Infection Prevention and Control Measures for Acute Respiratory Infections (ARI) including COVID-19 for Health and Care Settings - WALES.

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Table of Contents

1. Introduction

This guidance is intended to provide pathogen specific infection prevention and control measures to prevent transmission of viral Acute Respiratory Infection (ARI) including SARS-CoV-2 (COVID-19) and Influenza (flu). While Human metapneumovirus, Respiratory Syncytial Virus (RSV), Human parainfluenza and rhinovirus are not usually considered to be of public health concern, they can also spread within healthcare settings in Wales, especially in vulnerable patients/residents/service users.

This guidance should be read in conjunction with the National Infection Prevention and Control Manual Wales, which describes the application of Standard Infection Prevention and Control Precautions (SICPs) and Transmission Based Precautions (TBPs).

All healthcare staff must be familiar with the principles of SICPs and TBPs for preventing the spread of infection in healthcare settings.

The elements of SICPs are:

- *patient placement and assessment for infection risk (screening /triaging/ testing)
- hand hygiene
- respiratory and cough hygiene
- Personal Protective Equipment (PPE)
- safe management of the care environment
- safe management of patient care equipment
- safe management of healthcare linen
- safe management of blood and body fluids
- safe disposal of waste (including sharps)
- occupational safety: prevention and exposure management

TBPs are the additional measures to SICPs that may be required when caring for *patients with known / suspected infection or colonisation, these are:

- assessment for infection risk and patient placement
- assessment for infection risk and management of contacts
- safe management of patient care equipment in an isolation/cohort area
- safe management of the care environment
- PPE: including surgical masks, respiratory protective equipment (RPE), eye protection, aprons/gowns etc.
- aerosol generating procedures (AGPs) and associated PPE – (see Appendix 2 in this document)
- care of the deceased

The IPC principles in this document apply to health and care settings in Wales. This includes mental health and learning disabilities, primary care, maternity, and paediatrics as well as the care home sector (this list is not exhaustive).

Please note:

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- this guidance is of a general nature. Employers should consider the specific conditions of each individual place of work and comply with all applicable legislation and regulations, including the Health and Safety at Work etc. Act 1974. And Health and Safety Executive (HSE) guidance on use of PPE and RPE. This guidance does not supersede existing legislation or regulations across the UK

2. General Information

2.1. Infectious period

- **SARS CoV-2 (COVID-19)** - may be infectious from 2-3 days prior to symptom onset and typically up to 10 days following symptom onset. The time from exposure to developing the first symptom (incubation period) is typically 5 days but can be 1-14 days.
- **Influenza (Flu) –** may be infectious 1 day before onset of symptoms, peaks after 1-2 days of symptoms and then declines, so that infectivity is very low after 7 days in adults. It is more likely to spread to others in the first 5 days after onset of symptoms. The time from exposure to developing the first symptom (incubation period) is usually 1 to 3 days.
- **Other ARI – (**RSV, Metapneumovirus, *H. Influenza*, human parainfluenza, rhinovirus**)** - Have similar incubation and transmission periods. May be infectious 1 to 2 days before onset of symptoms and is more likely to spread to others in the first 5 days. The time from exposure to developing the first symptom (incubation period) is typically 2-5 days but can be as long as 8 days.

Severely immunocompromised individuals may remain infectious for a longer period of time, even in the absence of symptoms Refer to section 4.2 duration of precautions, for further information.

2.2. High risk groups/individuals

Individuals who are immunosuppressed or have certain medical conditions may be at higher risk of contracting ARI or at higher risk of serious illness and complications. A clinical risk assessment is required for those individuals considered to be high risk. - COVID-19 treatments | GOV.WALES

Additionally, individuals who are unvaccinated or partially vaccinated for COVID-19 or unvaccinated for Flu or RSV (in infants) are at higher risk of infection and serious illness.

2.3. High risk settings

High risk settings for ongoing transmission of ARI are those that cannot mitigate the risk of transmission through the application of the hierarchy of controls (HoC).

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Setting-specific risk assessment tools (acute sector, community / primary care and care home sector) are available to support organisations in applying the HoC - Criteria for completing a local risk assessment (acute inpatient areas) Managing risk using PPE - Using personal protective equipment (PPE) to control risks at work - HSE

3. Triaging and Testing for Acute Respiratory Viral Infection

3.1. Triaging/assessment of infection risk

Triaging within all healthcare facilities should be undertaken to enable early recognition of patients with acute respiratory viral infections. Triage should be undertaken by clinical staff who are trained and competent in the application of clinical case definitions as soon as possible on arrival and used to inform patient placement.

Patients with respiratory infection symptoms should be assessed in a segregated area, ideally a single room, and away from other patients pending their test result.

At times of high levels of respiratory infectious illness, it may be worth segregating unscheduled / emergency admissions into respiratory and non-respiratory pathways, ensuring that separation of patients (single room assessment areas ideally), ventilation and use of FRSM masks by all staff are optimised in the respiratory pathway.

3.2. Testing

Testing for patients and staff should be performed as per current guidance, see –

Patient testing framework, updated guidance (WHC/2023/07) | GOV.WALES

COVID-19 contacts: guidance for health and social care staff | GOV.WALES

This includes guidance on testing to exclude other respiratory pathogens in symptomatic patients.

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3.3. Cohorting

Once test results are available infectious patients should ideally be isolated in single rooms away from other patients. Where infectious cases exceed single room capacity cohorting of patients may be implemented and should be according to infecting organism. Patients with different infections should not be cohorted together and where a patient tests positive for more than one ARI e.g. Flu and COVID-19 then single room isolation should be prioritised.

In order to ensure the most appropriate clinical care for patients, cohort areas should be set up within the specialty area where the required clinical care is best provided. Patients should not be moved to a "respiratory ward" cohort area simply on the basis of a test result but may need to be moved if clinically they require enhanced respiratory management.

4. Additional Infection Prevention and Control Measures for ARI in healthcare settings

The application of SICPs and TBPs as per chapters 1 and 2 of the NIPCM for Wales should be followed. Refer to A to Z of pathogens for pathogen specific information and Appendix 11 for guidance on patient placement and the use of RPE. NIPCM Appendices

Appendix 1 of this guidance describes the personal protective equipment (PPE) required when providing direct care for suspected or confirmed ARI patients.

As a minimum, contact and droplet precautions should be applied when caring for patients with known or suspected ARI. In specific circumstances airborne precautions should also be applied, for example, when performing AGPs, and in high risk settings. **Appendix 2** of this guidance has an updated AGP list as published in the NIPCM England from 14th April 2022.

4.1. Source control

Mask wearing is a form of source control that has been applied to staff, patients and visitors in healthcare settings during the pandemic to prevent the transmission of SARS CoV-2 (COVID-19) in health and care settings. The most recent guidance from the World Health Organization (WHO) makes a strong recommendation (based on very low certainty of evidence) that in areas of known or suspected community or cluster of COVID-19 transmission, universal masking is recommended in health care facilities.

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Health and care staff

Health and care staff should continue to wear facemasks (type IIR) when working in respiratory care pathways and when clinically caring for suspected/confirmed COVID-19 and Flu patients.

In all other clinical care areas universal masking should be applied when there is known or suspected cluster transmission of ARI e.g., during an incident / outbreak, and/or if a new COVID-19 Variant of Concern (VOC) emerges. Universal masking should also be considered in settings where patients are at high risk of infection due to immunosuppression e.g. oncology/haematology. This should be guided by local risk assessment. This includes primary and community care staff.

Facemasks are **not** required in non-clinical areas e.g. offices, social settings. Where patients are supported in community settings e.g. mental health/learning disabilities support in the community, staff are not routinely required to wear masks, similar to public health messaging in these settings, unless this is their personal preference.

Approved transparent face masks are now available to purchase for use in place of an FRSM (type11R) if needed following a risk assessment. Any product must be a NHS Wales Shared Services Partnership (NWSSP) approved product that meets the national technical standard. They are not intended for routine use and must be worn in accordance with manufacturer instructions for use (IFU).

Inpatients:

Non-infectious inpatients are not required to wear a facemask unless this is a personal preference. However, in settings where patients are at high risk of infection due to immunosuppression e.g. oncology/haematology, non-infectious patients may be encouraged to wear a facemask following a local risk assessment.

Inpatients with **suspected or confirmed ARI** should be provided with a facemask (Type II or Type IIR) on admission. This should be worn in multi-bedded bays and communal areas e.g. waiting areas for diagnostics, if this can be tolerated and is deemed safe for the patient.

Facemasks are not required to be worn by **suspected or confirmed ARI** patients in single rooms unless a visitor enters, or the room door is required to remain open. Patients with **suspected or confirmed ARI** transferring to another care area should wear a facemask (if tolerated) to minimise the dispersal of respiratory secretions and reduce environmental contamination. Patients should be provided with a new facemask **at least** daily or when wet, soiled or damaged.

The requirement for patients to wear a facemask must never compromise their clinical care, such as when oxygen therapy is required or cause distress e.g. paediatric/mental health settings.

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Outpatients/primary care:

Outpatients with **suspected or confirmed ARI** should wear a facemask/covering, if tolerated, or offered one on arrival.

Visitors

Visitors and individuals accompanying patients to appointments are not routinely required to wear a facemask unless this is a personal preference or there is an outbreak in the area being visited or directed by the organisation they are visiting. However, in inpatient settings where patients are at high risk of infection due to immunosuppression e.g. oncology/haematology, visitors may be asked to wear a facemask following a local risk assessment

4.2. Duration of precautions

TBPs should only be discontinued in consultation with clinicians (including microbiology/IPC team) and should take into consideration the individual's test results (if available), transmissibility of the pathogen and resolution of clinical symptoms.

4.2.1. Stepping down precautions if the patient is staying in hospital

- COVID-19 - for in-patients, currently precautions/isolation should continue up to 10 days after the onset of symptoms (or their first positive COVID-19 test if they do not have any symptoms), provided the clinical criteria below have been met. Please refer to the most up to date guidance Welsh Government COVID-19 Hospital Testing Framework

- Influenza- for in-patients, precautions/isolation should continue for at least 5 days after the onset of symptoms (or their first positive flu test if they do not have any symptoms), provided the clinical criteria below have been met.

- Other ARI – (RSV, H. metapneumovirus, Human parainfluenza, rhinovirus) – for inpatients, precautions/isolation should continue up to 7-8 days after the onset of symptoms (or their first positive test if they do not have any symptoms), provided the clinical criteria below have been met.

Where a patient tests positive for more than one ARI e.g. Influenza and COVID-19 then stepping down precautions needs to be assessed against transmission risks and clinical criteria.

Clinical criteria:

- clinical improvement with at least some respiratory recovery
- absence of fever (temperature greater than 37.8°C) for 48 hours without the use of medication
- no underlying severe immunosuppression

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A cough or a loss of, or change in, normal sense of smell or taste (anosmia), may persist in some individuals with COVID-19 for several weeks, and are not considered an indication of ongoing infection when other symptoms have resolved.

This guidance does not apply if there are any additional indications for ongoing isolation and transmission based precautions (for example MRSA carriage, *C.difficile* infection, diarrhoea).

For clinically suspected ARI patients who have tested negative for COVID-19 and have not been tested for other ARI's and whose condition is severe enough to require hospitalisation, the isolation period should be measured from the day of admission.

Re-testing is not required for patients who have tested positive for other ARI pathogens (flu, RSV etc) unless there is underlying immunosuppression. These cases should be considered in consultation with clinicians (including microbiology/IPC team).

4.2.2. Severely immunocompromised patients

It is possible for severely immunocompromised patients to remain infectious for prolonged periods, even if they do not display any symptoms of ARI. The isolation period for COVID-19 patients whilst in hospital should be at least 14 days.

For all ARI including COVID-19 in severely immunocompromised patients resolution of symptoms should not be used as a marker of decreased infectiousness and these patients should be isolated in side rooms, cubicles or cohorted and a step down protocol agreed with the local Microbiology / IPC team.

4.2.3. Outpatients/primary care

Patients who are known or suspected to be positive with a respiratory pathogen and whose treatment cannot be deferred should receive care from services who are able to operate in a way which minimises the risk of spread of the virus to other patients. If required advice can be sought from Health Board IPC Teams or Health Protection Teams.

To support primary care specific risk assessment, tools are available to support organisations in applying the HoC here: - Criteria for completing a local risk assessment (primary care and outpatient settings)

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4.2.4. Care home or other non-acute healthcare settings

Guidance on preventing ARI (including *Streptococcus pneumoniae)*, use of PPE and managing outbreaks of acute respiratory infections in care homes can be found here in settings: https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/information-for-health-and-social-care/phw-info-pack-for-care-homes-in-wales-2022-23-influenza-covid-19-and-spneumoniaepdf/

To support setting specific risk assessment tools are available to support organisations in applying the HoC here: Criteria for completing a local risk assessment (social care)

5. Surveillance and monitoring/outbreak management/reporting

Ongoing surveillance of Severe Acute Respiratory Illness (SARI) should continue within healthcare settings and for hospital/organisation onset cases (staff and patients/individuals).

Positive cases of COVID-19 and Flu identified after admission who fit the criteria for a healthcare associated infection (HCAI) should trigger a case investigation. If two or more cases are linked in time and place, an outbreak investigation should be undertaken.

COVID-19 and Flu are notifiable organisms/diseases. Further information on reporting can be found here -https://www.legislation.gov.uk/wsi/2010/1546/contents

6. IPC considerations for contacts of cases (inpatients)

Inpatients who are considered contacts of COVID-19/Flu cases (not part of an outbreak) are no longer required to isolate if they are asymptomatic. Asymptomatic testing of inpatients may be used as part of an OCT to monitor contacts and mitigate risks if the patient remains in hospital or other care setting e.g. LFD or rapid antigen testing or local protocol.

If symptoms occur contacts should be tested as per testing framework and isolated or cohorted with other symptomatic contacts of the same case.

Refer to Welsh Government COVID-19 Hospital Testing Framework

7. Occupational health, vaccination and IPC considerations for contacts of cases (staff)

Systems should remain in place to ensure that vaccination and testing policies are implemented as advised by occupational health/public health teams.

The vaccination status of staff may be considered when making staffing decisions for areas where **suspected or confirmed** COVID-19/Flu patients/individuals are cared for.

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A risk assessment is required for health and care staff who may be at high risk of complications from COVID-19 or Flu.

Any patient/service user facing staff member who has symptoms of a respiratory tract infection including COVID-19 and/or has a high temperature is advised to stay at home and notify their employer as soon as possible.

When they no longer feel unwell and do not have /not had a high temperature and are ready to return to work they may wish to discuss with their employer ways to minimise any risk as some may still be infectious. This may include undertaking a risk assessment if the staff member works with patients whose immune system means that they are at higher risk of serious illness despite vaccination.

Symptomatic staff should avoid contact with people both in the healthcare setting and in the general community. Bank, agency, and locum staff should follow the same deployment advice as permanent staff.

Refer to Advice for health and care staff on respiratory viruses including COVID-19: guidance | GOV.WALES

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Appendix 1: Personal Protective Equipment required while providing direct care for patients with suspected or confirmed Acute Respiratory Infection (including COVID-19).

Before undertaking any procedure, staff should assess any likely blood and body fluid exposure risk and ensure PPE is worn that provides adequate protection against the risks associated with the procedure or task being undertaken.

If there is no direct contact with the patient or their environment, gloves and aprons/gowns are not required.

Refer to NIPCM Wales:
Appendix 6 '*guidance on donning (putting on) and doffing (removing) PPE*
Appendix 16 *Selection of Personal Protective Equipment (PPE) by Healthcare Workers (HCWs) during the provision of patient care*

PPE required by transmission/exposure	Disposable gloves	Disposable/reusable fluid-resistant apron/gown	FRSM/RPE	Eye/face protection (goggle/visor)
Droplet PPE	Single use	Single use apron or fluid-resistant gown if risk of extensive spraying/splashing	Single use FRSM Type IIR for direct patient care (1)	Single use or reusable (1)
Airborne PPE (When undertaking or if AGPs are likely) (3) Or if an unacceptable risk of transmission remains following application of the hierarchy of controls (4)	Single use	Single use fluid-resistant gown	Single use FFP3 (2) or reusable respirator/powered respirator hood (RPE)	Single use or reusable (2)

**the*

residents for example

(1) *FRSM can be worn sessionally (includes eye/face protection) if providing care for cohorted patients. All other items of PPE (gloves/gown) must be changed between patients and/or after completing a procedure or task.

(2) RPE can be worn sessionally (includes eye/face protection) in high risk areas where AGPs are undertaken for cohorted patients (see footnote 4). All other items of PPE (gloves/gown) must be changed between patients and/or after completing a procedure or task.

(3) Consideration may need to be given to the application of airborne precautions where the number of cases of respiratory infections requiring AGPs increases and patients cannot be managed in single or isolation rooms.

(4) Where a risk assessment indicates it, RPE should be available to all relevant staff. The risk assessment should include evaluation of the ventilation in the area, operational capacity, and prevalence of infection/new SARS-CoV-2 variants of concern in the local area. The hierarchy of controls can be used to inform the risk assessment. Staff should be provided with training on correct use.

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Appendix 2: Aerosol generating procedures

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

The list of medical procedures that are considered to be aerosol generating and associated with an increased risk of respiratory transmission is:

- awake* bronchoscopy (including awake tracheal intubation)
- awake* ear, nose, and throat (ENT) airway procedures that involve respiratory suctioning
- awake* upper gastro-intestinal endoscopy
- dental procedures (using high speed or high frequency devices, for example ultrasonic scalers/high speed drills)
- induction of sputum
- respiratory tract suctioning**
- surgery or post-mortem procedures (like high speed cutting / drilling) likely to produce aerosol from the respiratory tract (upper or lower) or sinuses.
- tracheostomy procedures (insertion or removal).

*Awake including ‘conscious’ sedation (excluding anaesthetised patients with secured airway)

** The available evidence relating to respiratory tract suctioning is associated with ventilation. In line with a precautionary approach, open suctioning of the respiratory tract regardless of association with ventilation has been incorporated into the current (COVID-19) AGP list. It is the consensus view of the UK IPC cell that only open suctioning beyond the oro-pharynx is currently considered an AGP, which means that oral/pharyngeal suctioning is **NOT** an AGP.