



COVID-19 and Children's Surveillance Report

Number 13

Compiled: 21 March 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.
- All countries included in this report are offering vaccination to primary school aged children and adolescents, except for South Africa. First dose coverage rates range from ~5-57% among 5-11 year olds and ~57-90% among 12-15 year olds.
- 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 most settings is now declining.
- The Omicron variant of concern³ was first reported from South Africa on 25 November 2021. At the time of writing, it has been detected in 167 countries⁴, up from 165 countries in the last report. Omicron is now the predominant variant worldwide due to its high transmissibility. Subvariant BA.2 has replaced BA.1 as the predominant Omicron subvariant in several regions, including NSW, Denmark, the Netherlands, South Africa and the UK.
- School mitigation measures include rapid antigen testing (RAT) in many countries. Victoria had a mask mandate for year 3 onwards whereas NSW mandated masks for secondary school students. Both states removed school mask mandates in late February 2022, except for primary schools in Victoria. No Nordic countries have had mask mandates for children and several countries have never recommended masks for children.
- All countries reopened schools during the Omicron period. Following the peak in infections and reopening of schools in Victoria and NSW in February 2022, infections, hospitalisations, ICU admissions and deaths declined. This pattern was similarly observed after schools reopened in 2020 with the ancestral strain, and in 2021 with the Delta variant. Schools did not drive infections as the peak of the Omicron wave occurred during the school holidays and reflected broader community transmission.
- Some countries had an increase in cases in children and adolescents with schools reopening during the Omicron period, which mostly declined within a few weeks. Similarly, hospitalisations briefly increased in children, but this has been a combination of admission for COVID-19 treatment and incidentally testing positive when admitted for an unrelated condition.
- The increase in paediatric hospitalisations during the Omicron wave was seen more so in the 0-4 year old age group.⁵ In the USA, the rate of hospitalisations during the peak of the Omicron wave was highest in children aged 0-4 years at 15.6 per 100,000 children (four times higher than the Delta variant peak of 1.8).⁶ The monthly hospitalisation rate of unvaccinated adolescents aged 12-17 years was six times higher than fully vaccinated adolescents (23.5 vs 3.8 per 100,000). Hospitalisation rates were lowest in the 5-11 year age group at approximately 3 per 100,000.
- 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.⁷ MIS-C has not increased in the USA as yet, despite a large increase in Omicron cases.⁸ A UK study found that compared with the Alpha wave, there were fewer

¹ Russell FM, Anderson V, Crawford N, Curtis N, Danchin M, Goldfeld S, Hart J, Keeble T, Medley T, Mutholland 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.mcrci.edu.au/sites/default/files/media/documents/covid-19_in_early_childhood_education_and_care_and_schools.pdf

² 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/>

³ World Health Organization (WHO). Update on Omicron 28 November 2021. Geneva, Switzerland: WHO; 2021. <https://www.who.int/news/item/28-11-2021-update-on-omicron>

⁴ GISAID. Tracking of Variants. Munich, Germany: GISAID; 2022. <https://www.gisaid.org/hcov19-variants/>

⁵ New York State Department of Health. Pediatric COVID-19 Update 07 January 2022. New York, US: New York State Department of Health; 2022. https://www.health.ny.gov/press/releases/2022/docs/pediatric_covid-19_hospitalization_report_summary.pdf

⁶ Marks KJ, Whitaker M, Anglin O, et al. Hospitalizations of children and adolescents with laboratory-confirmed COVID-19 - COVID-NET, 14 States, July 2021 - January 2022. MMWR. 2022;71(7):271-8. <https://www.cdc.gov/mmwr/volumes/71/wr/mm7107e4.html>

⁷ Omicron drives record cases of child COVID hospitalisations. Financial Times. 17 January 2022. <https://www.ft.com/content/28be9d3f-0b12-4c33-bda9-fbf375c0b7e>

⁸ Does Omicron hit kids harder? Scientists are trying to find out. Nature. 04 February 2022. <https://www.nature.com/articles/d41586-022-00309-x>



cases of MIS-C relative to SARS-CoV-2 infections during both the initial and subsequent Delta waves, and continuing into the Omicron wave despite extensive spread of BA.1.⁹ Seroprevalence surveys found that 97.6% of children aged 8-11 years have been exposed to or infected by COVID-19 by the third week of February 2022.¹⁰

- There is no increase in excess mortality in children aged 0-14 years in Europe during the Omicron period.¹¹
- There is no evidence that school re-opening during the Omicron period has increased community transmission or increased excess mortality in all ages. Where reported, excess mortality has declined, except for temporary increases in Denmark and the Netherlands which are now declining.
- Finland has removed all restrictions on children and Denmark has lifted all restrictions since February 2022. The Netherlands and England are slowly lifting remaining restrictions. Mask mandates have been removed from several regions, including Victoria (except in primary schools for years 3 to 6), NSW and the UK.

⁹ Cohen JM, Carter MJ, Cheung CR, et al. Lower risk of paediatric inflammatory multisystem syndrome (PIMS-TS) with the Delta variant of SARS-CoV-2 [Preprint]. medRxiv. 2022. <https://www.medrxiv.org/content/10.1101/2022.03.13.22272267v1>

¹⁰ Office for National Statistics (ONS). Coronavirus (COVID-19) antibody and vaccination data for the UK. London, United Kingdom: ONS; 2022. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/datasets/coronaviruscovid19antibodydatafortheuk>

¹¹ 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-Dec 2021 and they reopened in late Jan 2022. Early childhood centres have remained open.
 - Restrictions have eased further to remove density limits for hospitality, mandatory mask-wearing and advice to work from home in mid-Feb 2022.
 - Schools reopened with multi-layered mitigation strategies in place, including twice-weekly surveillance RATs (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. From late Feb 2022, masks are only required indoors in primary schools for all staff and students in grade 3 and above.
 - Approximately 56% of 5-11 year olds and 90% of 12-15 year olds have received at least one dose of a COVID-19 vaccine.
 - From early Apr 2022, a second booster dose will be offered to all aged 65 years and older and high-risk groups, including Indigenous Australians 50 years and older, individuals living in aged or disability care and immunocompromised individuals aged 16 years and older.
 - Case numbers are increasing, with currently ~8600 confirmed cases per day in all ages.
 - Infections are highest in the 30-39 year age group, followed by 20-29 year olds. One million children are offered RATs each week, so children are tested more and therefore likely to be over-represented in case numbers and the percentage contribution to all infections, although testing compliance is not known and the daily breakdown by age for RATs is not available.
 - Since 8 Jan 2022, both PCR and RAT positive results are considered positive cases.
 - There is no hospitalisation data available by age, but overall numbers are stable.
 - Two children have died with COVID-19 throughout the entire pandemic.
- **NSW** schools closed for holidays from mid-Dec 2021 and reopened in late Jan 2022. Early childhood centres have remained open.
 - Restrictions have eased further to remove mandatory mask-wearing and advice to work from home in mid Feb 2022.
 - 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, mask-wearing and cohorting. From late Feb and early Mar 2022, RATs are only used for symptomatic testing of students and staff (no longer for surveillance), masks are no longer required in most school settings and cohorting removed.
 - Approximately 49% of 5-11 year olds and 84% of 12-15 year olds have received at least one dose of vaccine.
 - From early Apr 2022, a second booster dose will be offered to all aged 65 years and older and high-risk groups, including Indigenous Australians 50 years and older, individuals living in aged or disability care and immunocompromised individuals aged 16 years and older.
 - Case numbers are increasing, with currently ~20,000 confirmed cases per day in all ages. Omicron subvariant BA.2 has become the predominant variant from the second week of Mar 2022.
 - Infections are highest in the 10-19 year age group and lowest in the 60+ year age group. Finer age breakdown is needed to understand if these are school aged children or 18-19 year olds (young adults). Children across the state were offered weekly RATs until the end of Feb 2022, they are likely to be over-represented in case numbers and the percentage contribution to total infections due to increased testing.
 - There is no data on hospitalisation trends by age, but overall hospitalisations continue to decline.
 - Four children have died with COVID-19 throughout the entire pandemic.
- **In Europe and North America**, there is now a downward trend in most countries and regions, although some regions are experiencing a new increase due to both an increase in Omicron subvariant BA.2, which is more transmissible, and the easing of restrictions.
- **Canada** closed its schools for the holidays in Dec 2021 and they reopened in early to mid-Jan 2022.
 - Public Health and Social Measures (PHSM) vary by province.
 - Approximately 57% 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 with Omicron but are now declining.
 - There have been 34 deaths with COVID-19 in children aged 0-19 years throughout the entire pandemic.
- **Denmark** closed its schools early for the end-of-year holidays and they reopened in early Jan 2022. Excess mortality in all age groups dramatically declined over the Omicron period but slightly increased before decreasing and stabilising over the past month.¹²

¹² EuroMOMO. Graphs and maps. Copenhagen, Denmark: Statens Serum Institut (SSI); 2022. <https://www.euromomo.eu/graphs-and-maps>



- Restrictions introduced due to the Omicron wave (BA.2) were eased in mid-Jan 2022. From 1 Feb, all restrictions have been lifted.
- Approximately 82% of the population aged 12+ have received at least one dose of vaccine. The 5-11 year old vaccination program commenced in late Nov 2021 but coverage data for this age group is not available.
- Total infection rates are stabilising in all age groups.
- Hospitalisations in children have remained relatively stable and very low, with a small increase in unvaccinated young children.
- A total of 44 cases of MIS-C have been reported throughout the Omicron period (1 Nov 2021 to 1 Feb 2022).¹³
 - 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 Nov and Dec 2021, attributed to the increase in Delta infections in Oct 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 four deaths with COVID-19 in children aged 0-19 years throughout the entire pandemic. Deaths are predominantly in those unvaccinated, or those aged >70 years and especially in those aged >80 years.
- **England** reopened its schools in early Jan 2022 following the end-of-year holidays. Excess mortality in all age groups continues to dramatically decline over the Omicron period.¹⁴
 - Additional PHSM were reintroduced in late Nov 2021 which have been eased. Masks are no longer required in indoor places, including schools. Asymptomatic RATs continue to be encouraged and are provided free of charge. RATs and PCR tests will no longer be free from Apr 2022, except for those aged 75 years and older, immunosuppressed individuals and health/social care workers with symptoms.
 - Approximately 57% of 12-15 year olds and 68% of 16-17 year olds have received at least one dose of vaccine. Vaccination for 5-11 year olds commenced in late Feb 2022 but coverage data is not available.
 - Infections across all age groups peaked in late Dec 2021 to early Jan 2022 and then decreased, but are now on an upward trend with subvariant BA.2 increasing.
 - Infection rates are highest in the 30-49 year age group and lowest in the 0-4 age group.
 - Overall hospitalisations remain stable, although there is now an increase in the 75+ year age group. Hospitalisations remain lowest in children 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. For children aged <4 years, about 70% are admitted for treatment of COVID-19. For children 5-19 years about 50% of the COVID-19 hospitalisations are incidental cases.¹⁵
 - There have been 83 deaths with COVID-19 in children aged 0-19 years in the past year.
- **Finland** reopened its schools in early Jan 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.¹⁶
 - Additional restrictions were reintroduced in late Dec 2021, including indoor mask wearing, proof of vaccination, work from home default and density limits. Further restrictions were introduced in Jan 2022, including limits on household visitors, hospitality opening hours and access to public places. From Feb 2022, restrictions are being lifted gradually. From early Mar 2022, advice to work from home was removed.
 - Approximately 26% of 5-11 year olds and 80% of 12-17 year olds have received at least one dose of vaccine.
 - Infections are increasing and are highest in the 24-49, followed by the 15-24 year age groups. Infections in children <15 years continue to decrease.
 - There is no hospitalisation data available by age. Total hospitalisations are high but stabilising.
 - There have been no deaths in children throughout the entire pandemic.
- **The Netherlands** reopened its schools in early Jan 2022 following the end-of-year holidays. Excess mortality in all age groups declined over the Omicron period, with a temporary increase in late Feb 2022.¹⁷
 - Some restrictions continue to be in place, including indoor mask wearing for certain venues and hybrid work arrangements. Masks are required for secondary school staff and student complemented with twice-weekly RAT screening. There is a gradual lifting of all remaining restrictions.
 - Approximately 69% of 12-17 year olds and 5% of 5-11 year olds have received at least one dose of vaccine.
 - Infections due to BA.1 were on a steep downward trend when restrictions eased, including removal of mask-wearing, until late Feb 2022. Subvariant BA.2 resulted in a steep upward trend over a few weeks, followed by a steep decline. Infections are highest amongst 30-39 year olds. There is an age-related increase in infection rates in children.

¹³ Sundhedsstyrelsen [Danish Health Authority]. Opdatering vedr. covid-19 vaccination af børn på 5-11 år [Update regarding COVID-19 vaccination of children aged 5-11 years]. Copenhagen, Denmark: Sundhedsstyrelsen; 2022. <https://www.sst.dk/-/media/Udgivelser/2022/Corona/Vaccination/Notat-vaccination-af-boern-5-11-aar.ashx>

¹⁴ EuroMOMO. Graphs and maps. Copenhagen, Denmark: Statens Serum Institut (SSI); 2022. <https://www.euromomo.eu/graphs-and-maps>

¹⁵ UK Health Security Agency (UKHSA). Weekly influenza and COVID-19 surveillance graphs. London, United Kingdom: UKHSA; 2022. <https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season>

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

¹⁷ EuroMOMO. Graphs and maps. Copenhagen, Denmark: Statens Serum Institut (SSI); 2022. <https://www.euromomo.eu/graphs-and-maps>



- Hospitalisations increased with Omicron (BA.1 and BA.2) but have since declined. There is now an increase in the 70+ year age groups, especially in the 90+ year olds, but rates remain stable and lowest in children.
 - In the past year, children <18 years accounted for 2% of all hospital admissions with COVID-19.
- The number of deaths with COVID-19 in children is not reported.
- **Scotland** reopened its schools in early Jan 2022 following the end-of-year holidays. Excess mortality in all age groups continues to decline over the Omicron period.¹⁸
 - Restrictions eased in late Jan 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 in most public places but school staff and students are no longer required to wear masks since late Feb 2022, except in indoor communal areas of secondary schools (e.g. corridors). Asymptomatic RATs continue to be encouraged and are provided free of charge. Similar to England, Scotland has plans to limit the provision of free RATs and PCR tests for most individuals in Apr 2022, including those who are symptomatic.
 - Approximately 71% of 12-15 year olds and 84% of 16-17 year olds have received at least one dose of vaccine. Vaccination for 5-11 year olds commenced in late Feb 2022 but coverage data is not available.
 - Infections across all age groups peaked in Jan 2022 and then decreased, but are now on an upward trend.
 - Infection rates are highest in the 40-49 year age group.
 - Hospitalisations in children had increased but stabilising. For children, hospitalisations are 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 five deaths due to COVID-19 in children aged 0-14 years in the past year.
- **Singapore** reopened its schools in early Jan 2022 following the end-of-year holidays.
 - From early Jan 2022, masks were made mandatory indoors & outdoors and shops were open with density limits. Masks remain mandatory in schools for all aged 6 years and older.
 - Approximately 93% of the entire population has received at least one dose of vaccine. All children aged 5-11 years are offered vaccine.
 - Following a peak in infections, there is currently a downward trend with ~9900 cases per day, primarily in the 20-39 year age group and lowest in children.
 - Overall hospitalisations stabilised and are on a downward trend. Admissions remain lowest in children.
 - A total of five cases of MIS-C have been reported, all from the Delta wave in mid-late 2021. There has been one ICU admission due to MIS-C. Singapore has not released any further data on MIS-C since 8 Nov 2021.
 - There have been no deaths in children throughout the entire pandemic.
- **South Africa** reopened its schools in early Jan 2022 following the end-of-year holidays. Overall excess mortality declined over the Omicron period and is now close to baseline levels.¹⁹
 - Certain restrictions such as the curfew and density limits were eased in late Dec 2021. Since Feb 2022, asymptomatic cases are not required to isolate while masks remain mandatory for all aged 6 years and older, including in schools.
 - Approximately 48% of the entire population is fully vaccinated. Vaccination is only offered to those aged 12 years and older.
 - There was a rapid increase in infections due to Omicron in all age groups followed by a rapid decrease, with children under 9 years currently having the lowest infection rates. Subvariant BA.2 is now more common than BA.1 but so far there has been no increase in case numbers.
 - Overall hospitalisations continue to decrease and many admissions were incidental (admitted for other reasons and subsequently test positive).
 - There have been 837 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.
- In the **United States**, schools reopened following the end-of-year holidays. Excess mortality in all age groups declined over the Omicron period and has now stabilised.²⁰
 - The US Centres for Disease Control and Prevention (CDC) recommend multi-layered PHSM, but adoption varies by State and Territory.
 - Approximately 33% of 5-11 year olds and 67% of 12-17 year olds have received at least one dose of vaccine.
 - Infections remain on a downward trend.
 - Hospitalisations are decreasing in all age groups.
 - During the Omicron wave beginning late Dec 2021, infants and children aged 0-4 years were hospitalised at approximately five times the rate of the previous peak during Delta variant predominance, with infants aged <6 months having the highest rates of hospitalisation, but indicators of severity did not differ by age group.²¹
 - There have been 921 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.

¹⁸ EuroMOMO. Graphs and maps. Copenhagen, Denmark: Statens Serum Institut (SSI); 2022. <https://www.euromomo.eu/graphs-and-maps>

¹⁹ 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>

²⁰ 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>

²¹ Marks KJ, Whitaker M, Agathis NT, et al. Hospitalization of infants and children aged 0-4 years with laboratory-confirmed COVID-19 - COVID-NET, 14 States, March 2020 - February 2022. *MMWR*. 2022;71(11):429-36. <https://www.cdc.gov/mmwr/volumes/71/wr/mm7111e2.htm>



- Texas has had the highest number of child deaths (127) and there are three States that have reported zero deaths throughout the entire pandemic.²²
- A total of 7459 cases of MIS-C have been reported, including 63 deaths.
 - There does not appear to be an increase in MIS-C despite the surge of Omicron cases 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	↑	Not available	Not reported	2 ^b
NSW, Australia	↑	↓*	Not reported	4 ^b
Canada	↓	↓*	Not reported	34 ^b
Denmark	Stable	Stable	44 cases*	4 ^b
England, UK	↑	Stable	Not reported	83 ^{b,#}
Finland	↓	Stable	Not reported	0
Netherlands	↑	Stable	Not reported	Not reported
Scotland, UK	↑	Stable	Not reported	5 ^{a,#}
Singapore	↑	Stable	5 cases	0
South Africa	↓	↓*	Not reported	837 ^b
USA	↓	↓	7459 cases	921 ^b

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

*Available data includes both children and adults.

*During the Omicron period (1 November 2021 - 1 February 2022).

[^]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.

²² 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/>



List of abbreviations

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 ²³	Schools & mitigation ²⁴	Vaccination coverage ^{25, 26}																								
<p>From late Feb 2022, masks are no longer required in most settings, QR check-in for certain venues only, proof of vaccination to attend some premises, reduced TTIQ and advice to work from home removed.</p>	<p>Closed for holidays from mid-Dec 2021 and returned to school in late Jan 2022.</p> <p>Multi-layered mitigation strategies have been introduced, including twice-weekly surveillance RAT (childcare, kindergarten and schools), mandatory third vaccine dose for staff and supply of air-purification devices.</p> <p>From late Feb 2022, masks are only required indoors in primary schools for all staff and students in grade 3 and above.</p>	<p>Age group</p> <table border="1"> <thead> <tr> <th>(years)</th> <th>1st dose (%)</th> <th>2nd dose (%)</th> <th>3rd/booster (%)</th> </tr> </thead> <tbody> <tr> <td>5-11</td> <td>55.6</td> <td>16.4</td> <td>-</td> </tr> <tr> <td>12-15</td> <td>89.5</td> <td>84.9</td> <td>-</td> </tr> <tr> <td>16+</td> <td>95.1</td> <td>93.7</td> <td>-</td> </tr> <tr> <td>18+</td> <td>-</td> <td>-</td> <td>63.9</td> </tr> </tbody> </table> <p>Fourth dose for immunocompromised recommended from early Jan 2022, booster dose available to all eligible adults aged 18y+ and 16-17y from 3 Feb 2022, second booster dose available to all 65y+ and high-risk groups from 4 Apr 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.</p>	(years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)	5-11	55.6	16.4	-	12-15	89.5	84.9	-	16+	95.1	93.7	-	18+	-	-	63.9				
(years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)																							
5-11	55.6	16.4	-																							
12-15	89.5	84.9	-																							
16+	95.1	93.7	-																							
18+	-	-	63.9																							
Infections by age group ²⁷	Hospitalisations in children ²⁸	Deaths by age group ²⁹																								
<p>Rapid antigen vs PCR cases</p> <p>Daily PCR cases (to 20/03/2022)</p> <p>From 8 Jan 2022, both PCR and RAT positive results are considered positive cases. Age distribution is only available for PCR positive cases, as displayed on the graph.</p>	<p>Current cases in hospital</p> <p>248 cases in hospital</p> <p>10 cases in ICU</p> <p>No age breakdown</p>	<p>People who have passed away with COVID-19</p> <p>21/03/2022</p> <table border="1"> <thead> <tr> <th>Age group</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>00-09</td> <td>1</td> </tr> <tr> <td>10-19</td> <td>1</td> </tr> <tr> <td>20-29</td> <td>4</td> </tr> <tr> <td>30-39</td> <td>16</td> </tr> <tr> <td>40-49</td> <td>30</td> </tr> <tr> <td>50-59</td> <td>101</td> </tr> <tr> <td>60-69</td> <td>198</td> </tr> <tr> <td>70-79</td> <td>573</td> </tr> <tr> <td>80-89</td> <td>1,008</td> </tr> <tr> <td>90+</td> <td>742</td> </tr> <tr> <td>Total</td> <td>2,674</td> </tr> </tbody> </table> <p>Two children have died with COVID-19 throughout the pandemic, including one 15 year old and one child under 10 with multiple underlying conditions and in palliative care.</p>	Age group	Total	00-09	1	10-19	1	20-29	4	30-39	16	40-49	30	50-59	101	60-69	198	70-79	573	80-89	1,008	90+	742	Total	2,674
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²³ <https://www.coronavirus.vic.gov.au/coronavirus-covidsafe-settings>
²⁴ <https://www.coronavirus.vic.gov.au/education-information-about-coronavirus-covid-19>
²⁵ <https://www.health.gov.au/resources/collections/covid-19-vaccination-daily-rollout-update>
²⁶ <https://twitter.com/VicGovDH>
²⁷ Data from: <https://www.coronavirus.vic.gov.au/victorian-coronavirus-covid-19-data>
²⁸ <https://www.coronavirus.vic.gov.au/victorian-coronavirus-covid-19-data>
²⁹ <https://www.coronavirus.vic.gov.au/additional-covid-19-case-data#cases-in-hospital>





Australia: New South Wales (population 8.2 million)

PHSM ³⁰	Schools & mitigation ³¹	Vaccination coverage ^{32, 33}																																																																																				
<p>From late Feb 2022, masks are no longer required in most settings, QR check-in and proof of vaccination for certain venues only, reduced TTIQ and advice to work from home removed.</p>	<p>Closed for holidays from mid-Dec 2021 and returned to school in late Jan 2022.</p> <p>Multi-layered mitigation strategies have been introduced, including mandatory third vaccine dose for staff and supply of air-purification devices.</p> <p>From late February and early March 2022, RATs are only used for symptomatic testing of students and staff (no longer for surveillance), masks are no longer required in most school settings and cohorting removed.</p>	<table border="1"> <thead> <tr> <th>Age group (years)</th> <th>1st dose (%)</th> <th>2nd dose (%)</th> <th>3rd/booster (%)</th> </tr> </thead> <tbody> <tr> <td>5-11</td> <td>48.9</td> <td>16.6</td> <td>-</td> </tr> <tr> <td>12-15</td> <td>83.5</td> <td>79.3</td> <td>-</td> </tr> <tr> <td>16+</td> <td>96.0</td> <td>94.5</td> <td>58.4</td> </tr> </tbody> </table> <p>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, second booster dose available to all 65y+ and high-risk groups from 4 Apr 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.</p>	Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)	5-11	48.9	16.6	-	12-15	83.5	79.3	-	16+	96.0	94.5	58.4																																																																				
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³³ <https://twitter.com/NSWHealth>
³⁴ <https://www.health.nsw.gov.au/Infectious/covid-19/Pages/weekly-reports.aspx>
³⁵ <https://www.health.nsw.gov.au/Infectious/covid-19/Pages/weekly-reports.aspx>
³⁶ <https://www.health.nsw.gov.au/Infectious/covid-19/Pages/weekly-reports.aspx>

Canada (population 38 million)

PHSM³⁷

Standard PHSM including TTIQ and mask wearing encouraged in shared spaces and subject to local advice.

Schools & mitigation³⁸

Closed for winter holidays in Dec 2021 and returned to school in mid-Jan 2022. Ontario resumed in-person learning following a brief switch to remote learning due to rising case numbers.

Standard PHSM and additional measures depending on local advice: physical distancing, cohorting, masks when required, screening tests. RATs were provided to students in Ontario for return to in-person learning.

Vaccination coverage³⁹

Age group (years)	1 st dose (%)	Fully vacc.* (%)	3 rd /booster (%)
5-11	56.9	37.1	-
12-17	88.2	84.4	12.4
Total pop.	84.7	81.0	46.5

*Canada also uses the J&J/Janssen vaccine which is a single-dose vaccine.

Third/booster doses have been available to high-risk individuals in phases since Sep 2021. Vaccination of 12y+ commenced mid-May and 5-11y in mid-Nov 2021.

Infections by age group^{40, 41}

Figure 3: COVID-19 cases (n=3,283,571³¹) in Canada by date³² as of March 18, 2022, 8 am EST (by age - 10 year groups³³)

Figure 5: Distribution³⁴ of confirmed COVID-19 cases reported to PHAC by vaccination status as of February 27, 2022

Vaccination status	Cases (%)	Hospitalizations (%)	Deaths (%)
Unvaccinated	43.3%	43.1%	63.7%
1-2 doses	2.3%	4.2%	5.6%
3+ doses	4.7%	5.6%	3.8%
Other	4.7%	4.2%	2.2%

British Columbia (pop. 5.1 million; data to Report #11, 08 Mar 2022):

Hospitalisations in children⁴²

Figure 7: Age and gender³⁴ distribution of COVID-19 cases hospitalized³⁵ in Canada as of March 18, 2022, 8 am EST (n=138,168³⁴)

Age group (years)	Number (Proportion %)
0-11	n = 3,143 (2.3%)
12-19	n = 1,694 (1.2%)
20-29	n = 6,665 (4.8%)
30-39	n = 10,448 (7.6%)
40-49	n = 11,824 (8.6%)
50-59	n = 18,059 (13.1%)
60-69	n = 23,632 (17.1%)
70-79	n = 26,902 (19.5%)
80+	n = 35,801 (25.9%)

British Columbia (pop. 5.1 million; data to Report #11, 08 Mar 2022):

Deaths by age group⁴³

Figure 7: Age and gender³⁴ distribution of COVID-19 cases deceased³⁶ in Canada as of March 18, 2022, 8 am EST (n=36,594³¹)

Age group (years)	Number (Proportion %)
0-11	n = 24 (0.1%)
12-19	n = 10 (0.0%)
20-29	n = 101 (0.3%)
30-39	n = 365 (1.0%)
40-49	n = 582 (1.6%)
50-59	n = 1,656 (4.5%)
60-69	n = 3,921 (10.7%)
70-79	n = 7,804 (21.3%)
80+	n = 22,231 (60.8%)

There have been 34 deaths with COVID-19 in children aged 0-19y throughout the pandemic.

	Ages 0-4	Ages 5-11	Ages 12-17
VACCINATIONS As of February 14, 2022	have 1 dose have 2 doses have 3/booster doses	Not eligible for vaccination 17% Not eligible 18%	88% 84% 18%
CASES As of February 14, 2022	new this report new this school year total cases	2,408 6,145 12,338	1,288 7,534 17,810
HOSPITALIZATIONS As of February 14, 2022	new this report new this school year over in critical care	73 156 238	42 67 104
CRITICAL CARE As of February 14, 2022	new this report new this school year over in critical care	8 16 24	2 8 10
DEATHS As of February 14, 2022	new this report new this school year total deaths	0 0 2	0 0 0

Figure 9: Case rate of COVID-19 by age and vaccination status, BC, July 1, 2021 to February 15, 2022

Figure 11: Daily hospital and critical care occupancy by pediatric age groups, 0-17 year-olds, BC, January 1, 2021 to February 15, 2022

Genomic surveillance⁴⁴

Percentage of samples sequenced

- Delta: 18.7%
- B.1.1.7: 19.7%
- B.1.1.529: 16.8%
- Other variants: 19.8%
- Other: 19.8%

Omicron (BA.1) is the dominant variant.

³⁷ <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks.html>
³⁸ <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/planning-2021-2022-school-year-vaccination.html>
³⁹ <https://health-infobase.canada.ca/covid-19/vaccination-coverage/>
⁴⁰ <https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html>
⁴¹ <http://www.bccdc.ca/schools/news-resources/data-for-k12>
⁴² <https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html>
⁴³ <https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html>
⁴⁴ <https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html>





Denmark

(population 5.9 million)

PHSM ⁴⁵	Schools & mitigation ⁴⁶	Vaccination coverage ⁴⁷	Genomic surveillance ⁴⁸								
<p>All restrictions lifted from February 2022.</p>	<p>Closed early for winter holidays in 2021 and returned to school in early Jan 2022.</p> <p>Standard PHSM, close contacts are not required to isolate but encouraged to get tested.</p>	<table border="1"> <thead> <tr> <th>Age group (years)</th> <th>1st dose (%)</th> <th>2nd dose (%)</th> <th>3rd/booster (%)</th> </tr> </thead> <tbody> <tr> <td>12+</td> <td>82.3</td> <td>80.8</td> <td>61.4</td> </tr> </tbody> </table> <p>Commenced 3rd/booster vaccination for people 65+ 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.</p>	Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)	12+	82.3	80.8	61.4	<p>Omicron (BA.2) is the predominant variant (>99%).</p>
Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)								
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Infections by age group ^{49, 50}	Hospitalisations in children ^{51, 52}	Deaths by age group ^{53, 54}	MIS-C ⁵⁵								
<p>Weekly positive cases by age and vaccine status*</p> <p>Ugentligt antal positive opdelt på alder og vaccinstatus</p> <p>Relative og absolutte antal personer med positiv SARS-CoV-2 PCR test. Viser kun ikke-didgere positive.</p> <p>Kristoffer T. Bæk, covid19danmark.dk, data: SSI</p>	<p>Weekly admissions by age and vaccine status*</p> <p>Ugentligt antal indlæggelser opdelt på alder og vaccinstatus</p> <p>Relative og absolutte antal indlæggelser med positiv SARS-CoV-2 PCR test.</p> <p>Kristoffer T. Bæk, covid19danmark.dk, data: SSI</p> <p>For the entire pandemic, a total of 164 children in ICU, which included 51 children with comorbidities.</p>	<p>Weekly deaths by age and vaccine status*</p> <p>Ugentligt antal døde opdelt på alder og vaccinstatus</p> <p>Relative og absolutte antal døde med positiv SARS-CoV-2 PCR test.</p> <p>Kristoffer T. Bæk, covid19danmark.dk, data: SSI</p> <p>Total of 4 deaths with COVID-19 in children aged 0-19y throughout the pandemic.</p>	<p>Prevalence of MIS-C and Kawasaki syndrome in children since 2017</p> <p>Figur 6. Forekomsten af MIS-C (Multi Inflammatory Syndrome in Children) og Kawasaki syndrom blandt børn siden 2017</p> <p>Data to Report #10, 14 Feb 2022</p>								

*(1) Top figures are rates per 100,000 and bottom figures are raw numbers; (2) Yellow (unvaccinated), blue (two doses), green (three doses)

⁴⁵ <https://en.coronasmitte.dk/rules-and-regulations>
⁴⁶ <https://en.coronasmitte.dk/rules-and-regulations>
⁴⁷ https://experience.arcgis.com/experience/9824b03b114244348ef0b10f69f490b4/page/page_3/
⁴⁸ <https://covid19genomics.dk/statistics>
⁴⁹ <https://covid19danmark.dk/>
⁵⁰ <https://covid19.ssi.dk/overvagningsdata/ugentlige-opgorelser-med-overvagningsdata>
⁵¹ <https://covid19danmark.dk/>
⁵² <https://covid19.ssi.dk/overvagningsdata/ugentlige-opgorelser-med-overvagningsdata>
⁵³ <https://covid19danmark.dk/>
⁵⁴ <https://covid19.ssi.dk/overvagningsdata/ugentlige-opgorelser-med-overvagningsdata>
⁵⁵ <https://www.sst.dk/-/media/Udgivelser/2022/Corona/Vaccination/Notat-vaccination-af-boern-5-11-aar.ashx>





England, UK

(population 56.6 million)

PHSM⁵⁶ Schools & mitigation⁵⁷ Vaccination coverage⁵⁸

Standard PHSM including reduced TTIQ, asymptomatic RAT encouraged and provided free of charge. Indoor mask-wearing and proof of vaccination to attend most premises no longer required. Remaining restrictions are gradually being lifted.

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

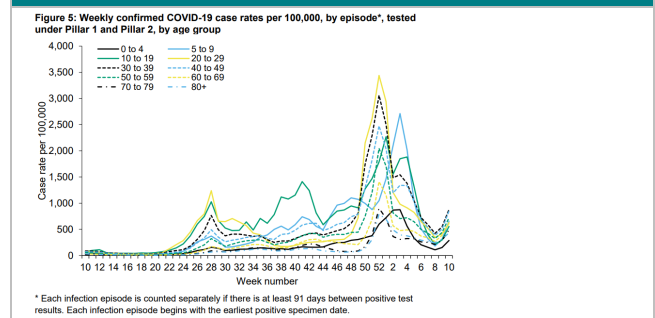
Standard PHSM. RAT screening for staff and secondary school students, mask wearing and close contact isolation no longer required.

Age group

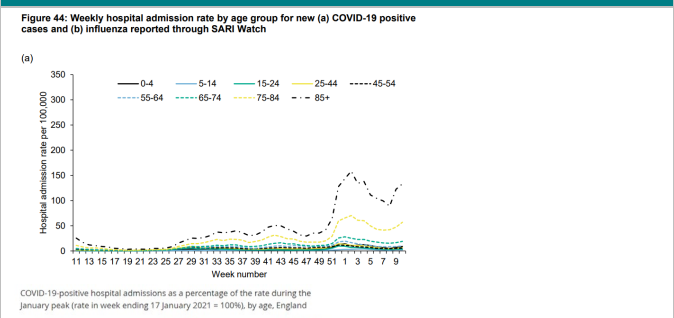
(years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)
12+	91.7	85.5	66.4
12-15	57.1	30.1	0.3
16-17	68.0	51.5	11.6

Third/booster dose available for all 18y+ and other high-risk groups. Vaccination for 16-17y commenced mid-Aug, 12-15y mid-Sep 2021 (initially as single dose) and 5-11y late Feb 2022 (coverage data not available).

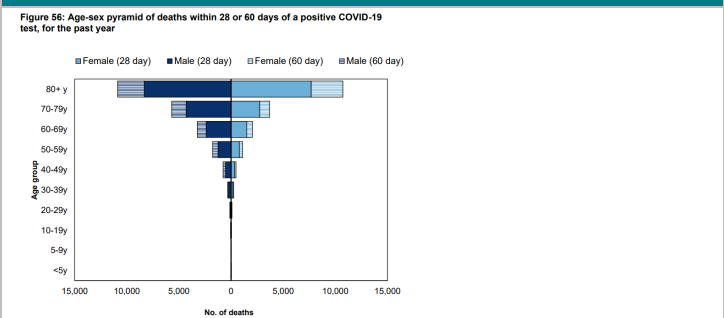
Infections by age group⁵⁹



Hospitalisations in children^{60, 61}



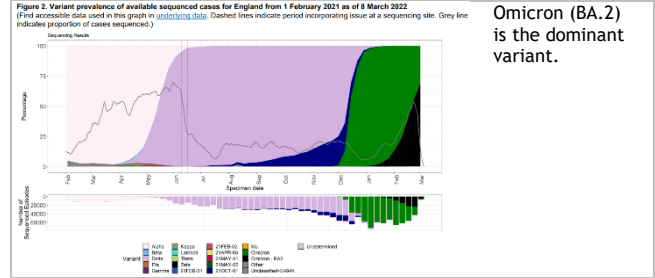
Deaths by age group⁶²



A total of 83 deaths with COVID-19 in the past year:

- <5y: 18
- 5-9y: 7
- 10-19y: 58

Genomic surveillance⁶³



⁵⁶ <https://www.gov.uk/guidance/covid-19-coronavirus-restrictions-what-you-can-and-cannot-do>
⁵⁷ <https://www.gov.uk/government/publications/actions-for-schools-during-the-coronavirus-outbreak/schools-covid-19-operational-guidance>
⁵⁸ <https://coronavirus.data.gov.uk/details/vaccinations?areaType=nation&areaName=England>
⁵⁹ <https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season>
⁶⁰ <https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season>
⁶¹ <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/articles/coronaviruscovid19latestinsights/hospitals>
⁶² <https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season>
⁶³ <https://www.gov.uk/government/publications/investigation-of-sars-cov-2-variants-technical-briefings>





Finland

(population 5.5 million)

<p>PHSM⁶⁴</p> <p>Restrictions reinstated in late Dec 2021, including mandatory indoor mask wearing, proof of vaccination to attend certain 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. From early March 2022, advice to work from home removed.</p>	<p>Schools & mitigation⁶⁵</p> <p>Schools closed for winter holiday in late Dec 2021 and reopened in early Jan 2022.</p> <p>Standard PHSM, cohorting and ventilation.</p>	<p>Vaccination coverage⁶⁶</p> <table border="1"> <thead> <tr> <th>Age group (years)</th> <th>1st dose (%)</th> <th>2nd dose (%)</th> <th>3rd/booster (%)</th> </tr> </thead> <tbody> <tr> <td>18+</td> <td>89.4</td> <td>87.1</td> <td>62.2</td> </tr> <tr> <td>5-11</td> <td>25.7</td> <td>8.6</td> <td>-</td> </tr> <tr> <td>12-17</td> <td>79.9</td> <td>73.9</td> <td>1.3</td> </tr> </tbody> </table> <p>Third/booster dose is recommended for all aged 18y+. Fourth dose recommended for 12y+ with severe immunodeficiency. Vaccine offered to 12y+ in early August and 5-11y children from late Dec 2021.</p>	Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)	18+	89.4	87.1	62.2	5-11	25.7	8.6	-	12-17	79.9	73.9	1.3
Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)															
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<p>Infections by age group⁶⁷</p> <p>ECDC. Figure produced 18 March 2022. Source: TESISy COVID-19</p>	<p>Hospitalisations in children⁶⁸</p> <p>ECDC. Figure produced 18 March 2022. Source: ECDC database compiled from public online sources</p> <p>Graph shows all ages combined and is not available by age group.</p>	<p>Deaths by age group⁶⁹</p> <p>Deaths by age group (for the whole period)</p> <p>There have been 0 deaths in children throughout the entire pandemic.</p> <p>Genomic surveillance⁷⁰</p> <p>thi</p> <p>COVID-19 -virusvariantit: Muut viruslinjat, S-geneedeletio, Alpha, Beta, Gamma, Delta, Nu, Senkenon (B.1.1.529), Omikron (BA.2)</p> <p>Data to Report #11, 08 Mar 2022 Blue (Other virus lineage) Purple (S-gene deletion, most likely Omicron)</p>																

⁶⁴ <https://valtioneuvosto.fi/en/information-on-coronavirus/current-restrictions>
⁶⁵ <https://oikm.fi/documents/1410845/65547855/MoEC+THL+recommendations+to+education+and+early+childhood+education+and+care+1.3.2022.pdf/61cad874-6b78-84e4-a885-3a61ca69cd10>
⁶⁶ https://sampo.thi.fi/pivot/prod/en/vaccreg/cov19cov/summary_cov19ageareacov
⁶⁷ <https://covid19-country-overviews.ecdc.europa.eu/countries/Finland.html>
⁶⁸ <https://covid19-country-overviews.ecdc.europa.eu/countries/Finland.html>
⁶⁹ <https://experience.arcgis.com/experience/92e9bb33fac744c9a084381fc35aa3c7>
⁷⁰ <https://thi.fi/web/infektioaudit-ja-rokotukset/ajankohtaista/ajankohtaista-koronaviruksesta-covid-19/tilannekatsaus-koronaviruksesta/koronaviruksen-seuranta>





Netherlands

(population 17.4 million)

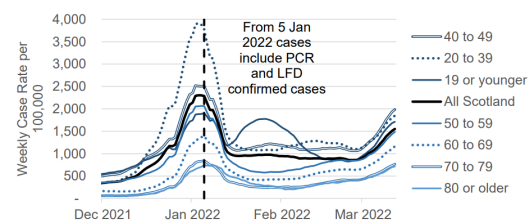
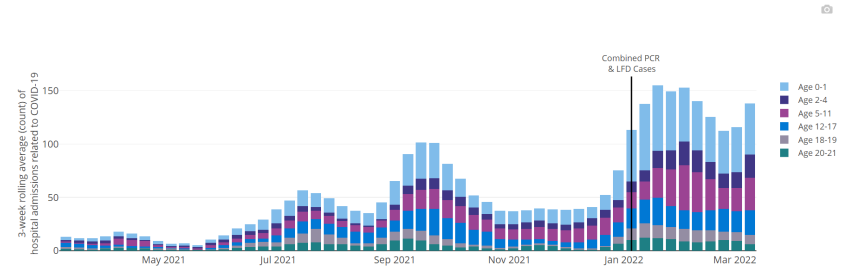
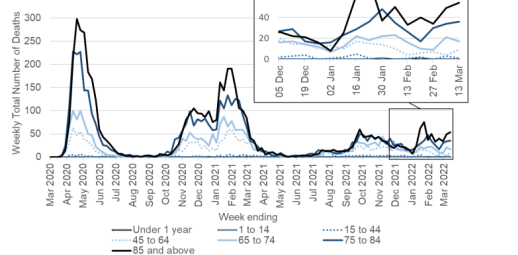
<p>PHSM⁷¹</p> <p>Advice for hybrid work arrangements, recommendation to perform self-test before visiting others or public places, indoor mask wearing required in certain venues, all public venues open, reduced TTIQ. Remaining restrictions are gradually being lifted.</p>	<p>Schools & mitigation⁷²</p> <p>Closed for winter holidays in late Dec 2021 and returned to school in early Jan 2022.</p> <p>Standard PHSM, mask wearing required for secondary school staff and students, twice-weekly RAT screening for staff and secondary school students, ventilation, quarantine arrangements based on case numbers within a cohort.</p>	<p>Vaccination coverage⁷³</p> <table border="1"> <thead> <tr> <th>Age group (years)</th> <th>1st dose (%)</th> <th>Fully vacc. (%)</th> <th>3rd/booster (%)</th> </tr> </thead> <tbody> <tr> <td>5-11</td> <td>5.0</td> <td>-</td> <td>-</td> </tr> <tr> <td>12-17</td> <td>69.0</td> <td>68.0</td> <td>-</td> </tr> <tr> <td>18+</td> <td>-</td> <td>86.4</td> <td>62.0</td> </tr> </tbody> </table> <p>*Note: The Netherlands also uses the J&J/Janssen vaccine which is a single-dose vaccine. Third/booster dose available for all 18y+. Vaccine offered to 12-17y from early July 2021 and 5-11y from mid-Jan 2022.</p>	Age group (years)	1 st dose (%)	Fully vacc. (%)	3 rd /booster (%)	5-11	5.0	-	-	12-17	69.0	68.0	-	18+	-	86.4	62.0		
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<p>Infections by age group^{74 75}</p> <p>Number of reported positive tests per 100,000 inhabitants, by age, by week</p> <p>from 24 January to 6 March 2022</p>	<p>Hospitalisations in children^{76, 77}</p> <p>Hospital admissions</p> <p>If we look at all hospital admissions (89,304) reported by the NICE Foundation between 1 January 2021 and 8 March 2022, 1.3% (1,195) were younger than 4 years old, 0.4% (314) were aged 4-11 years and 0.3% (304) were aged 12-17 years. The vast majority (98.0% or 87,495) of all people admitted to hospital with COVID-19 were aged 18 years or older.</p> <table border="1"> <thead> <tr> <th>Age group (children)</th> <th>Hospital admissions</th> <th></th> </tr> </thead> <tbody> <tr> <td><4</td> <td>1,131</td> <td>1.3%</td> </tr> <tr> <td>4-11</td> <td>296</td> <td>0.3%</td> </tr> <tr> <td>12-17</td> <td>297</td> <td>0.4%</td> </tr> <tr> <td>>17</td> <td>85,985</td> <td>98.0%</td> </tr> <tr> <td>Total</td> <td>87,709</td> <td></td> </tr> </tbody> </table>	Age group (children)	Hospital admissions		<4	1,131	1.3%	4-11	296	0.3%	12-17	297	0.4%	>17	85,985	98.0%	Total	87,709		<p>Deaths by age group⁷⁸</p> <p>The number of deaths in children is not known as the Netherlands provides a total sum of all deaths between 0-49 years.</p> <p>Genomic surveillance⁷⁹</p> <p>Omicron (BA.2) is the dominant variant.</p>
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⁷¹ <https://www.government.nl/topics/coronavirus-covid-19/tackling-new-coronavirus-in-the-netherlands/coronavirus-measures-in-brief>
⁷² <https://www.rivm.nl/en/coronavirus-covid-19/children-and-covid-19>
⁷³ <https://coronadashboard.government.nl/landelijk/vaccinaties>
⁷⁴ <https://coronadashboard.government.nl/landelijk/positief-geteste-mensen>
⁷⁵ <https://www.rivm.nl/en/coronavirus-covid-19/children-and-covid-19/research-results-ggd-data>
⁷⁶ <https://coronadashboard.government.nl/landelijk/ziekenhuis-opnames>
⁷⁷ <https://www.rivm.nl/en/coronavirus-covid-19/children-and-covid-19/research-results-ggd-data>
⁷⁸ <https://coronadashboard.government.nl/landelijk/sterfte>
⁷⁹ <https://www.rivm.nl/en/coronavirus-covid-19/virus/variants>



Scotland, UK

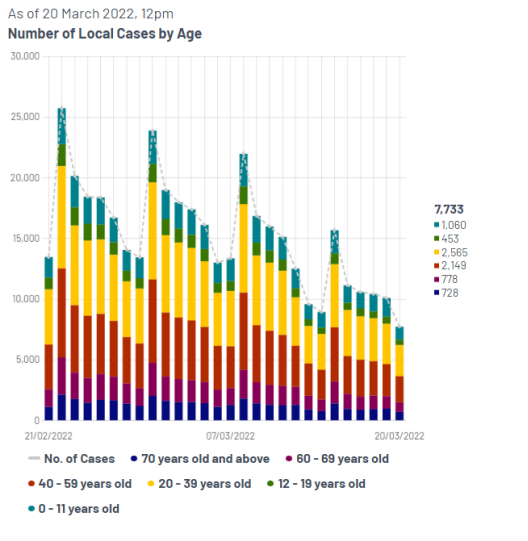
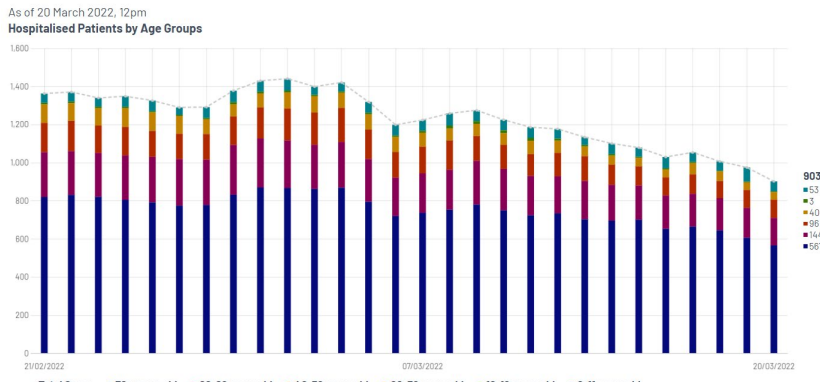
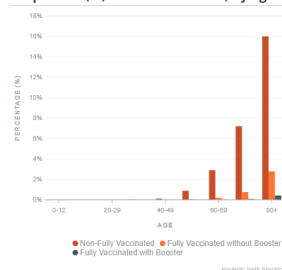
(population 5.5 million)

PHSM ⁸⁰	Schools & mitigation ⁸¹	Vaccination coverage ⁸²												
<p>From late Feb 2022, standard PHSM including TTIQ, indoor mask-wearing, asymptomatic RAT encouraged and provided free of charge. Hybrid work arrangements permitted and proof of vaccination to attend most premises no longer required.</p>	<p>Closed for winter holidays in late Dec 2021 and returned to school in early Jan 2022.</p> <p>Standard PHSM. RAT screening for staff and secondary school students, mask wearing (except in indoor communal areas of secondary schools) and close contact isolation no longer required.</p>	<p>Age group</p> <table border="1"> <thead> <tr> <th>1st dose (%)</th> <th>2nd dose (%)</th> <th>3rd/booster (%)</th> </tr> </thead> <tbody> <tr> <td>92.9</td> <td>87.3</td> <td>72.6</td> </tr> <tr> <td>70.9</td> <td>44.4</td> <td>1.3</td> </tr> <tr> <td>84.1</td> <td>61.3</td> <td>16.8</td> </tr> </tbody> </table> <p>Third/booster dose available for all 18y+ and other high-risk groups. Vaccination for 16-17y commenced mid-Aug, 12-15y mid-Sep 2021 (initially as single dose) and 5-11y late Feb 2022 (coverage data not available).</p>	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)	92.9	87.3	72.6	70.9	44.4	1.3	84.1	61.3	16.8
1 st dose (%)	2 nd dose (%)	3 rd /booster (%)												
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70.9	44.4	1.3												
84.1	61.3	16.8												
Infections by age group ⁸³	Hospitalisations in children ⁸⁴	Deaths by age group ^{85, 86}												
<p>Figure 7: Weekly total combined PCR and LFD cases (including reinfections) per 100,000 population in Scotland by age group, by specimen date. Data to 12 March 2022⁸³.</p>  <p>Omicron is the dominant variant in Scotland.</p>	<p>Hospital admissions 'with' COVID-19 (3-week rolling average)</p> <p>Download chart data</p>  <p>*Please note that positive tests include first LFD tests from 5 January 2022.</p> <p>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.</p>	<p>Figure 12: Weekly total number of deaths where Covid-19 was mentioned on the death certificate, by age group. Data to the week ending 13 March 2022.</p>  <p>There have been 5 deaths due to COVID-19 in children aged 0-14y in the past year.</p>												

⁸⁰ <https://www.gov.scot/coronavirus-covid-19/>
⁸¹ <https://www.gov.uk/government/publications/actions-for-schools-during-the-coronavirus-outbreak/schools-covid-19-operational-guidance>
⁸² <https://coronavirus.data.gov.uk/details/vaccinations?areaType=nation&areaName=Scotland>
⁸³ <https://www.gov.scot/collections/coronavirus-covid-19-the-state-of-the-epidemic/>
⁸⁴ <https://scotland.shinyapps.io/phs-covid19-education/?w=852fb58e/>
⁸⁵ <https://www.gov.scot/collections/coronavirus-covid-19-the-state-of-the-epidemic/>
⁸⁶ <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 ⁸⁷	Schools & mitigation ⁸⁸	Vaccination coverage ⁸⁹																																												
<p>From early Jan 2022, mandatory masks indoors & outdoors, TTIQ, hybrid work arrangements, shops open with density limits and digital check-in, vaccination requirements to enter some premises, limits on guests at home.</p>	<p>Closed for end-of-year holidays in mid-Nov 2021 and returned to school in early Jan 2022.</p> <p>Standard PHSM, RAT tests for symptomatic students and staff and mandatory masks 6y+ with exceptions.</p>	<table border="1"> <thead> <tr> <th>Age group (years)</th> <th>1st dose (%)</th> <th>2nd dose (%)</th> <th>3rd/booster (%)</th> </tr> </thead> <tbody> <tr> <td>Total pop.</td> <td>93.0</td> <td>92.0</td> <td>71.0</td> </tr> </tbody> </table> <p>Third/booster dose available for all aged 12y+. Vaccination for 12y+ commenced early June and 5-11y late Dec 2021. From 14 Feb 2022, all 18y+ must receive a booster dose within 270 days of their 2nd dose to be considered fully vaccinated. The same applies to all 12-17y from 14 Mar 2022.</p>	Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)	Total pop.	93.0	92.0	71.0																																				
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Infections by age group ⁹⁰	Hospitalisations in children ⁹¹	Deaths by age group ⁹²																																												
<p>As of 20 March 2022, 12pm</p> <p>Number of Local Cases by Age</p>  <p>7,733</p> <ul style="list-style-type: none"> 1,060 453 2,585 2,149 778 728 <p>Legend: No. of Cases, 70 years old and above, 60-69 years old, 40-59 years old, 20-39 years old, 12-19 years old, 0-11 years old</p>	<p>As of 20 March 2022, 12pm</p> <p>Hospitalised Patients by Age Groups</p>  <p>903</p> <ul style="list-style-type: none"> 53 3 40 96 144 567 <p>Legend: Total Cases, 70+ years old, 60-69 years old, 40-59 years old, 20-39 years old, 12-19 years old, 0-11 years old</p> <p>One child was admitted to ICU due to MIS-C for the entire pandemic.</p> <p>There have been five reported cases of MIS-C throughout the entire pandemic, last reported 8 Nov 2021.</p>	<p>Proportion (%) of cases who died, by age and vaccination status</p>  <table border="1"> <thead> <tr> <th>Age</th> <th>Non-Fully Vaccinated</th> <th>Fully Vaccinated (Without Booster)</th> <th>Fully Vaccinated (With Booster)</th> </tr> </thead> <tbody> <tr> <td>0-12</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> </tr> <tr> <td>13-19</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> </tr> <tr> <td>20-29</td> <td>0.020</td> <td>0.0</td> <td>0.0</td> </tr> <tr> <td>30-39</td> <td>0.043</td> <td>0.0</td> <td>0.0</td> </tr> <tr> <td>40-49</td> <td>0.12</td> <td>0.013</td> <td>0.0</td> </tr> <tr> <td>50-59</td> <td>0.89</td> <td>0.063</td> <td>0.0</td> </tr> <tr> <td>60-69</td> <td>2.9</td> <td>0.20</td> <td>0.033</td> </tr> <tr> <td>70-79</td> <td>7.2</td> <td>0.76</td> <td>0.083</td> </tr> <tr> <td>80+</td> <td>16</td> <td>2.8</td> <td>0.42</td> </tr> <tr> <td>Total</td> <td>0.67</td> <td>0.11</td> <td>0.027</td> </tr> </tbody> </table> <p>1 May 2021 to 28 Feb 2022</p> <p>Footnote: Cases in ICU care comprises cases critically ill and intubated in ICU or unstable and under monitoring in ICU.</p> <p>There have been 0 deaths in children throughout the entire pandemic.</p>	Age	Non-Fully Vaccinated	Fully Vaccinated (Without Booster)	Fully Vaccinated (With Booster)	0-12	0.0	0.0	0.0	13-19	0.0	0.0	0.0	20-29	0.020	0.0	0.0	30-39	0.043	0.0	0.0	40-49	0.12	0.013	0.0	50-59	0.89	0.063	0.0	60-69	2.9	0.20	0.033	70-79	7.2	0.76	0.083	80+	16	2.8	0.42	Total	0.67	0.11	0.027
Age	Non-Fully Vaccinated	Fully Vaccinated (Without Booster)	Fully Vaccinated (With Booster)																																											
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⁸⁷ <https://www.moh.gov.sg/covid-19-phase-advisory>

⁸⁸ <https://www.moe.gov.sg/faqs-covid-19-infection>

⁸⁹ <https://www.moh.gov.sg/>

⁹⁰ <https://www.moh.gov.sg/>

⁹¹ <https://www.moh.gov.sg/>

⁹² <https://www.moh.gov.sg/covid-19/statistics>

South Africa

(population 60.4 million)

<p>PHSM⁹³</p> <p>Since Feb 2022, asymptomatic cases are not required to isolate, mandatory masks 6y+ with exceptions. Previous curfew and density limits lifted.</p>	<p>Schools & mitigation⁹⁴</p> <p>Closed for end-of-year holidays in mid-Dec 2021 and returned to school in early Jan 2022.</p> <p>Standard PHSM, ventilation, symptom screening, mandatory masks 6y+ with exceptions and visitor limits.</p>	<p>Vaccination coverage⁹⁵</p> <p>Age group (years) Fully vaccinated* (%)</p> <p>18+ 48.4</p> <p>*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.</p>
<p>Infections by age group⁹⁶</p> <p>Characteristics of COVID-19 cases in South Africa by age and sex</p> <p>Figure 4. Weekly incidence risk of laboratory-confirmed cases of COVID-19 by age group in years and epidemiologic week South Africa 3 March 2020 – 12 March 2022 (n = 3 659 764, 34 740 missing age)</p>	<p>Hospitalisations in children and deaths by age group⁹⁷</p> <p>Hospital admissions of COVID-19 cases, by health sector, by epidemiological week</p> <p>Admissions to date by age group and sex Total: 510.16K</p> <p>Deaths to date by age group and sex Total: 101.47K</p> <p>Total of 837 deaths with COVID-19 in children 0-19y throughout the entire pandemic. Deaths in children account for <1% of all deaths in South Africa.</p>	<p>Genomic surveillance⁹⁸</p> <p>Detection Rates: Beta, Delta, C.1.2 and Omicron</p> <p>Detection rates of variants being monitored in South Africa*</p> <p>Percentage and number of clades by epiweek in South Africa, 2021 - 2022 (N=27 046)</p> <p>Omicron (BA.2) is the dominant variant.</p>

⁹³ <https://www.gov.za/covid-19/resources/regulations-and-guidelines-coronavirus-covid-19>
⁹⁴ <https://www.gov.za/covid-19/resources/regulations-and-guidelines-coronavirus-covid-19>
⁹⁵ <https://sacoronavirus.co.za/latest-vaccine-statistics/>
⁹⁶ <https://www.nicd.ac.za/diseases-a-z-index/disease-index-covid-19/surveillance-reports/weekly-epidemiological-brief/>
⁹⁷ <https://www.nicd.ac.za/diseases-a-z-index/disease-index-covid-19/surveillance-reports/daily-hospital-surveillance-datcov-report/>
⁹⁸ <https://www.nicd.ac.za/diseases-a-z-index/disease-index-covid-19/sars-cov-2-genomic-surveillance-update/>

USA

(population 332.8 million)

<p>PHSM⁹⁹</p> <p>The US CDC recommends indoor mask wearing for all aged 2y+ in areas of high community transmission, physical distancing, hand & surface hygiene, TTIQ, but adoption varies by State/Territory.</p>	<p>Schools & mitigation¹⁰⁰</p> <p>Closed for winter holidays in late Dec 2021 and reopened from early Jan 2022.</p> <p>Standard PHSM, cohorting, masks, PCR & RAT screening, but adoption varies by State/Territory.</p>	<p>Vaccination coverage^{101, 102}</p> <table border="1"> <thead> <tr> <th>Age group (years)</th> <th>1st dose (%)</th> <th>Fully vaccinated* (%)</th> <th>3rd/booster (%)</th> </tr> </thead> <tbody> <tr> <td>5-11</td> <td>33.0</td> <td>27.0</td> <td>-</td> </tr> <tr> <td>12-17</td> <td>67.0</td> <td>57.0</td> <td>-</td> </tr> <tr> <td>18+</td> <td>88.2</td> <td>75.3</td> <td>47.9</td> </tr> </tbody> </table> <p>*Note: The US also uses the J&J/Janssen vaccine which is a single-dose vaccine. Third/booster dose for 65y+ and other high-risk individuals from Sep 2021, expanded to all 18y+ from late Nov 2021 and 12y+ from early Jan 2022. Vaccination offered to 12y+ from May and 5-11y from Nov 2021.</p>	Age group (years)	1 st dose (%)	Fully vaccinated* (%)	3 rd /booster (%)	5-11	33.0	27.0	-	12-17	67.0	57.0	-	18+	88.2	75.3	47.9														
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<p>Infections by age group¹⁰³</p> <p>COVID-19 Weekly Cases per 100,000 Population by Age Group, United States March 01, 2020 - March 19, 2022*</p>	<p>MIS-C¹⁰⁴</p> <p>Daily MIS-C Cases and COVID-19 Cases Reported to CDC (7-Day Moving Average)</p> <p>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.</p>	<p>Deaths by age group^{105, 106}</p> <p>COVID-19 Weekly Deaths per 100,000 Population by Age Group, United States March 01, 2020 - March 19, 2022*</p> <p>Total 921 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 Territories¹⁰⁸: e.g. Texas (n=127); Arizona (n=61); California (n=63); Tennessee (n=36); Puerto Rico (n=9); Guam (n=5); Hawaii (n=1); Alaska (n=2).</p>																														
<p>Hospitalisations in children¹⁰⁹</p> <p>COVID-NET - Eriate Network - 2020-21 Weekly Rate</p> <p>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.</p>	<p>MIS-C Patients By Age Group</p> <p>There have been 7459 cases of MIS-C throughout the entire pandemic, including 63 deaths. The median age of MIS-C cases was 9y and half were between 5-13y. <i>Data to Report #11, 08 Mar 2022</i></p>	<p>Genomic surveillance¹⁰⁷</p> <table border="1"> <thead> <tr> <th>WHO label</th> <th>Lineage #</th> <th>US Class</th> <th>% Total</th> <th>95%PI</th> </tr> </thead> <tbody> <tr> <td>Omicron</td> <td>BA.1.1</td> <td>VOC</td> <td>66.1%</td> <td>60.6-71.1%</td> </tr> <tr> <td></td> <td>BA.2</td> <td>VOC</td> <td>23.1%</td> <td>18.6-28.3%</td> </tr> <tr> <td></td> <td>B.1.1.529</td> <td>VOC</td> <td>10.8%</td> <td>9.1-12.8%</td> </tr> <tr> <td>Delta</td> <td>B.1.617.2</td> <td>VOC</td> <td>0.0%</td> <td>0.0-0.0%</td> </tr> <tr> <td>Other</td> <td>Other*</td> <td></td> <td>0.0%</td> <td>0.0-0.0%</td> </tr> </tbody> </table> <p>Omicron (subvariant BA.1) is the dominant variant.</p>	WHO label	Lineage #	US Class	% Total	95%PI	Omicron	BA.1.1	VOC	66.1%	60.6-71.1%		BA.2	VOC	23.1%	18.6-28.3%		B.1.1.529	VOC	10.8%	9.1-12.8%	Delta	B.1.617.2	VOC	0.0%	0.0-0.0%	Other	Other*		0.0%	0.0-0.0%
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⁹⁹ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>
¹⁰⁰ <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-guidance.html>
¹⁰¹ https://covid.cdc.gov/covid-data-tracker/#vaccinations_vacc-total-admin-rate-total
¹⁰² <https://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/children-and-covid-19-vaccination-trends/>
¹⁰³ <https://covid.cdc.gov/covid-data-tracker/#demographicsovertime>
¹⁰⁴ <https://covid.cdc.gov/covid-data-tracker/#mis-national-surveillance>
¹⁰⁵ <https://covid.cdc.gov/covid-data-tracker/#demographicsovertime>
¹⁰⁶ https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm
¹⁰⁷ <https://covid.cdc.gov/covid-data-tracker/#variant-proportions>
¹⁰⁸ <https://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/children-and-covid-19-state-level-data-report/>
¹⁰⁹ https://gis.cdc.gov/grasp/COVIDNet/COVID19_3.html





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. ¹¹⁰



Currently, children under age five are not eligible to be vaccinated.

Last Updated: Mar 20, 2022

Data source: VTricks, IIS, Federal Pharmacy Program, Federal Entities Program, U.S. Census Bureau 10-year July 2019 National Population Estimates; Visualization: CDC CPR DEO Situational Awareness Public Health Science Team

¹¹⁰ <https://covid.cdc.gov/covid-data-tracker/#vaccinations-cases-trends>



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