

KIDS AND COVID AT A GLANCE:

- Australia-wide children 5-11 had the highest rate of COVID-19 infections of all age groups, during 2021.¹
- More than 1,077 NSW schools were impacted by COVID-19 during Term 4 2021²
- In NSW between 16th June 2021 and 11th December 2021: ³

Age	Cases	Hospitalised	ICU
0-9	13,260	291 (2%)	10
10-19	13,191	363 (3%)	36

- Based on NSW Health Minister's predictions, by January we can expect 75 children under 12 admitted to hospital every day.⁴
- Based on overseas experience⁵ and NSW govt projections, during Term One 2022 alone NSW can expect:⁶
 - 6,000 under-20s hospitalised
 - 60 under-20 deaths.
 - 40,000 under-20s will go on to have long COVID (unwell for more than 3 months)⁷
- NSW paediatric hospitals and ICU cannot cope with these numbers⁸
- Good ventilation can reduce COVID transmission by 80%⁹
- A surgical mask can reduce COVID transmission by 80%¹⁰
- Combined ventilation and mask can reduce COVID transmission by 96%
- Ventilation, mask and effective vaccination reduces risk by 99% ¹¹
- Natural ventilation (windows) is not reliable. Mechanical ventilation is required. ¹²
- If relying on natural ventilation, CO2 monitors must be used to warn of insufficient ventilation.¹³

¹ COVID-19 Australia: Epidemiology Report 56 <https://doi.org/10.33321/cdi.2021.45.69>

² Information reported to COVID Safe Schools Inc to 24 Dec 2021

³ COVID-19 Weekly Surveillance in NSW 11 December 2021 Published 17 December 2021 p 28-29

⁴ <https://www.abc.net.au/news/2021-12-16/unsw-modelling-25-000-COVID-19-cases-a-day-january-preliminary/100703352> and 15% of population 0-11 X 2% hospitalised see COVID-19 Weekly Surveillance in NSW 11 December 2021 Published 17 December 2021 p 28-29

⁵ USA statistics <https://time.com/6113220/why-kids-should-get-covid-19-vaccine>

⁶ See "Given the modelling, how many children are likely to be impacted in Term 1 2022" below

⁷ 5%-14% of all people who contract COVID have symptoms beyond 3 months – https://iht.deakin.edu.au/wp-content/uploads/sites/153/2021/12/Briefing-Paper_Long-COVID_Final.pdf;

[https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(21\)00084-5/fulltext](https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(21)00084-5/fulltext)

⁸ 47 PICU beds total in NSW <https://www.health.nsw.gov.au/Infectious/covid-19/communities-of-practice/Documents/paediatric-patients-icu.pdf>

⁹ <https://www.tandfonline.com/doi/full/10.1080/23744731.2021.1944665> especially fig 11

¹⁰ <https://www.tandfonline.com/doi/full/10.1080/23744731.2021.1944665> especially fig 11

¹¹ Assuming vaccination is 80% effective

¹² https://www.rehva.eu/fileadmin/user_upload/REHVA_COVID-19_guidance_document_V4.1_15042021.pdf

¹³ https://www.rehva.eu/fileadmin/user_upload/REHVA_COVID-19_guidance_document_V4.1_15042021.pdf

FURTHER INFORMATION

How many children in NSW and Australia have contracted and been hospitalized with COVID-19?

- In NSW between 16th June 2021 and 11th December 2021: ¹⁴

Age	Cases	Hospital	ICU
0-9	13,260	291 (2%)	10
10-19	13,191	363 (3%)	36

- In NSW between 16th June 2021 and 11th December 2021, 33% of all cases have been under 20 years old¹⁵.
- All Australia, January - December 2021: ¹⁶

Age	Cases	Hospital	ICU	Deaths
0-11	34,545	827 (2%)	17	1
12-17	15,699	445 (3%)	24	2

To what extent does COVID spread in schools?

- Research shows that children catch and transmit COVID-19 at much the same rate as adults¹⁷.
- In November 2021, 90% of Victoria's largest outbreaks were in education and childcare.¹⁸ NSW doesn't publish statistics on the source of outbreaks, however 9,586 people infected during term 4 2021 (9,586) were under 20 ¹⁹. It is likely that the source of a significant number of these infections would be in schools, as in Victoria.
- In NSW on the 18th December 2021, 295 under 20s tested positive to COVID-19²⁰.
- As at 18th November 2021, approximately 370 schools in NSW were closed due to outbreaks during Term 4. In late November, the policy of closing schools stopped, but more than More than 1,077 NSW schools were impacted by COVID-19 during Term 4 2021 ²¹

What is the health impact of COVID on Children?

¹⁴ COVID-19 Weekly Surveillance in NSW 11 December 2021 Published 17 December 2021 p 28-29

¹⁵ ibid

¹⁶ COVID-19 Australia: Epidemiology Report 56 <https://doi.org/10.33321/cdi.2021.45.69>

¹⁷ <https://www.mja.com.au/journal/2020/213/10/COVID-19-children-and-schools-overlooked-and-risk>

¹⁸ This is supported by the work of Mike Honey, data analyst <https://github.com/Mike-Honey>

¹⁹ https://data.nsw.gov.au/data/dataset/3dc5dc39-40b4-4ee9-8ec6-2d862a916dcf/resource/24b34cb5-8b01-4008-9d93-d14cf5518aec/download/confirmed_cases_table2_age_group.csv

²⁰ <https://data.nsw.gov.au/search/dataset/ds-nsw-ckan-3dc5dc39-40b4-4ee9-8ec6-2d862a916dcf/distribution/dist-nsw-ckan-24b34cb5-8b01-4008-9d93-d14cf5518aec/details?q=>

²¹ Information reported to COVID Safe Schools Inc to 24 Dec 2021

- Based on Canadian experience, 900 children 18 and under will develop Multisystem Inflammatory Syndrome (MIS-C)²²
- 5%-14% of all people who contract COVID have symptoms beyond 3 months.²³ This is likely to be higher in unvaccinated children.
- In the USA, 1% of children who contract COVID needed hospital treatment and 1% of those died.²⁴

Given the modelling, how many children are likely to be impacted in Term 1 2022?

- On 16/12/2021 Brad Hazzard said the modelling suggests that in January 2022, NSW will see 25,000 cases a day²⁵.
- Assuming (optimistically) cases stop increasing from then, each week 57,750 0-19 year olds will be infected²⁶
- During Term One, 575,750 young people will be infected (half of all school children in NSW). If the experience reported in the USA over 2021 is repeated (approximately 6 million confirmed child cases to October, 65,000 hospitalisations and 650 child deaths)²⁷, we can expect 6,000 child hospitalisations and approximately 60 child deaths.
- If, as a conservative estimate, 7% of those go on to experience Long COVID, 40,302 will be impacted.
- If those develop Multiple System Inflammatory Syndrome (MIS-C) at rates seen in Canada, 1,750 will go on to experience that outcome.

How does COVID Compare to other Serious childhood diseases?

- Polio is mild or asymptomatic in 99% of children. Despite the fact few children died of polio, and less than 1% suffered paralysis, it was, and is, treated as a serious disease. Most people have no symptoms, around 10% have mild fever, headache, tiredness, nausea and vomiting. In around 3% of infected people, the virus moves to the nervous system; two-thirds of these develop severe muscle pain and one-third develop severe muscle weakness (paralytic polio)²⁸.
- At its peak in Australia, there was a total of 357 polio deaths per year.²⁹ COVID-19 is dramatically more dangerous yet little is being done to protect children.

How can we prevent transmission in schools?

²² <https://www.lapresse.ca/COVID-19/2021-11-14/des-centaines-de-jeunes-touchees-par-un-dangereux-syndrome.php>

²³ https://iht.deakin.edu.au/wp-content/uploads/sites/153/2021/12/Briefing-Paper_Long-COVID_Final.pdf;
[https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(21\)00084-5/fulltext](https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(21)00084-5/fulltext)

²⁴ <https://time.com/6113220/why-kids-should-get-covid-19-vaccine>

²⁵ <https://www.abc.net.au/news/2021-12-16/uns-w-modelling-25-000-covid-19-cases-a-day-january-preliminary/100703352>

²⁶ If as a conservative estimate 33% of these cases are in those under 20

²⁷ <https://time.com/6113220/why-kids-should-get-covid-19-vaccine>

²⁸ https://www.aihw.gov.au/getmedia/ea7684ff-753c-44db-9091-24654db8b6b1/aihw-phe-236_Polio.pdf.aspx

²⁹ *ibid*

- Multilayered protections form the best defence against COVID: masks, ventilation, CO2 monitoring, vaccination are all essential³⁰
- San Francisco provides a useful model of good mitigation. In that city, 90% of children aged 12+ are fully vaccinated, all children aged 2+ are required to wear masks in schools, and following a ventilation audit, HEPA grade air purifiers were purchased for classrooms with inadequate ventilation. Despite over 100 daily COVID-19 cases in the community, only seven instances of in-school transmission have been identified in San Francisco schools since schools reopened in April 2021³¹
- In San Francisco, COVID-19 cases in children under 18 has remained less than 20% of overall cases throughout this pandemic,³² whereas in NSW the rate since schools resumed in Oct 2021 has been 40%.
- In San Francisco, from April up to 8 December across 89,500 staff and students there were 850 cases (the district does comprehensive surveillance testing), 53 suspected transmission events in schools over 12 outbreaks³³. There are 823,000 students in NSW where there were at least 850 outbreaks, so San Francisco schools were 7 times safer than NSW.
- US studies show schools without universal masking had outbreaks of COVID-19 at a rate of more than 3.5 times those without³⁴.
- Natural ventilation (open windows) alone is not sufficient. Mechanical ventilation is required plus CO2 monitoring to confirm safe ventilation.³⁵

³⁰ https://ozsage.org/media_releases/back-to-school-protecting-children-from-COVID-19-and-making-schools-and-childcare-safer/

³¹ https://ozsage.org/media_releases/back-to-school-protecting-children-from-COVID-19-and-making-schools-and-childcare-safer/

³² https://www.sfdph.org/dph/alerts/files/09.9.21_SFDPH_COVID_cases_Children_and_Schools.pdf

³³ <https://sf.gov/information/updated-data-covid-19-cases-among-san-francisco-children-and-schools>

³⁴ https://ozsage.org/media_releases/back-to-school-protecting-children-from-COVID-19-and-making-schools-and-childcare-safer/ Original Source: <https://www.cdc.gov/mmwr/volumes/70/wr/pdfs/mm7039e3-H.pdf>

³⁵ https://www.rehva.eu/fileadmin/user_upload/REHVA_COVID-19_guidance_document_V4.1_15042021.pdf