

## EDITORIAL



## Universal Masking Policies in Schools and Mitigating the Inequitable Costs of Covid-19

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Nearly 3 years into the Covid-19 pandemic, the United States leads high-income nations in Covid-19–related mortality.<sup>1</sup> Millions of persons now have long-term neurologic, cardiopulmonary, and other disabling conditions. Essential workers continue to face high workplace exposure to Covid-19 with few protections. To prevent Covid-19 transmission, 40 states and Washington, DC, implemented universal indoor masking policies in 2020.<sup>2</sup> Most maintained these policies until May 2021, when the Centers for Disease Control and Prevention (CDC) replaced guidance that everyone wear masks with guidance according to vaccination status.<sup>3</sup> Understanding the effects of universal masking policies as compared with individual masking is critical to minimizing the inequitable harms caused by Covid-19 and maximizing our ability to learn, work, and socialize during the pandemic.

Universal masking and individual masking are distinct interventions.<sup>4</sup> Universal masking lowers the amount of virus exhaled into shared air,<sup>5</sup> reducing the total number of cases of Covid-19 and making indoor spaces safer for populations that are vulnerable to its complications. Individual masking lowers the amount of virus that a masked person inhales from shared air, but only in environments with a relatively high amount of circulating virus and when others are unmasked. Furthermore, individual masking has little effect on population-level transmission.

Public schools are an important context in which to understand the ramifications of moving from universal to individual masking. Although quasi-experimental studies indicated that universal masking was associated with reduced

Covid-19 transmission before the availability of vaccines,<sup>6,7</sup> we previously had little causal-inference evidence regarding the effect of universal masking in schools or as part of a layered risk-mitigation strategy with vaccination, testing, and ventilation.

A study by Cowger and colleagues, the results of which are now reported in the *Journal*,<sup>8</sup> provides new evidence that the removal of universal school masking policies in Massachusetts was associated with an increased incidence of Covid-19. The study used difference-in-differences methods, a rigorous form of causal inference for policies that are infeasible or unethical to assess in a randomized trial. During a 15-week period (March to June 2022), Covid-19 cases in school districts that had ended universal school masking policies (70 districts for most of the 15-week period) were compared with cases in school districts that sustained universal masking policies (2 districts for most of the 15-week period). The removal of universal school masking was associated with an additional 2882 Covid-19 cases among 46,530 staff (an estimated 81.7 cases per 1000 staff) and an additional 9168 Covid-19 cases among 294,084 students (an estimated 39.9 cases per 1000 students) during the 15 weeks. In school districts that had ended universal masking, approximately 40% of 7127 staff cases and 32% of 28,524 student cases were associated with the removal of universal masking policies.

These findings have implications for federal and state decision making regarding universal masking policies. First, most of the benefits of universal masking accrued before county Covid-19

levels reached high CDC Covid-19 Community Levels, a metric that has been used for policy decisions. Second, school districts that ended masking policies had excess cases despite being more likely to have newer buildings and ventilation systems than school districts that sustained universal masking policies.<sup>8,9</sup> These observations highlight the importance of universal masking as a layer of protection early in Covid-19 surges. Masking policies were associated with reduced transmission despite the transmissibility of the omicron (B.1.1.529) variant and without the type of mask specified, although specifying high-quality masks could plausibly further reduce transmission.

The findings also expose a fundamental logical flaw of individual masking: assuming that individual persons will fully absorb the costs of their own masking decisions, rather than assuming that such costs will be shifted onto others and society. Cowger et al. estimated that excess cases implied a minimum of 6500 days of staff absence and 17,500 days of student absence. These absences create costly disruptions for schools and families. Much has been made of the social costs of masking and speculation about language development. Yet strategic implementation of masking policies requires consideration of the costs of not masking — and who will bear those costs. Poor and rich school districts were “differentially equipped to respond to the Covid-19 pandemic,”<sup>8</sup> with harms concentrated in low-income and Black, Latinx, and Indigenous communities.<sup>8,9</sup> Participatory decision making that includes parents from these communities,<sup>9,10</sup> as well as essential workers and persons at high risk for severe Covid-19, can strengthen consideration of societal trade-offs and center equity and inclusion.

The Covid-19 pandemic will not be without continuing costs. A prepandemic normal is unattainable in the short term, no matter how urgently we desire it. The questions for policymakers are these: how high will we allow the societal costs to be, and who will bear the greatest costs? Universal masking policies distribute a small cost across society, rather than shifting

the highest burdens of Covid-19 onto populations that have already been made vulnerable by structural racism and other inequities. Strategic use of universal masking policies could include community-level implementation early in surges of new Covid-19 variants and throughout the year in select classrooms to protect higher-risk children and staff. Visionary leadership that centers the populations that are most affected and prioritizes evidence, equity, and inclusion can help us navigate policy decisions that reduce the costs and inequities of Covid-19 in the years ahead.

Disclosure forms provided by the authors are available with the full text of this editorial at NEJM.org.

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