

## GUEST ESSAY

# We Studied One Million Students. This Is What We Learned About Masking.

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Big questions loom over the upcoming back-to-school season: Should children be required to wear masks? Should children go to in-person classes at all?

If we send children to school without masks, we increase their risk of acquiring Covid-19. Some could suffer illness or die. If we close schools, millions of children will suffer learning loss, and many of them may suffer lifelong effects on their physical and mental health.

For more than a year, we've worked with North Carolina school districts and charter schools, studying the rate of new Covid cases, the efficacy of mitigation measures such as masking and the increased risks of participating in school-sponsored sports. We have learned a few things for certain: Although vaccination is the best way to prevent Covid-19, universal masking is a close second, and with masking in place, in-school learning is safe and more effective than remote instruction, regardless of community rates of infection.

Vaccination is the strongest method for preventing the ill effects of Covid, but students under 12 years of age are ineligible for the vaccines. Masking, then, is one of the best, most readily available methods to protect them from the disease, with universal masking being one of the most effective and efficient strategies for preventing SARS-CoV-2 transmission in schools.

Universal masking in schools can save lives. Voluntary masking in schools will likely be much less effective and could lead to school closures and community transmission. This summer, we've seen that voluntary masking has failed in some schools in Missouri and North Carolina, which saw increases in Covid-19 cases and days missed because of quarantines, prompting several districts to reinstate mask mandates.

## OPINION CONVERSATION

*Questions surrounding the Covid-19 vaccine and its rollout.*

- **Is the pandemic getting worse again?**

Aaron E. Carroll, the chief health officer for Indiana University, writes that the answer depends on whether you are vaccinated.

- **Are new mask mandates a good idea?**

Jennifer B. Nuzzo and Beth Blauer, health experts at Johns Hopkins, examine three important questions about masking rules.

- **What do you say to a friend who doesn't want the vaccine?**

Our chatbot, developed with experts, tackles this thorny conversation.

- **Should we get vaccine booster shots, and when?**

While it's not yet clear boosters are truly needed, Elizabeth Rosenthal explores why the F.D.A. is likely to approve them for use.

How do we know that masking helps prevent spread among unvaccinated people in schools? In July 2020, we and our colleagues developed the ABC Science Collaborative to pair scientists with school and community leaders to make sure that school leaders had the most up-to-date, scientific information pertaining to Covid-19 and K-12 schools. In conjunction with North Carolina, the ABC Science Collaborative collected data from more than one million students and staff members in the state's schools from March to June 2021. Certain school districts in North Carolina were required, by bipartisan legislation, to submit infection data to the ABC Science Collaborative as a trusted third party.

During that time, more than 7,000 children and adults acquired the coronavirus and attended school while infectious. Because of close contact with those cases, more than 40,000 people required quarantine. Through contact tracing and testing, however, we found only 363 additional children and adults acquired the coronavirus. We believe this low rate of transmission occurred because of the mask-on-mask school environment: Both the infected person and the close contact wore masks. Schools provided this protection without expensive screening tests for the coronavirus or massive overhauls in ventilation systems.

Because North Carolina had a mask mandate for all K-12 schools, we could not compare masked schools to unmasked schools. To understand the preventive impact masks can have, we looked outside North Carolina for comparisons. Data from our research and from studies conducted in Utah, Missouri and Wisconsin shows that school transmission rates of coronavirus were low when schools enforced mask mandates. By contrast, one school in Israel without a mask mandate or proper social distancing protocols reported an outbreak of Covid-19 involving 153 students and 25 staff members.

Recent outbreaks at youth camps in Texas, Illinois and Florida show how quickly Covid-19 can spread among adolescents and adults who are largely unmasked and mostly unvaccinated, with the possibility of spreading into surrounding communities. The potential for this kind of community spread was the reason schools closed their doors in March 2020.

With the evidence now clear that universal masking is linked to lower spread, why not require universal masking? Why seek to gather hundreds of unvaccinated, unmasked individuals in an enclosed space for several hours a day, five days a week?

Schools that do not require masks will have more coronavirus transmission. And while mortality from Covid was only two per 100,000 school-age children as of April, with more than 50 million public school children in the United States, that could still mean many avoidable deaths of children in a year.

Once vaccination is available for all children, districts can serve their students best by creating incentives to encourage masking and vaccination. For example, if universal masking is enforced or a student is vaccinated, it's reasonable for schools to decide not to require quarantining or testing after exposure for asymptomatic children and adults. Similarly, schools may consider allowing vaccinated students who participate in extracurricular activities to continue even if they've been exposed to someone who tested positive. School districts that do not have universal masking should keep using strategies like ventilation and social distancing and continue to perform routine testing for unvaccinated students.

In schools that choose to open without mask mandates and with limited vaccine uptakes, increased Covid is likely. Until all children can get vaccinated, masks remain a well-researched solution for lowering the risk of getting Covid. Children should be in school, and we should embrace the measures that can keep them safe.

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