

In brief

Delta variant

18 August 2021

- The Delta variant has been estimated to be more than [twice as transmissible](#) as the original strain of SAR-CoV-2.¹ First recognised in India, it has now spread to [over 100 countries](#).²
- The current NSW outbreak is due to the Delta variant.
- The risk of [hospitalisation from COVID-19](#) is almost doubled for patients infected with Delta (S gene positive cases), compared with people infected with the Alpha variant.³ Both the Oxford–AstraZeneca and Pfizer–BioNTech [COVID-19 vaccines were effective](#) in reducing the risk of SARS-CoV-2 infection and COVID-19 hospitalisation in people with Delta.³
- There also reports of a 287% increase for [ICU admission](#) and 137% increase for death compared to non-variants of concern.⁴ There is a likely countervailing effect of vaccination in these data with a week-on-week reduced risk of hospitalisation, ICU admission and death.⁴
- According to the [US Centers for Disease Control and Prevention](#), COVID-19 vaccines are effective against severe disease and death from the Delta variant.⁵ Only a small proportion of fully vaccinated people are infected by the Delta variant and infections in vaccinated people are usually mild. However, pre-print data has found that Delta causes a higher rate of [vaccine breakthrough](#) cases (19.7% compared to 5.8% for all other variants).⁶
- Vaccines and Delta
 - Vaccines remain effective at [reducing symptomatic disease](#) and deaths.⁷
 - In terms of transmission, people who have received both doses of vaccine are about [half as likely to be infected](#) than unvaccinated (3.84% vs 7.23%) but breakthrough infections do occur.⁸
 - Once infected, there is [little difference in viral load](#) and vaccinated people are equally infectious as non-vaccinated.⁹
 - However, the [viral load clears](#) more quickly and disease is less severe for vaccinated people.¹⁰
 - Vaccines [reduce symptomatic disease](#) by 80%.¹¹
- Emerging data suggests that the Delta variant may have [slightly different symptoms](#) from the original strain which include headache, sore throat, runny nose, fever and [persistent cough](#).^{12, 13}
- [A cohort analysis in Scotland](#) found the risk of COVID-19 hospital admission (within 14 days of testing positive) was double in patients infected with Delta variant when compared to Alpha, and the risk of admission was particularly increased in those with five or more relevant comorbidities.³

To inform this brief, PubMed and Google searches were conducted using terms related to COVID-19 AND Delta/B.1.617.2 AND (country OR treatment OR prognosis OR comorbidities) on 28 July 2021. The Critical Intelligence Unit maintains a living evidence table on [COVID-19 variants](#).²

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