

In brief

COVID-19 vaccines in Australia – AstraZeneca and Pfizer

3 September 2021

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- Internationally, [22 vaccines](#) have been approved for use and [5.38 billion](#) vaccine doses have been administered.^{1, 2}
- All vaccines that are approved for use have strong safety profiles and benefit to risk ratios.³
- [In Australia](#), three vaccines have been approved for use and a further two have provisional determinations. To 29 August 2021, approximately 9.4 million doses of Pfizer and 9.6 million doses of AstraZeneca vaccines have been administered.⁴
- Both [AstraZeneca](#)⁵ and [Pfizer](#)⁶ vaccines have been shown to:
 - reduce symptomatic disease and mortality^{5, 6}
 - reduce the chance of [onward transmission](#) by 40-50%⁷
 - reduce hospitalisation rates in ‘real world’ effectiveness studies, AstraZeneca by [80%](#) to [95%](#) and Pfizer by [71%](#) to [97%](#).⁸⁻¹⁰
- For all vaccine types, death is an extremely [rare](#) adverse event.¹¹
- [In Australia](#) as at 29 August 2021, out of 9.6 million doses of AstraZeneca vaccine, there have been 125 reports of blood clots assessed as thrombosis with thrombocytopenia syndrome (TTS).⁴ There have been nine reported deaths; eight cases of TTS and one case of immune thrombocytopenia.⁴
- [Knowledge](#) about how to [manage](#) TTS has developed swiftly.^{12, 13}
- There have also been concerns with Pfizer and myocarditis. To 29 August 2021, there have been 293 cases in Australia of [suspected myocarditis and/or pericarditis](#). There have been no reported deaths.⁴
- According to the TGA, which monitors vaccine safety, the protective benefits of vaccination against COVID-19 far outweigh the potential risks.⁴
- For vector vaccines such as AstraZeneca, there is evidence of [long-lasting immune responses](#).¹⁴ Questions remain on the [longevity of immune responses](#) induced by mRNA vaccines, with emerging [evidence](#) of a [decline](#) in antibody titres 3 - 6 months post Pfizer vaccination.¹⁵⁻¹⁷
- To date, no vaccine has been shown to be entirely effective at preventing transmission.
- There are reports of [breakthrough infections](#) in fully vaccinated individuals. With Delta, vaccinated people – if infected - have a similar viral load to unvaccinated. This suggests that non-pharmaceutical interventions are still required.¹⁸
- There have been some concerns about the politicization of messaging about the different vaccines and manufacturers.

The Critical Intelligence Unit maintains a living evidence table on [COVID-19 vaccines](#) which was used to inform this brief.¹⁹

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