Mandatory Masking in Schools Reduced COVID-19 Cases During Delta Surge

An NIH-funded study compared more than 1.1 million students across nine states.

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Schools with mandatory masking during the Delta surge had approximately 72% fewer cases of in-school transmission of SARS-CoV-2 when compared to schools with optional or partial masking policies, according to a study funded by the National Institutes of Health. The study included more than 1.1 million students and over 157,000 staff attending in-person school across nine states: North Carolina, Wisconsin, Missouri, California, Washington, Georgia, Tennessee, Kansas and Texas.

The study is supported by NIH's Rapid Acceleration of Diagnostics – Underserved Populations (RADx-UP) program and the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD). It appears in Pediatrics.

The authors pointed out that their study was conducted when Delta was the dominant variant, and that their study did not obtain data on school masking in preventing the spread of the Omicron variant. However, they added that masking remains a critical preventive measure in times with high community infection rates with more transmissible variants, such as Omicron.

The U.S. Centers for Disease Control and Prevention recently updated its guidelines for masking and other preventive measures, taking into account community levels of COVID-19. The CDC recommends indoor masking in areas with high community levels of COVID-19. CDC's COVID-19 Community levels recommendations align precautions for educational settings with those for other community settings.

In the current study, most COVID-19 cases among students and staff were acquired from the community and approximately 10% of cases were acquired within school. The researchers found that for every 100 community-acquired cases, school districts with mandatory masking had approximately 7.3 cases of in-school infections, while optionally masked districts had 26.4 cases of in-school infections. In other words, school districts with optional masking had approximately 3.6 times the rate of in-school COVID-19 cases when compared to schools with mandatory masking. These data also show that mandatory masking was associated with a 72% reduction of in-school COVID-19 cases, compared to districts with optional masking.

The study included 61 school districts (kindergarten through grade 12) that provided data from July 26, 2021, through December 13, 2021, a period encompassing the Delta surge and preceding the Omicron surge. In total, there were 40,601 primary infections acquired in the community (36,032 among students, 4,569 among staff) and 3,085 secondary infections acquired in school (2,844 among students, 241 among staff). Of these school districts, six districts (10%) had optional masking policies; nine had partial masking, i.e., policies that changed during the study or only applied to certain grade levels (15%); and the remaining 46 districts (75%) required masking for the entirety of the study.

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