Letters

COMMENT & RESPONSE

Modeling Cost and Outcomes of SARS-CoV-2 School Testing Programs

To the Editor  We read with interest the article by Bilinski et al modeling transmission outcomes and cost of SARS-CoV-2 school testing programs. It is crucial to understand the realities of screening and surveillance in kindergarten through 12th-grade (K-12) testing programs when determining value.

Screening and surveillance school testing programs offer unique challenges that should be considered in model development. Universal enrollment and rapid turnaround times improve efficacy of testing programs, yet enrollment is often limited in voluntary programs, and consistent access to rapid tests is not always available. In New York City public schools, fewer than 25% of students were enrolled in testing programs. Accessing caregivers equitably to obtain consent can be difficult. More than 20% of US children speak a non-English language at home, and 5% live in limited-English-speaking households. Consent forms must be multilingual with audio options for those with visual impairments or limited literacy. Explanations of who is performing the test, why testing is being performed, and how data will be used should be available to overcome misinformation and distrust. Low enrollment fails to effectively capture asymptomatic SARS-CoV-2 infection. Achieving 90% enrollment as proposed in the article is likely not feasible for most K-12 US schools.

In publicly funded K-12 schools, the logistics of school testing programs are predominately determined by the state. Laboratory-based pooled testing with backup testing is sensitive and cost-effective when infection rates are low, but it is not universally available or useful during periods of high transmission. State testing plans include antigen with polymerase chain reaction (PCR) backup, school-based pools requiring subsequent individual tests of positive pools, and individual PCR. PCR turnaround times are often more than 24 to 48 hours, with virus surges and deconvoluting positive pools contributing to additional result delays, limiting the effectiveness in curbing transmission.

Lastly, school-based testing programs require personnel to locate and identify students; perform tests; follow up with results; notify families, state agencies, and health departments; and perform contact investigations. School nurses are primarily responsible for COVID-19 testing and related duties in addition to their normal role of caring for sick children, administering medications for chronic conditions, and ensuring routine vaccines and screenings for students. The cost of school-based testing programs should include dedicated personnel so that testing does not take away from the care that school nurses provide.

All school-based testing programs require additional resources, time, and finances. As we move into the next school year, we recommend that policy makers consider the real-world costs of COVID-19 school-based testing programs in decision-making.

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