

BRIEF REPORTS

Coronavirus disease 2019 (COVID-19) infection rates in a private school in Brooklyn, New York

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In March 2020, the World Health Organization (WHO) classified the coronavirus disease 2019 (COVID-19) outbreak as a pandemic; schools in the United States were ordered to close to minimise disease transmission.^{1,2} Serology surveillance data are limited, and there are no reports demonstrating the contribution of school closures to transmission control.^{1,2} School closure strategies might be national or local or based on student infection rates.² In the current study, we sought to determine the COVID-19 infection rate in a private school in Brooklyn, New York, during the re-opening school phase (Fall 2020).

Mandatory in-school COVID-19 testing was performed in a re-opened all girl's private school ($N = 701$) located in a red zone in Brooklyn, New York. Students (6–18 y/o) and staff members (19–80 y/o) were tested for COVID-19 during the first weeks of October, November, December and end of December 2020. Children submitted a signed parental consent form for COVID-19 testing. Testing for SARS-CoV-2 was conducted using nasopharyngeal (NP) swabs using the iAMP Real-Time PCR (Atila Bio Systems; Mountain View, CA).³ Test results were provided within 48–72 h via text message. Negative COVID-19 test was required for student return to in-person learning.

A total of 2439 tests were administered from October 2020 to December 2020. Three positive cases were reported (2 students and 1 staff member), giving an infection rate of 0.13%. The New York City (NYC) public school infection rate was 0.28% in October 2020⁴; NYC public schools closed again on 18 November 2020 when the 7-day rolling average test positivity rate increased to 3%.⁴

This is the first study, to our knowledge, to report the COVID-19 infection rate in a representative private school in Brooklyn. COVID-19 infection rates were low (0.13%) compared with infection rates in NYC public schools (0.28%–0.30%).⁴ No asymptomatic

infections were detected. Asymptomatic children who may be potentially infectious could be a component of transmission within the community. During an outbreak, school closures can affect deaths, through reduction of number of cases and transmission, but contacts can continue at home and increase during holidays and school closures.^{2,3} Emerging data from other countries show little evidence of COVID-19 transmission through schools. According to the American Academy of Pediatrics (AAP), opening schools does not significantly increase community transmission but mirrors community transmission.⁵ COVID-19 school policies should be practical, feasible and appropriate for different stages of child development.⁵

New policies were implemented in this private school to safely return to in-person schooling (September 2020). The dean of the school wrote the re-opening plan and followed NYC Department of Education guidelines⁴ (based on guidelines from Centers for Disease Control and Prevention), with guidance from local medical advisers. Physical changes within the school were made including erecting plastic barriers around both student's desktops and teacher desks. Mask wearing, six-foot distancing, using hand sanitiser and washing hands were strictly enforced. The children complied because the adults made clear that these policies were mandated, and practiced those policies.

The incidence of COVID-19 infection in this private school was low. School-wide testing, effective contact tracing, isolation of diagnosed students and proper social distancing measures need to be followed to keep cases down and schools open. As COVID-19 cases rise nationwide, policy makers question the safety of re-opening schools, especially in red zone areas. Further detailed surveillance data are needed to confirm the safety of our described method to demonstrate effective school re-opening.

CONFLICT OF INTEREST

The authors have no conflict of interest to disclose.

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