

## Testing for Respiratory Illnesses

Surveillance of influenza-like-illness in 2022 indicates a resurgence of viral respiratory illnesses. Notifications of laboratory diagnosed influenza have already surpassed numbers for this time in 2017 and 2019 [1], both years that saw higher than usual influenza-associated deaths [2].

Early testing and treatment for respiratory illnesses such as COVID-19 and influenza helps protect vulnerable populations from severe illness.

### Available tests and when to use them:

COVID-19		
Test	Indication	Obligations
<b>Rapid Antigen Test (RAT)</b>	Anyone with acute respiratory symptoms.	Should get tested as soon as possible, preferably the day of symptom onset.
	Close contacts of diagnosed COVID-19 cases.	Must undertake at least five RATs, 24 hours apart, in the seven-day period from specimen collection of positive case, or last exposure to the case.
	Asymptomatic social/workplace contacts of diagnosed COVID-19 cases.	Recommended daily testing for 5 days following exposure to the case.
	Asymptomatic international travellers arriving in Victoria.	Strongly recommended to be tested within 24 hours of arrival into Australia (RAT only).
<b>COVID-19 Nucleic Acid Amplification Test - Polymerase Chain Reaction (PCR)</b>	<b>Symptomatic</b> Anyone with symptoms can access PCR testing.	Should get tested as soon as possible, preferably the day of symptom onset (RAT preferable, but PCR may be used). <i>Clinically vulnerable* individuals should be offered PCR and marked as Priority 1.</i>
	<b>Asymptomatic</b> RAT positive.	An asymptomatic person who tests positive on a RAT with no epidemiological link to a case can access PCR to confirm the result if they choose.
	<b>Asymptomatic</b> An individual with two indeterminate RAT results.	Recommended to undertake a PCR to confirm the result.
	<b>Asymptomatic</b> Individuals requiring PCR at the discretion of a medical practitioner or direction from the Local Public Health Unit.	Consider individuals who are clinically vulnerable*, or those involved in an active outbreak of COVID-19.
<i>*Clinically vulnerable includes: age 65 years or older, chronic disease or other health conditions, moderate to severe symptoms at presentation, unvaccinated or not up-to-date with vaccination, Aboriginal or Torres Strait Islander, pregnant women.</i>		



Influenza and Other Respiratory Pathogens		
Test	Indication	Obligations
Influenza A/B PCR	Clinical concern for viral respiratory illness requiring treatment.  Priority populations include: residents of care settings, immunocompromised people, unvaccinated, the very old and the very young	Testing for viral respiratory illness facilitates early treatment with antivirals.
Respiratory Virus Multiplex PCR		

**Other circumstances where testing for COVID-19 may occur:**

- To verify a positive result that is in dispute:
  - Discuss the situation with the Western Public Health Unit to establish what steps should be taken.
- Prior to a planned admission or entry to hospital or residential care:
  - An admitting facility may request COVID-19 testing prior to entry.
  - RAT should be used in these circumstances.
  - If a PCR test is deemed necessary by a medical practitioner, the facility should clarify why, and, in most cases, should facilitate the test.
- Surveillance programs:
  - Some schools or workplaces participate in regular RAT surveillance.



**Diagnostic Accuracy and Accessibility:**

COVID-19		
Test	Diagnostic Accuracy	Cost and access
<b>Rapid Antigen Test (RAT)</b>	<p><b>Sensitivity</b>  <i>Symptomatic:</i> High, but can give false negative results, especially early in disease.  <i>Symptomatic (7 days from symptom onset):</i> Moderate.  <i>Asymptomatic:</i> Moderate-low.</p> <p><b>Specificity</b>  <i>Symptomatic:</i> High.  <i>Symptomatic (7 days from symptom onset):</i> High.  <i>Asymptomatic:</i> High.</p>	<p>Symptomatic people and close contacts are eligible for free RAT or PCR tests from testing sites (require Medicare card or ID).</p> <p>RAT can be purchased from pharmacies and retail outlets, usually between \$5 and \$10 per test.</p> <p>Commonwealth concession card holders are eligible for 10 RATs over a 3-month period through community pharmacies (program concludes on 31 July 2022).</p>
<b>Nucleic Acid Amplification Test - Polymerase Chain Reaction (PCR)</b>	PCR testing is the gold-standard for COVID-19 testing for its high sensitivity and specificity.	

Influenza and Other Respiratory Pathogens		
Test	Diagnostic Accuracy	Cost and Access
<b>Influenza A/B PCR</b>	PCR testing is the gold-standard for influenza testing for its high sensitivity and specificity	Test must be ordered by a GP or other eligible referrer.
<b>Respiratory virus multiplex PCR</b>	PCR testing is the gold-standard for influenza testing for its high sensitivity and specificity.	Medicare rebates are available, however the cost of tests will differ depending on GP and testing laboratory.



**Sources:**

1. Department of Health. (2022). Australian influenza surveillance report No. 03, 2022. Australian Government

2. Muscatello, D. J., Nazareno, A. L., Turner, R. M., & Newall, A. T. (2021). Influenza-associated mortality in Australia, 2010 through 2019: High modelled estimates in 2017. *Vaccine*, 39(52), 7578–7583. <https://doi.org/10.1016/j.vaccine.2021.11.019>

RA sensitivity and specificity (Cochrane Review) Rapid, point-of-care antigen and molecular-based tests for diagnosis of SARS-CoV-2 infection - Dinnes, J - 2021 | Cochrane Library

Watson J, Whiting P, Brush J. Interpreting a covid-19 test result. *BMJ*. 2020;;m1808. Interpreting a covid-19 test result | The BMJ

Multiplex PCR sensitivity and specificity: Multiplex PCR system for the rapid diagnosis of respiratory virus infection: systematic review and meta-analysis - PMC (nih.gov)

**Other key links:**

[Testing for respiratory pathogens \(health.vic.gov.au\)](https://www.health.vic.gov.au/testing-for-respiratory-pathogens)

[Normal.dot \(health.gov.au\)](https://www.health.gov.au/normal-dot)

[Rapid Antigen Testing – Concessional Access Program fact sheet \(health.gov.au\)](https://www.health.gov.au/rapid-antigen-testing-concessional-access-program)

[Updated PDF Factsheet-COVID19-pathology-item-extension.16.12.21.pdf \(mbsonline.gov.au\)](https://www.mbsonline.gov.au/updated-pdf-factsheet-covid19-pathology-item-extension-16.12.21.pdf)

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7 days a week

