







## COVID-19 and Children's Surveillance Report

Number 10

Compiled: 14 February 2022







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#### Overview

- This weekly summary documents the latest COVID-19 surveillance data in children and adolescents, with a focus on Victoria and New South Wales (NSW) as well as specific countries that are relevant to the Australian context because of their size, COVID-19 epidemiology, the mitigation measures in place and data availability.
- Data on Multisystem Inflammatory Syndrome in Children (MIS-C), otherwise known as Paediatric Inflammatory Multisystem Syndrome (PIMS-TS), is included where available.
- This report is updated weekly using the most recently available data from government websites. Excess mortality data is sourced from EuroMOMO and Our World in Data.
- Surveillance data for the Omicron variant of concern is included for most countries in this report.
- The number of infections in both unvaccinated and vaccinated children may also increase if school mitigation measures are few, or there are changes to testing criteria and the adoption of screening in schools. The number of cases will be biased towards the age groups that are tested most. Vaccines generally have lower effectiveness against Omicron infection but are still highly effective against severe disease.
- Throughout 2021, the proportion of infections in unvaccinated children generally increased as vaccination of adults increased. 1,2 Many countries are now vaccinating adolescents and others, including Australia, most European countries, Singapore and the USA, have begun vaccinating children aged 5 years and over.
- With the predominance of Omicron in many settings and with vaccines having lower effectiveness against infection for this variant, the age distribution of infection has changed again. Early reports from NSW, the UK and Denmark, regions which have intensive surveillance, indicate that transmission mainly occurred in 20-29 year olds initially, with infections in children and adolescents increasing as schools reopened after the end-of-year holidays, which in some settings is now declining.
- The Omicron variant of concern<sup>3</sup> was first reported from South Africa on 25 November 2021. At the time of writing, it has been detected in 146 countries<sup>4</sup>, up from 142 countries in the last report. Omicron is now the predominant variant across many countries due to its high transmissibility, including in Australia, Canada, Denmark, the Netherlands, South Africa, the UK and USA. Subvariant BA.2 has replaced BA.1 as the predominant Omicron subvariant in several countries, including Denmark, the Netherlands and South Africa.
- COVID-19 epidemiology in children and adolescents varies by setting.
- There has been an increase in paediatric hospitalisations, more so in the 0-4 year old age group, but this has been a combination of admission for COVID-19 treatment and incidentally testing positive when admitted for an unrelated condition. Nevertheless, being a COVID-19 positive patient presents its own health care and workforce challenges.
- During the Omicron surge, the clinical manifestations in children have been similar to other common paediatric respiratory viral infections. Croup has been a common reason for admission in the 0-4 year age group. 6 MIS-C has not increased in the USA despite a large increase in Omicron cases although this is being monitored as there may be a delay in reporting. 7
- There is no increase in excess mortality in children aged 0-14 years in Europe during Omicron.<sup>8</sup>
- There is no evidence that school re-opening has increased excess mortality in all ages. Where reported, excess mortality has declined.







Russell FM, Anderson V, Crawford N, Curtis N, Danchin M, Goldfeld S, Hart J, Keeble T, Medley T, Mulholland K, Ranganathan S, Suryawijaya Ong D, Overmars I, Perrett K, Steer A. COVID-19 in Early Childhood Education and Care & Schools. Research Brief Number 1, Version 1: 14 October 2021. Parkville, Victoria, Australia: Murdoch Children's Research Institute, The Royal Children's Hospital, University of Melbourne Department of Paediatrics; 2021. https://www.mcri.edu.au/sites/default/files/media/documents/covid-19 in early childhood education and care and schools.pdf

American Academy of Pediatrics (AAP). Children and COVID-19: State-Level Data Report 14 October 2021. Illinois, US: AAP; 2021. https://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/children-and-covid-19-state-level-data-report/

<sup>\*</sup>American Academy of Pediatris (APF). Clinicine and COVID-19. State-level Data Report: 19 Clicober 2021. Immost of State Pediatris (APF). Clinicine and COVID-19. State-level Data Report: 19 Clicober 2021. General Pediatris (APF). Clinicine and Covid-19. State-level Data Report: 19 Clicober 2021. Immost of State Pediatris (APF). Clinicine and Covid-19. State Pediatris (APF). Clinicine and Covid-19.

Omicron drives record cases of child COVID hospitalisations. Financial Times, 17 January 2022. https://www.ft.com/content/28be9d3f-0b12-4c33-bda9-fbff375c0b7e

Does Omicron hit kids harder? Scientists are trying to find out. Nature. 04 February 2022. https://www.nature.com/articles/d41586-022-00309-x <sup>8</sup> EuroMOMO. Graphs and maps. Copenhagen, Denmark: Statens Serum Institut (SSI); 2022. https://www.euromomo.eu/graphs-and-maps

#### **Summary**

- Victoria closed schools for holidays from mid-December 2021 and they reopened in late January 2022. Early childhood centres have remained open.
  - Density limits were reintroduced with work from home default and indoor mask wearing required for all aged 8 years and older.
  - Schools reopened with multi-layered mitigation strategies in place, including twice-weekly surveillance rapid antigen tests (RAT; for childcare, kindergartens and schools), mandatory third vaccine dose for staff, supply of air-purification devices and masks required for all staff and students grade 3 and above, and encouraged in younger students.
  - Approximately 52% of 5-11 year olds and 89% of 12-15 year olds have received at least one dose of a COVID-19 vaccine.
  - In the week following school reopening, 7046 students and 925 staff were infected with COVID-19, accounting for 0.7% and 0.84% of all students and staff respectively.9
  - There is a downward trend of infections, with ~8400 confirmed cases per day in all ages.
    - Infections are highest in the 30-39 year age group followed by 20-29 years. Infections are declining in all age groups, including school age children.
    - Omicron accounted for 97.8% of all positive samples from late Jan to early Feb 2022.
    - Since 8 January 2022, Victorian daily case numbers include both PCR and RAT positive results.
  - There is no hospitalisation data available by age, but overall numbers continue to decline.
    - Over 90% of COVID-19 cases currently in ICU have the Omicron variant.
  - Two children have died with COVID-19 throughout the entire pandemic.
  - Victorian data from the Omicron wave indicates that 10:
    - Daily hospitalisation rates per 100,000 people: three doses: 0.5 persons; two doses: 2.3 person; and zero doses: 3.08 persons.
    - A person with three doses is about six times less likely than an unvaccinated person, and 4.5 times less likely than someone with two doses, to be hospitalised.
    - An infected person is 88% less likely to die if they have received three doses, and 66% less likely to die if they have received two doses, compared to a person of the same age who has received zero or one dose.
- NSW schools closed for holidays from mid-December 2021 and reopened in late January 2022. Early childhood centres have remained open.
  - Indoor mask wearing is required for all aged 12 years and older and recommended for children in primary school.
  - Schools reopened with multi-layered mitigation strategies in place, including twice-weekly surveillance RAT, mandatory third vaccine dose for staff, supply of air-purification devices, masks required for all staff and high school students (and encouraged for primary school children), and cohorting.
  - Approximately 46% of 5-11 year olds and 84% of 12-15 year olds have received at least one dose of vaccine.
  - In the week following school reopening, 2417 students and 617 staff were infected with COVID-19. This accounts for ~0.2% of all students and <1% of school staff. 11
  - Case numbers are on a downward trend, with currently ~7600 confirmed cases per day in all ages.
    - Infections are highest in the 16-39 year age group and lowest in the 0-4 year age group (data to Report #9, 08 February 2022).
  - There is no data on hospitalisation trends by age, but overall hospitalisations are declining.
    - From late November 2021 to mid-January 2022, 13 children aged 0-9 years were admitted to ICU, and 5 unvaccinated and 5 fully vaccinated adolescents aged 10-19 years were admitted to ICU.
  - Two children have died with COVID-19 throughout the entire pandemic.
- In Europe and North America, there is now a downward trend in many countries and regions, including the United Kingdom, Canada and several states in the USA.
- Canada closed its schools for the holidays in December 2021 and they reopened in early to mid-January 2022.
  - Public Health and Social Measures (PHSM) vary by province.
  - Approximately 55% of 5-11 year olds and 88% of 12-17 year olds have received at least one dose of vaccine.
  - There was an initial steep increase in infections due to the Omicron variant followed by a steep downward trend in all age groups.
  - There is no data on hospitalisation trends by age. Overall hospitalisations had increased in recent weeks but are now declining.
  - There have been 29 deaths with COVID-19 in children aged 0-19 years throughout the entire pandemic.

<sup>11</sup> Carroll L & McPhee S, Schools stay open as hundreds of staff, students test positive. The Sydney Morning Herald, 04 February 2022, https://www.smh.com.a









<sup>9</sup> Morgan C. Free rapid tests for pre-school children as Victoria records 9785 new COVID-19 cases. The Age. 08 February 2022. https://www.theage.com.au/national/victoria/victoria-records-9785-new-covid-19-cases-20-deaths-20220208-p59ukf.html
10 Department of Health. Coronavirus update for Victoria - 14 February 2022. Melbourne, Victoria, Australia: Victoria State Government; 2022. https://www.health.vic.gov.au/media-releases/coronavirus-update-for-victoria-14-february-2022

- **Denmark** closed its schools early for the end-of-year holidays and they reopened in early January 2022. Excess mortality in all age groups dramatically declined over the Omicron period but in the last week there has been a slight increase. 12
  - Restrictions introduced due to the Omicron wave were eased in mid-January 2022. From 1 February, all restrictions have been lifted.
  - Approximately 83% of the population aged 12+ have received at least one dose of vaccine. The 5-11 year old vaccination program commenced in late November 2021.
  - Total infection rates are stabilising in all age groups. Infection rates remain highest in children and adolescents, especially the 6-11 year age group. Cases are stable in 0-5 years and declining in the 6-11 and 12-15 year age groups.
    - Based on Danish data, Omicron subvariant BA.2 is estimated to be 30% more infectious than BA.1.13
    - Denmark has one of the most intensive testing systems in the world.
  - Hospitalisations in children have remained relatively stable and very low, with a small increase in unvaccinated young children.
    - The increase in Omicron infections have not resulted in the number of hospitalisations, as seen with previous variants. Approximately 30-40% of all hospitalised patients with COVID-19 were not hospitalised due to COVID-19 but for other reasons. 14
  - A total of 44 cases of MIS-C have been reported throughout the Omicron period (1 November 2021 to 1 February 2022). 15
    - Of the 44 cases, 40 were unvaccinated, 3 had received one dose and 1 had received two doses of vaccine. Twenty-nine (29) cases were between the ages of 5-11.
    - There was an increase in MIS-C cases in November and December 2021, attributed to the increase in Delta infections in October 2021.
    - The prevalence of MIS-C was similar amongst previous SARS-CoV-2 variants, although this is not yet known for Omicron.
  - There have been three deaths with COVID-19 in children aged 0-19 years throughout the entire pandemic. Deaths are predominantly in those unvaccinated, or double vaccinated and aged 70 years and older.
- England reopened its schools in early January 2022 following the end-of-year holidays. Excess mortality in all age groups continues to dramatically decline over the Omicron period. 16
  - Additional PHSM were reintroduced in late November 2021, including mask wearing in certain indoor venues, work from home default and proof of vaccination. RAT is available for all twice weekly. Masks are no longer required in most public spaces but are recommended.
  - Approximately 55% of 12-15 year olds and 67% of 16-17 year olds have received at least one dose of vaccine. Vaccination in 5-11 year olds is only recommended for immunocompromised children.
  - Infections across all age groups are declining.
    - Infection rates continue to be highest in the 5-19 year age group.
  - Overall hospitalisations in all ages are declining, including in children and adolescents.
    - There was a steep increase in 0-4 year olds which has since declined, but rates in children remain the lowest compared to all other age groups.
    - Hospitalisations include children who test positive, irrespective of the reason for admission, so is an overestimate of hospitalisations for treatment of COVID-19.
    - Analysis of UK data between late November 2021 to early January 2022 shows that there was no difference in hospital admission risk between children under the age of 10 vears with Omicron compared with Delta (adjusted hazard ratio 1.00 [0.85-1.18]). 17
  - o There have been 82 deaths with COVID-19 in children aged 0-19 years in the past year.
- Finland reopened its schools in early January 2022 following the end-of-year holidays. There are no restrictions on children's activities. Excess mortality in all age groups continues to decline over the Omicron period. 18
  - Additional restrictions were reintroduced in late December 2021, including indoor mask wearing, proof of vaccination, work from home default and density limits. Further restrictions were introduced in January 2022, including limits on household visitors, hospitality opening hours and access to public places. From February 2022, restrictions are being lifted gradually.
  - Approximately 25% of 5-11 year olds and 80% of 12-17 year olds have received at least one dose of vaccine. All children aged 5-11 years are offered vaccine.
  - Infections remain high but are declining in all age groups.

<sup>17</sup> MRC Biostatistics Unit, University of Cambridge and UKHSA COVID-19 Epidemiology Cell. COVID-19 hospitalisation risk for Omicron compared with Delta VOCs, by age group. London, United Kingdom: MRC Biostatistics Unit, University of Cambridge and UKHSA COVID-19 Epidemiology Cell; 2022. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/1052451/\$1501\_Omicron\_severity\_2022-01-Cambridge.pdf









<sup>12</sup> EuroMOMO. Graphs and maps. Copenhagen, Denmark: Statens Serum Institut (SSI); 2022. https://www.euromomo.eu/graphs-and-maps
13 Statens Serum Institut (SSI). Risk assessment of Omicron BA.2. Copenhagen, Denmark: SSI; 2022. https://en.ssi.dk/-/media/arkiv/subsites/covid19/risikovurderinger/2022/risk-assesment-of-omicron-ba2.pdf?la=en

Sundhedsstyrelsen [Danish Health Authority]. Statusrapport [Status report]. Cophenagen, Denmark: Sundhedsstyrelsen; 2022. <a href="https://www.sst.dk/-/media/Udgivelser/2022/Statusrapport/5.ashx">https://www.sst.dk/-/media/Udgivelser/2022/Corona/Vaccination af børn på 5-11 år [Update regarding COVID-19 vaccination of children aged 5-11 years]. Copenhagen, Denmark: Sundhedsstyrelsen; 2022. <a href="https://www.sst.dk/-/media/Udgivelser/2022/Corona/Vaccination/Notat-vaccination/Notat-vaccination-af-boern-5-11-aar.ashx">https://www.sst.dk/-/media/Udgivelser/2022/Corona/Vaccination/Notat-vaccination/Notat-vaccination-af-boern-5-11-aar.ashx</a>

<sup>&</sup>lt;sup>16</sup> EuroMOMO. Graphs and maps. Copenhagen, Denmark: Statens Serum Institut (SSI); 2022, https://www.euromomo.eu/graphs-and-maps

- Infections are now highest in the 25-49 year age group.
- Overall hospitalisations are stable and remain low in children. There are more hospitalisations in the unvaccinated compared with the vaccinated in all age groups, with the disparity most marked with each older age cohort.
- There have been no deaths in anyone <30 years old throughout the entire pandemic.</li>
- The Netherlands reopened its schools in early January 2022 following the end-of-year holidays. Excess mortality in all age groups declined over the Omicron period but in the last week there has been a slight increase.<sup>19</sup>
  - o Restrictions continue to be in place, including indoor mask wearing, work from home default, household visitor limits and density limits.
  - o Approximately 69% of 12-17 year olds have received at least one dose of vaccine. All children aged 5-11 years are offered vaccine.
  - o Infections are declining in all age groups and are highest amongst 10-19 year olds.
    - During the week 24 30 January 2022, 51,458 people working in education or childcare were tested. 55.8% of those tests were positive. This percentage is slightly higher than 53.9% positive of the 681,772 adults tested in the general adult population during the same week.<sup>20</sup>
  - by Hospitalisations increased with Omicron but have since declined. There is now a slight upward trend amongst older age groups but rates remain lowest in children.
    - In the past year, children <18 years accounted for 1.5% of all hospital admissions with COVID-19.
  - o The number of deaths with COVID-19 in children is not reported.
- Scotland reopened its schools in early January 2022 following the end-of-year holidays. Excess mortality in all age groups declined over the Omicron period and is currently at baseline mortality levels.<sup>21</sup>
  - o Restrictions eased in late January 2022, including removal of density and household visitor limits. Hybrid work arrangements have been re-introduced, replacing the direction to work from home. Indoor mask wearing remains mandatory.
  - Approximately 69% of 12-15 year olds and 83% of 16-17 year olds have received at least one dose of vaccine. Vaccination in 5-11 year olds is recommended for immunocompromised children.
  - o Infections across all age groups declined from the Omicron peak and are now stable, except in the 15-24 year age group which is now increasing.
  - Hospitalisations in children are now declining. Hospitalisations in children were highest in the <1 year age group. Hospitalisations also include children who test positive, irrespective of the reason for admission, so is an overestimate of hospitalisations for treatment of COVID-19.
  - There have been three deaths due to COVID-19 in children aged 0-14 years in the past year.
- Singapore reopened its schools in early January 2022 following the end-of-year holidays.
  - o Restrictions were reintroduced in late September 2021, including indoor and outdoor mask wearing, work from home default and density limits.
  - o Approximately 92% of the entire population has received at least one dose of vaccine. All children aged 5-11 years are offered vaccine.
  - o Currently there is an upward trend in overall infections with ~11,000 cases per day, primarily in the 20-39 year age group.
  - Overall hospitalisations are increasing, although admissions remain lowest in children.
  - o A total of five cases of MIS-C have been reported (up to 8 November 2021), all from the Delta wave in mid-late 2021. There has been one ICU admission due to MIS-C.
  - o There have been no deaths in children throughout the entire pandemic.
- South Africa reopened its schools in early January 2022 following the end-of-year holidays. Excess mortality in all age groups continues to decline over the Omicron period. 22
  - o Certain restrictions such as the curfew and density limits were eased in late December 2021.
  - o Approximately 47% of the entire population is fully vaccinated. Vaccination is not offered to children aged 5-11 years.
  - There was a rapid increase in infections due to Omicron in all age groups followed by a rapid decrease, with children <19 years having the lowest infection rates.</li>
    - Omicron subvariant BA.2 is now responsible for ~75% of all infections.
  - o Overall hospitalisations continue to decrease. Many admissions were incidental (admitted for other reasons and subsequently test positive).
  - o There have been 815 deaths with COVID-19 in children aged 0-19 years throughout the entire pandemic. This accounts for <1% of all COVID-19 deaths in the country.





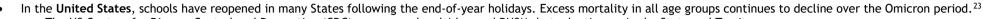


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<sup>&</sup>lt;sup>19</sup> EuroMOMO. Graphs and maps. Copenhagen, Denmark: Statens Serum Institut (SSI); 2022. https://www.euromomo.eu/graphs-and-maps

<sup>20</sup> RIVM. Research results from GGD data about children and COVID-19. Amsterdam, The Netherlands: National Institute for Public Health and the Environment; 2022. https://www.rivm.nl/en/coronavirus-covid-19/children-and-covid-19/research-results-ggd-data 21 EuroMOMO. Graphs and maps. Copenhagen, Denmark: Statens Serum Institut (SSI); 2022. https://www.euromomo.eu/graphs-and-maps

<sup>&</sup>lt;sup>22</sup> Our World in Data. Excess mortality during the Coronavirus pandemic (COVID-19). London, United Kingdom: Global Change Data Lab; 2022. https://ourworldindata.org/excess-mortality-covid



- o The US Centres for Disease Control and Prevention (CDC) recommend multi-layered PHSM, but adoption varies by State and Territory.
- o Approximately 32% of 5-11 year olds and 65% of 12-17 year olds have received at least one dose of vaccine.
- o Infections remain high but are on a downward trend overall. Infections are highest in the 18-39 year age group.
  - Hospitalisations are decreasing in all age groups.

     During the Omicron surge, the incidence of croup in young children nearly doubled compared to the rate in prior months, consistent with prior case reports.<sup>24</sup>
  - There have been 795 deaths with COVID-19 in children aged 0-17 years throughout the entire pandemic. This accounts for <0.1% of all COVID-19 deaths in the country.

     Texas has had the highest number of child deaths (124) and there are three States that have reported 0 deaths throughout the entire pandemic.<sup>25</sup>
- o A total of 6851 cases of MIS-C have been reported, including 59 deaths (data to Report #9, 08 February 2022).
  - There does not appear to be an increase in MIS-C despite the surge of Omicron cases so far but this may be due to delays in reporting and surveillance is ongoing.
- Hospitalisations and deaths include all children who test positive, irrespective of the reason for admission or death, so is likely an overestimate of hospitalisations and deaths due to COVID-19.

#### Summary of COVID-19 epidemiology in children and adolescents

Country	Cases	Hospitalisations	MIS-C/PIMS-TS	Deaths^
VIC, Australia	<b>↓</b>	Not available	Not reported	2ь
NSW, Australia	$\downarrow$	<u>_</u> *	Not reported	2ь
Canada	$\downarrow$	<b>↓*</b>	Not reported	29⁵
Denmark	Stable	Stable	44 cases⁺	3 <sup>b</sup>
England, UK	$\downarrow$	$\downarrow$	Not reported	82 <sup>b,#</sup>
Finland	$\downarrow$	Stable	Not reported	0
Netherlands	$\downarrow$	$\downarrow$	Not reported	Not reported
Scotland, UK	Stable	$\downarrow$	Not reported	3a,#
Singapore	<b>↑</b>	<b>↑</b>	5 cases	0
South Africa	$\downarrow$	↓*	Not reported	815 <sup>b</sup>
USA	$\downarrow$	$\downarrow$	6851 cases	795⁵

Note: Trends and values are for children only, unless otherwise specified.

<sup>25</sup> American Academy of Pediatrics (AAP). Children and COVID-19: State-Level Data Report 30 December 2021. Illinois, US: AAP; 2021. https://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/children-and-covid-19-state-level-data-report/







<sup>\*</sup>Available data includes both children and adults.

<sup>\*</sup>During the Omicron period (1 November 2021 - 1 February 2022).

<sup>^</sup>Age range for child deaths between 0-19y except Scotland (0-14y) and USA (0-17y). Deaths adue to COVID-19 or bwith COVID-19. #In the past year.

<sup>23</sup> Our World in Data. Excess mortality during the Coronavirus pandemic (COVID-19), London, United Kingdom: Global Change Data Lab; 2022. https://ourworldindata.org/excess-mortality-covid

<sup>&</sup>lt;sup>24</sup> Tunc et al. Pediatric croup during the COVID-19 Omicron variant surge. medRxiv [Preprint]. 2022. https://www.medrxiv.org/content/10.1101/2022.02.02.22270222v1



Abbreviation	Term
CDC	US Centres for Disease Control and Prevention
MIS-C	Multisystem inflammatory syndrome in children
NSW	New South Wales, Australia
PCR	Polymerase chain reaction
PHSM	Public health & social measures
PIMS-TS	Paediatric inflammatory multisystem syndrome
RAT	Rapid antigen testing
TTIQ	Test, trace, isolate, quarantine





#### Australia: Victoria

(population 6.6 million)

PHSM <sup>26</sup>	Schools & mitigation <sup>27</sup>	Vaccination c	overage <sup>28,29</sup>		
Indoor mask-wearing required for all aged 8+, all shops open, TTIQ, QR check-in, proof of vaccination to attend some premises.  From Jan 2022, density limits reintroduced and work from home default. A positive RAT result is reported as a "probable" COVID-19 case (treated as a PCR positive case and reported in daily case numbers). Certain essential workers can be exempt from close contact home isolation requirements to attend work.	Closed for holidays from mid-Dec 2021 and returned to school in late Jan 2022.  Multi-layered mitigation strategies have been introduced, including twice-weekly surveillance RAT (childcare, kindergarten and schools), mandatory third vaccine dose for staff, supply of air-purification devices, masks required for all staff and students grade 3 and above. Remote learning will be considered as a localised, short-term last resort.	Age group         (years)       1st dose (%)       2nd dose (%)       3rd/booster (%)         5-11       52.0       0.5       -         12-15       89.4       84.7       -         46:       0.4.5       0.2.2			
Infections by age group 30	Hospitalisations in children <sup>31</sup>	Deaths by age		tion for 5-11y availal	ole from 10 Jan 2022.
Daily new cases (to 13/02/2022)	Current cases in hospital 465 35 cases in hospital cases in No.CU		sed away with COVID-		
1000	No age breakdown  Over 90% of COVID-19 cases in ICU have the Omicron variant. 34	Age group 00-09 10-19	<b>Male</b> 0 0	Female 1	Total 1
3 8000		20-29 30-39 40-49	2 9 15	1 2	3 11 27
4000 —— 60-69 —— 70-79 2000 —— 80-89 —— 90+		50-59	106	34 57	88
0 125 km/s/2 2020 2021 2021 2022 2022 2022 2022 20		70-79 80-89 90+	913 491 264	175 375 373	488 866 637
From 8 Jan 2022, daily numbers include both PCR and RAT positive cases.  Omicron accounted for 97.8% of all samples from late Jan to early Feb 2022. 33					demic, including one 15 conditions and in palliative







https://www.coronavirus.vic.gov.au/coronavirus-covidsafe-settings

https://www.coronavirus.vic.gov.au/education-information-about-coronavirus-covid-19
https://www.kpaths.gov.au/education-information-about-coronavirus-covid-19
https://www.kpaths.gov.au/resources/collections/covid-19-vaccination-daily-rollout-update
https://witter.com/vic.GovDH

about from: https://www.coronavirus.vic.gov.au/victorian-coronavirus-covid-19-data

Data Hohi: https://www.coronavirus.vic.gov.au/victorian-coronavirus-covid-19-data
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https://www.coronavirus.vic.gov.au/victorian-coronavirus-covid-19-data
https://www.health.vic.gov.au/media-releases/coronavirus-update-for-victoria-9-february-2022
https://www.health.vic.gov.au/media-releases/coronavirus-update-for-victoria-9-february-2022

#### **Australia: New South Wales**

(population 8.2 million)

#### PHSM<sup>35</sup>

Mandatory masks indoors and on public transport for all aged 12+, TTIQ, QR check-in, all shops open, proof of vaccination to attend some premises. Certain essential workers can be exempt from close contact home isolation requirements to attend work.

#### Schools & mitigation 36

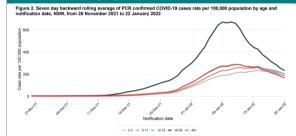
Closed for holidays from mid-Dec 2021 and returned to school in late Jan 2022.

Multi-layered mitigation strategies have been introduced, including twice-weekly surveillance RAT, mandatory third vaccine dose for staff, supply of air-purification devices, masks required for all staff and high school students, cohorting.

# Vaccination coverage 37,38 Age group (years) 1st dose (%) 2nd dose (%) 3rd/booster (%) 5-11 45.5 0.5 12-15 83.6 78.9 16+ 95.6 94.2 48.3

Fourth dose for immunocompromised recommended from early Jan 2021, booster dose available to all eligible adults aged 18y+ and 16-17y from 3 Feb 2022. Three primary dose recommendation extended to all severely immunocompromised people aged 5y+ from mid-Jan 2022. Vaccination for 5-11y available from 10 Jan 2022.

#### Infections by age group 39\*



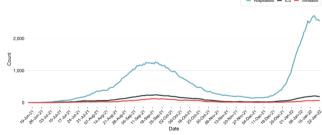
Omicron is now the dominant variant in NSW.

Jan* 0	15 Jan* 0	8 Jan	1 Jan	– 22 Jan 2022	- 25 Nov 2021	– 15 Jun 2021
	0	0	0	0		
					11	189
0	0	0	0	0	5	29
0	0	0	0	0	0	6
0	15	32	43	2,683	16,599	73
210	378	317	315	2,423		
210	393	349	358	5,106	16,615	297
	0 210 210	0 15 210 378 210 393	0 15 32 210 378 317 210 393 349	0 15 32 43 210 378 317 315 210 393 349 358	0 15 32 43 2,683 210 378 317 315 2,423 210 393 349 358 5,106	0 15 32 43 2,683 16,599 210 378 317 315 2,423 -

#### Hospitalisations in children 40\*

	1 Jan 2020 – 15 Jun 2021		1 Jan 2020 – 15 Jun 2021 16 Jun – 25 Nov 2021		26 Nov 2021 – 22 Jan 2022		
Age-group (years)	Hospitalised	Percentage of cases hospitalised	Hospitalised	Percentage of cases hospitalised	Hospitalised	Percentage of cases hospitalised	
0-9	5	2%	291	2%	371	1%	
10-19	8	2%	359	3%	262	<1%	
20-29	22	2%	964	7%	855	<1%	
30-39	41	4%	1,253	10%	934	1%	
40-49	39	5%	1,295	14%	662	1%	
50-59	59	8%	1,266	19%	780	1%	
60-69	84	13%	1,045	27%	1,115	3%	
70-79	67	17%	763	40%	1,447	7%	
80-89	40	33%	507	54%	1,416	18%	
90+	13	31%	129	54%	466	20%	
Total	378	7%	7.872	10%	8.308	1%	

Figure 4b. Number of PCR-confirmed and RAT cases in hospital, in ICU and ventilated by date, NSW, from 16 June 2021 to 22 January 2022



Many admissions in <12y children are for social reasons as parents are hospitalised for treatment of COVID-19. -1% of primary school age cases are admitted for treatment of COVID-19. Graph is not available by age group.

#### Deaths by age group 41\*

disorder.

Table 7. Deaths following recent infection with COVID-19, by age group and location, 26 November 2021 to 22 January 2022

Age group (veers)	Number of deaths	Coop fotality rate	Location	of death
Age-group (years)	Number of deaths	Case fatality rate	Health care facility	Aged care facility
0-9	1	<0.1%	0	0
10-19	0	0%	0	0
20-29	2	<0.1%	2	0
30-39	3	<0.1%	2	0
40-49	9	<0.1%	7	0
50-59	21	<0.1%	18	0
60-69	43	0.1%	38	0
70-79	117	0.6%	104	12
80-89	155	1.9%	130	23
90+	85	3.6%	61	23
Total	436	0.1%	362	58

Table 6. Proportion of PCR confirmed cases with a severe outcome (ICU and/or death) amongst all cases, by age, time of infection, and vaccination status, NSW 26 November 2021 to 22 January 2022

infection, and vaccination status, NSW, 26 November 2021 to 22 January 2022						
Age-group (years)	Three or n	nore effective doses	Two	effective doses	Less than to	wo effective doses
0-9	-		-		<1%	(15 / 54,536)
10-19	0%	(0 / 232)	<1%	(5 / 54,508)	<1%	(6 / 15,854)
20-29	<1%	(1 / 3,849)	<1%	(22 / 128,000)	<1%	(7 / 2,692)
30-39	<1%	(2 / 3,833)	<1%	(33 / 87,486)	1%	(11 / 2,123)
40-49	<1%	(2 / 5,125)	<1%	(38 / 64,157)	1%	(14 / 1,176)
50-59	<1%	(5 / 4,258)	<1%	(58 / 52,112)	3%	(22 / 687)
60-69	<1%	(10 / 2,911)	<1%	(106 / 31,310)	6%	(33 / 512)
70-79	1%	(15 / 2,081)	1%	(189 / 14,013)	9%	(33 / 379)
80-89	1%	(8 / 1,046)	3%	(160 / 5,373)	17%	(40 / 231)
90+	2%	(7 / 447)	5%	(63 / 1,296)	17%	(18 / 103)
Total	<1%	(50 / 23,782)	<1%	(674 / 438,255)	<1%	(199 / 78,293)
Less than two effective doses combines those with one and no effective dose.						

Two children have died with COVID-19 throughout the pandemic, including one 15 year old with pneumococcal meningitis and one three-year-old with underlying genetic

\*Note: NSW data has not been updated since Report #9 (08 February 2022)







<sup>35</sup> https://www.nsw.gov.au/covid-19/stay-safe/rules

https://education.nsw.gov.au/covid-19/advice-for-families

https://www.health.gov.au/resources/collections/covid-19-vaccination-daily-rollout-update

https://twitter.com/NSWHealth

https://www.health.nsw.gov.au/Infectious/covid-19/Pages/weekly-reports.aspx

https://www.health.nsw.gov.au/Infectious/covid-19/Pages/weekly-reports.aspx https://www.health.nsw.gov.au/Infectious/covid-19/Pages/weekly-reports.aspx

#### Canada

(population 38 million)

#### PHSM<sup>42</sup> Schools & mitigation 43 Vaccination coverage 44 Fully Standard PHSM including TTIQ and mask wearing encouraged in shared spaces and Closed for winter holidays in Dec 2021 and subject to local advice. returned to school in mid-Jan 2022. Ontario 3<sup>rd</sup>/booster Age group 1st dose vacc.\* resumed in-person learning following a brief (years) (%) (%) (%) switch to remote learning due to rising case 5-11 22.7 54.6 numbers. 12-17 87.9 83.5 1.9 Standard PHSM and additional measures 84.2 79.4 42.6 Total pop. depending on local advice: physical distancing. \*Canada also uses the J&J/Janssen vaccine which is a singlecohorting, masks when required, screening dose vaccine. tests. RATs provided to students in Ontario for Third/booster doses have been available to high-risk individuals return to in-person learning. in phases since Sep 2021. Vaccination of 12y+ commenced mid-May and 5-11y in mid-Nov 2021. Infections by age group 45,46 Hospitalisations in children 47 Deaths by age group 48 Figure 7. Age and gender <sup>4</sup> distribution of COVID-19 cases hospitalized vin Canada as of February 11, 2022, 8 am EST (n=126,243 <sup>1</sup>) Figure 7. Age and gender 4 distribution of COVID-19 cases deceased am EST (n=34,612 1) in Canada as of February 11, 2022, 8 Figure 5. Distribution of confirmed COVID-19 cases reported to PHAC by vaccination status as of Male Female Other 12-19 n = 11 (0.0%) 10,000 12,000 14,000 16,000 18,000 20,000 22,000 24,000 Number (Proportion (%)) British Columbia (pop. 5.1 million, data has not been updated since Report #8, 31 Jan 2022): British Columbia (pop. 5.1 million, data has not been There have been 29 deaths with COVID-19 in children aged 0updated since Report #8, 31 Jan 2022): 19y throughout the pandemic. Genomic surveillance<sup>49</sup> 67







https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks.html

<sup>&</sup>lt;sup>40</sup> https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/planning-2021-2022-school-year-vaccination.html

<sup>44</sup> https://health-infobase.canada.ca/covid-19/vaccination-coverage/

https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html

http://www.bccdc.ca/schools/news-resources/data-for-k12

https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html

https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html

https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html

#### **Denmark**

(population 5.9 million)

PHSM <sup>50</sup>	Schools & mitigation 51	Vaccination coverage <sup>52</sup>	Genomic surveillance <sup>53</sup>
Partial lockdown reinstated from 19 Dec 2021. Restrictions eased in mid-	Closed early for winter holidays in 2021 and returned to school in early Jan 2022.	Age 1 <sup>st</sup> 2 <sup>nd</sup> 3 <sup>rd</sup> / group dose dose booster	8A.1 AY.2 BA.1 BA.1 BA.1 BA.1 BA.1 BA.1 BA.1 BA.1
January 2022 including reopening of certain public venues. All restrictions lifted from February 2022.	Standard PHSM, and PCR or RAT screening tests (recommended weekly for staff & students from grade 1 unless fully vaccinated or previously infected with COVID-19 in the last 6 months, twice weekly tests recommended for areas with high infection rates).	(years) (%) (%) (%)  12+ 82.5 80.9 61.4  Commenced 3 <sup>rd</sup> /booster vaccination for people 65+y in late Oct and for all adults from late Nov 2021.  Vaccination for 5-11y age group commenced late Nov 2021, coverage data not available.	Omicron is now the predominant variant (>99%).
Infections by age group 54,55	Hospitalisations in children <sup>56,57</sup>	Deaths by age group 58,59	MIS-C <sup>60</sup>
Weekly positive cases by age and vaccine status*  Ugentligt antal positive opdelt på alder og vaccinestatus Retaive og absolutie antal personer med positiv SARS-CoV-2 PCR test Vjers han like t-tillgjere positive.	Weekly admissions by age and vaccine status*  Ugentligt antal indlæggelser opdelt på alder og vaccinestatus Relative og absolutte antal indlæggelser med positiv SARS-CoV-2 PCR test	Weekly deaths by age and vaccine status*  Ugentligt antal døde opdelt på alder og vaccinestatus Relative og absolutte antal døde med positiv SARS-CoV-2 PCR test	Prevalence of MIS-C and Kawasaki syndrome in children since 2017 Figur 6. Forekomsten af MIS-C (Multi Inflammatory Syndrome in Children) og Kawa-
Visite kun like-ti-tiligere positive.  Positive per 100.000  Angive arrai positive per 100.0001 alders: og vaccinationegruppen  6.5	Indiaesgelser per 100 000  Argher antal indiaesgelser per 100 000 laiders og vacinationsgruppen  Argher antal indiaesgelser per 100 000 laiders og vacinationsgruppen  50 0 40 40 40 10 10 11 10 11 10 10 20 29 20 29 20 29 20 29 20 29 20 29 20 29 20 29 20 29 20 29 20 20 29 20 20 20 20 20 20 20 20 20 20 20 20 20	Dade per 100.000  Angiver antial dece per 100.000 index- og vaccinationsgruppen  64 641 1245 1649 20-29 30-39  150 0 40-49 150-89 60-64 66-64 70.79 85-  100 100 100 100 100 100 100 100 100 10	sakis syndrom blandt born siden 2017  Mukakudari Iymikarudasyndrom (Kawasasi))  15  16  Multsystem infammatory Syndrome in Children (MS-C)  17  18  19  19  10  11  12  13  10  11  11  12  13  10  10  10  10  10  10  10  10  10
Absolut antial positive  Angiver and junch incopieding vasce insidemostates (groupers are stabled;)  0-5	Absolut antal indiaggelser  Acquire antal rad againer opides polyvacatoritic (gruppeme er staties)  61	Absolut antal deede Arciginer antal deed opder på vaccinaciansaturas (grupperna er stabler)  61 1229 1619 2629  20 20  40-49 10-99 60-64 65-69 70-79  21 22 20 20 20 20 20 20 20 20 20 20 20 20	Multisystem inflammabrisk syndrom associeret med COVID-19  15  12  9  6  3  0  12  3  4  6  7  8  9  10  11  2017  2018  2019  2020  2021  2022
Ingen vaccination   Fuld effekt 2 doser   Fuld effekt 3 doser Kristoffer T. Bask, covid 19dammark.dk, data: SSI	Ingen vaccination   Fuld effekt 2 doser   Fuld effekt 3 doser	Ingen vaccination I Fuld effekt 2 doser Fuld effekt 3 doser  Kristoffer T. Usek. covid 19darmark.de. data: 551  Total of 3 deaths with COVID-19 in children aged 0- 19y throughout the pandemic.	

\*(1) Numbers per 100,000; (2) Absolute numbers; Yellow (unvaccinated), blue (two doses), green (three doses)





https://en.coronasmitte.dk/rules-and-regulations
 https://en.coronasmitte.dk/rules-and-regulations
 https://en.coronasmitte.dk/rules-and-regulations
 https://experience.arcgis.com/experience/9824b03b114244348ef0b10f69f490b4/page/page\_3/

https://covid19genomics.dk/statistics
https://covid19denomics.dk/statistics
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https://www.sst.dk/-imedia/Udgivelser/2022/Corona/Vaccination/Notat-vaccination-af-boern-5-11-aar.ashx

## England, UK

(population 56.6 million)

PHSM <sup>61</sup>	Schools & mitigation <sup>62</sup>	Vaccination coverage <sup>63</sup>
Standard PHSM including TTIQ and proof of vaccination/negative test required for certain venues; previously most PHSM lifted until re-introduced in late Nov 2021. Indoor mask-wearing no longer mandatory.	Closed for winter holidays in Dec 2021 and returned to school in early Jan 2022.  Standard PHSM, cohorting, mask wearing required for adults and students from year 7 onwards, twice-weekly RAT screening for staff and secondary school students, vaccination of 16-17y commenced mid-Aug & 12-15y commenced mid-Sep 2021 (initially as single dose). Close contacts who are fully vaccinated or under 18.5y and produce a negative PCR test result do not need to isolate.	Age group  (years) 1st dose (%) 2nd dose (%) 3rd/booster (%)  12+ 91.2 84.5 65.1  12-15 55.2 21.9 0.1  16-17 67.1 48.4 6.6  Third/booster dose available for all 18y+ and other high-risk groups.  Vaccination is recommended for children aged 5-11 years who are immunocompromised.
Infections by age group <sup>64</sup>	Hospitalisations in children <sup>65,66</sup>	Deaths by age group <sup>67</sup>
Figure 5: Weekly confirmed COVID-19 case rates per 100,000, by episode*, tested under Pillar 1 and Pillar 2, by age group  4,000 3,500	Figure 43: Weekly hospital admission rate by age group for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch  (a)  350  04  5-14  15-24  25-44	Figure 55: Age-sex pyramid of deaths within 28 or 60 days of a positive COVID-19 test, for the past year    Female (28 day)   Maile (28 day)   Female (60 day)   Maile (60 day)







https://www.gov.uk/guidance/covid-19-coronavirus-restrictions-what-you-can-and-cannot-do
https://www.gov.uk/government/publications/actions-for-schools-during-the-coronavirus-outbreak/schools-covid-19-operational-guidance
https://coronavirus.data.gov.uk/details/vaccinations?areaType=nation&areaName=England
https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season
https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season
https://www.ons.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season
https://www.ons.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season
https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season

#### **Finland**

#### (population 5.5 million)

PHSM <sup>68</sup>	Schools & mitigation 69	Vaccination coverage 70
Restrictions reinstated in late Dec 2021, including mandatory indoor mask wearing, proof of vaccination to attend premises, work from home default and density limits. Additional restrictions in early Jan 2022 including limits on household visitors, hospitality opening hours and access to public places. Gradual easing of restrictions from Feb 2022.	Schools closed for winter holiday in late Dec 2021 and reopened in early Jan 2022.  Standard PHSM, cohorting, masks, ventilation, vaccination of 12y+ commenced early Aug & 5-11y in late Dec 2021.	Age group 1st dose 2nd dose 3rd/booster (years) (%) (%) (%)  18+ 88.6 86.0 59.4  5-11 24.7 0.5 -  12-17 79.7 73.2 1.1 Third/booster dose is recommended for all aged 18y+. Fourth dose recommended for 12y+ with severe immunodeficiency. Vaccine offered to 5-11y children from late Dec 2021.
Infections by age group <sup>71,72</sup>	Hospitalisations in children <sup>73</sup>	Deaths by age group <sup>74</sup>
Finland: 14-day age-specific COVID-19 case notification rate	Hospitalisations by age group (14-day average):  Covid-19-ta-trumes vueside criticises/reambificion vuodeceastelle joutunimen ilmanaturuus 24 palvin liukuvusla ajarjaksolla käryhmittäin rokotusetatuksen mutkaan  12-38  0-31  12-38  12-39  10-30  1	Deaths by age group (for the whole period)  1,500  1,000







bttps://valtioneuvosto.fi/en/information-on-coronavirus/current-restrictions
https://valtioneuvosto.fi/en/information-on-coronavirus/current-restrictions
https://sampo.thl.fi/piwot/prod/en/vaccreg/cov19cov/summary\_cov19ageareacov
https://sampo.thl.fi/fi/web/infektiotaudit-ja-rokotukset/ajankohtaista/ajankohtaista-koronaviruksesta-covid-19/tilannekatsaus-koronaviruksesta/koronaviruksen-seuranta
https://covid19-country-overviews.ecdc.europa.eu/countries/Finland.html
https://covid19-country-overviews.ecdc.europa.eu/countries/Finland.html
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https://experience.arcgis.com/experience/92e9bb33fa-744(9a)04381fc35aa3c7
https://thl.fi/fi/web/infektiotaudit-ja-rokotukset/ajankohtaista/ajankohtaista-koronaviruksesta-covid-19/tilannekatsaus-koronaviruksesta/koronaviruksen-seuranta

#### **Netherlands**

(population 17.4 million)

#### PHSM<sup>76</sup> Schools & mitigation 77 Vaccination coverage 78 3<sup>rd</sup>/booster Age group 1st dose Fully vacc. Work from home default, household visitor limits, Closed for winter holidays in late Dec 2021 and returned to recommendation to perform self-test before visiting others school in early Jan 2022. (vears) (%) (%) (%) or public places, mask wearing required indoors, all public 12-17 69.0 68.0 venues open with time and density limits, TTIO. Standard PHSM, mask wearing required for secondary school 18+ 86.3 60.6 staff and students, twice-weekly RAT screening for staff and \*Note: The Netherlands also uses the J&J/Janssen vaccine which secondary school students, ventilation, quarantine is a single-dose vaccine. arrangements based on case numbers within a cohort, Third/booster dose available for all 18y+. Vaccination coverage vaccination of 12-17y commenced early July 2021 & 5-11y data for children 5-11y is not available. commenced mid-Jan 2022. Infections by age group 79 Hospitalisations in children 80,81 Deaths by age group 82 - 0-9 - 10-19 - 20-29 - 30-39 - 40-49 - 50-59 - 60-69 - 70-79 - 80-89 - 90+ - 0-19 - 20-29 - 30-39 - 40-49 - 50-59 - 60-69 - 70-79 - 80-89 - 90+ Distribution of age groups in the Netherlands Deaths by age group 27 Apr 202 -- All age groups Data for recent days is incomplete due to reporting delays This value is larger than shown in the graph Source: NICE via RIVN Value of Sunday, 13 February - Source: RIVM Hospital admissions Genomic surveillance 83 If we look at all hospital admissions (81,070) reported by the NICE Foundation → between 1 January 2021 and 1 The number of deaths in children is not known as the Netherlands February 2022, 1.0% (802) were younger than 4 years old. 0.2% (198) were aged 4-11 years and 0.3% (232) were provides a total sum of all deaths between 0-49 years. Inschatting aandeel Alpha, Beta, Gamma, Delta, OmicronBA.1, OmicronBA.2 aged 12-17 years. The vast majority (98.5% or 79,838) of all people admitted to hospital with COVID-19 were aged 18 years or older. Age group Children Hospital admissions 4-11 0.2% >17 79838 98,5%







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https://www.government.nl/topics/coronavirus-covid-19/tackling-new-coronavirus-in-the-netherlands/coronavirus-measures-in-brief

https://www.rivm.nl/en/coronavirus-covid-19/children-and-covid-19

https://coronadashboard.government.nl/landelijk/vaccinaties

https://coronadashboard.government.nl/landelijk/positief-geteste-mensen

https://coronadashboard.government.nl/landelijk/ziekenhuis-opnameshttps://www.rivm.nl/en/coronavirus-covid-19/children-and-covid-19/research-results-ggd-data

https://coronadashboard.government.nl/landelijk/sterfte

<sup>83</sup> https://www.rivm.nl/en/coronavirus-covid-19/virus/variants



(population 5.5 million)

#### PHSM<sup>84</sup>

Minimal restrictions before reinstated in Dec 2021, including mandatory masks indoors, density limits, recommendation to travel only for essential reasons, work from home default and proof of vaccination to attend premises.

From 24 Jan 2022, restrictions eased including removal of density limits and household visitor limits. Hybrid work arrangements introduced.

#### Schools & mitigation 85

Closed for winter holidays in late Dec 2021 and returned to school in early Jan 2022.

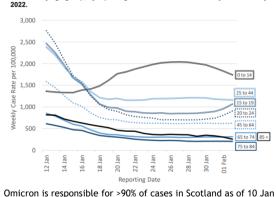
Standard PHSM, cohorting, mask wearing recommended for adults and students from year 7 onwards, twice-weekly RAT screening for staff and secondary school students, vaccination of 16-17y commenced mid-Aug & 12-15y commenced mid-Sep 2021 (initially as single dose). Close contacts who are fully vaccinated or under 18.5y and produce a negative PCR test result do not need to isolate.

#### Vaccination coverage 86 1st 2<sup>nd</sup> Age dose dose 3<sup>rd</sup>/booster group (years) (%) (%) (%) 12+ 92.6 86.6 70.0 12-15 69.4 38.8 1.0 16-17 83.2 56.7 10.8

Third/booster dose available for all 18y+ and other highrisk groups. Vaccination is recommended for children aged 5-11 years who are immunocompromised.

#### Infections by age group 87\*

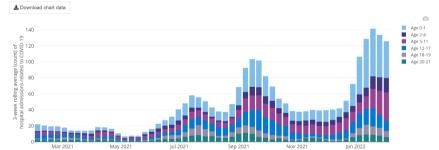
## Figure 6: Weekly total combined PCR and LFD cases per 100,000 population in Scotland by age group, by reporting date<sup>23</sup>. Data from 12 January to 2 February 2022.



2022.

#### Hospitalisations in children 88

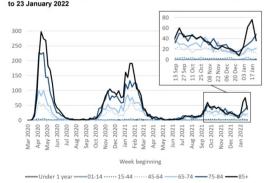
Hospital admissions related to COVID-19 (3-week rolling average)



Any admitted child who is COVID-19 positive is included, so this overestimates the number of children being admitted and needing treatment for COVID-19.

#### Deaths by age group 89,90\*

Figure 11: Deaths by age group (weekly total by week beginning, NRS), data up to 23. January 2022



There have been 3 deaths due to COVID-19 in children aged 0-14y in the past year.

\*Note: Data has not been updated since Report #9 (08 February 2022)







https://www.gov.scot/coronavirus-covid-19/

https://www.gov.uk/government/publications/actions-for-schools-during-the-coronavirus-outbreak/schools-covid-19-operational-guidance

https://coronavirus.data.gov.uk/details/vaccinations?areaType=nation&areaName=Scotlanc thttps://www.gov.scot/collections/coronavirus-covid-19-the-state-of-the-epidemic/

https://scotland.shinyapps.io/phs-covid19-education/\_w\_852fb58e/

https://www.gov.scot/collections/coronavirus-covid-19-the-state-of-the-epidemic/

https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/weekly-and-monthly-data-on-births-and-deaths/deaths-involving-coronavirus-covid-19-in-scotland

### Singapore

(population 5.5 million)

#### PHSM<sup>91</sup>

Restrictions re-introduced in late Sep 2021 after temporary easing.

Mandatory masks indoors & outdoors, TTIQ, work from home, shops open with density limits and digital check-in, vaccination requirements to enter some premises, limits on guests at home.

#### Schools & mitigation 92

Closed for end-of-year holidays in mid-Nov 2021 and returned to school in early Jan 2022.

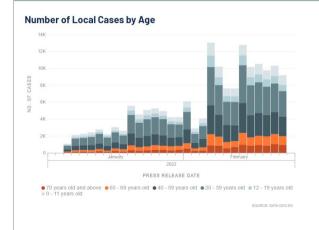
Standard PHSM, cohorting, RAT & temperature screening, mandatory masks 6y+ with exceptions, vaccination of 12y+ commenced early Jun 2021 and 5-11y in late Dec 2021.

#### Vaccination coverage 93

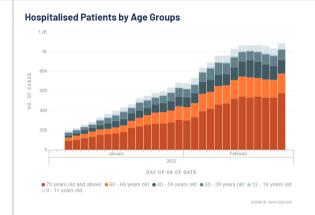
Age group	1st dose	2 <sup>nd</sup> dose	3 <sup>rd</sup> /booster
(years)	(%)	(%)	(%)
Total pop.	92.0	90.0	63.0

Third/booster dose available for all aged 12y+. From 14 Feb 2022, all 18y+ must receive a booster dose within 270 days of their  $2^{nd}$  dose to be considered fully vaccinated. The same will apply to all 12-17y from 14 Mar 2022.

#### Infections by age group 94



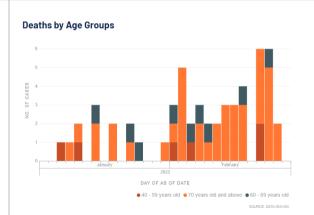
#### Hospitalisations in children 95



One child was admitted to ICU due to MIS-C for the entire pandemic.

There have been five reported cases of MIS-C throughout the entire pandemic, last reported 8 Nov 2021.

#### Deaths by age group 96



There have been 0 deaths in children throughout the entire pandemic.







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https://www.moh.gov.sg/covid-19-phase-advisory

https://www.moe.gov.sg/faqs-covid-19-infection

<sup>93</sup> https://www.moh.gov.sg/

https://www.moh.gov.sg/ https://www.moh.gov.sg/

<sup>%</sup> https://www.moh.gov.sg/

#### South Africa

#### (population 60.4 million)

#### PHSM<sup>97</sup>

Since 1 Oct 2021, restrictions including partial curfew, mandatory masks 6y+ with exceptions, density limits.

Since 30 Dec 2021, lifting of certain restrictions including removal of curfew and increased density limits.

#### Schools & mitigation 98,99

Closed for end-of-year holidays in mid-Dec 2021 and returned to school in early Jan 2022.

Standard PHSM, ventilation, symptom screening, mandatory masks 6y+ with exceptions, visitor limits, vaccination of 12y+.

#### Vaccination coverage 100

Age group Fully

(years) vaccinated\* (%)

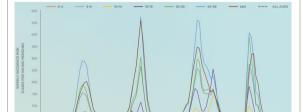
18+ 47.2

\*Note: South Africa also uses the J&J/Janssen vaccine which is a single-dose vaccine.

Vaccination is available for all aged 12y+. Coverage data for 12-17y not available.

#### Infections by age group 101

Characteristics of COVID-19 cases in South Africa by age and sex

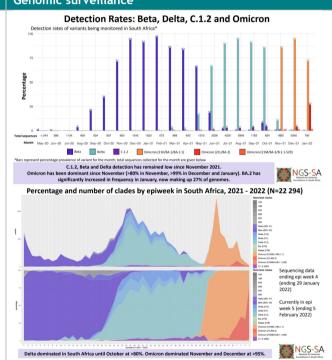


#### Hospitalisations in children and deaths by age group 102



Total of 815 deaths with COVID-19 in children 0-19y throughout the entire pandemic. Deaths in children account for <1% of all deaths in South Africa.





\*Note: Data has not been updated since Report #9 (08 February 2022)





https://www.gov.za/covid-19/resources/regulations-and-guidelines-coronavirus-covid-19/

https://www.gov.za/covid-19/resources/regulations-and-guidelines-coronavirus-covid-19

https://sacoronavirus.co.za/vaccine-updates/ loo https://sacoronavirus.co.za/latest-vaccine-statistics/

https://www.nicd.ac.za/diseases-a-z-index/disease-index-covid-19/surveillance-reports/weekly-epidemiological-brief/

 $<sup>^{102} \</sup> https://www.nicd.ac.za/diseases-a-z-index/disease-index-covid-19/surveillance-reports/daily-hospital-surveillance-datcov-report/disease-index-covid-19/surveillance-reports/daily-hospital-surveillance-datcov-report-datcov-report-d$ 

https://www.nicd.ac.za/diseases-a-z-index/disease-index-covid-19/sars-cov-2-genomic-surveillance-update/

#### **USA**

#### (population 332.8 million)

PHSM <sup>104</sup>	Schools & mitigation 105	Vaccination coverage 106,107					
The US CDC recommends indoor mask wearing for all unvaccinated and aged 2y+, physical	Closed for winter holidays in late Dec 2021 and reopened from early Jan 2022.	Age group (years)	1 <sup>st</sup> dose (%)	Fully vaccinated* (%)	3 <sup>rd</sup> /booster (%)	*Note: The US also uses the J&J/Janssen vaccine which is a single-dose vaccine.	
distancing, hand & surface hygiene, TTIQ, but adoption varies by State/Territory.	Standard PHSM, cohorting, masks, PCR &	5-11	5-11 31.5 23.8		-	Third/booster dose for 65y+ and other high-risk individuals from Sep	
, and a second s	RAT screening, vaccination commenced mid-May for 12y+ and early Nov 2021 for	12-17 64.7 54.8		-	2021, expanded to all 18y+ from late Nov 2021 and 12y+ from early Jan		
	5-11y, but adoption varies by State.	18+	87.5	74.6	46.1	2022.	
Infections by age group 108	MIS-C <sup>109</sup>	Deaths by ag	ge group 110,1	11	Genomic surve	eillance 112	
COVID-19 Weekly Cases per 100,000 Population by Age Group, United States  March 01, 2020 - February 12, 2022*  Age Group	The shaded area on the right side of the figure represents the most recent six weeks of data, for which reporting of MIS-C cases is still incomplete.	COVID-19 Weekly Deaths per 100,000 Population by Age Group, United States  March 01, 2020 - February 12, 2022*  Apr Group  Total 795 deaths with COVID-19 in children 0-17y throughout the entire pandemic, accounting for <0.1% of all deaths in the US.  There is marked variation by State/Territory and case fatality rates are between 0-0.01% for the vast majority of States and Territories 113; e.g. Texas (n=124); Arizona (n=59); California (n=51); Tennessee (n=32); Puerto Rico (n=9); Guam (n=5); Hawaii (n=1); Alaska (n=2).			United States: 1031/2821 – 25/2022  United States: 1031/2821 – 25/2022 NOWCAST  USA  VENCINAL Image: 105/282 NowCAST  One of the state		
Any admitted child who is COVID-19 positive is likely to be included, so this is likely to be an overestimation of the number of children needing treatment for COVID-19.	There have been 6851 cases of MIS-C throughout the entire pandemic, including 59 deaths. The median age of MIS-C cases was 9y and half were between 5-13y.  Note: Data has not been updated since Report #9 (08						

February 2022)





https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-guidance.html https://covid.cdc.gov/covid-data-tracker/#vaccinations\_vacc-total-admin-rate-total

https://covid.cdc.gov/covid-data-tracker/#vaccinations-vacc-tucar-guinnerac
https://covid.cdc.gov/covid-data-tracker/#vaccination-demographics-trends
https://covid.cdc.gov/covid-data-tracker/#demographicsovertime
https://covid.cdc.gov/covid-data-tracker/#imis-national-surveillance
https://covid.cdc.gov/covid-data-tracker/#imis-national-surveillance
https://www.cdc.gov/nchs/nvss/vsr/covid-weekly/index.htm

https://covid.cdc.gov/covid-data-tracker/#variant-proportions https://covid.cdc.gov/covid-data-tracker/#variant-proportions https://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/children-and-covid-19-state-level-data-report/https://gis.cdc.gov/grasp/COVIDNEY-COVID19\_3.html

## **USA:** Comparison of states

A comparison of select US states based on 7-day incidence per 100,000 population and PHSM.

INDICATOR	MONTANA (pop. 1.1 million)			TENNESSEE (pop. 6.8 million)			CALIFORNIA (pop. 39.5 million)			
7-day incidence per 100,000 population <sup>115</sup>	618			574			490			
PHSM	Mask wearing encouraged, physical distancing, TTIQ <sup>116</sup>			Mask wearing encouraged, physical distancing, TTIQ <sup>117</sup>			Indoor mask wearing mandatory in many indoor venues for all aged 2+, TTIQ <sup>118</sup>			
Schools & mitigation	Closed in Dec 2021 for winter holidays, returned to school in early Jan 2022.  Standard PHSM as recommended by US CDC, school-based mask mandates with option for parents to optout, vaccination encouraged, vaccination of 12+y commenced mid-May and 5-11y in early Nov 2021. 119			Closed in Dec 2021 for winter holidays, returned to school in early Jan 2022.  Standard PHSM as recommended by US CDC, mask wearing and vaccination encouraged, vaccination of 12+y commenced mid-May and 5-11y in early Nov 2021. 120			Closed in Dec 2021 for winter holidays, returned to school in early Jan 2022.  Standard PHSM as recommended by US CDC, mask wearing mandatory for all aged 2+, PCR & RAT screening, vaccination of 12+y commenced mid-May and 5-11y in early Nov 2021, mandatory staff vaccination or weekly testing. 121			
Vaccination coverage <sup>122</sup>	Age group (years) 5-11 12-17 18-64 65+	1st dose (%) 24.3 50.0 68.1 99.9	Fully vacc.* (%) 17.8 42.4 58.6 92.0	Age group (years) 5-11 12-17 18-64 65+	1 <sup>st</sup> dose (%) 16.9 44.1 67.6 97.3	Fully vacc.* (%) 12.9 37.0 58.2 88.8	Age group (years) 5-11 12-17 18-64 65+	1st dose (%) 38.2 79.4 90.1 99.9	Fully vacc.* (%) 29.3 69.1 77.6 94.2	
	*The US also uses the J&J/Janssen vaccine which is a single-dose vaccine. State-specific data on 3 <sup>rd</sup> /booster dose coverage not available.									

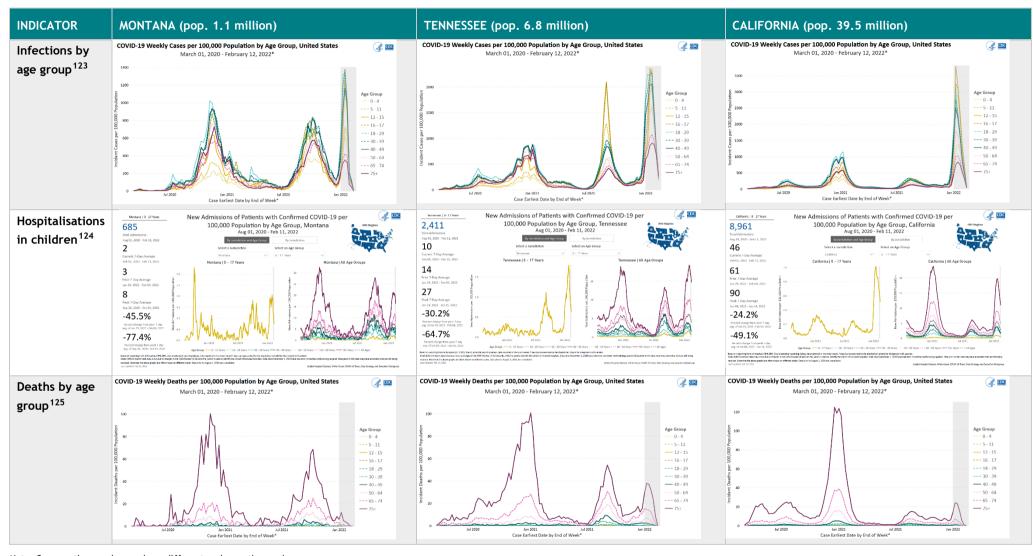






<sup>115</sup> https://covid.cdc.gov/covid-data-tracker/#cases\_casesper100klast7days
116 https://covid19.mt.gov/index
117 https://covid19.tn.gov/prevention/
118 https://covid19.ca.gov/masks-and-ppe/
119 https://opid19.ca.gov/masks-and-ppe/
119 https://dphhs.mt.gov/publichealth/cdepi/diseases/CoronavirusMT/index
110 https://www.tn.gov/health/cdepi/ncov/educational-resources.html
121 https://www.tn.gov/health/cdepi/ncov/educational-resources.html
122 https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/K-12-Guidance-2021-22-School-Year.aspx
123 https://www.manuerling.org/coronavirus-covid-19/vaccine-tracker

https://www.mayoclinic.org/coronavirus-covid-19/vaccine-tracker



Note: Comparative graphs may have different scales on the y-axis.







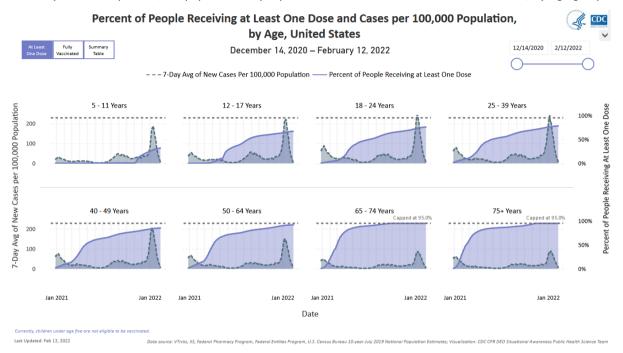
<sup>123</sup> https://covid.cdc.gov/covid-data-tracker/#demographicsovertime

https://covid.cdc.gov/covid-data-tracker/#new-hospital-admissions

https://covid.cdc.gov/covid-data-tracker/#demographicsovertime

## USA: Impact of vaccination on disease incidence

Seven-day incidence per 100,000 population in people who received at least one dose of vaccine, by age group. 126









https://covid.cdc.gov/covid-data-tracker/#vaccinations-cases-trends



#### Darren Suryawijaya Ong

Research Assistant, Asia-Pacific Health, Murdoch Children's Research Institute

#### Dr John Hart

Research Clinician, Asia-Pacific Health, Murdoch Children's Research Institute

#### **Professor Fiona Russell**

Director, Child and Adolescent Health PhD Program, Department of Paediatrics, The University of Melbourne Group Leader, Asia-Pacific Health, Murdoch Children's Research Institute

To subscribe and receive the weekly reports, please email: <a href="mailto:asiapacific.health@mcri.edu.au">asiapacific.health@mcri.edu.au</a>

Murdoch Children's Research Institute

50 Flemington Rd, Parkville Victoria 3052 Australia ABN 21 006 566 972

 $\underline{\text{https://www.mcri.edu.au/research/themes/infection-and-immunity/asia-pacific-health}}$ 





