Guidance on testing for Acute Respiratory Infection (ARI) in Residential Care Facilities* (RCF) – Winter 2023/2024

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Version	Date	Changes from previous version	Author
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 for 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 2023/2024 influenza season, is the co-circulation of COVID-19, Influenza, and other respiratory viruses, all of which present with similar respiratory symptoms. COVID-19, influenza, and other respiratory viruses 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 (RCF)s 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. Vaccination provides the best protection against significant respiratory illnesses.

The inactivated quadrivalent influenza vaccine (QIV) is being offered to

- People aged 65 years and older in Ireland in the 2023/2024 season
- Those aged 18-64 years who are in at-risk groups, pregnant women, health and care workers, household contacts/carers of people with underlying chronic health conditions or Down Syndrome
- Children aged 2-17 years in risk groups ONLY if contraindicated to receive LAIV

As per National Immunisation Advisory Committee recommendations (3) an autumn COVID-19 booster vaccine is recommended for:

- those aged 50 years and older

- those aged 5-49 years with immunocompromise associated with a suboptimal response to vaccination
- those aged 5-49 years with medical conditions associated with a higher risk of COVID-19 hospitalisation, severe disease or death
- health and care workers

XBB.1.5 monovalent mRNA COVID-19 vaccines are preferred for use as boosters. It is also important that the uptake levels for influenza and COVID-19 vaccines among both residents and staff are optimised. 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. It is important that infection prevention and control (IPC) measures are maintained and strengthened within RCFs to further reduce transmission opportunities.

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 (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 2023/2024. This case definition aligns with the European Commission/ European Centre for Disease Prevention and Control EU case definition* (5)

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

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 2023/2024.

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, health protection Consultants in Public Health Medicine, and the HSE Research and Guideline Development Unit in 2022 and 2023.

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 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 and some other laboratories may already be testing 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) should be undertaken. This PHRA will direct the management of the outbreak. Testing of up to five symptomatic residents is generally recommended.
- 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 public health risk assessment. 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 suitability for treatment with Paxlovid.
    - Treat as per HSE guidance here or see HSE/ICGP Quick Reference here.

And/or

- If the results of the test are **Positive / Possible / Probable Influenza**:
    - Assess suitability for antiviral therapy e.g. Tamiflu.
    - Treatment should be started as early as possible, ideally within 48 hours of symptom onset.
    - A public health risk assessment should be undertaken to assess the requirement for providing antiviral chemoprophylaxis to exposed residents and staff. This risk assessment can be undertaken by the IMT or local public health.
    - 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 testing with antigen tests, 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.
- Antigen testing is generally less likely to detect virus at low levels than PCR testing. 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

- Staff should be informed that they **MUST NOT** attend work if they have a fever, cough, shortness of breath, **or any new respiratory symptoms**. This continues to apply to staff after COVID-19 and/or influenza vaccination/infection.
- If a member of staff has confirmed COVID-19 infection, it is important they follow follow advice for the public except where indicated by local dynamic institutional risk assessment(s) or as part of the public health management of an outbreak or specific public health risk. Staff should be aware of their local policy for reporting illness to their line manager. Please refer to Public Health Advice for the management of COVID-19 cases and contacts.
- If a member of staff has confirmed 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, or until they are well enough to return. 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 myalgia - 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/