

COVID-19 Strategies for Schools

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Metro Denver Partnership for Health



COVID-19

Strategies for Schools

Recommendations from the Metro Denver Partnership for Health

The Metro Denver Partnership for Health (MDPH) is updating its original school guidelines based on the increasing evidence — from metro Denver schools and globally — of the importance of in-person learning and the safety of in-person learning when standard prevention measures are used.

In-person learning is critical for the health and development of children, particularly, the youngest children. Re-opening schools for in-person learning, beginning with the youngest children, should be a public health priority for the Denver metro area.

Evidence from schools in the Denver metro area shows that when standard prevention measures are followed, in-person learning can be conducted in a way that prevents disease transmission for both students and staff. The safety of in-person learning has been demonstrated at much higher rates of community transmission than had been predicted at the time of our earlier guidance.

In-person learning appears to have minimal impact on community transmission. Schools are affected by high rates of community transmission, but schools are not the primary driver of community case rates.

Updated review of the scientific literature

Young children appear to be less susceptible to COVID-19. Studies in a range of settings show lower rates of COVID infection among children, particularly among those younger than 10 years of age, than among adults. Furthermore, young children appear to have a lower risk of transmitting COVID-19 to others. While SARS-CoV2 infectivity of respiratory tract secretions appears to be similar among children and adults, the risk of transmission from young children to household and community contacts appears to be lower than from adults.^{1,2,3}

Schools can prevent transmission, even when community rates are high. Data from Denver-area schools show low rates of apparent in-school transmission when standard prevention measures are followed (symptom screening, universal masking, distancing, hand hygiene, and rapid evaluation and testing of persons with symptoms).

The Colorado Department of Public Health and Environment (CDPHE)'s review of public health data found that strategies such as cohorting, mask wearing, and disease investigation seem to be working to prevent school outbreaks in Colorado.⁴ These findings are consistent with experiences from schools around the world.⁵ School transmission appears to be rare when strict mitigation measures — mask wearing, symptom screening, 3-foot distancing, staggering entry/exit times, sanitizing — are in place.⁶

Risk is particularly low among younger children and increases with age.⁷ COVID-19 outbreaks in high schools did not extend to nearby elementary schools in countries including France, Israel, and New Zealand.⁸

Schools are clearly affected by community transmission. The rate of community transmission is highly correlated with cases in metro Denver schools. However, most cases among students and staff appear to be acquired at home or in the community rather than in schools. Thus far, there is insufficient evidence to define a threshold for the level of community transmission that increases in-school transmission risk. Notably, several countries

have recently kept schools open during second waves of transmission and have been able to reverse community-wide transmission surges and also mitigate economic harm during these waves by allowing parents greater opportunities to work.⁹

Higher community case rates cause higher rates of disruption of in-person learning. Some of the disruption is due to quarantine of students, but classroom and school closures are more often due to quarantine of teachers. The experience of Denver metro school systems is that at very high levels of community transmission (> 500-700 cases per 100,000 in 14 days), it can become difficult to operate in-person learning due to shortages of teachers and quarantine of students, with some schools experiencing a tipping point at lower rates.

While no social interaction can be completely risk-free, especially with high levels of community transmission, schools' consistent implementation of disease mitigation strategies reduce transmission risk among adults in school settings and provide protection for faculty and staff as students return to in-person learning.

Schools are not the primary drivers of community transmission. Evidence to date finds that children are not primary drivers of transmission and that school reopening is likely to have minimal impact on transmission between students or between students and staff.^{10,11,12} Additional community mitigation measures, such as those within Level Red of the [Colorado Dial](#), can be effective when in-person learning is continued.

Recommendations for Returning to and Maintaining In-Person Attendance

- Re-opening schools for in-person learning is a public health priority in the Denver metro area. Limiting or suspending extracurricular activities reduces additional risks that can threaten in-person learning.¹³
- Start with the youngest children (early childhood to 5th grade) who benefit the most from in-person learning and have the lowest risk of acquiring and transmitting SARS-CoV2. If in-person learning for younger students continues to demonstrate minimal transmission, build on these efforts in a stepwise manner by opening schools to in-person learning for progressively higher grades.

- Schools must continue to comply with the standard prevention measures that have been shown to be effective in Denver metro schools (symptom screening, increased ventilation, masking, distancing, hand hygiene).
- Implement strategies to decrease school disruption, including [use of targeted contact identification as recommended by CDPHE](#), to safely limit the number of students and staff who are quarantined and following new national guidelines for shortening the duration of quarantine.¹⁴
- Consider expanded testing for COVID-19 among asymptomatic students/staff and persons in quarantine as part of standard prevention measures. [Recently updated CDC quarantine guidance](#) provides options for reducing time in quarantine to 7 days with a negative test at day 5 or later OR 10 days with no test for persons who have remained asymptomatic and who are aware of the need for daily symptom monitoring through the full 14 days of the standard quarantine approach. These options can reduce the time staff or students need to be away and also create an incentive for testing which can help in the assessment of intra-school transmission.
- Collect data to monitor the efficacy of school mitigation strategies and inform where and when changes or modifications may be needed. This includes:
 - Rates of intra-school transmission (as measured by the proportion of persons in quarantine who test positive while either asymptomatic or symptomatic);
 - Positivity rates for staff and students over time; and,
 - Percentage of staff and students who undergo routine surveillance testing.
- Work with local public health to explain the rationale for and encourage delayed relaxation of community mitigation measures until K-12 schools have been re-opened for in-person learning (full or hybrid).
- Consider prioritizing school staff, beginning with elementary school staff, when COVID-19 vaccine becomes available for "essential workers" (Priority 2A in the state plan).

Additional mitigation and prevention strategies are detailed below. MDPH will continue to collaborate with the region's schools in staying informed of the evidence and support their efforts to implement these protocols.



Masks and Other Protective Equipment

Guidance

- **Students:** Face coverings required unless mitigating circumstances preclude use.
- **Teachers/Staff:** Face coverings and eye protection required unless mitigating circumstances preclude use.

Other Considerations

- Masks can reduce respiratory droplet transmission, especially indoors with less than 6 feet of separation.
- Consider face shields (or goggles if feasible) as added barrier option for staff and for teachers, especially when working in close proximity or when students are unable to wear masks consistently, such as in some special education classes.
- Masks/face covering should be required except where doing so would inhibit the individual's health, in which case reasonable accommodations should be pursued to maintain safety and health.

Resources

[Centers for Disease Control and Prevention \(CDC\) School Guidelines](#)



Cohort Grouping

Guidance

- **Students and teachers:** Keep same group together each day.
- Use technology if/when new teachers need to join a classroom for a time-limited period.
- Common space such as libraries and cafeterias should be accessed as a cohort.
- Limit or discontinue use of lockers and locker rooms.

Other Considerations

- Create schedules that decrease opportunities for group of students to mix such as limiting passing periods and in-between class times.
- For mixed cohorts (A/B, morning and afternoon cohorts) that cannot be physically distant: disinfect shared spaces/classrooms between cohort changes; require face coverings as feasible under previous guidance; monitor daily symptom screening checks; and promote hand hygiene.
- Indoor extracurricular programs should work to adhere to physical distancing and masking guidelines if cohorts are mixed.

Resources

[Centers for Disease Control and Prevention \(CDC\) School Guidelines](#)

[Colorado High School Activities Association Athletics Guidance](#)



Physical Distancing

Guidance

- Maintain at least 3 feet of distance in indoor and outdoor settings if possible
- One-way hallways
- **Primary School:** Stagger recess times
- **Secondary School:**
 - Limit or discontinue use of lockers; limit in-between class time
 - Staff: Discontinue in-person faculty/staff meetings. Reduce interactions between adults in shared spaces.

Other Considerations

- Regular use of mitigation factors (including face coverings, eye protection, and hand hygiene) can reduce the risk of infections for physical distancing of 3 feet.¹⁵
- Consider physical demarcations outlining 3-foot intervals for pick up, drop off, bus loading, etc.
- Avoid large groups, especially indoors (performances, assemblies)
- Hold faculty/staff meetings via virtual platforms.
- Encourage staff to maintain 12-foot distances if eating together in a break room; encourage staff to access outdoor spaces for eating, weather permitting.

Resources

[Reopening Schools in the Context of COVID-19: Health and Safety Guidelines from Other Countries](#)
[Center for Disease Control and Prevention \(CDC\) School Guidelines](#)



Bus Transportation

Guidance

- One student per seat

Other Considerations

- Masking/face covering should be required.
- Multiple children could share a seat if they are members of the same household, such as siblings, or in a classroom cohort.

Resources

[Guidelines for Public Transportation Providers](#)



Hand washing and Sanitizing

Guidance

- **Students:** Observed hand washing/sanitizing at regular intervals
- **Teachers, staff:** every few hours through the day

Other Considerations

- Implement health hygiene education (covering coughs and sneezes in tissues/elbows).
- Consider sneeze guards in some settings such as teacher or reception desks.

Resources

[Centers for Disease Control and Prevention \(CDC\) School Guidelines](#)



Temperature and Symptom Screening

Guidance

- **Students:** Self-reported by families (or self-report for secondary school) prior to arrival on school grounds. If incomplete, screened upon arrival.
- **School-based adults:** Self-reported prior to arrival on school grounds. If incomplete, screened upon arrival.

Other Considerations

- Screen to include temperature checks.
- Designate a room to isolate any symptomatic individuals until he/she can safely return home or seek care.
- Develop streamlined process for same day testing of symptomatic students and staff in partnership with local health department and delivery system or providers.
- Districts can collaborate with COVID Check Colorado for access to app-based symptom monitoring.

Resources

[Centers for Disease Control and Prevention \(CDC\) School Guidelines](#)



Building Entry/Exit

Guidance

- Stagger drop-off/pickup times (assigned by cohort)
- Limit student and staff contact by parents or other adults who do not need to be on school grounds.

Other Considerations

- Establish pickup procedure for anyone with COVID symptoms being sent home.

Resources

[Centers for Disease Control and Prevention \(CDC\) School Guidelines](#)



Ventilation

Guidance

- Utilize outdoor spaces when feasible.
- Ensure that ventilation systems operate properly per OSHA guidance.
- Increase circulation of outdoor air as much as possible by opening windows and doors and other methods when indoor and outdoor conditions safely permit.
- Improve engineering controls using the building ventilation systems to maximize air exchange rates.

Resources

[Centers for Disease Control and Prevention \(CDC\) School Guidelines](#)

[CDPHE Guidance for Preventing, Reporting and Mitigating Workplace Outbreaks](#)



Cleaning Procedures

Guidance

- Clean frequently touched surfaces in schools and on buses at least daily and between use as much as possible
- Primary School: Remove toys or classroom items that cannot be easily cleaned or sanitized, such as plush toys.

Resources

[CDPHE Environmental Cleaning Guidance](#)

[Centers for Disease Control and Prevention \(CDC\) School Guidelines](#)



Testing

Guidance

- Develop systems for prompt referral of symptomatic teachers, staff, and students for fast-turnaround testing

Other Considerations

- Negative tests results can allow adults and students with COVID-like symptoms to avoid isolation at home and/or shorten quarantine. Routine testing can also lead to faster detection of outbreaks if positive cases are detected.

Resources

[CDPHE Testing Overview](#)

[CDC Considerations for Testing for K-12 School Administrators and Public Health Officials](#)



Protocols for Positive Cases and Return to School

Guidance

- Symptomatic adults and students should not come to school or should be sent home.

Other Considerations

- Symptomatic students on school grounds should be isolated until they can return home safely.
- Follow the Colorado Department of Public Health and Environment's [Return-to-learn guidance](#) following a positive COVID-19 symptom screen or a positive case in the school setting.

Resources

[Centers for Disease Control and Prevention \(CDC\) School Guidelines](#)



Comorbidities (Who is at greater risk and should not be in-person at school?)

Guidance

- Develop approaches to allow adults or students who are at greater risk of serious complications from COVID to learn/work remotely.
- For students, this should be determined by a health care provider.
- For adults, highest priority for remote work should be given to those 65 and older or with highest-risk underlying illnesses (i.e, heart disease, lung disease, diabetes).

Other Considerations

- Consider offering use of medical grade masks (with appropriate fit) as an alternative to remote work.

Resources

[Centers for Disease Control and Prevention Information People at Higher Risk for Severe Illness](#)



Vaccination

Guidance

- Assure access to vaccination for influenza, measles (MMR), and pertussis (DTaP)
- COVID-19 vaccination for faculty/staff as soon as it can be prioritized

Other Considerations

- In-school immunization programs and collaboration with healthcare systems can provide access to current vaccines.
- Develop plans with local public health for COVID-19 vaccinations as vaccine is available for these essential workers.

Endnotes

- ¹Viner RM, Mytton OT, Bonell C, et al. Susceptibility to SARS-CoV-2 infection among children and adolescents compared with adults: a systematic review and meta-analysis. *JAMA Pediatr*. Published online September 25, 2020. doi:[10.1001/jamapediatrics.2020.4573](https://doi.org/10.1001/jamapediatrics.2020.4573)
- ²Stephanie Bialek, CDC; Ryan Gierke, CDC; Michelle Hughes, CDC; Lucy A. McNamara, CDC; Tamara Pilishvili, CDC; Tami Skoff, CDC. Coronavirus Disease 2019 in Children – United States, February 12 – April 2, 2020. *Morbidity and Mortality Weekly Report*. April 10, 2020. 69 (14). <https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6914e4-H.pdf>.
- ³Yanshan Zhu, Conor J Bloxham, Katina D Hulme, Jane E Sinclair, Zhen Wei Marcus Tong, Lauren E Steele, Ellesandra C Noye, Jiahai Lu, Yao Xia, Keng Yih Chew, Janessa Pickering, Charles Gilks, Asha C Bowen, Kirsty R Short, A meta-analysis on the role of children in SARS-CoV-2 in household transmission clusters, *Clinical Infectious Diseases*, ciaa1825, <https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciaa1825/6024998>
- ⁴Colorado Department of Public Health and Environment. In-Person Learning in the Time of COVID-19: The costs and benefits of in-person learning during rising cases in Colorado. November 2020. <https://drive.google.com/file/d/1tQ2mlVokJrVr42121MALc9JDBN3sIl8B/view>
- ⁵COVID-19 in children and the role of school settings in COVID-19 transmission, 6 August 2020. Stockholm: ECDC; 2020. <https://www.ecdc.europa.eu/sites/default/files/documents/COVID-19-schools-transmission-August%202020.pdf>
- ⁶Suk, et al. The role of children in the transmission chain of SARS-CoV-2: a systematic review and update of current evidence. November 9, 2020. <https://www.medrxiv.org/content/10.1101/2020.11.06.20227264v1.full.pdf>
- ⁷Colorado Department of Public Health and Environment. November 2020. <https://drive.google.com/file/d/1tQ2mlVokJrVr42121MALc9JDBN3sIl8B/view>
- ⁸Levinson et al. Reopening Primary Schools during the Pandemic. *N Engl J Med* 2020; 383:981-985.
- ⁹Onishi, N., Meheut, C., Francini, A. “Positive Test Rate of 11 Percent? France’s Schools Remain Open.” *New York Times*, published November 30, 2020. <https://www.nytimes.com/2020/11/30/world/europe/france-covid-schools.html>
- ¹⁰Lee B and Raszka WV. COVID-19 Transmission and Children: The Child Is Not to Blame. *Pediatrics*. 2020;146(2):e2020004879.
- ¹¹Jonas F Ludvigsson. Children are unlikely to be the main drivers of the COVID-19 pandemic – a systematic review. *Acta Paediatrica*, May 19, 2020. <https://onlinelibrary.wiley.com/doi/abs/10.1111/apa.15371>
- ¹²Heavey et al. No evidence of secondary transmission of COVID-19 from children attending school in Ireland, 2020. *Euro Surveill*. 2020; 25(21), May 28 2020. <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2020.25.21.2000903>
- ¹³Colorado Department of Public Health and Environment. November 2020.
- ¹⁴Options to Reduce Quarantine for Contacts of Persons with SARS-CoV-2 Infection Using Symptom Monitoring and Diagnostic Testing. December 2, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/more/scientific-brief-options-to-reduce-quarantine.html>.
- ¹⁵Chu, et al. 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. *Lancet* 2020: 395:1973-87.

Addresses of Websites

- **CDC schools guidance:** <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html>
- **CHSAA guidance:** <https://chsaanow.com/2020-05-22/chsaa-to-lift-moratorium-with-strict-guidelines-for-resuming-in-person-conditioning-sessions/>
- **Health and Safety Guidelines from Other Countries:** <https://learningpolicyinstitute.org/product/reopening-schools-covid-19-brief>
- **Public transportation guidance:** <https://drive.google.com/file/d/1F6ejkZlCWLOvmalkjo5Y9ksF-5CQ13Kp/view>
- **CDPHE workplace outbreak prevention:** <https://drive.google.com/file/d/1zDIIWVOEDSkmbN2qCF83W2jM7N4ZcaZs/view>
- **CDPHE environmental cleaning guidance:** <https://covid19.colorado.gov/cleaning-guidance>
- **CDPHE testing overview:** <https://covid19.colorado.gov/covid-19-in-colorado/about-covid-19/testing-for-covid-19>
- **CDPHE information for people at high risk:** <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/index.html>

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