Winter Strategy:
Testing and IPAC for Acute Respiratory Infection

Purpose and scope

The purpose of this document is to provide testing guidance for the management of patients who have an acute respiratory infection\(^\text{1}\) (ARI) during the Winter period including a summary of infection prevention and control (IPAC) strategies. As patients may present with an ARI or develop an ARI while an inpatient, this document is intended for use by IPAC, Infectious Diseases (ID), Respiratory Medicine, Emergency Departments (ED), bed and patient flow managers and other relevant clinical services.

- This winter NSW Health Pathology is changing from COVID-19 only PCR to Respiratory PCT triplex test of COVID-19, Flu A/B +/- RSV
- Triplex respiratory PCR testing is intended for patients who are symptomatic with an acute respiratory infection
- Surveillance testing for COVID-19 will continue while COVID-19 community transmission remains high.

Acute respiratory infection (ARI)

For the purpose of this guidance, an acute respiratory infection (ARI) is defined below. However, this does not replace clinical judgement after a careful clinical history and examination.

Definition:

**New onset of**

At least one of the following

- Cough
- Sore throat or runny nose
- Shortness of breath or difficulty breathing

AND

At least one of the following systemic features:

- Fever
- Lethargy, malaise or decreased appetite
- Headache

\(^1\) Previously this was termed influenza like illness (ILI).
### TABLE 1: Respiratory virus testing FAQ

<table>
<thead>
<tr>
<th>1. Who do I need to test?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Testing for COVID-19/Influenza A and B +/- RSV</strong></td>
</tr>
<tr>
<td>1. Patients who meet criteria for ARI (whether on admission or if already an inpatient)</td>
</tr>
<tr>
<td>2. Patients in whom a contact history and/or symptom screening is unreliable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. What do I routinely need to test?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The respiratory secretions from nose/throat or nasopharynx. That is nose/throat swabs or a nasopharyngeal aspirate. If unsure, check with your laboratory provider</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. What tests are available?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. RAT – Rapid Antigen Test for COVID-19</td>
</tr>
<tr>
<td>2. Respiratory viral triplex test (COVID-19, Flu A/B., +/- RSV)</td>
</tr>
<tr>
<td>a. Standard</td>
</tr>
<tr>
<td>b. Rapid</td>
</tr>
<tr>
<td>3. Respiratory PCR Panel (may include Influenza, rhinovirus, adenovirus, enterovirus, RSV, parainfluenza &amp; HMPV and others, check with the laboratory)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. When should Rapid PCR be used?</th>
</tr>
</thead>
<tbody>
<tr>
<td>These are recommendations only and are subject to local decisions. It is important that each facility works closely with the Microbiology and Pathology Director and with their ID and ED directors and IPAC to ensure the most appropriate use of testing.</td>
</tr>
<tr>
<td><strong>ARI likely to be COVID-19:</strong> Rapid (or routine) PCR (Triplex)</td>
</tr>
<tr>
<td><strong>ARI requiring HDU or ICU:</strong> Rapid (or routine) PCR (Triplex)</td>
</tr>
<tr>
<td><strong>ARI requiring NIV:</strong> Rapid (or routine) PCR (Triplex)</td>
</tr>
<tr>
<td><strong>ARI being admitted:</strong> Rapid (or routine) PCR (Triplex)</td>
</tr>
</tbody>
</table>

**When should Standard PCR be used?**

- **ARI discharged from ED:** If needed (e.g., if antiviral therapy considered), Standard PCR (Triplex)
- **Other Admissions:** Standard PCR (Triplex)

<table>
<thead>
<tr>
<th>5. Do I need to wait for results to move a patient?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with ARI should be managed with TBP (airborne or droplet) and standard precautions. The absence of results should not delay the implementation of TBP or bed movement and appropriate IPAC strategies can be implemented in ward areas. Test results may provide additional information to be able to consider the most appropriate infection prevention and control strategies.</td>
</tr>
</tbody>
</table>
What about Surveillance Testing?

**Surveillance Testing**

Surveillance testing for COVID-19 provides an important layer of protection for patients and staff and recommendations are in the COVID infection control manual. Surveillance tests for COVID-19 should be by standard PCR or RAT and include patients who are close contacts of confirmed COVID-19 and do not meet ARI criteria.

Surveillance testing for other respiratory viruses is not recommended.

Admission testing as per the current CEC guidance - [COVID-19 IPAC manual Appendix 2B: Recommendations for COVID-19 surveillance testing in NSW healthcare facilities.]

**Background**

The management of patients presenting with potential COVID-19 has re-emphasised the need for the early identification, isolating or cohorting of infectious patients, which is challenging because of the large numbers of patients with ARIs and COVID-19. Testing over the past two years has been a combination of symptomatic and surveillance testing. Symptomatic testing was only for COVID-19 due both to its prevalence and the relative absence of other respiratory viral pathogens.

As the clinical presentation of patients with COVID-19 and influenza is very similar (and this includes respiratory syncytial virus, or RSV in children) there is a need to combine the IPAC approach to COVID-19 with other respiratory pathogens such as influenza and/or RSV for at least the months of June – September 2022.

The indication for and utility of surveillance testing for COVID-19 will vary depending on prevalence, testing strategies need to prioritise diagnostic testing with ongoing review of surveillance testing recommendations.

This document provides a framework for the assessment, testing and IPAC management of patients during the winter period. It also recognises the use of COVID-19 testing for surveillance and IPAC decisions. It does not cover specific treatment for any of these pathogens, nor does it cover testing other than detection of respiratory viruses. It is not a substitute for detailed clinical assessment of patients nor comprehensive IPAC.

Currently RATs are used mainly for symptomatic testing in the community and for close contact surveillance testing. RATs can also be used for surveillance testing in health care facilities. Currently RAT for influenza is not recommended due to low sensitivity and is not generally available.

Patients presenting to the emergency department with symptoms of an ARI and who are admitted, and any admitted patients who develop ARI symptoms (as per a definition of acute respiratory infection below) should be tested using a Respiratory triplex PCR². NSW Health Pathology will change from COVID-19 only testing to a triplex PCR test that includes COVID-19, influenza A/B (+/- RSV). The Roche Liat tests for SARS-CoV-2, Influenza A and B, and GeneXpert which tests for SARS-CoV-2, Influenza A and B, and RSV. These tests will be described as respiratory Triplex. In many laboratories, rapid single pathogen testing will no longer be available.

The decision whether to order standard or rapid triplex PCR will depend on the need to guide patient management (e.g., infection prevention and control) and local laboratory capacity.

---

² PCR COVID-19, Flu A/B, RSV (nb Liat tests 3 targets only COVID-19 & FLU A/B or Flu A/B & RSV)
This document provides guidance on testing of patients with ARI; however, each facility and Local Health District (LHD) need to discuss testing with their laboratory provider together with their local Microbiology and Pathology Director, together with the ED, ID and IPAC to guide local testing decisions and IPAC management.

► Note: patients with ARI symptoms should be managed under transmission-based precautions (TBP) while waiting for any respiratory virus testing results.

Definition of cohorting: Cohorting refers to the grouping of patients with the same condition in the same area. The goal of cohorting patients (and the HW that attend to them) is to minimise interaction between infectious patients and non-infected patients as much as possible.
Flow Chart 1: IPAC Management of Patients with ARIs

Transmission based precautions (TBP) for all ARIs

For all ARIs

- Rapid Testing where rapid placement of patient required
- Standard PCR where isolation/cohorting can be implemented

If COVID negative can consider cohorting while awaiting confirmation test results for other respiratory viruses with TBP

If triplex is negative, isolation and testing for other respiratory pathogens may be required

- Confirmed COVID-19
  - Isolate or cohort with COVID cases
- Confirmed influenza
  - Isolate or cohort with influenza cases
- Confirmed influenza and COVID coinfection or influenza and RSV coinfection
  - Isolate or cohort with similar cases
- Other respiratory pathogens
  - Isolate or cohort with similar pathogen especially in immunocompromised patients

Winter strategy:
Testing and IPAC for Acute Respiratory Infection
Version 1.0, May 2022
UNCONTROLLED WHEN PRINTED
Page 5 of 6
Patients who present with ARI symptoms will need to be risked assessed for possible infection with COVID-19, influenza or other infectious respiratory disease. **Symptomatic** patients are more likely to transmit infection.

Note: The management of vulnerable patients remains a priority when considering ARI or COVID-19

**Inpatient / patient to be admitted**

- **RAT for suspected COVID (15 mins)**
  - **RAT +ve COVID**
    - Isolate/cohort (immunosuppressed patients should be isolated)
  - **RAT -ve COVID and COVID suspected**
    - Isolate and organise PCR for confirmation
      - PCR for COVID-19, flu A/B and RSV
        - Choice of:
          - Standard Triplex
          - Rapid Triplex
      - PCR +ve for COVID, flu A/B or RSV
        - Isolate/cohort (immunosuppressed patients should be isolated)
      - PCR -ve for COVID, flu A/B or RSV
        - Additional respiratory virus panel as per local guides

**Patient NOT for admission**

- Nil routine respiratory specimen required. Residential care facility residents or as guided by public health may require testing
  - If patient is not for admission, respiratory testing is NOT recommended
    - Consideration of standard PCR testing for patients only who would benefit from anti-influenza or COVID therapy is recommended

**This testing guide does not replace assessment for diagnostic management**

**NB:** PCR provides results for influenza, rhinovirus, adenovirus, RSV, parainfluenza & HMPV