Protecting the Health of Vulnerable Children and Adolescents During COVID-19–Related K-12 School Closures in the US

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The coronavirus disease 2019 (COVID-19) pandemic prompted widespread closures of kindergarten through 12th grade (K-12) schools, affecting approximately 124,000 schools and 55.1 million students. Without a vaccine, school closures were part of a comprehensive public health strategy to curb viral transmission, although their effectiveness is debatable. As COVID-19 evidence evolves, there is increased awareness of the disproportionate health impact of closures on vulnerable children and an intensified call to reopen schools safely.

K-12 School Closures Affect the Most Vulnerable Children and Adolescents

School closures restrict access to the free and reduced price meal programs, which provide lunches to nearly 30 million children daily. Health consequences of food insecurity include fatigue and reduced immune response, potentially increasing the risk of COVID-19, and long-term effects on development as well as psychological, emotional, and physical health. School lunch participation significantly improves academic outcomes.

School closures limit school-based health centers' (SBHCs') provision of direct services. SBHCs are associated with improved educational outcomes, improved access to health care and preventive services, better health outcomes, and reduced substance use. Halting these services may greatly hinder progress, particularly for students who lack access to quality health care.

School closures limit students' access to behavioral health resources. Prolonged school closure and home confinement may cause social isolation, lengthened screen time, frustration and boredom, weight gain, and disrupted sleep cycles. Children quarantined or in isolation during disease outbreaks have more posttraumatic stress symptoms than those not quarantined, and early findings suggest higher depressive symptoms among home-restricted students in Wuhan, China. Low-income US households have already experienced disproportionately higher behavioral health impacts from COVID-19.

Education is an important social determinant of health. There are inequalities in receiving home schooling and attendance in virtual classrooms owing to factors such as access to internet and technology. Students with special education needs are most vulnerable during the shift to distance learning, with 40% of parents of children with an individualized education program reporting no support following closures. With students of color and low-income students more likely to require special education services, these effects are felt disproportionately among socioeconomically disadvantaged children.

Protecting Students' Health During Widespread School Closures

How can we mitigate the adverse health consequences of school closures for our most vulnerable children and adolescents?

- Ensure that schools continue to deliver nutrition assistance and health services. Many cities converted school buses to use for meal delivery or developed centralized pickup locations with multiday food packages. Michigan's Pandemic Electronic Benefit Transfer program offsets the cost of meals that students consume at school. Strategies for SBHCs include communicating with

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families about how to access services, pivoting to telehealth models, coordinating with other health centers to ensure continuity of care, and developing protocols to reopen safely.

- **Develop tutoring programs with virtual options.** High-dosage tutoring can prevent learning loss and can particularly benefit families whose parents struggle with literacy. The Tennessee Tutoring Corps program is a potential model, pairing college students who need summer jobs and internships with K-12 students.

- **Take a holistic cross-sector approach.** School districts could partner with community organizations to provide for students’ varied health, social, and economic needs. New York City’s Community Schools Initiative, which uses community partnerships to integrate health, mental health, and social work resources into schools, offers one promising model. A cross-sector approach with engaged community partners also aligns with the current Public Health 3.0 vision.

- **Train school staff in trauma-based practices for working with students and families.** Addressing students’ psychological and emotional trauma is necessary to facilitate learning, and there are existing crisis-response protocols, such as the National Association of School Psychologists’ PREPaRE curriculum.

- **Use social media to engage students.** Engaging students on video conferencing platforms is challenging. Teachers can use social media creatively to deliver instructional content, such as teaching math on TikTok. Fitness and other apps could benefit students who are missing afterschool activities, such as team sports; this loss is particularly challenging for students who cannot afford summer sports programs or who lack safe outdoor environments for play.

- **Foster an organizational culture of quality improvement.** Schools will experience failures and successes as they deliver remote services this summer and implement protocols for safe returns in the fall. Implementing quality improvement tools, such as those developed by the Institute for Healthcare Improvement, can help schools adapt their approaches in real time to emerging needs and evidence.

- **Leverage the COVID-19 pandemic as a call to action to bridge the digital divide permanently.** The Miami-Dade County Public Schools distributed more than 80,000 mobile devices and 11,000 smartphones. The Minford, Ohio, school district distributed laptops and paper-based work packets to rural students without internet or technology. These are short-term solutions. The COVID-19 crisis is reinvigorating debates to treat wireless internet access as a necessary public utility and to develop and implement innovative technologies for cost-effective broadband wireless in rural areas.

- **Enhance infrastructure to address physical health, behavioral health, and other social services targeting vulnerable students.** On average, US school systems have only 1 nurse per 1151 students, 1 counselor per 491 students, and 1 psychologist per 1400 students. Nearly 80% of adolescents who need mental health services do not receive them, with higher unmet need among Latinos and the uninsured. Addressing these behavioral health service gaps is critical to support students struggling with school closures and to enable successful returns to the classroom.

Each recommended action requires creative problem-solving, cross-sector collaboration, community partnerships, and most importantly, resources. Although health system funding for COVID-19 has increased, state education budgets are in crisis, and the social supports described here are most likely to be eliminated under budget cuts. A large influx of federal aid targeting the most economically disadvantaged schools and districts can pave a path forward.

**ARTICLE INFORMATION**

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