

COVID-19 PANDEMIC

Prioritizing Health, Equity and Communities

SUMMARY

The COVID-19 pandemic has presented unprecedented challenges to the nation's K-12 education system. The rush to slow the spread of the virus led to closures of schools across the country, with little time to ensure continuity of instruction or to create a framework for deciding when and how to reopen schools. States, districts, and schools are now grappling with the complex and high-stakes questions of whether to reopen school buildings and how to operate them safely if they do reopen. These decisions need to be informed by the most up-to-date evidence about the SARS-CoV-2 virus that causes COVID-19; about the impacts of school closures on students and families; and about the complexities of operating school buildings as the pandemic persists.

In response to this need for evidence-based guidance, the Board on Science Education of the National Academies of Sciences, Engineering, and Medicine, in collaboration with the Academies' Board on Children, Youth, and Families (BCYF) and Standing Committee on Emerging Infectious Disease, convened the Committee on Guidance for K-12 Education on Responding to COVID-19. The committee was tasked with providing guidance on the reopening and operation of elementary and secondary schools for the 2020–2021 school year. This report documents the committee's findings, conclusions, and recommendations

with respect to (1) what is known (and not known) about COVID-19, (2) what is necessary to know about schools in order to make decisions related to COVID-19, (3) how determinations about reopening schools and staying open can best be made, and (4) strategies for mitigating the spread of COVID-19 in schools.

Equity and Reopening Schools

The committee was particularly concerned about how the persistent inequities of the education system might interact with similar disparities in health outcomes and access in ways that could devastate some communities more than others. Every choice facing states, districts, and schools is being made against the backdrop of entrenched economic and social inequities made more visible by the disparate impacts of the pandemic on Black, LatinX and Indigenous communities. Without careful attention, plans to reopen schools could exacerbate these inequities.

COVID-19, Children and Transmission

Evidence to date suggests that children and youth (aged 18 and younger) are at low risk of serious, long-term consequences or death as a result of contracting COVID-19.

However, there is insufficient evidence with which to determine how easily children and youth contract the virus and how contagious they are once they do. Similarly, while some measures—such as physical distancing, avoiding large gatherings, handwashing, and wearing masks—are clearly important for limiting transmission, there is no definitive evidence about what suite of strategies is most effective for limiting transmission within a school setting when students, teachers, and other staff are present. The fact that evidence is inadequate in both of these areas—transmission *and* mitigation—makes it extremely difficult for decision-makers to gauge the health risks of physically opening schools and to create plans for operating them in ways that reduce transmission of the virus.

Weighing the Risks of Building Closures

Keeping schools closed to in-person learning in Fall 2020 poses potential educational risks. Students of all ages benefit from in-person learning experiences in ways that cannot be fully replicated through distance learning. The educational risks of extended distance learning may be higher for young children and children with disabilities. In addition, without careful implementation, virtual learning alone runs the risk of exacerbating disparities in access to high-quality education across different demographic groups and communities.

Opening school buildings to some extent in Fall 2020 may provide benefits for families beyond educating children and

youth. Working caregivers would have affordable, reliable childcare for school-age children, and families would be better able to access services offered through the school, such as provision of meals and other family supports (e.g. mental health services, school-based health services).

If and when schools reopen, staffing is likely to be a major challenge. A significant portion of school staff are in high-risk age groups or are hesitant to return to in-person schooling because of the health risks. In addition, some of the strategies for limiting the transmission of COVID-19 within schools, such as maintaining smaller class sizes and delivering both in-person and virtual learning, will require additional instructional staff.

The Decision to Reopen

While many guidance documents for reopening schools exist, many state-level guidance documents do not explicitly call on districts to reopen schools; rather they pose a series of questions for districts to consider in making decisions about reopening. This approach to providing guidance allows for regional variation and flexibility. However, it also leaves district leaders with a tremendous responsibility for making judgments about the risks of reopening while also responding to the needs of students, families, and staff.

Weighing all of the relevant factors to arrive at a decision about reopening and staying open involves simultaneously considering the public health risks, the educational risks,



and other potential risks to the community. This kind of risk assessment requires expertise in public health, infectious disease, and education as well as clear articulation of the community's values and priorities. It also requires a protocol for monitoring data on the virus to track community spread. To ensure that the process of reopening schools is reflective of the community's needs and values and attends effectively to the multiple (and often conflicting) priorities of the numerous stakeholders, schools and districts will need to take care to engage a range of perspectives in the decision-making process.

Implementing Mitigation Strategies

Reopening school buildings will be contingent on implementing a set of mitigation strategies that limits transmission of the virus. The existing guidance documents offer an extensive list of potential strategies but little guidance on how districts and schools can or should prioritize them. Many of the mitigation strategies currently under consideration (such as limiting classes to small cohorts of students or implementing physical distancing between students and staff) require substantial reconfiguring of space, purchase of additional equipment, adjustments to staffing patterns, and upgrades to school

buildings. The financial costs of consistently implementing a number of potential mitigation strategies is considerable. While some highly resourced districts with well-maintained buildings may be able to implement most of the strategies, many schools and districts will need additional financial support to institute and maintain mitigation measures. Costs are a particular concern due to the budget cuts resulting from the economic impact of the pandemic.

Poor-quality school buildings (i.e., those that have bad indoor air quality, are not clean, or have inadequate bathroom facilities) complicate reopening and may make it difficult for school districts to implement the recommended health and safety measures. This poses a problem for equitable implementation of the strategies as children and youth from low-income families disproportionately attend schools with poor-quality facilities.

Finally, even if all of the mitigation strategies are in place and well implemented, it is impossible to completely eliminate the risk of COVID-19 in schools. Therefore, it is incumbent on school officials, in association with local public health authorities, to plan for the possibility that one or more students, teachers or staff will contract COVID-19.

RECOMMENDATIONS

The committee formulated a set of recommendations designed to help districts and schools successfully navigate the complex decisions around reopening school buildings, keeping them open, and operating them safely. In its final recommendation, the committee identifies four areas of research that are urgently needed to fill the existing gaps in evidence: (1) the role of children in transmission of SARS-CoV-2, (2) the role of reopening schools in the spread of SARS-CoV-2 in communities, (3) the role of airborne transmission of COVID-19, and (4) the relative effectiveness of different mitigation strategies in schools.

RECOMMENDATION 1

The Decision to Reopen

Districts should weigh the relative health risks of reopening against the educational risks of providing no in-person instruction in Fall 2020. Given the importance of in-person interaction for learning and development, districts should prioritize reopening with an emphasis on providing full-time, in-person instruction in grades K-5 and for students with special needs who would be best served by in-person instruction.

RECOMMENDATION 2

Precautions for Reopening

To reopen during the pandemic, schools and districts should provide surgical masks for all teachers and staff, as well as supplies for effective hand hygiene for all people who enter school buildings.

RECOMMENDATION 3

Partnerships Between School Districts and Public Health Officials

Local public health officials should partner with districts to:

- assess school facilities to ensure that they meet the minimum health and safety standards necessary to support COVID-19 mitigation strategies;
- consult on proposed plans for mitigating the spread of COVID-19;
- develop a protocol for monitoring data on the virus in order to (a) track community spread and (b) make decisions about changes to the mitigation strategies in place in schools and when future full school closures might be necessary;
- participate in shared decision-making about when it is necessary to initiate closure of schools for in-person learning;
- design and deliver COVID-19 related prevention and health promotion training to staff, community and students.

RECOMMENDATION 4

Access to Public Health Expertise

States should ensure that in portions of the state where public health offices are short-staffed or lack personnel with expertise in infectious disease, districts have access to the ongoing support from public health officials that is needed to monitor and maintain the health of students and staff.

RECOMMENDATION 5

Decision- making Coalitions

State and local decision-makers and education leaders should develop a mechanism, such as a local task force, that allows for input from representatives of school staff, families, local health officials, and other community interests to inform decisions related to reopening schools. Such a cross-sector task force should:

- determine educational priorities and community values related to opening schools;
- be explicit about financial, staffing, and facilities-related constraints;
- determine a plan for informing ongoing decisions about schools;
- establish a plan for communication; and
- liaise with communities to advocate for needed resources.

RECOMMENDATION 6

Equity in Reopening

In developing plans for reopening schools and implementing mitigation strategies, districts should take into account existing disparities within and across schools. Across schools, plans need to address disparities in school facilities, staffing shortages, overcrowding, and remote learning infrastructures. Within schools, plans should address disparities in resources for students and families. These issues might include access to technology, health care services, ability to provide masks for students, and other considerations.

RECOMMENDATION 7

Addressing Financial Burdens for Schools and Districts

Schools will not be able to take on the entire financial burden of implementing the mitigation strategies. Federal and state governments should provide significant resources to districts and schools to enable them to implement the suite of measures required to maintain individual and community health and allow schools to remain open. Under-resourced districts with aging facilities in poor condition will need additional financial support to bring facilities to basic health and safety standards. In addition, State Departments of Education should not penalize schools by withholding state-wide school funding formula monies for student absences during the COVID-19 pandemic.

RECOMMENDATION 8

High-Priority Mitigation Strategies

Based on what is currently known about the spread of COVID-19, districts should prioritize mask wearing, providing healthy hand hygiene solutions, physical distancing, and limiting large gatherings. Cleaning, ventilation, and air filtration are also important, but attending to those strategies alone will not sufficiently lower the risk of transmission. Creating small cohorts of students is another promising strategy.

RECOMMENDATION 9

Urgent Research

The research community should immediately conduct research that will provide the evidence needed to make informed decisions about school reopening and safe operation. The most urgent areas for inquiry are:

- children and transmission of COVID-19,
- the role of reopening schools in contributing to the spread of COVID-19 in communities,
- the role of airborne transmission of COVID-19, and
- the effectiveness of different mitigation strategies.

COMMITTEE ON GUIDANCE FOR K-12 EDUCATION ON COVID-19

Enriqueta C. Bond (Chair, NAM), Founding Partner, QE Philanthropic Advisors; **Dimitri A. Christakis**, Pediatrician and Epidemiologist, University of Washington School of Medicine; **Michael Lach**, Assistant Superintendent, Township High School District 113, Illinois; **Phyllis D. Meadows**, Senior Fellow, The Kresge Foundation; **Kathleen Moore**, Owner, Kathleen Moore and Associates; **Caitlin Rivers**, Senior Scholar, Johns Hopkins Center of Health Security; **Keisha Scarlett**, Chief of Equity, Partnerships, and Engagement, Seattle Public Schools; **Nathaniel Schwartz**, Professor, Annenberg Institute for School Reform, Brown University; **Jeff Vincent**, Director and Cofounder, Center for Cities & Schools, University of California, Berkeley; **Kenne Dibner**, Study Director; **Heidi Schweingruber**, Director, Board on Science Education; **Natacha Blain**, Director, Board on Children, Youth, and Families; **Lisa Brown**, Director, Standing Committee on Emerging Infectious Disease; **Leticia Garcilazo Green**, Research Associate; **Matthew Lammers**, Program Coordinator

For this report, the National Academies appointed a committee with expertise in education administration, education policy, child development, learning sciences, school facilities, public health, and epidemiology. The study was sponsored by the Brady Education Foundation and the Spencer Foundation. Any opinions, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect the views of any organization or agency that provided support for the project. Copies of the Consensus Study Report are available from the National Academies Press, (800) 624-6242; <http://www.nas.edu/k12Covid>.

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

The nation turns to the National Academies of Sciences, Engineering, and Medicine for independent, objective advice on issues that affect people's lives worldwide.

www.nationalacademies.org