

Building the Evidence for Safe Return to School During the COVID-19 Pandemic

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Returning children safely to school during the coronavirus disease 2019 (COVID-19) pandemic is an extraordinary public health challenge but a crucial part of our country's return to normal. Guidance from the Centers for Disease Control and Prevention is available to assist parents, teachers, and support staff¹; however, implementation of this guidance is variable at the state and local level. In virtual learning environments, children lose opportunities for social and emotional development, access to nutrition, and opportunities for physical activity. Families of children with and children with physical, intellectual, developmental, and/or learning disabilities, as well as other cognitive limitations, struggle to gain access to services that are commonly provided in a school setting.² Additionally, the achievement gap is widening for children who are disadvantaged and/or are part of racial and ethnic minority groups, with the lack of access to

virtual learning environments (ie, “digital divide”) only exacerbating these disparities.²

The National Institutes of Health (NIH) recognize there are urgent scientific questions facing policymakers, public health officials, school district leaders, and educators as they decide how to safely return children to in-person school. Early in the pandemic, in studies, it was documented that when schools and public health officials successfully implemented recommended safety measures (eg, masking, physical distancing, symptom monitoring), COVID-19 testing, and contact tracing, school-related transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was drastically reduced.^{3,4} Nevertheless, these studies were often conducted in relatively affluent, ethnically homogenous settings.

The NIH Rapid Acceleration of Diagnostics: Underserved Populations (RADx-UP) is working to

understand COVID-19 testing patterns and implement strategies or interventions with the potential to rapidly increase reach, access, acceptance, and sustainment of COVID-19 diagnostics among underserved and/or vulnerable populations. As part of RADx-UP, the goal of the Return to School Diagnostic Testing Approaches initiative is understanding and addressing COVID-19 testing access and effectiveness to enable safe return to school for students, teachers, and support staff, particularly in schools that provide for underserved and vulnerable populations across the United States (eg, schools where the majority of students receive free or reduced-cost meals). The initiative is focused on ensuring that SARS-CoV-2 prevention and containment strategies are scalable as well as implemented with underserved community engagement. Additionally, populations with specific challenges to employing



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mitigation methods (eg, children with chronic medical conditions or disabilities) were not included in early studies; special considerations for these populations are needed. Finally, tribal nations need scientific efforts that respect their sovereignty, including how, what, and when data are collected, to build evidence for safe return to school in their communities.

Throughout this program, the NIH coordinated within the Department of Health and Human Services (eg, the Centers for Disease Control and Prevention and the Food and Drug Administration) and with the Department of Education. We learned many lessons from the implementation challenges involved in deploying various surveillance, screening, and diagnostic testing approaches. Investigators are being integrated with other federal programs to expand the data available for study. We are working with investigators to standardize data collection procedures, using common data elements and the Food and Drug Administration–authorized testing methods, so that results can be compared across programs.

The NIH adopted a flexible funding mechanism to account for the evolving nature of the pandemic. During the program launch at 8 sites in February of 2021, the United States experienced surging cases and hospitalizations, with many children remaining in a virtual school environment.⁵ Vaccines were not yet widely available for adults, and emergency use authorization in 12- to 16-year-olds was months away. As of August 2021, variable vaccination rates and dominance of the more infectious SARS-CoV-2 δ variant are contributing to a surge in COVID-19 cases across the country, impacting community transmission levels and protection for children <12 years of age who lack access to the vaccine.

Pediatric cases now account for 15% of total cases in the United States.⁶

With findings from the 8 RADx-UP return to school projects described in this supplement, we provide initial evidence-based strategies to prevent infection, contain outbreaks, reduce quarantine duration, track variant transmission, and safely return children to in-person school. The requirement to partner with the community provided important feedback on testing preferences and engagement approaches. The importance of educating and engaging families in research, as well as disseminating and interpreting testing results, is revealed. Barriers to deployment and maintenance of testing programs are identified. These approaches are encouraging systematic evaluation of strategies to inspire recruitment and trust in scientific research efforts in the school setting during the pandemic.

This work continues as we begin a new school year across the country. With the addition of 8 funded programs in July 2021, we will engage new communities, determine strategies and methods to prevent transmission, contain outbreaks, and rapidly adapt to the challenges posed by newly-circulating variants. The needs of children and the health of their families and communities will remain paramount.

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opportunity, and the communities and scientific teams engaged in this work.

ABBREVIATIONS

COVID-19: coronavirus disease 2019
NIH: National Institutes of Health
RADx-UP: Rapid Acceleration of Diagnostics: Underserved Populations
SARS-CoV-2: severe acute respiratory syndrome coronavirus 2

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