



COVID-19 and Children's Surveillance Report

Number 15

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Aim

- To provide a weekly summary on 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.

Methods

- This report is updated weekly using the most recently available data from government websites.
- Excess mortality data are sourced from EuroMOMO and Our World in Data. Excess mortality refers to the number of deaths from all causes during a crisis above and beyond what we would have expected to see under 'normal' conditions.¹ In this case, we are interested to compare the number of deaths during the COVID-19 pandemic compared to the expected number of deaths had the pandemic not occurred.
- Caveat: The number of infections in both unvaccinated and vaccinated children increases if school mitigation measures are few, or there are changes to testing criteria and the adoption of screening in schools which identifies asymptomatic cases. The number of cases and the age distribution of cases will be biased towards the age groups that are tested most.

Overview

- The Omicron variant of concern (BA.1)² has been detected in 177 countries³ (up from 175 countries in the last report) and is the predominant variant worldwide due to its high transmissibility. Subvariant BA.2 has replaced BA.1 as the predominant Omicron subvariant in most regions included in this report, including NSW, Canada, Denmark, the Netherlands, South Africa, the UK and the USA. BA.1 remains predominant in Finland. Genomic surveillance data is not publicly available for Victoria and Singapore.
- With the predominance of Omicron in many settings and with vaccines having lower effectiveness against infection for this variant, the age distribution of infection changed. 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 have now declined.

School mitigation measures

- All countries in this report reopened schools during the Omicron period.
- School mitigation measures include rapid antigen testing (RAT) and multiple measures 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. England does not have a mask mandate in most places including schools, whereas Scotland requires masks for specific circumstances in secondary schools. Singapore and South Africa require masks in schools.
- Finland has removed all restrictions on children and Denmark has lifted all restrictions since February 2022. The Netherlands and England have removed most restrictions.
- Vaccines generally have lower effectiveness against Omicron infection but are still highly effective against severe disease.
- 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 ~6-57% among 5-11 year olds and ~58-90% among 12-15 year olds.

¹ 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>

² 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>

³ GISAID. Tracking of Variants. Munich, Germany: GISAID; 2022. <https://www.gisaid.org/hcov19-variants/>



Snapshot summary

- Following the peak in infections and reopening of schools in Victoria and NSW in February 2022, infections, hospitalisations, ICU admissions and deaths declined with subvariant BA.1. This pattern was similarly observed after schools reopened in 2020 with the ancestral strain, and in 2021 with the Delta variant. School infections occur but there is no evidence that they drive community transmission, as the peak of the BA.1 wave occurred during the school holidays and reflected broader community transmission.
- Following the Omicron wave, seroprevalence surveys in the UK found that 97.6% of children aged 8-11 years have prior infection with SARS-CoV-2 by the third week of February 2022, highlighting the high transmissibility of BA.1.⁴
- 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.
- Fine age category breakdown by year of age is not available for children except for England and The Netherlands which both show an age-dependent increase in infection rates up to about 13 years of age. This may be due to younger children being more efficient at clearing the virus.⁵
- The increase in paediatric hospitalisations during the Omicron wave was seen more so in the 0-4 year old age group but was higher in 0-2 years compared to 3-4 year olds.^{6,7} In the USA, the rate of hospitalisations during the peak of the Omicron wave (first week of January 2022) was highest in children aged 0-4 years at 14.5 per 100,000 children (five times that of Delta peak of 2.9).⁷ Hospitalisation rates were lowest in the 5-11 year age group at approximately 3 per 100,000, which is the lowest of all age groups. 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). Hospitalisations in children aged 0-4 years decreased by mid-February 2022 to 3.9 per 100,000. Recent data is not yet available for the 5-11 and 12-17 year age groups.⁸
- An analysis of incidence rates and clinical outcomes of children <5 years infected with the Omicron and Delta variants in the US found that⁹:
 - Incidence rates increased from 1.0-1.5 (Delta period) to 2.4-5.6 cases per 1000 persons per day (Omicron emergence). Monthly rates peaked in Jan 2022 during the Omicron period at 8.6 cases per 1000 persons per day.
 - Omicron infection was higher in children aged 0-2 years compared to 3-4 years.
 - Risks for severe clinical outcomes in children infected with Omicron were significantly lower than those with Delta.
- During the Omicron BA.1 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.¹⁰
- Data from the US and UK both show that despite a large increase in infections during BA.1, the number of MIS-C cases did not increase. MIS-C declined in the USA.¹¹ A UK study found that compared with the Alpha wave, there were fewer 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.1.¹² Compared to the Alpha wave, the proportion of MIS-C cases to SARS-CoV-2 infections were lower in pre-vaccine Delta, post-vaccine Delta and Omicron waves, at 56%, 66% and 95% lower respectively.¹³
- In Europe, there is no substantial increase in excess mortality in children aged 0-14 years during the Omicron period.¹⁴
- For infections in educational staff, the Netherlands found similar rates of infection in educational staff vs the general adult population. During 7 to 13 Mar 2022, of 29,677 people tested and working in education or childcare, 66.8% were positive. In comparison, 66.5% of the 559,493 adults tested were positive in the same week.¹⁵
- There is no evidence that school re-opening during the Omicron BA.1 period (and BA.2 for Denmark) 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.

⁴ 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>

⁵ Mallapaty S. Kids show mysteriously low levels of COVID antibodies. Nature. 10 March 2022. <https://www.nature.com/articles/d41586-022-00681-8>

⁶ Pediatric COVID-19 update: 7 January 2022. New York, USA: New York State Department of Health; 2022. https://www.health.ny.gov/press/releases/2022/docs/pediatric_covid-19_hospitalization_report_summary.pdf

⁷ 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.htm>

⁸ Marks KJ, Whitaker M, Anglin O, et al. Hospitalizations 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?cid=mm7111e2_w

⁹ Wang L, Berger NA, Kaelber DC, et al. Incidence rates and clinical outcomes of SARS-CoV-2 infection with the Omicron and Delta variants in children younger than 5 years in the US. JAMA Pediatrics. 2022. <https://doi.org/10.1001/jamapediatrics.2022.0945>

¹⁰ Omicron drives record cases of child COVID hospitalisations. Financial Times. 17 January 2022. <https://www.ft.com/content/28be9d3f-0b12-4c33-bda9-fb9f375c0b7e>

¹¹ Does Omicron hit kids harder? Scientists are trying to find out. Nature. 04 February 2022. <https://www.nature.com/articles/d41586-022-00309-x>

¹² 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>

¹³ Cohen JM, Carter MJ, Cheung CR, et al. Lower risk of multisystem inflammatory syndrome in children (MIS-C) with the Delta and Omicron variants of SARS-CoV-2 [Preprint]. medRxiv. 2022. <https://www.medrxiv.org/content/10.1101/2022.03.13.22272267v2>

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

¹⁵ National Institute for Public Health and the Environment (RIVM). Research results from GGD data about children and COVID-19. Amsterdam, The Netherlands: Ministry of Health, Welfare and Sport; 2022. <https://www.rivm.nl/en/coronavirus-covid-19/children-and-covid-19/research-results-ggd-data>





Summary of COVID-19 epidemiology in children and adolescents

Country	Predominant variant	Cases	Hospitalisations	MIS-C/PIMS-TS	Deaths [^]
VIC, Australia	Not reported	↑	Not available	Not reported	2 ^b
NSW, Australia	Omicron BA.2	↑	Stable	Not reported	4 ^b
Canada	Omicron BA.2	↓	↓*	Not reported	36 ^b
Denmark	Omicron BA.2	Stable	Stable	44 cases [†]	7 ^b
England, UK	Omicron BA.2	↑	Stable	Not reported	83 ^{b,‡}
Finland	Omicron BA.1	↓	Stable	Not reported	0
Netherlands	Omicron BA.2	↓	Stable	Not reported	Not reported
Scotland, UK	Omicron BA.2	↓	↑	Not reported	5 ^{a,‡}
Singapore	Not reported	↓	↓	5 cases [†]	0
South Africa	Omicron BA.2	Stable	↓*	Not reported	847 ^b
USA	Omicron BA.2	↓	↓	7880 cases	950 ^b

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

*Available data includes both children and adults.

[†]During the Omicron period (1 Nov 2021 - 1 Feb 2022). [‡]Last reported 8 Nov 2021.

[^]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.



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 57% 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 is 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 ~10,300 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 twice weekly, 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 in all ages 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 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 50% of 5-11 year olds and 83% of 12-15 year olds have received at least one dose of vaccine.
 - From early Apr 2022, a second booster dose is 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 ~19,800 confirmed cases per day in all ages. Omicron subvariant BA.2 is the predominant variant.
 - 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, during that time they were 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 are stable.
 - Four children have died with COVID-19 throughout the entire pandemic.
- **In Europe and North America**, the downward trend continues in many 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 (BA.1) variant followed by a steep downward trend in all age groups. BA.2 is now the predominant variant.
 - There is no data on hospitalisation trends by age. Overall hospitalisations had increased with Omicron but are now declining.
 - There have been 36 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.¹⁶
 - Restrictions introduced due to the Omicron wave were eased in mid-Jan 2022. From 1 Feb, all restrictions have been lifted.

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



- Approximately 47% of 5-11 year olds and 82% of 12-15 year olds have received at least one dose of vaccine.
- 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).¹⁷
 - 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 incidence of MIS-C was similar amongst previous SARS-CoV-2 variants, although this is not yet known for Omicron.
- There have been seven deaths with COVID-19 in children aged 0-19 years throughout the entire pandemic.
- **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.¹⁸
 - Additional PHSM were reintroduced in late Nov 2021 which have been eased. Masks are no longer required in indoor places, including schools. RATs and PCR tests are no longer free from Apr 2022, except for those aged 75 years and older, immunosuppressed individuals and health/social care workers with symptoms.
 - Approximately 58% 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 yet available.
 - Infections across all age groups peaked in late Dec 2021 to early Jan 2022 with BA.1 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. However, positivity rates are highest amongst children aged 2-12 years.
 - 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.¹⁹
 - 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.²⁰
 - 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 25-49 year age group. Infections in children <15 years continue to decline.
 - There is no hospitalisation data available by age. Total hospitalisations continue to increase. Specialist care admissions remain low and stable in children.
 - 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 and late Mar 2022.²¹
 - Some restrictions remain in place, including indoor mask wearing for certain venues and hybrid work arrangements. There is a gradual lifting of all remaining restrictions.
 - Approximately 6% of 5-11 year olds and 69% of 12-17 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 10-19 year olds. There is an age-related increase in infection rates in children up to 13 years of age.
 - Hospitalisations increased with Omicron (BA.1 and BA.2) but have since declined. There was an increase in the 70+ year age groups, especially in 90+ year olds, but rates are now declining. Rates remained stable and lowest in children.
 - In the past year, children <18 years accounted for 2.1% of all hospital admissions with COVID-19.
 - The number of deaths with COVID-19 in children is not reported.

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

¹⁸ 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/Udgivelse/2022/Corona/Vaccination/Notat-vaccination-af-boern-5-11-aar.aspx>

¹⁹ 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>

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



- **Scotland** reopened its schools in early Jan 2022 following the end-of-year holidays. Excess mortality in all age groups remains low and stable over the Omicron period.²²
 - Most restrictions have been lifted. Some remain in place including mask-wearing on public transport and some indoor settings. TTIQ will end in early May 2022.
 - Approximately 68% of 12-15 year olds and 81% 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 yet available.
 - Infections across all age groups peaked in Jan and then decreased, before increasing again in mid-Mar 2022 due to BA.2 and is now decreasing.
 - Infection rates are highest in the 40-49 year age group.
 - Hospitalisations in children temporarily decreased but are now increasing. For children, hospitalisations are highest in the <1 and 5-11 year age groups. 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 late Mar 2022, some restrictions were eased including masks becoming mandatory indoors only, hybrid work arrangements, increased density limits in shops and vaccination requirements remaining in place. Masks remain mandatory in schools for all aged six 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 with BA.2, there is currently a downward trend with ~4500 cases per day, primarily in the 20-39 year age group.
 - 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. However, 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.²³
 - 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 49% 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 BA.1 in all age groups followed by a rapid decrease, with children under nine years currently having the lowest infection rates. Omicron subvariant BA.2 overtook BA.1 as the predominant variant in late Jan 2022 but 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 847 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 stabilised.²⁴
 - The US Centres for Disease Control and Prevention (CDC) recommend multi-layered PHSM, but adoption varies by State and Territory.
 - Approximately 34% of 5-11 year olds and 68% of 12-17 year olds have received at least one dose of vaccine.
 - Infections remain on a downward trend. BA.2 replaced BA.1 as the predominant variant in late Mar 2022 but there has been no increase in case numbers.
 - Hospitalisations continue to decrease in all age groups.
 - There have been 950 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 (127) and there are three States that have reported zero deaths throughout the entire pandemic.²⁵
 - A total of 7880 cases of MIS-C have been reported, including 66 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.

²² EuroMOMO. Graphs and maps. Copenhagen, Denmark: Statens Serum Institut (SSI); 2022. <https://www.euromomo.eu/graphs-and-maps>

²³ 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>

²⁴ 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>

²⁵ American Academy of Pediatrics (AAP). Children and COVID-19: State-Level Data Report. 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 ²⁶	Schools & mitigation ²⁷	Vaccination coverage ^{28, 29}																								
<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 were 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>56.2</td> <td>30.7</td> <td>-</td> </tr> <tr> <td>12-15</td> <td>89.5</td> <td>85.3</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>66.1</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	56.2	30.7	-	12-15	89.5	85.3	-	16+	95.1	93.7	-	18+	-	-	66.1				
(years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)																							
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²⁸ <https://www.health.gov.au/resources/collections/covid-19-vaccination-daily-rollout-update>
²⁹ <https://twitter.com/VicGovDH>
³⁰ Data from: <https://www.coronavirus.vic.gov.au/victorian-coronavirus-covid-19-data>
³¹ <https://www.coronavirus.vic.gov.au/victorian-coronavirus-covid-19-data>
³² <https://www.coronavirus.vic.gov.au/additional-covid-19-case-data#cases-in-hospital>

Australia: New South Wales (population 8.2 million)

PHSM ³³	Schools & mitigation ³⁴	Vaccination coverage ^{35, 36}																																																																																																																	
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<p>Figure 4. Daily seven-day rolling average rate of people reported with COVID-19 per 100,000 population, by age group and test date, NSW, in the four weeks to 2 April 2022</p> <p>Omicron (BA.2) is the dominant variant.</p> <p>Table 7. Variants of concern (VOCs) identified by whole genome sequencing (WGS) of virus from people who tested positive for SARS CoV-2 by PCR, by test date, NSW, in the four weeks to 2 April 2022</p> <table border="1"> <thead> <tr> <th rowspan="2">Variant</th> <th colspan="4">Week ending</th> </tr> <tr> <th>12 March</th> <th>19 March</th> <th>26 March</th> <th>02 April</th> </tr> </thead> <tbody> <tr> <td>Delta (B.1.617)</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Omicron (BA.1)</td> <td>152</td> <td>103</td> <td>51</td> <td>9</td> </tr> <tr> <td>Omicron (BA.2)</td> <td>264</td> <td>418</td> <td>524</td> <td>141</td> </tr> <tr> <td>Total</td> <td>416</td> <td>521</td> <td>575</td> <td>150</td> </tr> </tbody> </table>	Variant	Week ending				12 March	19 March	26 March	02 April	Delta (B.1.617)	0	0	0	0	Omicron (BA.1)	152	103	51	9	Omicron (BA.2)	264	418	524	141	Total	416	521	575	150	<p>Table 3. Age group of people with a COVID-19 diagnosis in the previous 14 days who were admitted to hospital in the week ending 2 April 2022, NSW</p> <table border="1"> <thead> <tr> <th>Age group (years)</th> <th>Admitted to hospital (but not to ICU) (%)</th> <th>Admitted to ICU (%)</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>0-9</td> <td>105 (10%)</td> <td>2 (2%)</td> <td>107 (9%)</td> </tr> <tr> <td>10-19</td> <td>65 (6%)</td> <td>2 (2%)</td> <td>66 (6%)</td> </tr> <tr> <td>20-29</td> <td>113 (10%)</td> <td>11 (13%)</td> <td>123 (11%)</td> </tr> <tr> <td>30-39</td> <td>157 (14%)</td> <td>10 (12%)</td> <td>162 (14%)</td> </tr> <tr> <td>40-49</td> <td>96 (9%)</td> <td>8 (10%)</td> <td>104 (9%)</td> </tr> <tr> <td>50-59</td> <td>84 (8%)</td> <td>13 (16%)</td> <td>93 (8%)</td> </tr> <tr> <td>60-69</td> <td>106 (10%)</td> <td>8 (10%)</td> <td>111 (10%)</td> </tr> <tr> <td>70-79</td> <td>149 (14%)</td> <td>16 (19%)</td> <td>160 (14%)</td> </tr> <tr> <td>80-89</td> <td>157 (14%)</td> <td>12 (14%)</td> <td>165 (14%)</td> </tr> <tr> <td>90+</td> <td>57 (5%)</td> <td>1 (1%)</td> <td>58 (5%)</td> </tr> <tr> <td>Total</td> <td>1,089 (100%)</td> <td>83 (100%)</td> <td>1,149 (100%)</td> </tr> </tbody> </table> <p>Figure 1. Daily seven-day rolling average* of people with COVID-19 admitted to hospital within 14 days of their diagnosis, NSW, in the four weeks to 2 April 2022</p> <p>Some admissions in <12y children are for social reasons as parents are hospitalised for treatment of COVID-19. Graph is not available by age group.</p>	Age group (years)	Admitted to hospital (but not to ICU) (%)	Admitted to ICU (%)	Total	0-9	105 (10%)	2 (2%)	107 (9%)	10-19	65 (6%)	2 (2%)	66 (6%)	20-29	113 (10%)	11 (13%)	123 (11%)	30-39	157 (14%)	10 (12%)	162 (14%)	40-49	96 (9%)	8 (10%)	104 (9%)	50-59	84 (8%)	13 (16%)	93 (8%)	60-69	106 (10%)	8 (10%)	111 (10%)	70-79	149 (14%)	16 (19%)	160 (14%)	80-89	157 (14%)	12 (14%)	165 (14%)	90+	57 (5%)	1 (1%)	58 (5%)	Total	1,089 (100%)	83 (100%)	1,149 (100%)	<p>Table 4. Reported deaths of people with COVID-19, by age group, NSW, in the week ending 2 April 2022</p> <table border="1"> <thead> <tr> <th>Age-group (years)</th> <th>Number of deaths</th> </tr> </thead> <tbody> <tr> <td>0-9</td> <td>0 (0%)</td> </tr> <tr> <td>10-19</td> <td>0 (0%)</td> </tr> <tr> <td>20-29</td> <td>0 (0%)</td> </tr> <tr> <td>30-39</td> <td>2 (3%)</td> </tr> <tr> <td>40-49</td> <td>0 (0%)</td> </tr> <tr> <td>50-59</td> <td>3 (4%)</td> </tr> <tr> <td>60-69</td> <td>6 (8%)</td> </tr> <tr> <td>70-79</td> <td>15 (21%)</td> </tr> <tr> <td>80-89</td> <td>30 (41%)</td> </tr> <tr> <td>90+</td> <td>17 (23%)</td> </tr> <tr> <td>Total</td> <td>73 (100%)</td> </tr> </tbody> </table> <p>Table 2. Reported deaths of people with COVID-19, by vaccination status, NSW, in the week ending 2 April 2022</p> <table border="1"> <thead> <tr> <th>Vaccination status</th> <th>Number of deaths</th> </tr> </thead> <tbody> <tr> <td>Three or more doses</td> <td>27 (37%)</td> </tr> <tr> <td>Two doses</td> <td>26 (36%)</td> </tr> <tr> <td>One dose</td> <td>1 (1%)</td> </tr> <tr> <td>No dose/Unknown</td> <td>19 (26%)</td> </tr> <tr> <td>Total</td> <td>73 (100%)</td> </tr> </tbody> </table> <p>Four children have died with COVID-19 throughout the pandemic, including one 15 year old with pneumococcal meningitis, one three-year-old with underlying genetic disorder, one two-year-old with no major pre-existing conditions and one two-month-old baby.</p>	Age-group (years)	Number of deaths	0-9	0 (0%)	10-19	0 (0%)	20-29	0 (0%)	30-39	2 (3%)	40-49	0 (0%)	50-59	3 (4%)	60-69	6 (8%)	70-79	15 (21%)	80-89	30 (41%)	90+	17 (23%)	Total	73 (100%)	Vaccination status	Number of deaths	Three or more doses	27 (37%)	Two doses	26 (36%)	One dose	1 (1%)	No dose/Unknown	19 (26%)	Total	73 (100%)
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³⁶ <https://twitter.com/NSWHealth>
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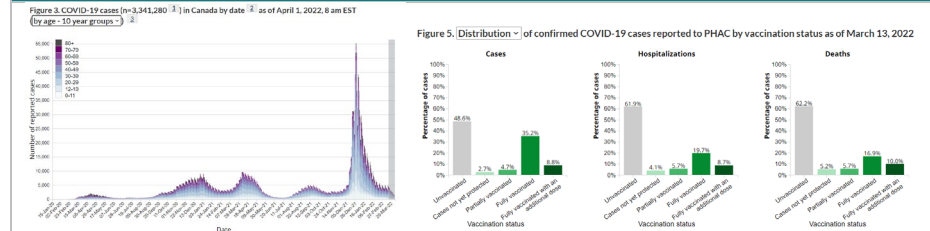
Canada (population 38 million)

PHSM⁴⁰

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



Infections by age group^{43,44}



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

	Ages 0-4	Ages 5-11	Ages 12-17
VACCINATIONS	Have 1 dose Have 2 doses Have 3/booster doses	Not eligible 17% 84%	88% 18% 84%
CASES	new this report new this school year total cases	2,408 8,145 12,318	2,207 15,362 17,910
HOSPITALIZATIONS	new this report new this school year total hospitalized	73 156 238	42 93 127
CRITICAL CARE	new this report new this school year total in critical care	8 16 24	4 8 14
DEATHS	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.

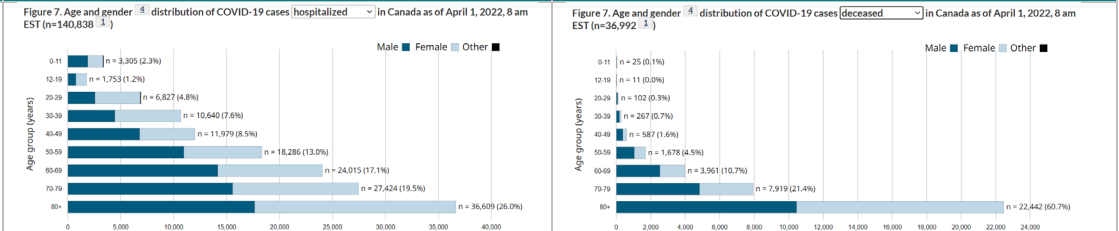
⁴⁰ <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks.html>
⁴¹ <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/guidance-documents/planning-2021-2022-school-year-vaccination.html>
⁴² <https://health-infobase.canada.ca/covid-19/vaccination-coverage/>
⁴³ <https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html>
⁴⁴ <http://www.bccdc.ca/schools/news-resources/data-for-k-12>
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Schools & mitigation⁴¹

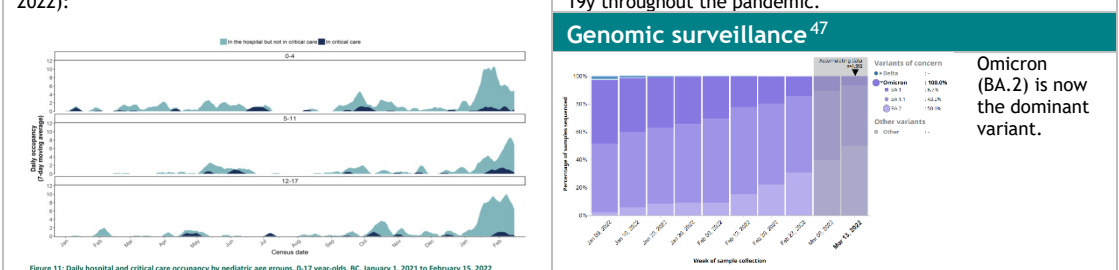
Closed for winter holidays in Dec 2021 and returned to school in mid-Jan 2022.

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.

Hospitalisations in children⁴⁵



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



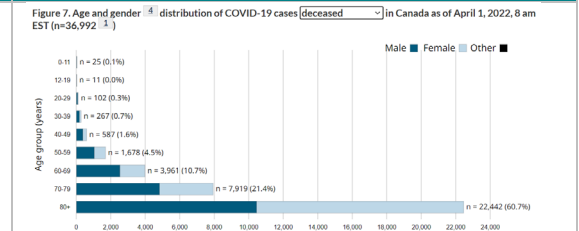
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Vaccination coverage⁴²

Age group (years)	1 st dose (%)	Fully vacc.* (%)	3 rd /booster (%)
5-11	56.9	39.5	-
12-17	88.3	84.5	14.5
Total pop.	84.7	81.3	47.0

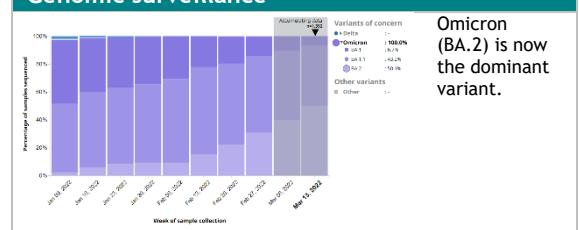
*Canada also uses the J&J/Janssen vaccine which is a single-dose vaccine. Third/booster doses have been available to high-risk individuals in phases since Sep 2021. Vaccination of 12y+ commenced mid-May and 5-11y in mid-Nov 2021.

Deaths by age group⁴⁶



There have been 36 deaths with COVID-19 in children aged 0-19y throughout the pandemic.

Genomic surveillance⁴⁷



⁴¹ <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks.html>
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Denmark

(population 5.9 million)

<p>PHSM⁴⁸</p> <p>All restrictions lifted from February 2022.</p>	<p>Schools & mitigation⁴⁹</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>	<p>Vaccination coverage⁵⁰</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>47.3</td> <td>38.8</td> <td>-</td> </tr> <tr> <td>12-15</td> <td>81.8</td> <td>79.9</td> <td>0.4</td> </tr> <tr> <td>16-19</td> <td>89.9</td> <td>88.6</td> <td>44.5</td> </tr> <tr> <td>12+</td> <td>82.3</td> <td>80.8</td> <td>61.5</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.</p>	Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)	5-11	47.3	38.8	-	12-15	81.8	79.9	0.4	16-19	89.9	88.6	44.5	12+	82.3	80.8	61.5	<p>Genomic surveillance⁵¹</p> <p>Omicron (BA.2) is the predominant variant (>99%).</p>
Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)																				
5-11	47.3	38.8	-																				
12-15	81.8	79.9	0.4																				
16-19	89.9	88.6	44.5																				
12+	82.3	80.8	61.5																				
<p>Infections by age group^{52, 53}</p> <p>Weekly positive cases by age and vaccine status*</p> <p>Ugentligt antal positive opdelt på alder og vaccinstatus Relative og absolutte antal personer med positiv SARS-CoV-2 PCR test Været kan lade til flere positive.</p>	<p>Hospitalisations in children⁵⁴</p> <p>Weekly admissions by age and vaccine status*</p> <p>Ugentligt antal indlæggelser opdelt på alder og vaccinstatus Relative og absolutte antal indlæggelser med positiv SARS-CoV-2 PCR test</p>	<p>Deaths by age group^{55, 56}</p> <p>Weekly deaths by age and vaccine status*</p> <p>Ugentligt antal døde opdelt på alder og vaccinstatus Relative og absolutte antal døde med positiv SARS-CoV-2 PCR test</p> <p>Total of 7 deaths with COVID-19 in children aged 0-19y throughout the pandemic.</p>	<p>MIS-C⁵⁷</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)

⁴⁸ <https://en.coronasmitte.dk/rules-and-regulations>
⁴⁹ <https://en.coronasmitte.dk/rules-and-regulations>
⁵⁰ https://experience.arcgis.com/experience/9824b03b114244348ef0b10f69f490b4/page/page_3/
⁵¹ <https://covid19genomics.dk/statistics>
⁵² <https://covid19danmark.dk/>
⁵³ <https://covid19.ssi.dk/overvagningsdata/ugentlige-opgorelser-med-overvaagningsdata>
⁵⁴ <https://covid19danmark.dk/>
⁵⁵ <https://covid19danmark.dk/>
⁵⁶ <https://covid19.ssi.dk/overvagningsdata/ugentlige-opgorelser-med-overvaagningsdata>
⁵⁷ <https://www.sst.dk/-/media/Udgifter/2022/Corona/Vaccination/Notat-vaccination-af-boern-5-11-aar.ashx>



England, UK

(population 56.6 million)

<p>PHSM⁵⁸</p> <p>Most restrictions have been lifted. Some remain in place including an advice to stay home if positive for COVID-19 and mask-wearing in healthcare settings only. Free PCRs and RATs are no longer available to most people.</p>	<p>Schools & mitigation⁵⁹</p> <p>Closed for winter holidays in Dec 2021 and returned to school in early Jan 2022.</p> <p>Standard PHSM. RAT screening for staff and secondary school students, mask wearing and close contact isolation no longer required.</p>	<p>Vaccination coverage⁶⁰</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>91.8</td> <td>85.9</td> <td>66.8</td> </tr> <tr> <td>12-15</td> <td>57.5</td> <td>32.6</td> <td>0.4</td> </tr> <tr> <td>16-17</td> <td>68.3</td> <td>52.7</td> <td>14.1</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>	Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)	12+	91.8	85.9	66.8	12-15	57.5	32.6	0.4	16-17	68.3	52.7	14.1
Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)															
12+	91.8	85.9	66.8															
12-15	57.5	32.6	0.4															
16-17	68.3	52.7	14.1															
<p>Infections by age group^{61,62}</p> <p>Figure 5: Weekly confirmed COVID-19 case rates per 100,000, by episode*, tested under Pillar 1 and Pillar 2, by age group</p> <p>Figure 6: Mortality rate percentage of the population testing positive for coronavirus (COVID-19) on nose and throat swabs, by age group, England, 13 February to 26 March 2022</p> <p>* Each infection episode is counted separately if there is at least 91 days between positive test results. Each infection episode begins with the earliest positive specimen date.</p>	<p>Hospitalisations in children^{63,64}</p> <p>Figure 44: Weekly hospital admission rate by age group for new (a) COVID-19 positive cases and (b) influenza reported through SARI Watch</p> <p>COVID-19-positive hospital admissions as a percentage of the rate during the January peak (rate in week ending 17 January 2021 = 100%), by age, England</p> <p>COVID-19 as primary reason for admission among hospitalised patients positive for SARS-CoV-2 by age group and time period</p>	<p>Deaths by age group⁶⁵</p> <p>Figure 56: Age-sex pyramid of deaths within 28 or 60 days of a positive COVID-19 test, for the past year</p> <p>A total of 83 deaths with COVID-19 in the past year:</p> <ul style="list-style-type: none"> <5y: 18 5-9y: 8 10-19y: 57 																
<p>Genomic surveillance⁶⁶</p> <p>Figure 2: Variant prevalence of available sequenced cases for England from 1 February 2021 as of 22 March 2022</p> <p>Omicron (BA.2) is the dominant variant.</p>																		

⁵⁸ <https://www.gov.uk/guidance/covid-19-coronavirus-restrictions-what-you-can-and-cannot-do>
⁵⁹ <https://www.gov.uk/government/publications/actions-for-schools-during-the-coronavirus-outbreak/schools-covid-19-operational-guidance>
⁶⁰ <https://coronavirus.data.gov.uk/details/vaccinations?areaType=nation&areaName=England>
⁶¹ <https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season>
⁶² <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/articles/coronaviruscovid19latestinsights/infections#infections-by-age>
⁶³ <https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season>
⁶⁴ <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/articles/coronaviruscovid19latestinsights/hospitals>
⁶⁵ <https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2021-to-2022-season>
⁶⁶ <https://www.gov.uk/government/publications/investigation-of-sars-cov-2-variants-technical-briefings>





Finland

(population 5.5 million)

<p>PHSM⁶⁷</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. Masks are recommended indoors and on public transport.</p>	<p>Schools & mitigation⁶⁸</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 coverage⁶⁹</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>26.4</td> <td>11.0</td> <td>-</td> </tr> <tr> <td>12-17</td> <td>79.8</td> <td>73.9</td> <td>1.5</td> </tr> <tr> <td>18+</td> <td>89.5</td> <td>87.2</td> <td>62.7</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 Aug and 5-11y children from late Dec 2021.</p>	Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)	5-11	26.4	11.0	-	12-17	79.8	73.9	1.5	18+	89.5	87.2	62.7
Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)															
5-11	26.4	11.0	-															
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<p>Infections by age group⁷⁰</p> <p>Finland: 14-day age-specific COVID-19 case notification rate</p>	<p>Hospitalisations in children^{71,72}</p> <p>Finland: hospital occupancy by COVID-19 cases</p> <p>Rate of admission to specialist care by age group</p> <p>Rate of admission to specialist care by age group</p>	<p>Deaths by age group⁷³</p> <p>Deaths by age group (for the whole period)</p> <p>There have been 0 deaths in children throughout the pandemic.</p>																
<p>Genomic surveillance⁷⁴</p> <p>Variant of concern distributions</p> <p>Omicron sublineage distributions</p>																		

⁶⁷ <https://valtioneuvosto.fi/en/information-on-coronavirus/current-restrictions>
⁶⁸ <https://okm.fi/documents/1410845/65547855/MoEC+THL+recommendations+to+education+and+early+childhood+education+and+care+1.3.2022.pdf/61cad874-6b78-84e4-a885-3a61ca69cd10>
⁶⁹ https://sampo.thl.fi/pivot/prod/en/vaccreg/cov19cov/summary_cov19ageareacov
⁷⁰ <https://covid19-country-overviews.ecdc.europa.eu/countries/Finland.html>
⁷¹ <https://covid19-country-overviews.ecdc.europa.eu/countries/Finland.html>
⁷² <https://thl.fi/fi/web/infektioitaudit-ja-rokotukset/ajankohtaista/ajankohtaista-koronaviruksesta-covid-19/tilannekatsaus-koronaviruksesta/koronaviruksen-seuranta>
⁷³ <https://experience.arcgis.com/experience/92e9bb33fac744c9a084381fc35aa3c7>
⁷⁴ <https://covid19-country-overviews.ecdc.europa.eu/countries/Finland.html>





Netherlands

(population 17.4 million)

<p>PHSM⁷⁵</p> <p>Most restrictions have been lifted. Some remain in place including mask-wearing in airports only and advice to test if symptomatic.</p>	<p>Schools & mitigation⁷⁶</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 coverage⁷⁷</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>6.0</td> <td>2.0</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>63.3</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 Jul 2021 and 5-11y from mid-Jan 2022.</p>	Age group (years)	1 st dose (%)	Fully vacc. (%)	3 rd /booster (%)	5-11	6.0	2.0	-	12-17	69.0	68.0	-	18+	-	86.4	63.3		
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18+	-	86.4	63.3																	
<p>Infections by age group^{78,79}</p> <p>Number of reported positive tests per 100,000 inhabitants, by age, by week from 31 January to 13 March 2022</p>	<p>Hospitalisations in children^{80, 81}</p> <p>Hospital admissions</p> <p>If we look at all hospital admissions (91,355) reported by the NICE Foundation between 1 January 2021 and 15 March 2022, 1.4% (1,310) were younger than 4 years old, 0.4% (328) were aged 4-11 years and 0.3% (316) were aged 12-17 years. The vast majority (97.9% or 89,401) 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>1,310</td> <td>1.4%</td> </tr> <tr> <td>4-11</td> <td>328</td> <td>0.4%</td> </tr> <tr> <td>12-17</td> <td>316</td> <td>0.3%</td> </tr> <tr> <td>>17</td> <td>89,401</td> <td>97.9%</td> </tr> <tr> <td>Total</td> <td>91,355</td> <td></td> </tr> </tbody> </table>	Age group (children)	Hospital admissions		<4	1,310	1.4%	4-11	328	0.4%	12-17	316	0.3%	>17	89,401	97.9%	Total	91,355		<p>Deaths by age group⁸²</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 surveillance⁸³</p> <p>Omicron (BA.2) is the dominant variant.</p>
Age group (children)	Hospital admissions																			
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⁷⁵ <https://www.government.nl/topics/coronavirus-covid-19/tackling-new-coronavirus-in-the-netherlands/coronavirus-measures-in-brief>
⁷⁶ <https://www.rivm.nl/en/coronavirus-covid-19/children-and-covid-19>
⁷⁷ <https://coronadashboard.government.nl/landelijk/vaccinaties>
⁷⁸ <https://coronadashboard.government.nl/landelijk/positief-geteste-mensen>
⁷⁹ <https://www.rivm.nl/en/coronavirus-covid-19/children-and-covid-19/research-results-ggd-data>
⁸⁰ <https://coronadashboard.government.nl/landelijk/ziekenhuis-opnames>
⁸¹ <https://www.rivm.nl/en/coronavirus-covid-19/children-and-covid-19/research-results-ggd-data>
⁸² <https://coronadashboard.government.nl/landelijk/sterfte>
⁸³ <https://www.rivm.nl/en/coronavirus-covid-19/virus/variants>



Scotland, UK

(population 5.5 million)

<p>PHSM⁸⁴</p> <p>Most restrictions have been lifted. Some remain in place including mask-wearing on public transport and some indoor settings. TTIQ will end in early May 2022.</p>	<p>Schools & mitigation⁸⁵</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>Vaccination coverage⁸⁶</p> <p>Age group</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>93.3</td> <td>87.3</td> <td>72.9</td> </tr> <tr> <td>12-15</td> <td>67.9</td> <td>42.1</td> <td>1.1</td> </tr> <tr> <td>16-17</td> <td>80.9</td> <td>54.3</td> <td>10.1</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>	Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)	12+	93.3	87.3	72.9	12-15	67.9	42.1	1.1	16-17	80.9	54.3	10.1
Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)															
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<p>Infections by age group⁸⁷</p> <p>Figure 6: Weekly total combined PCR and LFD cases (including reinfections) per 100,000 population in Scotland by age group, by specimen date. Data to 27 March 2022^{89, 90}.</p>	<p>Hospitalisations in children⁸⁸</p> <p>Hospital admissions 'with' COVID-19 (3-week rolling average)</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>Deaths by age group^{89, 90}</p> <p>Figure 11: Weekly total number of deaths where Covid-19 was mentioned on the death certificate, by age group. Data to the week ending 27 March 2022.</p> <p>There have been 5 deaths due to COVID-19 in children aged 0-14y in the past year.</p>																
<p>Genomic surveillance⁹¹</p> <p>Figure 4: Modelled percentage of infections compatible with the Omicron BA.1 variant and Omicron BA.2 variant, based on nose and throat swabs, daily, in Scotland, 13 February to 26 March 2022⁹¹.</p> <p>Omicron (BA.2) is the dominant variant in Scotland.</p>																		

⁸⁴ <https://www.gov.scot/coronavirus-covid-19/>
⁸⁵ <https://www.gov.uk/government/publications/actions-for-schools-during-the-coronavirus-outbreak/schools-covid-19-operational-guidance>
⁸⁶ <https://coronavirus.data.gov.uk/details/vaccinations?areaType=nation&areaName=Scotland>
⁸⁷ <https://www.gov.scot/collections/coronavirus-covid-19-the-state-of-the-epidemic/>
⁸⁸ https://scotland.shinyapps.io/phs-covid19-education/?w_852fb58e/
⁸⁹ <https://www.gov.scot/collections/coronavirus-covid-19-the-state-of-the-epidemic/>
⁹⁰ <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>
⁹¹ <https://www.gov.scot/collections/coronavirus-covid-19-the-state-of-the-epidemic/>





Singapore

(population 5.5 million)

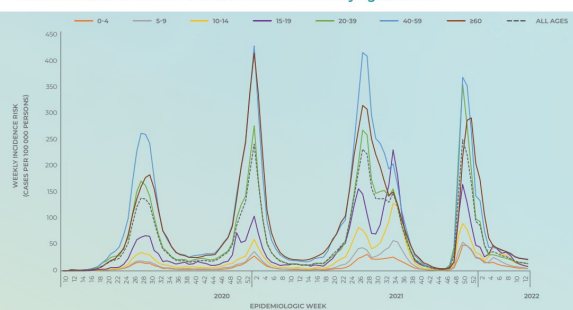
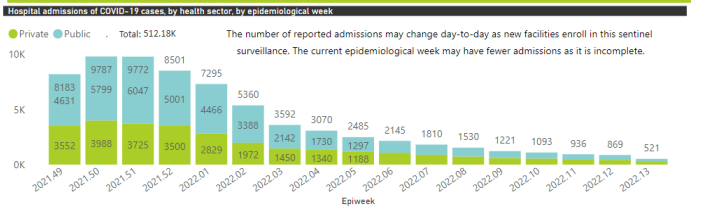
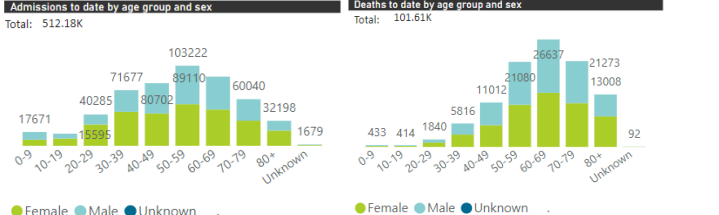
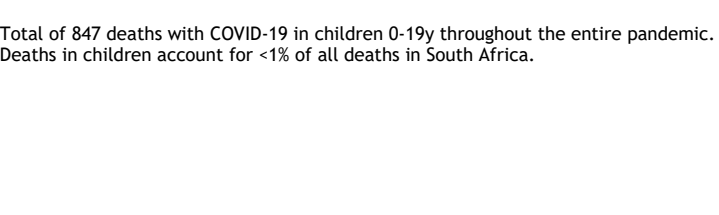
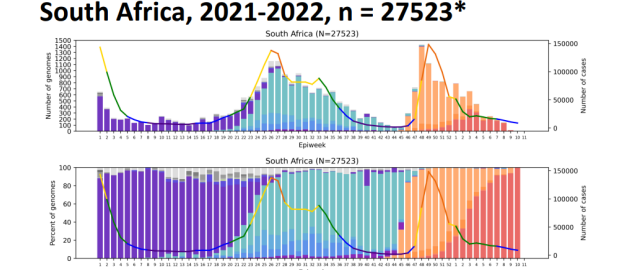
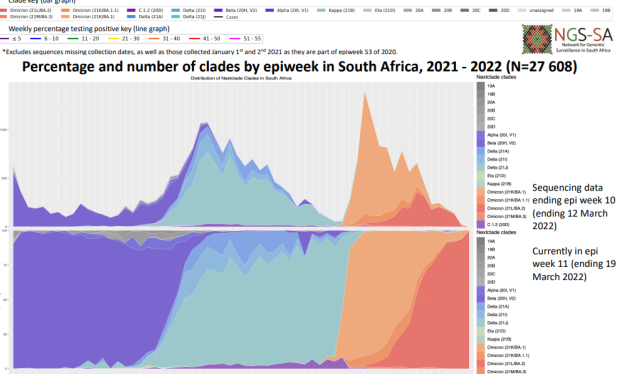
PHSM ⁹²	Schools & mitigation ⁹³	Vaccination coverage ⁹⁴								
<p>From late Mar 2022, some restrictions have eased including masks mandatory indoors but optional outdoors, hybrid work arrangements, increased density limits in shops, vaccination requirements to enter many premises.</p>	<p>Closed for 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>72.0</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	72.0
Age group (years)	1 st dose (%)	2 nd dose (%)	3 rd /booster (%)							
Total pop.	93.0	92.0	72.0							
Infections by age group ⁹⁵	Hospitalisations in children ⁹⁶	Deaths by age group ⁹⁷								
<p>As of 03 April 2022, 12pm Number of Local Cases by Age</p> <p>3,674</p> <ul style="list-style-type: none"> 482 208 1,355 983 368 278 	<p>As of 03 April 2022, 12pm Hospitalised Patients by Age Groups</p> <p>430</p> <ul style="list-style-type: none"> 22 2 23 26 75 283 	<p>As of 03 April 2022, 12pm Deaths by Age Groups</p> <p>There have been 0 deaths in children throughout the entire pandemic.</p>								

⁹² <https://www.moh.gov.sg/covid-19-phase-advisory>
⁹³ <https://www.moe.gov.sg/faqs-covid-19-infection>
⁹⁴ <https://www.moh.gov.sg/>
⁹⁵ <https://www.moh.gov.sg/>
⁹⁶ <https://www.moh.gov.sg/>
⁹⁷ <https://www.moh.gov.sg/>



South Africa

(population 60.4 million)

<p>PHSM⁹⁸</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 & mitigation⁹⁹</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 coverage¹⁰⁰</p> <p>Age group (years) Fully vaccinated* (%)</p> <p>18+ 48.8</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 group¹⁰¹</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 epidemiological week South Africa 3 March 2020 – 26 March 2022 (n = 3 678 371, 34 681 missing age)</p>	<p>Hospitalisations in children and deaths by age group¹⁰²</p> <p>Hospital admissions of COVID-19 cases, by epidemiological week</p> <p>Total: 512.18K</p> <p>Private Public Total: 512.18K</p> <p>The number of reported admissions may change day-to-day as new facilities enroll in this sentinel surveillance. The current epidemiological week may have fewer admissions as it is incomplete.</p>  <p>Admissions to date by age group and sex</p> <p>Total: 512.18K</p>  <p>Deaths to date by age group and sex</p> <p>Total: 101.61K</p>  <p>Total of 847 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 surveillance¹⁰³</p> <p>South Africa, 2021-2022, n = 27523*</p>  <p>Percentage and number of clades by epiweek in South Africa, 2021 - 2022 (N=27 608)</p>  <p>Delta dominated in South Africa until October at >80%. Omicron has dominated from November onwards.</p> <p>Omicron (BA.2) is the dominant variant.</p>

⁹⁸ <https://www.gov.za/covid-19/resources/regulations-and-guidelines-coronavirus-covid-19>
⁹⁹ <https://www.gov.za/covid-19/resources/regulations-and-guidelines-coronavirus-covid-19>
¹⁰⁰ <https://sacoronavirus.co.za/latest-vaccine-statistics/>
¹⁰¹ <https://www.nicd.ac.za/diseases-a-z-index/disease-index-covid-19/surveillance-reports/weekly-epidemiological-brief/>
¹⁰² <https://www.nicd.ac.za/diseases-a-z-index/disease-index-covid-19/surveillance-reports/daily-hospital-surveillance-datoc-report/>
¹⁰³ <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>PHSM¹⁰⁴</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 & mitigation¹⁰⁵</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 coverage¹⁰⁶</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>34.4</td> <td>27.7</td> <td>-</td> </tr> <tr> <td>12-17</td> <td>68.3</td> <td>58.4</td> <td>23.6</td> </tr> <tr> <td>18+</td> <td>88.4</td> <td>75.5</td> <td>48.5</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	34.4	27.7	-	12-17	68.3	58.4	23.6	18+	88.4	75.5	48.5															
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<p>Infections by age group¹⁰⁷</p> <p>COVID-19 Weekly Cases per 100,000 Population by Age Group, United States March 01, 2020 - April 02, 2022*</p>	<p>MIS-C¹⁰⁸</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^{109, 110}</p> <p>COVID-19 Weekly Deaths per 100,000 Population by Age Group, United States March 01, 2020 - April 02, 2022*</p>	<p>Genomic surveillance¹¹¹</p> <table border="1"> <thead> <tr> <th>WHO label</th> <th>Lineage #</th> <th>US Cases</th> <th>%Total</th> <th>95%CI</th> </tr> </thead> <tbody> <tr> <td>Omicron</td> <td>BA.2</td> <td>VOC</td> <td>54.9%</td> <td>50.8-59.1%</td> </tr> <tr> <td></td> <td>BA.1.1</td> <td>VOC</td> <td>40.4%</td> <td>36.4-44.5%</td> </tr> <tr> <td></td> <td>BA.1.2/29</td> <td>VOC</td> <td>4.7%</td> <td>3.9-5.7%</td> </tr> <tr> <td></td> <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></td> <td>Other*</td> <td></td> <td>0.0%</td> <td>0.0-0.0%</td> </tr> </tbody> </table>	WHO label	Lineage #	US Cases	%Total	95%CI	Omicron	BA.2	VOC	54.9%	50.8-59.1%		BA.1.1	VOC	40.4%	36.4-44.5%		BA.1.2/29	VOC	4.7%	3.9-5.7%		Delta	B.1.617.2	VOC	0.0%	0.0-0.0%		Other*		0.0%	0.0-0.0%
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<p>Hospitalisations in children¹¹³</p> <p>COVID-NET - Enteric Network - 2000-21 Weekly Rate % cases with enteric fever with enteric fever by age in hospital. Source: CDC COVID-NET</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 7880 cases of MIS-C throughout the entire pandemic, including 66 deaths. The median age of MIS-C cases was 9y and half were between 5-13y.</p>																																	

¹⁰⁴ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>
¹⁰⁵ <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-guidance.html>
¹⁰⁶ https://covid.cdc.gov/covid-data-tracker/#vaccinations_vacc-total-admin-rate-total
¹⁰⁷ <https://covid.cdc.gov/covid-data-tracker/#demographicsovertime>
¹⁰⁸ <https://covid.cdc.gov/covid-data-tracker/#mis-national-surveillance>
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¹¹⁰ https://www.cdc.gov/nchs/nvss/vsrr/covid_weekly/index.htm
¹¹¹ <https://covid.cdc.gov/covid-data-tracker/#variant-proportions>
¹¹² <https://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/children-and-covid-19-state-level-data-report/>
¹¹³ 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. ¹¹⁴



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

Last Updated: Apr 03, 2022

Data source: VTrcks, 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

¹¹⁴ <https://covid.cdc.gov/covid-data-tracker/#vaccinations-cases-trends>



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