Guidance on testing for Acute Respiratory Infection (ARI) in Residential Care Facilities* (RCF) – Winter 2024/2025

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Version	Date	Changes from previous version	Author
2.1	04/04/2025	Update NIAC links	HSE Research and Guideline Development Unit
2.0	21/10/2024	Updated for Winter 2024/2025	HPAC-ID and Winter Resilience Lead, NHPO, HSE Research and Guideline Development Unit
1.4	13/02/2023	Removed reference to "lysis swab (primestore) for the NVRL"	HSE Research and Guideline Development Unit
1.3	02/11/2023	Review and update for Winter 2023/2024	Respiratory SIG team; ADPHs; CPHMs; and the HSE Research and Guideline Development Unit
1.2	17/11/2022	Reviewed to align with 2022/2023 NIAC recommendations Updated to include updated EU/ECDC case definition of acute respiratory infection (ARI)	HPSC influenza team and the HSE Research and Guideline Development Unit
1.1	26/10/2021	Added link to updated version of 'Public Health & Infection Prevention and Control Guidelines on the Prevention and Management of Outbreaks of COVID-19, influenza and other Respiratory Infections in Residential Care Facilities' Updated language in certain recommendations	HPSC influenza team and the HSE Research and Guideline Development Unit
1.0	22/10/2021	Published version 1	Developed by a subgroup of PICT

*Please note the term Residential Care Facility (RCF) encompasses all congregate care settings where people live for extended periods for example nursing homes, community hospitals, certain mental health facilities and community housing units for people with intellectual and physical disabilities.

Please note this document provides guidance for testing of Acute Respiratory Infections in Residential Care Facilities only. This document should be read in conjunction with Public Health & Infection Prevention and Control Guidelines on the Prevention and Management of Outbreaks of COVID-19, influenza and other Respiratory Infections in Residential Care Facilities

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Purpose

One of the challenges for the 2024/2025 influenza season, is the co-circulation of COVID-19, influenza, and other respiratory viruses, which are difficult to distinguish based on clinical symptoms alone and require laboratory confirmation for definitive diagnosis. The purpose of this guidance is to provide advice/recommendations regarding the testing of symptomatic individuals for COVID-19, influenza, and other respiratory viruses in Residential Care Facilities.

Background

Persons in Residential Care Facilities (RCFs) are susceptible to the risk of contracting infectious diseases. RCF residents are at higher risk of serious consequences from infection due to several influencing factors such as frailty, close living arrangements and the movement of both health and care staff and visitors among the residents (1). Transfer of residents, which is a common occurrence, is also an influential factor in the spread of infection between other facilities, hospitals, and medical centres (2). Taking these factors into consideration, combined with exposure to other infectious diseases circulating in RCFs, of which respiratory viruses are very common, and age-related impairment of the immune system, older persons are at a substantially higher risk from respiratory infections and their consequences.

Outbreaks of acute respiratory infections (ARI) in RCFs are a frequent occurrence and can last for long periods of time, resulting in severe illness and mortality as well as impact on service provisions, impacting not only the settings but also hospitals due to restrictions on moving people from hospitals into RCFs. Vaccination provides the best protection against serious consequences of seasonal influenza and SARS-CoV-2.

The most recently adapted vaccines are being offered for the Autumn-Winter vaccination programme. It is important that the uptake levels for influenza and COVID-19 vaccines among both residents and staff are optimized to protect themselves and their families and prevent outbreaks. (4)

The potential co-circulation of COVID-19, influenza and other respiratory viruses, in combination with RCF residents being susceptible to infection, means that Public Health interventions such as testing are integral to ensuring early detection of symptomatic infection, so that interventions such as treatment and prophylaxis with antivirals can be implemented promptly and appropriately. It is important that infection prevention and control (IPC) measures are initiated on symptom onset before receiving test results and

that they are maintained and strengthened within RCFs to further reduce transmission opportunities, both to prevent but also control any outbreaks of infection.

It is also well understood that early detection, reduces the likelihood of further spread within the facility thus lowering the incidence of morbidity and mortality from these infections as well as reducing impact on service delivery (4).

Acute Respiratory Infection (ARI) case definition*

**Please note this case definition is for surveillance and management and pertains to RCF settings for the Winter-Spring 2024/2025. This case definition aligns with the European Commission/ European Centre for Disease*

Acute respiratory infection (ARI)

- Sudden onset of symptoms

AND

At least one of the following four respiratory symptoms:

- Cough, sore throat, shortness of breath, coryza

AND

- A clinician's judgement that the illness is due to an infection

Prevention and Control EU case definition (5

The most common symptoms of COVID-19 (as defined by the WHO) are: (6)

- fever
- cough
- tiredness
- loss of taste or smell.

Less common symptoms:

- sore throat
- headache
- aches and pains
- diarrhoea

- a rash on skin, or discolouration of fingers or toes
- red or irritated eyes.

Acute respiratory infection (ARI) outbreak definition*

*Please note this outbreak definition is for surveillance and management pertains to RCF for Winter 2024/2025.

A cluster/outbreak of two or more cases of acute respiratory infection (ARI) arising within the same 48-hour period in the above settings/situations, which meet the same clinical case definition. Investigation of lower numbers of cases in a shorter timeframe can be undertaken if considered appropriate following public health risk assessment (7).

Recommendations

The following recommendations were initially made by the subgroup of the Pandemic Incident Control Team (PICT) in 2021 and were subsequently reviewed by the HPSC influenza team, the Respiratory Special Interest group (SIG), the Area Directors of Public Health, Consultants in Public Health Medicine *si* Health Protection, and the HSE Research and Guideline Development Unit in 2022, 2023. During 2024, these guidelines were reviewed by Health Protection Advisory Committee for Infectious Diseases (HPAC-ID) which reviews all health protection guidance and makes recommendations that are considered and signed-off by the Director of National Health Protection.

Residents

- If a resident presents with respiratory symptoms or other symptoms compatible with COVID-19 or influenza (as per the ARI definition above) multiplex PCR testing for COVID-19 AND influenza (flu) should be undertaken as a minimum. Where multiplex testing is not available, testing for flu and COVID-19 should be undertaken simultaneously using appropriate swabs. The NVRL tests for multiple pathogens on multiplex PCR systems. Most other laboratories now also test for multiple pathogens on multiplex PCR systems.
- When an outbreak is suspected, notify the healthcare facility's infection prevention and control team and the Department of Public Health. When there is an outbreak of a respiratory tract infection in a long term RCF, a Public Health Risk Assessment (PHRA) (Appendix 2) should be undertaken. This PHRA will direct the management of the outbreak. Testing of up to five

symptomatic residents is generally recommended. Usually, it is not recommended to test every patient presenting with symptoms in an outbreak where the cause has already been established and people meeting the case definition should be considered as a probable case.

- However, in some circumstances e.g., when infection with more than one respiratory pathogen is suspected in the facility, additional testing of symptomatic individuals may be required following a clinical or PHRA. This will be assessed on a case-by-case basis.
- It is advisable that swabs are taken on site by trained staff and that **only one swab should be taken per symptomatic resident** to test for both influenza and COVID-19 (as a minimum). Please note that only one swab should be taken unless the laboratory providing service is not able to provide testing for both flu and COVID-19 on the same sample.
- For symptomatic residents, it is recommended that a deep nasal or nasopharyngeal sample is taken using a swab specified as appropriate by the laboratory providing the testing service.
- Please note an anterior nasal swab is not a high-quality sample and is not recommended.
- The RCF should ensure sufficient supplies of viral swabs are ordered as soon as possible. RCF may seek immediate advice from the NVRL/local laboratory (depending on local arrangements) regarding access to viral swabs.
- If the results of the tests are **positive for COVID-19**:
    - Assess for treatment according to national guidelines.
    - Treat as per HSE guidance

and/or

- If the results of the test are **positive** or clinical assessment indicates **possible or probable influenza**:
    - Assess suitability for antiviral therapy e.g. oseltamivir (Tamiflu) in consultation with resident's GP.
    - Treatment should be started as early as possible, ideally within 48 hours of symptom onset.
    - A PHRA (Appendix 2) should be undertaken to assess the requirement for providing antiviral chemoprophylaxis to exposed residents and staff. This risk assessment can be undertaken by the OCT or local Public Health team.
    - See HSE influenza antiviral treatment and prophylaxis guidance here or see antibioticprescribing.ie for further management advice. (please see guidance document here and algorithm here)

- Additional respiratory virus testing, or PCR where confirmation is required, may be used to guide clinical decisions, for example, if required to determine eligibility to be considered for targeted treatment for COVID-19, or antiviral treatment or prophylaxis against influenza.
- Current polymerase chain reaction (PCR) based laboratory tests are accurate, but no diagnostic test is perfect.
- Testing of asymptomatic residents is not appropriate as there is no reason to believe that testing of those who are asymptomatic will assist in managing the outbreak.
- If the results of these tests are negative for both COVID-19 and influenza, conduct a clinical risk assessment and discuss with Public Health to determine if further testing should be undertaken for other respiratory viruses, preferably on the same sample. A diagnosis of COVID-19 or influenza is still possible following a "not detected" result if a resident remains symptomatic and unwell with no alternative diagnosis. If there is any concern, the resident's condition should be discussed with their doctor. Continue with infection prevention and control measures.

Staff

If a member of staff has **fever, cough, shortness of breath, or any new respiratory symptoms** they are advised to stay at home and avoid contact with other people **until 48 hours after their symptoms have substantially or fully resolved**. This continues to apply to staff after COVID-19 and/or influenza vaccination/recent infection.

- If staff have cardinal symptoms of a severe respiratory infection like fever, cough and shortness of breath, testing for respiratory viruses may be recommended. However, in an established outbreak, staff meeting the clinical case definition can be assumed to be probable cases without the need for confirmatory testing. Testing strategy for staff linked to a specific outbreak may be informed by the PHRA. The use of COVID-19 antigen test may be considered if there is delay in access to multiplex PCR test. A negative test in the presence of symptoms should not indicate absence of disease and staff are advised to continue to stay at home and avoid contact with other people **until 48 hours after their symptoms have substantially or fully resolved**.
- If a member of staff has **laboratory confirmed COVID-19 or influenza infection**, it is important they follow the advice given to them and remain off work for a minimum of 5 days from the onset of symptoms, **and only return to work when they have been symptom free for 48hrs and are fit to work.** Staff should be aware of their local policy for reporting illness to their line manager.

- In addition, at the start of each shift, all staff should confirm with their line manager that they do not have any symptoms of respiratory illness, such as fever, cough, shortness of breath, or any new respiratory symptoms - the safety pause. **This continues to apply to staff after vaccination/infection.**
- Staff members who become unwell at work should immediately report to their line manager and should be sent home. They should contact their GP for clinical assessment and testing if deemed appropriate.
- Occupational health guidance for healthcare workers is available at: https://www.hse.ie/eng/staff/workplace-health-and-wellbeing-unit/covid-19-guidance/

References

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Appendix 1

Case definitions

ARI Case definition

https://www.ecdc.europa.eu/sites/default/files/documents/Operational-considerations-respiratory-virus-surveillance-euro-2022.pdf

COVID-19 case definition

https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/casedefinitions/covid-19interimcasedefinitionforireland/

Influenza case definition:

https://www.hpsc.ie/a-z/respiratory/influenza/casedefinitions/

http://www.hpsc.ie/hpsc/NotifiableDiseases/CaseDefinitions/

RSV case definition

https://www.hpsc.ie/a-z/respiratory/respiratorysyncytialvirus/casedefinitions/

COVID-19 outbreak case definition
https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/casedefinitions/covid-19outbreakcasedefinitionforireland/

Appendix 2

Issues to consider in a Public Health Risk Assessment include:

Area/ Health Region factors:

❑ Level of disease circulating in the community, with evidence of community transmission. High levels of disease rate per 100,000 at county or Local Electoral Area (LEA), wastewater surveillance etc provide evidence.

❑ Frequency or rate of outbreaks recorded- within health and care settings and other settings including congregate residential settings.

❑ Severity of illness and impact of outbreaks on patients i.e. hospitalisations, ICU admissions, deaths etc.

❑ The pathogen: Transmissibility of the pathogen usually viruses as new evidence suggests. Evidence of mixed pathogens- a multi-pathogen outbreak.

Setting factors:

❑ Vulnerability of patients on the site and in areas affected or likely to be affected by outbreaks e.g. immunosuppressed, cancer centre, dialysis units etc.

❑ Configuration/ layout of the setting - in a hospital, its layout and proximity of wards to each other e.g. is it an entire wing affected or a number of wings and is it possible to closing off a wing;

❑ Availability of isolation wards/capacity to cohort patients.

❑ Level of flu and covid vaccine coverage amongst staff.

❑ Staff absenteeism and the staffing levels available to work