



StrongSchoolsNC

What Are We Learning About Children and COVID-19?

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*We are learning more every day regarding COVID-19 in children. We are using the latest research to help NC make decisions about how we should operate our schools during the COVID-19 pandemic. We will continue to follow new data and science as it is available to learn more. **The current research summarized below still presents an early and limited picture of children and schools during the COVID-19 pandemic.** Be sure to check back for regular updates by visiting <https://www.nc.gov/covid19>.*

Children appear to be less likely to acquire and spread COVID-19 than adults.

- Children, particularly younger children, appear to be less likely than adults to become infected with COVID-19, even after being exposed to someone with COVID-19.
- Young children can spread the virus, however children under 14 years of age may be less likely to spread COVID-19 to others when compared with older teens and adults.
- Newer findings suggest that younger children may be more likely to get COVID-19 from an adult than to spread infection to adults.
- Spread of COVID-19 is much more likely within a household than not within a household (e.g., in schools)

Most children have very mild illness, but while rare, some children can develop severe symptoms. We are learning more about children who are at higher risk for severe illness.

- Children infected with COVID-19 generally have mild or no symptoms.
- Although rare, children can have severe disease. Those with underlying medical conditions are at increased risk of severe illness from COVID-19.
- Our African American and LatinX communities and children are disproportionately affected by COVID-19.

With prevention measures in place, increasing evidence suggests low rates of COVID-19 transmission in primary and secondary school settings even with high rates of community transmission.

- Little evidence that schools have contributed to increase rates of community transmission; countries that have reopened their schools did not see large rises in infection at a population level.
- Overall, studies in the US and internationally have demonstrated limited disease transmission from child-to-child and very limited to no transmission from child-to-adult in the in-person school setting.
- North Carolina's ABC collaborative found rates of secondary transmission during in-person school instruction significantly less than the surrounding communities and no cases of student to staff transmission

Preventive measures are important to success of in-person learning

- School systems that had high rates of face covering and other preventive measures showed low rates of transmission
- Lower rates of transmission in schools than the community suggest schools can be a protective environment because of monitoring and adherence to prevention measures
- Higher rates of spread of virus have been seen in out of school social gatherings and sports
- Mask use and hand-hygiene remain critical prevention measures.
- CDC recommends 6 feet of social distancing as the most health-protective distancing, but where that is not possible, 3-feet or greater of social distancing may still reduce risk of spread.

Learn More

Children may be less likely to have and spread COVID-19 than adults, but we are learning more about children's ability to spread the virus

[CDC, MMWR: Morbidity Mortality Weekly Report, Coronavirus Disease 2019 in Children — United States; February 12–April 2, 2020.](#)

[Cluster of COVID-19 in northern France: A retrospective closed cohort study. April 23, 2020](#)

[SARS-CoV-2 infections in primary schools in northern France: A retrospective cohort study in an area of high transmission. June 29, 2020.](#)

[CDC, Reported laboratory-confirmed COVID-19 cases and estimated cumulative incidence, by sex and age group — United States; January 22–May 30, 2020](#)

[DA International, Hospital Admission in Children and Adolescents With COVID-19, Early results from a national survey conducted by the German Society for Pediatric Infectious Diseases; May 5, 2020](#)

[World Health Organization, Considerations for school-related public health measures in the context of COVID-19; May 10, 2020](#)

[BMJ Global Health, Reduction of secondary transmission of SARS-CoV-2 in households by face mask use, disinfection and social distancing: a cohort study in Beijing, China; May 11, 2020](#)

[Children are unlikely to be the main drivers of the COVID-19 pandemic—a systematic review. May 19, 2020](#)

[Preprint. MedRxiv, Susceptibility to and transmission of COVID-19 amongst children and adolescents compared with adults: a systematic review and meta-analysis; May 24, 2020](#)

[CDC, COVID 19 Information for Pediatric Health Care Providers; May 29, 2020](#)

[Prevent Epidemics, COVID-19 Weekly Science Review; June 20-26, 2020](#)

[Nature, Coronavirus disease 2019 \(COVID-19\) in children and/or adolescents: a meta-analysis; June 17, 2020](#)

[Science, Changes in contact patterns shape the dynamics of the COVID-19 outbreak in China; June 26, 2020](#)

[Centers for Disease Control and Prevention; Preparing K-12 School Administrators for a Safe Return to School in Fall 2020. Updated July 23, 2020](#)

[Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report \(MMWR\) Hospitalization Rates and Characteristics of Children Aged < 18 years Hospitalized with Laboratory-Confirmed COVID-19 COVID-NET, 14 States, March 1-July 25, 2020](#)

[BMJ Contact tracing during Phase 1 of the COVID-10 pandemic in the Province of Trento, Italy: key findings and recommendations. July 29, 2020](#)

[School Opening across globe suggest ways to keep coronavirus at bay, despite outbreaks. July 7, 2020](#)

[Contact tracing during coronavirus disease outbreak, South Korea, 2020. Emerg Infect Dis. July 16, 2020](#)

[Children and Fecal SARS-CoV-2 shedding: Just the tip of the iceberg of Italian COVID-19 outbreak? Digestive and Liver Disease July 18, 2020](#)

[Balancing the Risks of Pupils Returning to Schools; Royal Society DELVE Initiative; July 24 2020](#)

[Children and COVID-19: State Data Report. A joint report from the American Academy of Pediatrics and Children's Hospital Association. July 30, 2020](#)

[COVID-19 in Children and the Dynamics of Infection in Families Pediatrics July 2020](#)

[Pediatric Age-Related Differences in Nasopharyngeal Severe Acute Respiratory Syndrome Coronavirus 2 \(SARS-CoV-2\) Levels in Patients with Mild to Moderate Coronavirus Disease 2019 \(COVID-19\) JAMA July 30, 2020](#)

[American Academy of Pediatrics, COVID-19 Planning Considerations: Guidance for School Re-entry; June 25, 2020, Updated 8/19/20](#)

[Transmission of SARS-CoV-2 in Australian educational settings: a prospective cohort study. Updated August 3, 2020](#)

[Household transmission of SARS-CoV-2 in the United States. August 16, 2020](#)

[Transmission Dynamics of COVID-19 Outbreaks Associated with Child Care Facilities — Salt Lake City, Utah, April–July 2020. Early Release / September 11, 2020 / 69](#)

[Susceptibility to SARS-CoV-2 infection among children and adolescents compared with adults. September 25, 2020](#)

[National Trends of Cases of COVID-19 in Children Based on US State Health Department Data Pediatrics. Sept 29, 2020](#)

[COVID-19 Trends Among School-Aged Children – United States, March 1-September 19, 2020. Morbidity and Mortality Weekly Report \(MMWR\) September 28, 2020](#)

Most children have very mild illness with COVID-19, but some have more severe symptoms and we are learning more about children who are at higher risk for infection or more severe illness

[CDC, MMWR: Morbidity Mortality Weekly Report, Coronavirus Disease 2019 in Children — United States; February 12–April 2, 2020.](#)

[Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report \(MMWR\) Hospitalization Rates and Characteristics of Children Aged < 18 years Hospitalized with Laboratory-Confirmed COVID-19 COVID-NET, 14 States, March 1-July 25, 2020](#)

[Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report \(MMWR\) COVID-19 – Associated Multisystem Inflammatory Syndrome in Children – United States, March-July 2020](#)

[Hospital Admission in Children and Adolescents With COVID-19. Early results from a national survey conducted by the German Society for Pediatric Infectious Diseases \(DGPI\) . May 2020](#)

[Multisystem Inflammatory Syndrome in US Children and Adolescents. N Engl J Med, July 23, 2020](#)

[Centers for Disease Control and Prevention; Health Department-Reported Cases of Multisystem Inflammatory Syndrome in Children \(MISC-C\) in the United States July 15, 2020](#)

[Children and Fecal SARS-CoV-2 shedding: Just the tip of the Iceberg of Italian COVID-19 outbreak? Digestive and Liver Disease July 18, 2020](#)

[American College of Rheumatology Clinical Guidance for Pediatric Patients with Multisystem Inflammatory Syndrome in Children \(MIS-C\) Associated with SARS-CoV-2 and Hyperinflammation in COVID-19. July 23, 2020](#)

[Children and COVID-19: State Data Report. A joint report from the American Academy of Pediatrics and Children's Hospital Association. July 30, 2020](#)

[Racial/Ethnic and Socioeconomic Disparities of SARS-CoV-2 Infection Among Children Goyal MK, et al. Pediatrics. Aug. 5, 2020](#)

[Immune responses to SARS-CoV-2 infection in hospitalized pediatric and adult patients. Science Translational Medicine. Sept 21, 2020](#)

With prevention measures in place, increasing evidence suggests lower rates of COVID-19 transmission in the primary and secondary school setting even with high rates of community transmission.

[Lancet Child and Adolescent Health, School Closure and Management Practices During Coronavirus Outbreaks Including COVID-19: A Rapid Systematic Review; April 6, 2020](#)

[Cluster of COVID-19 in northern France: A retrospective closed cohort study. April 23, 2020](#)

[NCIRS, COVID-19 in schools- the experience in NSW; April 26, 2020](#)

[Learning Policy Institute, Reopening Schools in the Context of COVID-19: Health and Safety Guidelines from other Countries, May 15 2020](#)

[A large COVID-19 outbreak in a high school 10 days after schools' reopening, Israel, May 2020. Euro Surveill.](#)

[Prevent Epidemics, COVID-19 Weekly Science Review; June 20-26, 2020](#)

[Center for Global Development, Back to School: An update on COVID cases as schools reopen; June 12, 2020](#)

[American Academy of Pediatrics, COVID-19 Planning Considerations: Guidance for School Re-entry; June 25, 2020](#)

[SARS-CoV-2 infections in primary schools in northern France: A retrospective cohort study in an area of high transmission. June 29, 2020.](#)

[School Opening across globe suggest ways to keep coronavirus at bay, despite outbreaks. July 7, 2020](#)

[Balancing the Risks of Pupils Returning to Schools; Royal Society DELVE Initiative; July 24 2020](#)

[Lancet Child Adolesc Health. Transmission of SARS-CoV-2 in Australian education settings: a prospective cohort study August 3, 2020](#)

[CDC, MMWR. SARS-CoV-2-Associated Deaths Among Persons Aged <21 years – United States, February 12 – July 21, 2020, Early Release, September 15, 2020](#)

[Surveillance of COVID-19 school outbreaks, Germany, March to August 2020](#)

[Minimal transmission of SARS-CoV-2 from paediatric COVID-19 cases in primary schools, Norway, August to November 2020. Brandal et al. EuroSurveill, November 2020](#)

[Factors associated with positive SARS-CoV-2 test results in outpatient health facilities and emergency departments among children and adolescents age <18 years-Mississippi. CDC Morbidity and Mortality Weekly Report December 2020.](#)

[Incidence and Secondary Transmission of SARS-CoV-2 Infections in Schools. Zimmerman and the ABC Science Collaborative et al. Pediatrics. January 2021](#)

[COVID-19 Cases and Transmission in 17 K-12 Schools – Wood County, Wisconsin, August 21- November 29, 2020. CDC Morbidity and Mortality Weekly Report. January 29, 2021. 70\(4\);136–140](#)

[Data and Policy to Guide Opening Schools Safely to Limit the Spread of SARS-CoV-2 Infection. JAMA. January 26, 2021](#)

Preventive measures are important to success of in-person learning

[The Lancet, Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis; June 1, 2020](#)

[World Health Organization, Considerations for school-related public health measures in the context of COVID-19; May 10, 2020](#)

[Case-Control Study of Use of Personal Protective Measures and Risk of SARS-CoV-2 Infection, Thailand. CDC Emerging Infectious Disease. November 11, 2020](#)

[COVID-19 Cases and Transmission in 17 K-12 Schools – Wood County, Wisconsin, August 21- November 29, 2020. CDC Morbidity and Mortality Weekly Report. January 29, 2021. 70\(4\);136–140](#)

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