COVID-19 infection will be following public health advice for restricted movement.
  
  o They may drive themselves to the unit or be driven by someone who is willing to drive them (Units should have arrangements in place in the event this is not possible).

  o They should not use public transport or travel with another patient from the unit.

  o The patient should be advised to:
    
    ▪ Wash hands with soap and water before leaving their house or use hand sanitiser
    
    ▪ In so far as is possible; maintain two metre distance from other individuals (for example sit in the backseat passenger side away from the driver)
    
    ▪ Wear a surgical face mask.

• **Individuals who have symptoms of COVID-19 or confirmed infection** should telephone in advance of their appointment and if necessary, may drive themselves to the unit if they feel well enough or be driven in private transport by someone who has already had exposure and is willing to drive them. If they have a surgical face mask, this should be worn for transfer to hospital. If they do not have a surgical face mask they should use a cloth face covering. Where they cannot arrange for their own transport, the unit should have alternative arrangements in place.
• **Asymptomatic individuals** - should proceed with dialysis as per usual.

• **Asymptomatic individuals who are a close contact of someone who has confirmed COVID-19** should be placed in a single room if available or if not, then in a dialysis station with at least two metres physical separation from other patients.

• **Symptomatic individuals – with possible or confirmed COVID-19 infection** should be placed in a single room with the door to remain closed, where possible. Negative pressure isolation is not necessary, unless AGPs are to be performed (see list of AGP above). Appropriate isolation signage should be placed on the door. Contact and droplet precautions should be added.

• In the event that the need arises, consideration can be given to cohorting patients with confirmed COVID-19 infection who require dialysis.

**Satellite Dialysis Units**

• If a dialysis patient has clinical features of COVID-19 and is still at home, the patient should be instructed to stay at home, and the parent renal unit should be informed, so appropriate arrangements can be made.

• If a dialysis patient has clinical features for COVID-19 and presents to a satellite dialysis unit, the patient should be placed in a single room and the parent renal unit contacted. If there is no isolation facility, the patient should be given a surgical face mask, access to alcohol-based hand rub and tissue and placed in an area at least 2m away from other individuals. If they are not in any distress, it may be practical for them to wait in a car if they drove themselves to the unit.

**Dialysis Machine**

The dialysis machine cleaning/disinfection protocol should be adhered to, as per standard practices.
Community Hospitals and Rehabilitation Facilities

There are a number of specific challenges for community hospitals and rehabilitation centres. They are in some respects more similar to acute hospitals than to long-term residential care facilities (LTRCFs). Therefore, guidance for these hospitals is provided here.

- Many have very few single patient rooms and are largely dependent on multi-bed rooms that is two, four, six bed or larger areas.
- They have higher turnover, as the length-of-stay is typically two to four weeks, even though it is understood that some patients may have longer lengths-of-stay as part of their rehabilitation.

The current guidance for LTRCF specifies that each new admission should be tested for SARS-CoV-2 prior to admission and should be accommodated in a single room for 14 days after admission. It is recognised that implementing this requirement in community hospitals/rehabilitation facilities would have a disproportionate impact on service provision as is also the case in acute hospitals. The following is therefore suggested:

- In facilities where care is provided for both long-term care residents and for short stay patients, distinct wards and areas should be identified, to meet the different requirements for care of both groups.
- The facility should have plans in place for the management of patients who develop symptoms during their admission. This includes planning for isolation or cohorting, should the need arise.
- All patients are assessed before admission to ensure they are not known COVID-19 contacts and have no clinical symptoms suggestive of COVID-19.
- Everyone is tested for COVID-19 either within the three days BEFORE admission (particularly for transfers from an acute facility) or within one day AFTER admission (for example when coming from the community if testing in advance of admission cannot be arranged). For elective admissions from the community, testing in the community before admission is preferred if possible. However, it is necessary to take account of practical difficulties the person may experience in traveling to access testing. This
difficulty may be addressed if the sample can be taken in their home. However, admission should not be delayed because testing in the community is not practical. In such cases the test should be performed promptly after admission (as above).

- With these controls in place, patients can be admitted to a multi-bed cohort area with other newly-admitted patients, if there are no available single rooms and provided there is no other requirement for transmission-based precautions.

- Where cohorting new patients in a multi-bed area is necessary, the cohort areas for admission should include as few beds as possible (for example, a 2-bed or 4-bed area is preferred to a 6-bed area).

- Where practical to do so, those admitted from the community and who are awaiting test results should be accommodated in a single room or in separate areas, until the test result is available and reported as SARS-CoV-2 RNA not detected.

- During the initial 14-day period, patients should remain in the cohort area as much as is practical and avoid contact with other patients in the facility.

- Staff caring for patients should apply standard precautions plus a surgical face mask.

- Where patients leave the cohort area for therapy or other reasons, then they should not mix with patients from other areas. Group therapy activities can be arranged for members of the same cohort.

- Where practical patients should be encouraged to wear a mask when they are not in their bed space and if they choose to wear a mask for most of the time, including in their bed space, this should be facilitated.

- Each cohort area should have designated bathing and toilet facilities, where practical to do so. Where this is not practical, the bathing and toilet facilities should be shared with the lowest possible number of other patients.

- All patients should be monitored twice daily for symptoms of COVID-19.

- Patients should be advised not to share personal items, including food/drink.

- Please note that cohorting may not be appropriate for mobile patients with behavioural challenges.

- Patients should remain in their cohort area, in so far as is practical until 14 days have elapsed. If patients in the cohort area are not all admitted on the same day, then the 14
days must elapse after the date of admission of the last patient to the cohort area.
• At the end of the 14 days, patients may remain together or one or more patients can transfer to other areas of the facility.

Maternity Units

The following section addresses specific infection prevention and control issues, which may arise in the care of a mother with suspected or confirmed COVID-19 infection in the maternity setting.
This section should be read in conjunction with guidance from the Institute of Obstetricians and Gynaecologists, RCPI available here
Issues related to visiting and persons accompanying women in labour are addressed in the guidance document on visiting in acute hospitals: https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/infectionpreventionandcontrolguidance/visitorsvisiting/

Delivery
• Mothers should not be asked to wear a surgical face mask during labour and birth. However, they should be requested to wear a surgical face mask when outside of the isolation room.
• Appropriate PPE must be worn by any person entering the room.
• The use of birthing pools should be avoided for suspected or confirmed cases of COVID-19 infection.
• The use of Entonox or maternal pushing during labour are not AGPs associated with an increased risk of infection.

Postpartum
• If the mother is well enough to care for the baby herself, both mother and baby should be isolated in a single room with en suite facilities for the duration of hospitalisation. The following additional precautions are advised;
  • The baby should be placed in an enclosed incubator in the room.
• Where an enclosed incubator is not available, the cot should be placed at least 2m distance from the mother.

• When baby is outside the incubator and mother is breast feeding, bathing, caring for, cuddling, or is within 2m of the baby the mother should be advised to wear a surgical face mask, and to clean her hands thoroughly with alcohol-based hand rub or soap and water before and after interacting with the baby.

• The mother should be encouraged and taught to practice respiratory hygiene and cough etiquette.

• The baby should be temporarily removed from the room if any AGPs are to be performed within the room.

• Routine testing of babies born to mothers with suspected or confirmed COVID-19 infection is not appropriate. However, they should be closely monitored for signs of infection;
  o Parents should be provided with information about signs of possible COVID-19 infection in their baby and aware of who to contact if they are concerned post discharge.

**Breastfeeding**

To date, no evidence has been found to suggest that the virus is present in the breast milk of mothers with COVID-19. There has been no evidence of virus transmission in breast milk from previous experience with other coronaviruses, such as SARS CoV or MERS CoV and therefore, the risk of transmission through breast milk is likely to be low.

• If a mother with COVID-19 is breastfeeding, she should be advised to wear a surgical face mask and to wash her hands or use alcohol-based hand rub before and after interacting with her baby.

• If the mother is expressing breast milk using a pump, this should be designated to the mother for the duration of hospitalisation and should be cleaned and disinfected, as per the manufacturer’s instructions.

• The expressed breast milk (EBM) container should be transported from the mother’s room to the storage location in a plastic-specimen transport bag. Storage conditions should be as per local policy. However, the EBM should be clearly marked and stored in a patient-
specific container box separately to the EBM of other patients.

The neonate born to a mother with suspected or confirmed COVID-19 infection

- Suctioning, bag mask ventilation and intubation of new-borns are considered to be AGPs and although the absolute risk to HCW performing these procedures on new-born infants is thought to be low, appropriate IPC precautions including use or appropriate PPE are recommended.
- As soon as the infant is stabilised after birth, they should be placed in an enclosed incubator.
- Where admission to a neonatal unit is required for an infant of a mother with suspected or confirmed COVID-19 infection;
  - The neonate should be isolated in an enclosed incubator in a single room where possible. Appropriate isolation signage should be in place.
  - Staff caring for infants of suspected or confirmed COVID-19 infants should wear appropriate PPE.
  - The duration of transmission-based precautions should be discussed on a case-by-case basis with the local IPCT
Acute Mental Health Facilities/Units

The IPC requirements for care of people with suspected or confirmed COVID-19 are the same for patients in Acute Mental Health services as in other acute services. However, there may be specific challenges related to the patient’s overall care needs. One of the challenges which require planning relates to care of patients with impaired spatial awareness.

Therefore, if a patient is suspected or confirmed to have COVID-19, the recommended IPC precautions should be instituted as above, but may be subject to the following considerations:

- Isolation in a single room may be associated with specific risks in relation to the overall care needs of some patients, which may make this impractical to apply. Consultation with public health and/or IPC specialists should be considered in these cases to determine the best level of IPC practice that can be achieved in the circumstances.

- If the patient cannot be placed in a single room, but can tolerate wearing a surgical face mask, this may help to reduce risk of exposure for other patients and staff.

- If isolation in a single room is not practical or is not safe, consideration should be given to how the patient can be cared for in ways that maintain a distance of 2m from other patients and from staff to the greatest extent possible. For example, if there is a bay or area available where the person has as little contact as possible with other patients.

- If there is more than one inpatient with COVID-19 they should be accommodated in the same clinical area whenever possible. Please refer to cohorting section.

- Staff should follow IPC practice including use PPE as outlined in ‘recommendation for the use of PPE’.

- If the wearing of a surgical face mask by staff creates practical difficulties in interacting with the patient, a clear full face visor worn correctly will substantially reduce exposure of staff to droplets in a low-risk scenario. The visor or face shield should be sufficient in width and length to cover the face e.g. extends below the chin and provides cover to the side. For use in healthcare the face shield should conform to the required specifications (EU PPE Regulation 2016/425, EN16 or equivalent).

- However, as face visors are generally not considered to afford the same level of protection as a surgical face mask, they should not be worn as a substitute for a surgical
face mask in high risk scenarios (e.g. when caring for a patient with suspected/confirmed COVID-19).

- If the patient is mobile, facilitating access to a safe outdoor location where possible may be helpful in reducing risk of exposure of other patients and staff.
- There is rarely a justification on IPC grounds to impede access by a patient to a second opinion, peer support or legal advice if the service provider has been informed of the risk, accepts that risk and is supported in managing the risk to themselves.
- IPC measures required to minimise risk for those offering a second opinion, peer support or legal representatives are those outlined in the main document, as appropriate for any member of staff providing care.
- A risk assessment should be completed before electroconvulsive therapy (ECT) is undertaken. In situations where this procedure is urgent and the patient is a suspect/confirmed case of COVID-19 or a contact of a case of COVID-19, ECT should be carried out as an AGP, with IPC measures for AGP outlined in this guidance to be followed.
- Some patients may need to go home on visits or overnight stays as part of the process of preparing for discharge. While this is accepted as a key part of the therapeutic process it is associated with a risk of exposure to COVID-19 during the visit and consequently a risk of introduction of COVID-19 into the healthcare setting on their return. A risk assessment should be performed in advance of the visit and a plan developed with the patient and other members of the household to minimise risk of exposure during the visit. The plan should also specify any specific requirements for additional infection prevention and control precaution or testing required when the patient returns to the hospital.
- Staff visiting the services to provide sessional care/therapy are not restricted in delivering the service and should follow appropriate IPC measures at all times, including; hand hygiene, respiratory etiquette, physical distancing and appropriate PPE, as outlined in this guidance for acute hospitals.
- Dedicated rooms for family meetings and group therapy in the service should be organised to meet IPC guidance to the greatest degree practical.
Transfer

Internal Transfer

- Minimise movement of the patient from the single room or designated cohort area.
- Patients should wear a surgical face mask when outside their room or designated cohort area.
- All HCWs who are in close contact (within 2m) with the patient should adhere to good IPC practice, including hand hygiene and wearing of appropriate PPE during transfer.
- HCWs in the receiving departments should be informed of the precautions required prior to the transfer of the patient (e.g., diagnostic departments, operating theatre).
- Investigations should be scheduled so that patients are not waiting in communal areas.
- HCWs carrying out procedures should adhere to good IPC practice, including hand hygiene and wearing of appropriate PPE for the task to be undertaken.
- Cleaning and decontamination of the patient’s room or bed space in a cohort area, along with equipment should be undertaken following completion of the procedure.

External Transfer

- Transfer of patients with confirmed COVID-19 to another hospital should be avoided, unless it is required for medical care.
- If transfer is required, it is the responsibility of the transferring facility to inform in advance, the HCW in the receiving facility and the ambulance personnel of the diagnosis, the date of symptom onset and the precautions required.
- Standard, contact and droplet precautions, with appropriate PPE should be continued during patient transfer and upon arrival at the receiving facility.

In keeping with written communication issued by the HSE’s Chief Clinical Officer, transfer of patients should be not be refused or delayed, pending results of testing for SARS-CoV-2. Testing of asymptomatic individuals as a condition of transfer is not acceptable. However, surveillance testing on arrival at the receiving hospital is appropriate, as with all other admissions (March 19\textsuperscript{th} 2020).
Guidance on the transfer of hospitalised patients from an acute hospital to a residential care facility

Refer to Appendix 4 and section ‘Community Hospitals and Rehabilitation Facilities’.

Transfer from primary care/community settings using hospital transport systems (e.g., Oncology Day Care)

- Patients attending for essential care (Oncology) should be advised; to contact their usual care unit by telephone if they have new symptoms consistent with COVID-19, rather than presenting themselves.
- Patients who have been in close contact with someone who has suspected or confirmed COVID-19 infection should be instructed to advise the unit in advance of attending.
- Patients should be advised to check their temperature before travelling.
- Patients who have no symptoms suggestive of COVID-19 and who have not been diagnosed as asymptomatic infectious cases by testing can travel by their usual means.

- Asymptomatic patients who have been informed that they are close contacts of person with COVID-19 infection will be following public health advice for restricted movement. They may drive themselves to the unit or be driven by someone who is willing to drive them (units should have arrangements in place in the event this is not possible). They should not use public transport or travel with another patient from the unit. The patient should be advised to:
  - Wash hands with soap and water before leaving their house or use hand sanitiser.
  - In so far as is possible, maintain two metre distance from other individuals in the car unless they are members of the same household (e.g., sit in the backseat passenger side away from the driver).
  - The patient should be advised to wear a face covering or surgical face mask unless travelling with a member of their own household.

- Patients who have symptoms of possible COVID-19 must telephone in advance of their
appointment and if necessary, may drive themselves to the unit, if they feel well enough or be driven in private transport by someone who has already had exposure and is willing to drive them. If they have a surgical face mask this should be worn, if tolerated for transfer to the hospital. Where this is not possible, the unit should have alternative arrangements in place.

Transfer of patients to home to receive home care services

- When a patient is being discharged home to receive ongoing care in that setting, ensure that information relating to their COVID-19 testing is communicated to the home care team in advance of their first attendance. This information should include dates and results of any COVID-19 tests done while in hospital, residential care or other care setting. In particular the home care team will need to know whether the person is within the infectious period.
- Consider providing patient-held short note containing this information that can be reviewed by the home care team at each visit.
- IPC advice for staff in home care teams is available at https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/infectionpreventionandcontrolguidance/healthandsocialcareworkers/COVID-19%20IPC%20Guidance%20for%20HCW.pdf

Laboratory

- For information in relation to laboratory processes, refer to **Biosafety guidance for diagnostic laboratories handling specimens from individuals with possible or confirmed infection with Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2)** available at: https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/guidance/laboratoryguidance/
- Double bagging of specimens at time of collection is not required. Care should be taken not to contaminate the outside of the bag.
- Laboratory specimens, including those from COVID-19 patients can be sent by pneumatic tube systems, in line with standard operating procedures.
• Blood cultures can be collected, as per standard procedures.
• Clinical HCWs should contact laboratory HCWs when specimens are submitted from a patient with suspected or confirmed infection, through proper completion of request forms or electronic test ordering systems, or by direct communication with the laboratory. Transport of specimens between laboratories should be in accordance with Category B transportation regulations.

**Point-of-Care Testing**

Point-of-care testing (POCT) should not be performed on potentially-infectious specimens where a practical and safe alternative exists. If point-of-care blood gas analysis is necessary to manage a critically ill patient, the incremental risk to the HCW beyond the risk of delivering direct patient care is likely to be minimal and it may be performed with the following precautions:

• The operator must adhere to standard, contact and droplet precautions throughout the blood specimen collection at the patient’s bedside.
• The needle should be removed and disposed of safely and the adaptor applied to the tip of the syringe. If air must be expelled from the sampling syringe, this should be performed in the patient care zone with the syringe pointing away from the operator.
• Ideally a blood gas analysis machine should be placed within the patient room if repeat testing is likely to be required. If a blood gas analysis machine is not in the patient room, then the syringe should be laid flat in a disposable tray with deep sides for transport to the blood gas analyser.
• Remove PPE and perform hand hygiene on leaving the patient room. Apply clean gloves and transfer specimen to a clean disposable tray and take the tray with the specimen to the blood gas analyser.
• The analysis of the specimen may be performed as normal, using standard precautions.
• The residual blood in the syringe should be discarded as per standard practice and the instrument and its surroundings are cleaned/disinfected after use.
Pharmacy

Medication delivery

Once medication delivery boxes/totes/chute capsules/reusable bags etc. have not been in direct contact with the immediate environment of COVID-19 patients AND provided standard precautions have been carried out by all staff, additional decontamination of these receptacles is not required over and above routine cleaning.

Medication returns to the Pharmacy

Hospital-issued medication that forms part of ward stock in drug presses or drug trolley: Provided standard precautions have been carried out by all staff, the return of medicines from a COVID-19 ward should follow usual procedures.
Care of the Deceased with Confirmed COVID-19 Infection

- Please refer to the RCPI Faculty of Pathology guidance for performing autopsy procedures.

Communication of level of risk

- It is understandable that those who will be handling the remains will be concerned and may wish to be made aware of the patient’s infectious status.

Hygienic preparation

- Any IPC procedures that have been advised before death must be continued in handling the deceased person after death. In relation to COVID-19, specifically if transmission-based precautions have been discontinued before death, then they are not required after death – see section on duration of transmission-based precautions.
- Hygienic preparation includes; washing of the face and hands, closing the mouth and eyes, tidying the hair and in some cases, shaving the face.
- Washing or preparing the body for religious reasons is acceptable if those carrying out the task wear long-sleeved gowns, gloves, a surgical face mask and eye protection if there is a risk of splashing, which should be discarded after use.

Transport to the Mortuary

- An inner lining is not required in terms of COVID-19 risk, as per WHO guidance, but may be required for other, practical reasons such as maintaining dignity or preventing leakage affecting the mortuary environment.
- A face mask or similar should be placed over the mouth of the deceased before lifting the remains into the inner lining.
• Those physically handling the body and placing the body into the inner lining should wear the following PPE: Gloves, long-sleeved gown, surgical face mask.

• Play close attention to hand hygiene after removal of PPE.

• Once in the hospital mortuary, it would be acceptable to open the inner lining if used for family viewing only (the mortuary attendant should wear PPE to open the inner lining as above).

• The family should be advised not to kiss the deceased and should clean their hands with alcohol-based hand rub or soap and water after touching the deceased.

• Once the body has been placed in the coffin, PPE is not required for transfer or for other parts of the funeral or burial process. The unnecessary wearing of PPE during the burial and other public events can cause significant distress to families and should be avoided when not required.

Handling personal possessions of the Deceased

• Most jewellery, including watches, rings, bracelets, earrings and items like photo frames can be wiped down using a detergent/disinfectant wipe. Alternatively, items of jewellery (with the exception of watches) can be placed in hot soapy water and cleaned first, then rinsed and dried using disposable paper towel.

• Items of clothing and soft toys should be placed directly into a washing machine and washed on the hottest setting that the fabric can withstand.

• Paper materials, such as prayer books/religious texts or items that cannot be wiped should be placed in a plastic bag and left aside for 72 hours before handling.

• Clothing that needs to be washed by hand should be placed in a plastic bag and stored for 72 hours, after which it can be washed.

• Personal belongings that family members wish to discard should be placed in a plastic bag and tied securely, then placed in a second plastic bag and set aside for 72 hours, after which it can go out for collection in the general waste.
Appendix 1 Respiratory/Cough Etiquette

**Coughing and Sneezing**

- Turn your head away from others
- Use a tissue to cover your nose and mouth
- Drop your tissue into a waste bin
- No tissues? Use your sleeve
- Clean your hands after discarding tissue using soap and water or alcohol gel for at least 15 seconds

*These steps will help prevent the spread of colds, flu and other respiratory infections*
Appendix 2 Healthcare Risk Waste

**Risk Waste**

**Yellow Bag**
- All blood-stained items and all items soiled with body fluids assessed as infectious
- Suction catheters & tubing
- Incontinence waste from known or suspected enteric infections
- Bag should be closed using ‘swan neck’ when 2/3 full

*NO SHARPS, LIQUIDS OR HARD OBJECTS*

**Yellow Sharps Bin** (with blue or red lid)
- All Needles
- All Syringes
- Scalpels
- Contaminated slides
- Sharps tips of clear IV giving sets

*NO FREE LIQUIDS*

**Yellow 30/60 Litre Rigid Bin** (with yellow lid)
- Blood Administration Sets (never disconnect line from bag)
- Contained blood and body fluids
- Non-cultured laboratory waste (including autoclaved microbiological cultures)
- Disposable suction liners
- Redivac drains (ensure drain closure sealed)
- Sputum containers
- Chest drains

**NOTE**
Absorbent material or gelling agent should be used in sufficient quantities to hold the fluid and prevent leakage.

*NO SHARPS OR FREE LIQUIDS*
Appendix 3 Preliminary guidance on facial hair and respiratory protection in the healthcare setting in the context of COVID-19 and other pathogens transmitted by the same route.

v1.1, 30.05.2020

Background
Healthcare workers (HCWs) are at increased risk of exposure to a variety of respiratory hazards including transmissible respiratory diseases. One element of protecting HCWs against infectious respiratory hazards is the effective use of specific items of personal protective equipment (PPE). Surgical face masks and respirator masks are the most commonly used types of PPE in this context.

1. Surgical masks
Surgical masks are intended to protect the wearer against the mucosa of the nose and mouth and most of the surrounding skin from impact of respiratory droplets originating from the respiratory tract of the patient. They are also intended to protect the patient from exposure to potentially infectious droplets from the healthcare worker. The degree of protection afforded is related to the properties of the mask and how it is applied in particular the fit of the mask to the face. Facial hair that is sufficient to prevent the mask from fitting flush against the skin of the face may result in reduced protection against droplet impact.

2. Respirators
In this context, respirators are intended to provide protection from infectious agents spread by the airborne route (small aerosols) including aerosols generated during Aerosol Generating Procedures associated with an increased risk of infection (AGPs).

There are two types:
(a) **Respirator masks (flat or cone shaped, FFP2 or FFP3)**

These are disposable masks and are intended to protect the wearer against inhalation of infectious aerosols in addition to protection against droplet impact. The degree of protection afforded is related to the properties of the mask and how it is applied, in particular the fit of the mask to the face. The filtration of aerosols is entirely dependent on forcing inhaled air to pass through the fabric of the mask. This works if the seal of the mask against the face prevents air circumventing the mask. Respirator masks that do not fit flush because of facial hair along the sealing area of the respirator cannot be considered as providing adequate protection against exposure to aerosols.

Fit testing of respirator masks and the fit checking of the mask each time used is required to ensure that the mask fits properly to the wearer’s face shape, with no gaps between the mask and face for air to escape unfiltered. The Health and Safety Authority indicate that where a risk assessment indicates that healthcare workers need to use a close-fitting respirator mask for their protection that every effort should be made to comply with the requirement for fit testing of the workers, as far as is reasonably practicable. When fit testing of all staff is not immediately possible, then fit testing should be prioritised for those at greatest risk.

(b) **Powered Air Purifying Respirators (PAPRs)**

PAPRs enclose the entire head in a hood. Protection is provided against droplets (head is enclosed) and aerosols (air is pumped by a battery-powered pump though an appropriate filter into the hood). As the entire head is enclosed, PAPRs do not require a seal against the skin. The protection afforded is not reduced by facial hair. PAPRs are not generally used and are not widely available. There may be significant challenges in relation to use of PAPRs. They may not be easy to source, costs are significant, staff need to be trained in their use, they must be cleaned and decontaminated according to the manufacturer’s instructions and there can be issues of user comfort.
Options for management

There is no one solution that will work for every facility and for every healthcare worker. The options for healthcare workers with facial hair that prevents a surgical mask or respiratory mask from fitting flush against the skin are as follows:

1. Remove facial hair that interferes with the fit of the mask flush against the skin. This is the most practical way to ensure that staff can benefit fully from protection provided by surgical masks and properly fitted respirator masks.

2. For healthcare workers for whom removal of facial hair that interferes with the fit of the mask flush against the skin is not an acceptable option
   a) surgical masks are likely to provide useful protection against droplet transmitted infection but this may be at a reduced level.
   b) respirator masks cannot be expected to work effectively

3. Risk management options include
   a) Consider if they can be assigned duties that do not involve direct care for patients for whom aerosol precautions are required.
   b) Wear a PAPR when caring for patients for whom airborne precautions are required.

Notes.

1. This note relates only to use of respiratory protection related to infectious disease. Exposure to other hazardous substances is beyond the scope of this document.

2. For an illustration of facial hairstyles that may impact on the function of respirator masks see [https://blogs.cdc.gov/niosh-science-blog/2017/11/02/noshave/](https://blogs.cdc.gov/niosh-science-blog/2017/11/02/noshave/)
Appendix 4 Checklist to support a health care facility (HCF) using Powered Air Purifying Respirators (PAPRs)

Appendix 5 Admissions, transfers to and discharges from residential care facilities

Readers should not rely solely on the information contained within these guidelines. Guideline information is not intended to be a substitute for advice from other relevant sources including, but not limited to, the advice from a health professional. Clinical judgement and discretion will be required in the interpretation and application of these guidelines. These guidelines are aligned with the principles of Art 3 IHR.

Introduction

Long-term residential care facilities (LTRCF) are a critical part of health and social care services. LTRCFs should put in place clear processes that facilitate the return of residents from an acute setting and the admission of new residents, where it is clinically safe to do so.

It is recognised that accepting admission or transfer of residents poses a risk of introducing COVID-19, even where processes to manage the risks are in place however it is essential that this risk is balanced against the consequences of restricting access to a facility/service or disproportionately impacting on the wellbeing of residents.

In all instances, careful attention to standard precautions will assist in minimising risk of infection to residents and staff. Key elements include; hand hygiene, respiratory hygiene and cough etiquette, use of personal protective equipment (PPE), for example wearing disposable gloves when in contact with blood or other body fluids (other than sweat), non-intact skin or mucus membranes and regular environmental cleaning.

It is essential that residents and clients and their significant persons are informed of the issues and risks of decisions related to their care and that their preferences are taken into account in applying this guidance.
Background on testing for COVID-19

The key point about testing is that interpretation is not straightforward

1. A test result that says not-detected or “negative” does not prove the person is not infectious to others
2. A test result that says a virus is detected does not prove the person is still infectious to others

Over the course of the COVID-19 pandemic, there has been significant learning about the role of testing for COVID-19 and its role in determining levels of asymptomatic infection and tracking spread of infection, especially in congregated settings, such as LTRCF.

Experience to date indicates that a test may fail to detect the virus in a significant proportion of people who have COVID-19 infection. A single test may be reported as not-detected or “negative” in a substantial proportion of people with infection. The test is more likely to miss infection in people with pre-symptomatic or asymptomatic infection. Therefore, a not-detected or “negative” test makes COVID-19 infection less likely, but it does not prove the person is not infected.

Equally, for those who have been infected and infectious with COVID 19, a continued positive test result does not mean they are still infectious to others. Some people have a positive test for weeks after onset of symptoms, but latest evidence shows they do not spread infection after they have fully recovered. For people with a diagnosis of COVID-19 infection who are in a RCF or are planning to move into a RCF, the period of isolation is 14 days after onset of infection with no fever for the last five of this period. This remains the case although the infectious period is now 10 days with no fever for the last 5 days for people who do not require hospitalisation for care of COVID-19 or who are not resident in LTRCF. Note that repeat testing
at the end of the isolation period is generally not appropriate though exceptions may arise in the context of discussion with Microbiology, Infectious Diseases or Public Health Clinicians.

The role of COVID-19 testing in assisting with decision-making regarding transfers to congregated settings

- People for admission to a LTRCF should be tested for SARS-CoV-2. This is to help identify most of those who have infection, but it will not detect all of those with infection.
- Testing should be performed within three days of planned admission to the LTRCF.
- Where testing is not performed before admission, it should be carried out within one day of admission.
- Irrespective of testing, all residents should be assessed before admission to ensure they are not known COVID-19 contacts and have no clinical symptoms suggestive of COVID-19.

Note this requirement for testing (and single room placement) is not intended to apply to

- People who, in the last 12 weeks, have already had confirmed COVID-19, who are fully recovered and are no longer considered infectious to others (minimum 14 days since onset of symptoms and no fever for the last five days).
- Settings caring for children under the age of 18
- Persons who are returning to supported/assisted living or small group homes (generally less than five residents) following discharge from hospital, where the facility is more reflective of a household setting

It is also acknowledged that some residents may decline testing, or may find the process too distressing and that testing may not be appropriate in every situation (Refer to DoH Guidance on Ethical Considerations Relating to Long-Term Residential Care Facilities in the context of COVID-19).

**Procedure for Testing of People Pre-transfer/Admission to a LTRCF**
• If a person is being transferred from an acute hospital to a LTRCF, the hospital should arrange for the person to be swabbed in the three days before transfer. The person will need to be isolated for 14 days regardless of the test result. There is an exception to this requirement if the person diagnosed with COVID-19 in the previous 12 weeks and who is no longer infectious (more than 14 days after onset) as a result of that infection.

• If a person is being admitted to the LTRCF from home where possible, the GP should arrange for the person to be swabbed within the three days before admission. This can be done using Healthlink. If the person cannot travel to the test centre, a home test can be ordered by clicking on the ‘no transport available’ option as shown on the screenshot below (Figure 1). The person will need to be isolated for 14 days regardless of the test result. There is an exception to this requirement if the person diagnosed with COVID-19 in the previous 12 weeks and who is no longer infectious (more than 14 days after onset) as a result of that infection.

• If a test pre-admission cannot be arranged, including for urgent admissions, the person should be admitted as planned. The person will need to be isolated for 14 days, with full contact and droplet precautions until the result of the test is available. The facility can arrange swabbing after admission. This can be done by the person’s own GP or the GP/Medical Officer who provides medical care for the residents in the facility. There is an exception to this requirement if the person diagnosed with COVID-19 in the previous 12 weeks and who is no longer infectious (more than 14 days after onset) as a result of that infection.
Requirements for placement of the person as part of transfer protocols

- All transfers or new admissions should have a risk assessment, to ensure sufficient resources are available within the LTRCF to support physical distancing and placement of residents.
- Residents who are transferred or directly admitted to a LTRCF should be accommodated in a single room (or room with no other residents) for 14 days after arrival and monitored for new symptoms consistent with COVID-19 during that time.
- The requirement for a single room applies even if the person;
  - Has had a test for SARS-CoV-2 reported as “not-detected” or “negative”.
  - Is only being admitted for short periods of respite or convalescence which may have an anticipated duration of less than 14 days.
  - Although the resident has single room accommodation and may be encouraged to avoid or limit interaction with other residents in so far as practical, care
delivered within the room can be delivered with Standard Precautions plus surgical mask and the resident may leave their room as per guidance below on transfers.

- The requirement for a single room does not apply:
  - to residents who have had COVID-19 diagnosed in the previous 12 weeks but who are who are no longer considered infectious to others (minimum 14 days since onset of symptoms and no fever for the last five days).
  - In certain situations where persons are being admitted to community hospitals or rehabilitation facilities where implementing this requirement would have a disproportionate impact on service provision (See section below)
  - A move to a multi-occupancy room (where this is the planned accommodation in the longer term for the resident) will be appropriate after the 14-day period, once the resident is symptom free and there is no evidence of infection in residents within the room it is proposed for the resident to move to.

Planning

- All LTRCF should review their accommodation to identify areas where new residents can be safely isolated. It is understood that the creation of such areas may be constrained by existing accommodation availability (e.g., rooms already in use by existing residents).
- Where possible the use of single rooms in LTRCF with significant numbers of multi-occupancy rooms should be prioritised for new transfers and admissions from community or other healthcare facilities (acute hospital or other LTRCF), regardless of the pre-admission COVID-19 test result.
- For those LTRCF providing a blend of longer-term nursing home and short-term respite or convalescence care, it is advised to consider where the longer and shorter-term residents will be accommodated and where it is feasible, to try and place residents for shorter-term accommodation in an area separate to those for longer-term accommodation.
• The identification of space for the 14-day isolation period needs to be managed carefully with residents, families and others. Existing residents should not be required to move from their room / accommodation in order to facilitate the creation of new areas to facilitate transfers.

• Careful consideration should also be given to the consequences of closing facilities/rooms within a service for the purpose of having an isolation area should a need arise – the potential harms of such decisions should be balanced against the likely requirement.

Admissions to LTRCF from acute hospitals and rehabilitation facilities or other LTRCF

(1) Transfer of people with COVID

• Any resident transferred to a LTRCF before the 14 days have elapsed since date of onset of symptoms or date of first positive test (if symptom onset undetermined/asymptomatic), must be isolated with transmission-based precautions up to day 14 on return to the LTRCF. Such transfer should not proceed if the receiving LTRCF has no other residents with infectious COVID-19 at the time. Provided the resident has remained afebrile for the last five of the 14 days, the resident is no longer infectious to others after day 14 has elapsed.

• In particular, existing residents from a LTRCF who require transfer to hospital from the LTRCF for assessment or care related to COVID-19 acquired in the LTRCF should be allowed to transfer back to that LTRCF following assessment / admission, if clinically fit for discharge and risk assessment with the facility determines there is capacity for them to be cared for there, with appropriate isolation and where that transfer represents the most appropriate place of care for the resident (e.g. ongoing need for palliative care).

• If the resident in an LTRCF has been diagnosed with COVID-19 while in hospital, it is important to assess if the person was infected in the LTRCF before transfer to the hospital or if this is a hospital-acquired infection. If it is likely that infection was acquired
in hospital and there are no other known cases of COVID-19 in the LTRCF, transfer back to the LTRCF should be delayed until the resident is no longer infectious to others.

- The public health team should be notified immediately where newly-diagnosed COVID-19 is assessed as acquired within a LTRCF.
- In all instances the discharging hospital should provide the LTRCF with the following information on the arrival of the resident:
  - The date and results of COVID-19 tests (including dates of tests reported as not-detected)
  - The date of onset of any symptoms of COVID-19
  - Date of last documented fever while in hospital (particularly important where resident is being transferred to RCF within 14 days of COVID-19 diagnosis)
  - Details of any follow-up treatment or monitoring required

(2) Admission of people with no diagnosis or clinical suspicion of COVID-19 from acute hospital to LTRCF

- Testing for SARS-CoV-2 should be undertaken within the three days prior to discharge from the acute hospital. A single test is generally sufficient but a second test between day 5 and day 7 may be considered if the resident is transferred from a ward or unit with an outbreak of COVID-19.
- Result should be available before the person is discharged.
- Resident must be accommodated in a single room for 14 days after arrival to the LTRCF, regardless of test result
- Residents should be cared for using standard precautions plus a surgical face mask where no other indication for transmission-based precautions exists (HCW are advised to wear a surgical face mask where a 2m distance cannot be maintained, in line with NPHET recommendations)
- The resident is not required to remain in strict isolation, but should practice restricted movement:
▪ The resident may leave their room, but should remain separated from other residents (e.g. to go the garden or for a short walk)
▪ The resident should not dine in communal dining areas
▪ The resident should not attend group activities

(3) Admission of people from community / home settings, including urgent admissions

▪ Testing for SARS-CoV-2 should be carried out. If testing can be facilitated in the community prior to the anticipated admission date, the test should be taken within the three days prior to admission.
  ▪ Residents should be cared for using standard precautions plus a surgical face mask where no other indication for transmission-based precautions exists (HCW are advised to wear a surgical face mask where a 2m distance cannot be maintained, in line with NPHET recommendations)
  ▪ The resident is not required to remain in isolation, but should practice restricted movement
    o The resident may leave their room, but should remain separated from other residents (e.g. to go the garden or for a short walk)
    o The resident should not dine in communal dining areas
    o The resident should not attend group activities

▪ If the testing prior to admission is not feasible or the result is not yet available, provided the new resident has not developed new symptoms or signs of COVID-19 and has not been informed they have been in contact in the past 14 days with a person confirmed to have COVID-19, the planned admission can go ahead, with a viral swab to be taken within 24 hours of admission to the LTRCF
  ▪ The person should remain in isolation with contact and droplet precautions until the results of the swab are available
  ▪ If the swab result is reported as SARS-CoV-2 not detected/negative, then contact and droplet precautions can be discontinued (if there are no other indications for them) and the resident can practice restricted movement
The resident may leave their room, but should remain separated from other residents (e.g. to go the garden or for a short walk)

The resident should not dine in communal dining areas

The resident should not attend group activities

Irrespective of whether or not the COVID-19 test result is available, if the person is symptomatic or a known contact, a medical assessment is required prior to further decisions being made about admission.

Residents who become symptomatic during admission to the LTRCF

Following transfer/admission to a LTRCF, the resident should be evaluated by their doctor if they become symptomatic, including changes in the resident’s overall clinical condition and a further viral swab for SARS-CoV-2 sent for testing.

The rationale for this recommendation is that, in the context of a pandemic, there may have been contact between the resident and HCW or other people who may have had COVID-19 infection, but who may have been in the pre-symptomatic incubation period or have had minimal symptoms/been asymptomatic at the time. In that case, there would be an associated risk of unrecognised onward transmission to the resident.

(4) Cessation of new admissions to a facility during an outbreak of COVID-19 in a LTRCF

Following the declaration of an outbreak within a LTRCF, admissions of new residents to the facility (i.e. residents not previously living in the LTRCF) should be suspended until Public Health state that the outbreak is over.

Residents normally cared for in the LTRCF who are admitted to hospital while an outbreak is ongoing in the LTRCF may have their discharge to the same LTRCF facilitated if it is deemed to be clinically appropriate and a risk assessment has been carried out which identifies that the resident can be isolated and the facility has capacity to manage their care needs and
where that transfer represents the most appropriate place of care for the resident (e.g. ongoing need for palliative care).

**Transfers from LTRCF to an acute hospital**

- COVID-19 positive status in itself does not preclude transfer to acute hospital and must not significantly delay transfer to an acute hospital, where it is deemed clinically appropriate. The national ambulance service (NAS) and the local receiving hospital must be informed by the LTRCF, in advance of transfer of any COVID-19 positive or suspected COVID-19 resident AND where there is a suspected or confirmed COVID-19 outbreak in the LTRCF.

- People with COVID-19 do not require to be hospitalised for the 14 days if they are clinically fit for discharge, if infection was acquired in the LTRCF or if the LTRCF already has cases of COVID-19 and the LTRCF has appropriate facilities and capacity for isolation and can support care.

- Residents do not require isolation on return to their LTRCF following hospital transfer to facilitate short investigations (e.g., diagnostics, haemodialysis, radiology, outpatient appointment).

- Residents will need to be isolated for 14 days on return to their LTRCF in the event that an episode of care in an acute hospital results in a longer period of time (12 hours or more) or an overnight stay in the acute hospital.

- If an episode of care lasts longer than 12 hours but less than 3 days there is no requirement for testing before return to the LTRCF unless the person has new symptoms suggestive of COVID-19. This is because the test is not likely to be positive within that time frame even if the person was exposed after arrival at the hospital. In such circumstances return to the LTRCF should not be delayed pending a test result however a test should be performed in the LTRCF between day 5 and day 7 after arrival at the hospital if possible.
- The resident should continue to restrict movement and be monitored closely for symptoms for 14 days after return even if the test at 5 to 7 days is reported as not detected/negative.
### Table 3 Transfer/admission of a resident to a LTRCF

<table>
<thead>
<tr>
<th>CLINICAL SCENARIO</th>
<th>RECOMMENDED PRECAUTIONS ON ARRIVAL TO LTRCF</th>
<th>PRE-ADMISSION TEST FOR SARS-CoV-2 (COVID-19)</th>
<th>TIMING OF TRANSFER TO LTRCF</th>
<th>DAY OF TRANSFER</th>
</tr>
</thead>
</table>
| CONFIRMED COVID-19 & will be still infectious to others on planned date of transfer (less than 14 days since onset/test date) | Transmission-based Precautions until 14 days reached and has been afebrile for last five of those days                                                                 | Not required, as already confirmed COVID-19                                             | LTRCF has other resident(s) with COVID-19: Transfer when fit for discharge to LTRCF AND provided LTRCF can meet care needs | Confirm date of onset/first positive test result  
Confirm date last febrile |
| CONFIRMED COVID-19 in past 12 weeks & no longer infectious to others (more than 14 days since onset/test date and afebrile for last five of those days) | No requirement for Transmission based Precautions                                                                 | Not required, as already confirmed COVID-19                                             | When fit for discharge to LTRCF                                                            | Confirm date of onset/first positive test result is more than 14 days ago and was afebrile for last five days of that |
| NO PRIOR CONFIRMATION OF COVID-19/COVID-19 MORE THAN 12 WEEKS AGO & NO SUSPICION OF COVID-19 | Single room accommodation with monitoring for symptoms until 14 days reached  
Standard Precautions                                                                 | Test within the 3 days prior to scheduled transfer date  
Test result-not-detected  
LTRCF can meet care needs                                                                 |                                                                                   | Confirm test result received  
Ensure no new symptoms and not newly-identified as a |
<table>
<thead>
<tr>
<th>19</th>
<th>Test result available prior to transfer</th>
<th>plus surgical face mask</th>
<th>contact of a COVID-19 case</th>
</tr>
</thead>
</table>
| NO PRIOR CONFIRMATION OF COVID-19/ COVID-19 MORE THAN 12 WEEKS AGO & NO SUSPICION OF COVID-19 | Transmission-based Precautions until test result is available | Test within one day of admission | Take sample for COVID-19 test
Ensure no symptoms and not newly identified contact of a COVID-19 case |
Appendix 6 Checklist to support COVID-19 outbreak management in acute healthcare setting.

Appendix 7 Self-assessment checklist for IPC measures to manage risk of spread of COVID19 in acute hospital settings
Appendix 8 Excerpt from “Guidance for the Adult Unscheduled Care Pathway in the COVID-19 era: The Acute Floor” Regarding VUI 202012/1 (Variant SARS-CoV-2)

New variant SARS-CoV-2 with reported increased transmission risk

Affected population:

All patients who have travelled from Great Britain (this includes England, Scotland or Wales but not NI) since the 8th December and attending the acute floor/ emergency department for unscheduled care.

Action:

As part of the streaming process at the navigation hub, recent travel history (within 14 days) must be taken. In addition, it is essential to ask if the person has been in contact indoors with anyone who has recently travelled from Great Britain and who has symptoms of COVID-19. A high index of suspicion for new variant SARS-CoV-2 should be held for patients presenting with COVID-19 symptoms with recent travel from Great Britain or close contact with a symptomatic person who has recently travelled from Great Britain.

Patients with symptoms of COVID-19 presenting within 14 days of arrival from Great Britain:

These patients are very high priority for placement in single room or cubicle. Cohorting with other suspected or confirmed COVID-19 patients should be avoided. If a single room is not available contact and droplet precautions should be strictly adhered to in a room with the least possible other patients. Their specimens, if positive, are to be sent for genomic sequencing. If the specimen is reported not detected they should be reviewed by a senior clinical decision maker before contact and droplet precautions are lifted.

Patients without symptoms of COVID-19, presenting within 14 days of arrival from Great Britain, who are being admitted for non-COVID healthcare services:

As with all patients for unscheduled admission these patients should be tested for COVID-19. If it practical to do so they should be placed in a single room or cubicle until they have a PCR result reported with the virus not detected.

Haemodialysis

Patients travelling from Great Britain (not NI) and availing of holiday access haemodialysis should be managed with contact and droplet precautions even in the absence of symptoms suggestive of COVID-19.