POLICYLAB NOVEMBER 2020
INFORMING CHILDREN'S HEALTH POLICY THROUGH RESEARCH

Executive Summary: Evidence and Guidance for In-Person Schooling during the COVID-19 Pandemic

Updated on November 5, 2020 (from October 21, 2020)

Across the United States, schools have been safely reopening following closure for the COVID-19 pandemic by adhering to recommended mitigation strategies including mask wearing, social distancing, hygiene and contact tracing. All decision-makers should be mindful that as long as there are cases of SARS-CoV-2 in the community, there are no strategies that can entirely eliminate transmission risk in schools. The goal is to keep transmission as low as possible to maximize both safety and in-person learning.

In this revision of our original guidance from August 2020, we have updated our recommendations to reflect the challenges schools are facing following reopening in the fall. We have intentionally moved beyond the absolutism of case incidence and test positivity thresholds that—although were helpful for knowing when/how to start school in late summer (at a time when school outbreaks was insufficient to guide decision-making)—are no longer the most pressing questions for school leaders.

Now the questions have turned to fortifying school safety plans and guiding how decisions might be made as case transmission increases during the winter. Our team is currently monitoring data on regional case incidence and test positivity rates that we expect will warrant the proactive closure of schools, but exact thresholds are unknown at this time. This guidance emphasizes the importance of working with local health departments. In addition to a strong and well-implemented safety plan, schools that have successfully reopened, partially or fully in-person, usually have close relationships with local public health authorities, characterized by rapid and effective contact tracing of infected students and teachers.

What follows are the key informational priorities that are more richly discussed in our extended guidance, found here.

KEY EVIDENCE

Children are at lower risk of severe disease from SARS-CoV-2, although that risk is not zero.

Teachers, staff and caregivers are at higher risk of symptomatic and severe infection, which must be considered in school reopening decisions.

Evidence of **linked in-school transmission (i.e., viral transmission between and amongst students or teachers while at school) should drive decisions** to revert to online learning.

FOUNDATIONAL COMPONENTS OF A STRONG SCHOOL SAFETY PLAN

The effectiveness of a successful school safety plan is inherent in the layering of multiple strategies that can reduce the likelihood of linked transmission during the school day.

Knowing that lapses in compliance to specific safety measures will occur, a multi-layered plan provides redundancy in protection measures to minimize the possibility of transmission.

Local area differences and unique educational settings should shape variation in school plans.

- **Partnerships with local public health agencies** for screening, reporting, contact tracing and guidance on decisions of when to revert to online instruction
- **Sustained implementation of multi-layered safety protocols** to reduce risk of transmission in classrooms and during extracurricular programs (more information below)
- **Clear instructions for families** to mitigate transmission outside of school
- **Short-term flexible online learning options** for children under quarantine or for interim school closures, and long-term online options for children with higher-risk household contacts
- **Flexible attendance policies for students, teachers, and staff** when they are ill (regardless of etiology), when they have suspected or confirmed COVID-19 illness, or when household members are COVID-positive or have had suspected or confirmed COVID-19 exposure
- **Appropriate staffing of school health services, nurses and counselors**
- **Prioritizing up-to-date immunization schedules** and influenza vaccinations for students and all staff
- **November 5 addition: Testing protocols, when available, that focus on quick identification of outbreaks with point-of-care testing.** When using new rapid antigen tests, molecular PCR confirmation should be obtained for positive antigen tests when they are used for frequent surveillance in asymptomatic teachers or children (due to false positives), or for negative tests in children or teachers with concerning symptoms or high-risk exposures (due to false negatives).

COMPONENTS OF A MULTI-LAYERED SAFETY PLAN

SYMPTOM SURVEILLENCE

Comprehensive ongoing symptom surveillance of students and staff should include routine daily symptom checks with on-site or in-home screening. The COVID-19 case definition below, adapted from the Council of State and Territorial Epidemiologists (CTSE), can be utilized to enact quarantine and flexible leave policies.

- *Two of the following symptoms:*
  - *fever (measured or subjective) chills, rigors*
  - *muscle aches (myalgias)*
  - *headache*
  - *sore throat*
  - *nausea or vomiting, diarrhea*
  - *fatigue*
  - *congestion or runny nose*

OR

- *At least one of the following symptoms: cough, shortness of breath, difficulty breathing, new loss of smell or taste*

Additionally, we would suggest individuals with symptoms that may represent a non-COVID-19 respiratory viral illness be asked to stay home until their symptoms are resolved or their primary medical provider confirms symptoms are unrelated to a respiratory viral illness in order to deter the spread of other communicable diseases.

QUARANTINE & SCHOOL ABSENCE POLICIES

When students or staff members test positive for COVID-19 or meet the case definition criteria above, absence policies can follow this structure:

1. **Symptomatic individual (test positive OR no test):** exclude for 10 days from symptom onset AND at least 24 hours after fever resolution (if present) AND improved respiratory symptoms
2. **Symptomatic individual determined to have an alternate illness by their primary medical doctor OR with test negative:** exclude until fever-free for 24 hours (if fever present) and symptoms improving
3. **Direct exposure but asymptomatic:** exclude for 14 days from last exposure if remains asymptomatic. Direct exposures occur when an individual (student or staff) is within 6 feet of an individual diagnosed with COVID-19 for a period of 15 minutes or longer, and when this exposure occurred during or within 48 hours prior to the individual's symptom onset.

There is no role for testing a child previously diagnosed with COVID-19 to get a "negative test" that clears that child for earlier return to school. The COVID-19 positive individual does NOT need a repeat COVID test or a doctor's note in order to return to school.

MASKING

Masks (surgical or cloth) should be required for children 2 years and older who are mature enough and physically capable of wearing one. Surgical masks (not N95 masks) covering the mouth and nose are recommended for staff and all adults in school buildings.

PHYSICAL DISTANCING

Schools should prioritize selective distancing measures, given strong evidence of their effectiveness in reducing transmission. Distancing via smaller teacher-student ratios and physical distancing of desks are preferable. Six foot physical distancing is ideal, with all desks facing the same direction.

ESTABLISHING SMALL GROUP COHORTS

Schools can minimize contact between students and teachers by using a small cohort model with small groups of students and staff that spend the majority of the day together in classes, lunch, bathroom breaks, transitions and recess. Ongoing symptom surveillance will allow efficient and targeted isolation of small cohorts of children if one cohort member shows symptoms or tests positive.

INCREASED VENTILATION

Schools should optimize ventilation in learning spaces (Centers for Disease Control and Prevention (CDC), 2020) to improve air flow and cleanliness. Ventilation can reduce risk of indoor COVID-19 transmission but cannot replace the need for masking and distancing. Ventilation strategies include increased use of open windows and outdoor spaces and optimizing air exchanges in ventilation systems. Reducing the density of people within spaces is an important and effective improvement to air cleanliness.

HAND WASHING HYGIENE, CLEANING & DISINFECTING

Sanitation procedures are important in school settings. Schools should disinfect at regular intervals throughout the day and emphasize increased student and staff hand hygiene (in compliance with CDC guidance). Sharing of objects should be minimized, and disinfection of shared and frequently touched surfaces should be prioritized, particularly door handles, light switches and faucets. Additionally, desktops should be disinfected between classroom rotations. Disinfectant supplies should be OSHA- and CDC-approved. Resource-constrained schools may require assistance in acquiring bulk supplies.

SPORTS, MUSIC & OTHER EXTRACURRICULAR ACTIVITIES

Schools may continue to offer extracurricular activities such as sports, music, art, and theatre so long as there have not been widespread school closures related to rapidly accelerating disease transmission in the community. If schools choose to allow these activities, activity-specific safety protocols that emphasize the appropriate use of masking, distancing and hygiene are necessary to reduce the likelihood of outbreaks in these settings, which often are occurring before or after the activity occurs (e.g., during travel to the activity, in meeting rooms, locker rooms, or gatherings before or after the event).

KEY QUESTIONS TO GUIDE DECISION-MAKING ON REVERTING TO VIRTUAL LEARNING

With colder weather, case transmission is likely to rise, and school districts will be faced with challenging decisions on when to revert to distance learning vs. continuing in-class instruction. These challenging decisions can be informed by asking a few key questions and reflecting on the ability of the school, alongside public health partners, to remediate any identified issues:

1) **Did your school have difficulty implementing and maintaining all aspects of its school safety plan?**

2) **How effective has your collaboration with local public health authorities been when there has been a student or teacher who is found to be COVID-positive?**

3) **How quickly is disease transmission and test positivity accelerating in your region?** *(Note that regions that surpass 9% test positivity might consider temporary closures.)*

4) **Has there been evidence of in-classroom transmission within your school?**

5) **Has there been evidence of increasing linked transmission in your school or other schools in your region despite high levels of compliance with safety measures?**

6) **Are there populations to consider for prioritized maintenance of in-school instruction (e.g., children with learning differences or special needs)?**

THE AUTHORS

David Rubin, MD, MSCE
rubin@email.chop.edu

Meredith Matone, DrPH, MHS
matonem@email.chop.edu

Deanna Marshall, MPH
marshalldb@email.chop.edu

Jeffrey Gerber, MD, PhD
gerberj@email.chop.edu

Susan Coffin, MD, MPH
susan.coffin@phila.gov

Brian Fisher, DO, MPH, MSCE
fisherbria@email.chop.edu

The mission of PolicyLab at Children's Hospital of Philadelphia (CHOP) is to achieve optimal child health and well-being by informing program and policy changes through interdisciplinary research. PolicyLab is a Center of Emphasis within the Children's Hospital of Philadelphia Research Institute, one of the largest pediatric research institutes in the country.

PolicyLab

Children's Hospital of Philadelphia
2716 South Street
Roberts Center for Pediatric Research, 10th Floor
Philadelphia, PA 19146

P 267-426-5300
F 267-426-0380

PolicyLab@email.chop.edu
policylab.chop.edu
@PolicyLabCHOP