School District Prevention Policies and Risk of COVID-19 Among In-Person K–12 Educators, Wisconsin, 2021

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See also Teasdale and Fleary, p. 1696.

Objectives. To assess the rate of COVID-19 among in-person K–12 educators and the rate's association with various COVID-19 prevention policies in school districts.

Methods. We linked actively working, in-person K–12 educators in Wisconsin to COVID-19 cases with onset from September 2 to November 24, 2021. A mixed-effects Cox proportional hazards model, adjusted for pertinent person- and community-level confounders, compared the hazard rate of COVID-19 among educators working in districts with and without specific COVID-19 prevention policies.

Results. In-person educators working in school districts that required masking for students and staff experienced 19% lower hazards of COVID-19 than did those in districts without any masking policy (hazard ratio = 0.81; 95% confidence interval = 0.72, 0.92). Reduced COVID-19 hazards were consistent and remained statistically significant when educators were stratified by elementary, middle, and high school environments.

Conclusions. In Wisconsin's K–12 school districts, during the fall 2021 academic semester, a policy that required both students and staff to mask was associated with significantly reduced risk of COVID-19 among in-person educators across all grade levels. (*Am J Public Health*. 2022;112(12):1791–1799. https://doi.org/10.2105/AJPH.2022.307095)

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Evidence supports the use of specific prevention efforts to reduce COVID-19 transmission in schools during periods of high community transmission. Policies related to masking,[1–5] physical distancing,[6,7] and quarantine after close contact (resulting from effective contact tracing)[8] have been associated with reduced rates of COVID-19 transmission and outbreaks in school environments. In districts practicing a multifaceted combination of these policies, students and staff experience rates of COVID-19 lower than those of the surrounding communities.[9,10]

For the 2021–2022 academic year, most K–12 students and educators in the United States returned to in-person school environments. In Wisconsin, the vast majority of regular K–12 school districts offered in-person learning for the 2021–2022 school year and were responsible for implementation of their own COVID-19 prevention policies. There was no standardized return-to-school directive from the state regarding implementation of such policies.[11]

The resulting heterogeneity in school district COVID-19 prevention policies throughout Wisconsin allowed us to build on a significant limitation of previous research in this field. Most school-related policy research was conducted during the previous 2020–2021 academic year—a time when almost all schools or districts had some form of prevention policy in place; as a result, it was challenging to directly compare the risk of COVID-19 associated with the presence or absence of certain policies.

In this analysis, our aim was to assess the rate of COVID-19 among in-person K–12 educators and the rate's association with a COVID-19 prevention policy's presence or absence. We chose to compare the rates of COVID-19 among in-person K–12 educators specifically because this is a group that is just as often involved in school-based COVID-19 transmission events as are students[12,13] and is an occupational category with frequently overlooked workplace risk.[14,15] We further stratified educators based on grade level taught to investigate the effect of COVID-19 prevention policies in elementary, middle, and high school settings.

METHODS

We completed our analysis using a cohort study design and a variety of data sources collected prospectively or at a single time point. We used multiple data sources available at both the Wisconsin state and the national levels to aggregate information related to our study sample (Wisconsin's in-person K–12 educators), outcome (COVID-19 cases), and exposure (school district COVID-19 prevention policies).

Educator Data

We created a roster of all licensed, actively working educators in Wisconsin during the 2020–2021 school year from multiple data sources maintained by the Wisconsin Department of Public Instruction. We filtered a data set consisting of all licensed educators in Wisconsin using a data set of educators actively employed during the 2020–2021 school year (the most recent academic year available).[16] We used this merged data set to represent all licensed educators likely to be working during the 2021–2022 school year.

Many categories of educators in Wisconsin can be licensed, including administrators, pupil service staff, and classroom teachers.[16] For educators with multiple categories assigned, we categorized individuals based on their position with the highest full-time equivalent value. We also used these positions to categorize educators by grade level taught (elementary school, middle school or junior high school, and high school). We excluded educators assigned to roles not likely to be working in school settings (Figure 1).

COVID-19 Case Data

We used the Wisconsin Electronic Disease Surveillance System (WEDSS) to collect all confirmed and probable cases of COVID-19 reported from June 1 through November 30, 2021 throughout Wisconsin. We based criteria for confirmed and probable cases on

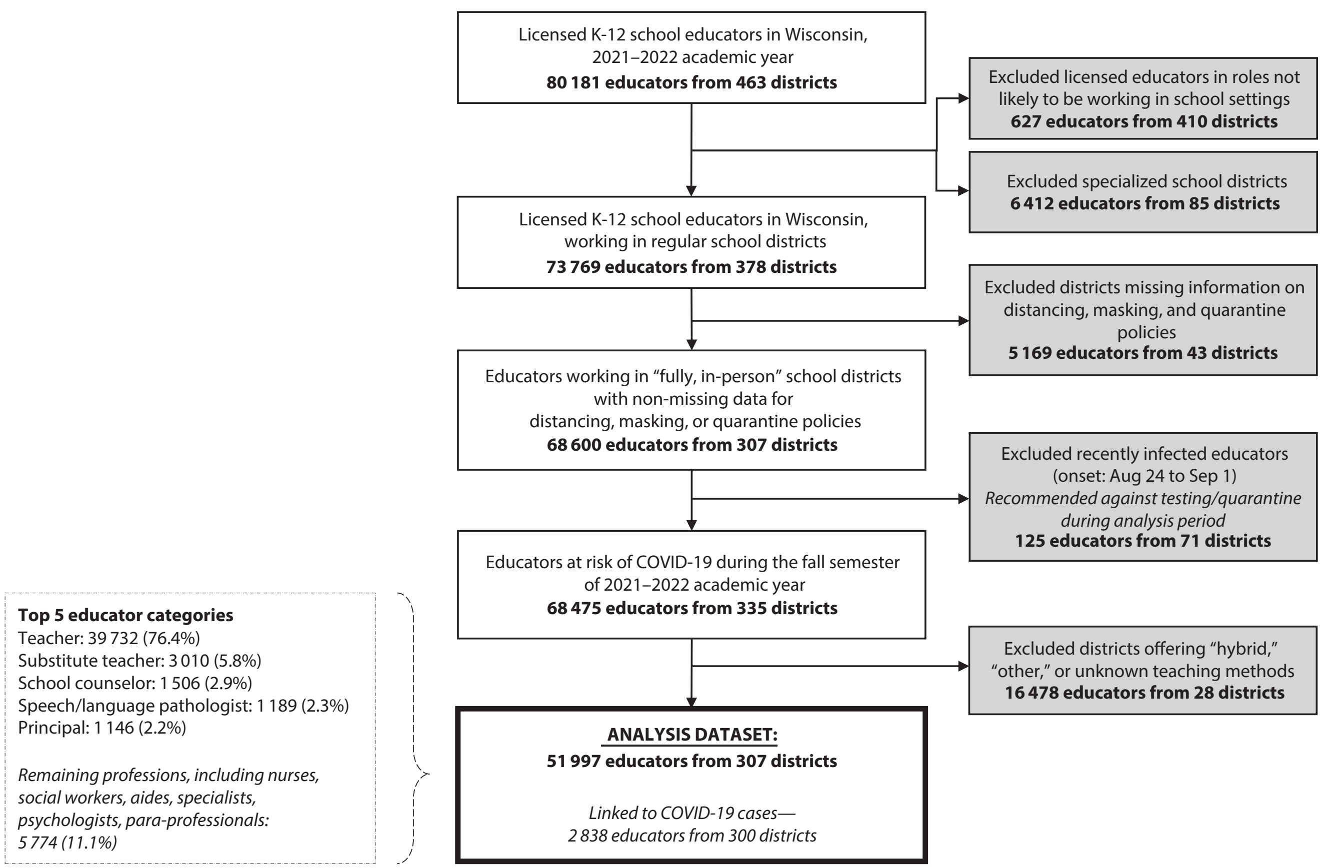


FIGURE 1— Criteria for School District and Educator Inclusion in Study Analysis: Wisconsin, September 2–November 24, 2021

definitions established by the Council for State and Territorial Epidemiologists.[17] We used illness symptom onset date to time stamp cases; if the reported symptom onset date was missing (e.g., for asymptomatic persons), we used the specimen sample collection date or the diagnosis date as a substitute.

September 1 was the first day of the academic year for Wisconsin K–12 schools in 2021. Therefore, the only COVID-19 cases we considered were those that were time stamped from September 2 through November 24, 2021 (or 1 full day into the academic year through the day before Thanksgiving break). We used identifying information from the educator licensure database, including name and date of birth, to link Wisconsin educators to these time-eligible COVID-19 case records in WEDSS. For all cases, we adjusted time at risk during the study period based on the US Centers for Disease Control and Prevention (CDC) recommendation at the time against retesting or quarantine after close contact for persons with infections 90 or fewer days ago.[18] Educators linked to a case of COVID-19 contributed no risk time during their respective 90-day window after infection.

School District Prevention Policy Data

There were 463 school districts in Wisconsin that were linked to our roster of actively working educators in 2021–2022 (Figure 1). Of these, 378 districts were considered "regular school districts" by the National Center for Education Statistics (NCES), which are defined as "locally governed agenc[ies] responsible for providing free public elementary or secondary education."[19] The other 85 districts exist within these regular school districts and generally reflect individual schools or specialized programs (e.g., preparatory academies, schools for deaf or blind students). For the sake of broader generalizability and to avoid issues with small numbers in our results, we excluded these smaller 85 districts.

We obtained COVID-19 prevention policy data for Wisconsin school districts from responses to a national cross-sectional telephone survey.[11] MCH Strategic Data (Sweet Springs, MO) designed the questionnaire in partnership with Esri (Redlands, CA) and the CDC Foundation (Atlanta, GA). This questionnaire was administered to US K–12 public school districts before the start of the 2021–2022 school year. For this analysis, we extracted Wisconsin school district survey responses related to masking, physical distancing, and quarantine policies. The original survey requested specific responses about whether the policy applied to students and educators separately. We operationalized each of these policies as (1) robust—required for both students and educators, (2) partial—required for either students or educators, or (3) absent—required for neither students nor educators (Table A, available as a supplement to the online version of this article at http://www.ajph.org). We excluded districts missing information for all distancing, masking, and quarantine policies.

To adjust for potential ascertainment bias owing to regular COVID-19 testing policies in schools (wherein districts with prevention policies might have also been asking educators to routinely test for COVID-19), we also extracted information on regular staff testing policies.

Person-Level Confounders

We included 3 educator-level variables as potential confounders: age, sex, and COVID-19 vaccination status. We obtained age and sex from the educator licensure information. We collected COVID-19 vaccination information from the Wisconsin Immunization Registry, which the Wisconsin Department of Health Services stores and maintains. We linked educators to COVID-19 vaccination records based on an exact match for first name, last name, and date of birth. We implemented a subsequent linking step using an exact match for date of birth and approximate text matching on both first name and last name. Approximate text matching was based on Jaro–Winkler distance calculations (with distance ≤ 0.25).[20]

Community-Level Confounders

We considered 2 community-level variables to be potential confounders given their association with educator risk outside the school environment and their likely association with COVID-19 policies implemented in school districts. First, we aggregated COVID-19 case data from WEDSS by week for each Wisconsin school district community (i.e., the general population living in school district boundaries), which we used to account for temporal changes in COVID-19 incidence.[21] Second, we accounted for the proportion of the school district community vaccinated against COVID-19 using publicly available Wisconsin Immunization Registry data.[21]

School District–Level Confounders

We incorporated 2 district-specific variables into our analysis as confounders. For one, we calculated a proxy for average classroom size using a student to educator ratio derived from the NCES Common Core data set. Using this same data set, we included the NCES locale classification of school district (city, suburb, town, or rural). Definitions for each locale were based on census-defined groupings and are available on the NCES Web site.[19]

Statistical Analysis

To compare unadjusted differences in school districts with different prevention policies, we used nonparametric statistical tests, including Wilcoxon rank–sum for continuous variables and χ^2 for categorical variables.

To compare hazard rates of COVID-19 among educators working in districts with various prevention policies, we used a mixed-effects Cox proportional hazards model. We adjusted this model for previously described confounders at the individual, community, and school district levels. We included a random effect for school district to account for additional unknown or unobserved confounders at the school district level. We chose to keep all 3 prevention policies in the same multivariate-adjusted regression model to assess their independent contribution to the overall association. We assessed Schoenfeld residuals to confirm that neither the model overall nor the 3 main policy variables violated the proportional hazards assumption.[22] We used spline terms for continuous confounders to allow a nonlinear relationship with the outcome.

We used 4 distinct regression models to account for school districts that were missing district-level data for 1 or 2 COVID-19 prevention policies. Model A included information only from school districts with complete data for all 3 policies. Model B imputed missing policy information using information from nonmissing district-level characteristics, including district population size, proportion of district vaccinated in fall 2021, NCES locale (i.e., urban vs rural), and number of educators and students.[23] As a sensitivity analysis, we created 2 other data sets in which missing policy information was assumed to be either absent (model C) or robust (model D). We conducted all analyses in R version 4.1 (R Foundation for Statistical Computing, Vienna, Austria).[24]

RESULTS

Of the 378 Wisconsin K–12 regular school districts, 43 districts (11.4%) did not submit any response for policies related to physical distancing, mask use, or quarantine (Figure 1). We excluded these districts from our analysis, including the 5169 educators affiliated with them. We also excluded educators who were not considered to be at risk for COVID-19 because a 90-day window following recent infection extended throughout our entire analysis period (n = 125; illness onset dates: August 24–September 1, 2021). Lastly, we excluded all school districts that reported a teaching method for fall 2021 other than "full in-person learning" (n = 28 districts; n = 16 478 affiliated educators). We were left with 51 997 licensed, in-person K–12 educators from 307 school districts in our study sample.

Educators were on average aged 44.0 years; the majority were female (n = 38 702; 74.4%), non-Hispanic White (50 478; 97.1%), and employed by their school district as a teacher (39 732; 76.4%). As of the first day of the 2021–2022 school year (September 1, 2021), 40 526 (77.9%) educators had completed a full primary series of a COVID-19 vaccination. From September 2 through November 24 (the day before the start of Thanksgiving break), 2838 (5.5%) of 51 997 educators were linked to a case of COVID-19. This translated to an unadjusted cumulative incidence of 5458 cases per 100 000 educators.

Responding K–12 public school districts implemented a variety of prevention practices, but policies were nearly always applied to students and staff equally (Table 1; Figure 2). Very few districts implemented a partial policy. Among districts that reported a robust policy practice, physical distancing procedures were the most commonly reported (188/278; 67.6%), followed by quarantine (87/169; 51.5%), and then masking requirements (73/298; 24.5%).

Unadjusted Kaplan–Meier curves indicated that educators working in districts with a robust distancing, masking, or quarantine policy (compared with those working in districts without these policies) experienced a significantly lower hazard of COVID-19 illness from September 2 through November 24, 2021 (Figure A, available as a supplement to the online version of this article at http://www.ajph.org).

Using our imputed multivariate mixed-effects proportional hazards model, we found that, compared with those in districts without masking policies, educators working in districts with robust masking policies were associated with a 19% lower hazard of COVID-19 during September 2 through November 24 (hazard ratio [HR] = 0.81; 95% confidence interval [CI] = 0.72, 0.92). Neither quarantine nor distancing policies were significantly associated with educator rates of COVID-19 during our analysis period. Model findings were relatively unaffected by missing data assumptions in our sensitivity models (Table C, available as a supplement to the online version of this article at http://www.ajph.org).

TABLE 1— Characteristics of Wisconsin K–12 School Districts and Their Use of COVID-19 Prevention Strategies During the Fall 2021 Academic Semester: Wisconsin, September 2–November 24, 2021

	Distancing Policy (n = 278)			Masking Policy (n = 298)			Quarantine Policy (n = 169)		
	Robust, No. (%) or Mean (SD)	Absent, No. (%) or Mean (SD)	P	Robust, No. (%) or Mean (SD)	Absent, No. (%) or Mean (SD)	P	Robust, No. (%) or Mean (SD)	Absent, No. (%) or Mean (SD)	P
Districts[a]	188 (67.6)	90 (32.4)	. . .	73 (24.5)	202 (67.8)	. . .	87 (51.5)	79 (46.7)	. . .
% of district population fully vaccinated against COVID-19	52.8 ± 10.7	49.3 ± 9.2	.009	59.4 ± 10.9	48.7 ± 8.6	< .001	52.1 ± 10.5	49.8 ± 9.3	.49
Teacher age, y	44.6 ± 2.5	44.9 ± 2.1	.45	44.4 ± 2.4	44.6 ± 2.4	.3	45 ± 2.4	44.6 ± 2.0	.07
% of teachers vaccinated	77.6 ± 8.7	74.8 ± 10.7	.04	80.7 ± 8.2	75.6 ± 9.3	< .001	76.1 ± 10.8	75.7 ± 8.2	.6
Teachers per district	129.7 ± 190.8	123.2 ± 132	.4	215.2 ± 277.5	99.6 ± 106.4	.001	100.8 ± 95.8	122.9 ± 133.6	.51
Students per district	1827.7 ± 2760.7	1811.3 ± 2013.4	.29	3060.7 ± 3984.3	1428.7 ± 1636.9	.003	1427.7 ± 1442.7	1787.8 ± 2037.1	.48
Student:teacher ratio	13.2 ± 2.0	13.8 ± 2.1	.03	13.4 ± 2.1	13.4 ± 1.9	.98	13.2 ± 2.1	13.6 ± 1.9	.42
Use of policy for both students and staff[b]									
Districts with a robust distancing policy	188 (100)	0 (0)	. . .	63 (94)	103 (56.9)	< .001	58 (69)	38 (50)	.05
Districts with a robust masking policy	63 (34.8)	4 (4.5)	< .001	73 (100)	0 (0)	. . .	27 (31.8)	6 (7.8)	.005
Districts with a robust quarantine policy	58 (59.2)	26 (40)	.05	27 (79.4)	51 (43.6)	.005	87 (100)	0 (0)	. . .
Regular staff testing for COVID-19	20 (11.8)	11 (13.1)	.92	12 (18.8)	18 (9.9)	.17	10 (12.2)	4 (5.6)	.15

Note. The study involved n = 307 school districts.

[a]Robust indicates policy in place for both students and staff. Absent indicates policy in place for neither students nor staff. The partial categories of any given policy (i.e., policy in place for either students or staff) are not presented because of small numbers. The total number of districts with a response for given policy is used as the denominator used for percentage calculations.

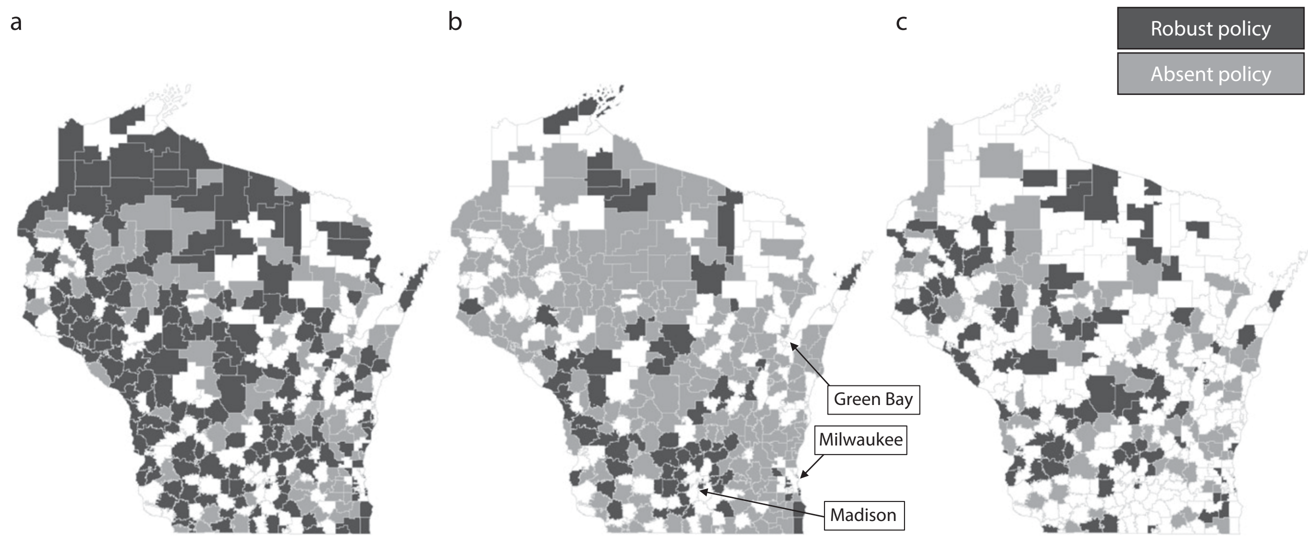
[b]Total districts with given policy implementation is used as the denominator used for percentage calculations.

When we stratified our imputed model by grade level, the hazards reduction associated with a robust masking policy remained consistent and statistically significant across elementary, middle, and high school locations (HR = 0.83 [CI = 0.77, 0.99]; HR = 0.74 [CI = 0.58, 0.95]; and HR = 0.77 [CI = 0.61, 0.98], respectively).

In assessing the potential for outcome ascertainment bias among school districts, we noted that the use of COVID-19 testing policies among educators was low but comparable between districts using different COVID-19 prevention policies (Table 1). In addition to unadjusted Kaplan–Meier curves (Figure B, available as a supplement to the online version of this article at http://www.ajph.org), we also reran our complete case model (Table 2; model 1), including a binary indicator variable for staff testing alongside the 3 other policy variables; it did not substantially alter the point estimates or CIs for our main policies of interest (not shown).

DISCUSSION

Our results provide further evidence of the benefits of student and staff masking in school settings during a period of high community transmission.[1–3,25,26] COVID-19 incidence rates in our assessed group of Wisconsin K–12 school district communities averaged 49.3 per 100 000 residents during the study period (range = 2.6–293.6 per 100 000 residents). During the first 3 months of the 2021–2022 academic year (September 2–November 24), and adjusted for pertinent person- and community-level factors, in-person educators working in school districts with both student and staff masking policies in place were 19% less likely to experience a COVID-19 illness than



(a) (total responses = 278)

Robust:	188/278	(67.6%)
Partial:	0/278	(0%)
Absent:	90/278	(32.4%)
Missing:	36/307	(11.7%)

(b) (total responses = 298)

Robust:	73/298	(24.5%)
Partial:	23/298	(7.7%)
Absent:	202/298	(67.8%)
Missing:	9/307	(2.9%)

(c) (total responses = 169)

Robust:	87/169	(51.5%)
Partial:	3/169	(1.8%)
Absent:	79/169	(46.7%)
Missing:	138/307	(45.0%)

FIGURE 2— Wisconsin K–12 Public School Districts' Implementation of COVID-19 Prevention Policies of (a) Distancing, (b) Masking, and (c) Quarantine: Fall 2021 Academic Semester

Note. Robust policies indicate those applied to both students and educators. Absent policies were not required for either students or educators. Because of small numbers, districts with partial policies (or those differentially applied to students and staff) are not highlighted in a color, nor are districts with missing policy data.

were their counterparts working in districts without any masking policies. This is equivalent to a 23% higher HR among educators in districts without masking policies than among educators in districts with robust masking policies. Moreover, the protective effect associated with a robust masking policy was consistent across elementary, middle, and high school environments.

Our findings complement those of an ecologic study by Budzyn et al., who, using the same MCH survey policy data, determined that after the start of the 2021–2022 school year, US counties with school mask policies in place for students and staff experienced a significantly lower risk of pediatric COVID-19 cases than did counties without mask mandates (16.3 vs 34.9 cases per 100 000 children aged < 18 years).[27] Existing research also corroborates our study's lack of association between COVID-19 risk and either physical distancing or quarantine after exposure (imputed HR = 1.08; 95% CI = 0.98, 1.19 and HR = 0.98; CI = 0.89, 1.07, respectively). For example, 2 articles from the Duke University School of Medicine that suggest that—in the presence of masking policies—distancing or quarantine policies might have little effect on COVID-19 risk reduction.[25,26]

K–12 educators, despite a higher risk of workplace-associated COVID-19 incidence, do not appear to be at more risk for severe outcomes of COVID-19 than do those in other professional categories.[28,29] But, in our work, the 23% higher rate of COVID-19 illness among educators in districts without any masking policy is not without potential ramifications. In studies of school-based COVID-19 outbreaks, researchers identified that staff are often as involved in outbreaks as students.[4,6,12,13] These school-based outbreaks can subsequently spill over to the surrounding community members; for instance, preventing COVID-19 transmission in educational settings has a noted benefit to households associated with schoolchildren.[15]

We also note that the educators in our study were relatively young (average age = 44 years), almost entirely non-Hispanic White (97.1%), and highly vaccinated (77.9% having completed a full, primary vaccination series by the start of school). Therefore, our calculated HRs among Wisconsin educators might not be generalizable to all educators in the United States. Indeed the 23% higher HR of COVID-19 associated with a lack of a masking policy in Wisconsin school

TABLE 2— Effect of School District Policy (Physical Distancing, Masking, and Quarantine) on Hazard Rate of COVID-19 Among K–12 Educators, Stratified by Grade Level: Wisconsin, September 2–November 24, 2021

School Setting and Policy	Model Data Assumptions[a] HR (95% CI)[b]	
	Complete Cases	Imputed
Elementary school		
Distancing	1.14 (0.93, 1.40)	1.06 (0.92, 1.23)
Masking	0.78 (0.60, 1.03)	0.83 (0.70, 0.99)
Quarantine	1.01 (0.82, 1.23)	1.06 (0.92, 1.21)
Middle School		
Distancing	1.05 (0.76, 1.47)	0.97 (0.79, 1.19)
Masking	1.02 (0.68, 1.54)	0.74 (0.58, 0.95)
Quarantine	0.89 (0.66, 1.22)	0.99 (0.81, 1.20)
High School		
Distancing	1.23 (0.96, 1.60)	1.19 (0.99, 1.44)
Masking	0.76 (0.53, 1.07)	0.77 (0.61, 0.98)
Quarantine	0.96 (0.75, 1.23)	0.91 (0.76, 1.08)
Overall		
Distancing	1.11 (0.96, 1.28)	1.08 (0.98, 1.19)
Masking	0.81 (0.67, 0.98)	0.81 (0.72, 0.92)
Quarantine	1.00 (0.87, 1.15)	0.98 (0.89, 1.07)

Note. CI = confidence interval; HR = hazard ratio.

[a]Reflects 2 data sets treating missing policy data in distinct ways: (1) only school districts with complete data for all 3 policies or (2) imputed data for missing policy information using information from nonmissing district-level characteristics. Multivariate model adjusted for each of the 3 policies (masking, distancing, quarantine), teacher full vaccination status by start of school, National Center for Education Statistics school district locale, and spline terms for the following variables: teacher age (years), percentage of school district community fully vaccinated, weekly COVID-19 incidence rate in the school district community, and average student:teacher ratio in school district.
[b]HRs and CIs associated with policy implementation, robust vs absent. Robust indicates policy in place for both students and staff. Absent indicates policy in place for neither students nor staff. The partial categories of any given policy (i.e., policy in place for either students or staff) are not presented because of small numbers.

districts could be more pronounced in US school districts with an older or less vaccinated population of educators.

Limitations and Strengths

The findings of this study are subject to at least 3 principal limitations. First, policy variables were based on responses at the beginning of the semester. We were unable to account for potential changes to policy throughout the semester. However, we note that the trajectory of COVID-19 cases in Wisconsin was increasing from early July 2021 through mid-January 2022. For this reason, we do not expect that policies were suspended during our analysis period—if anything, it is more likely that some districts without policies in September implemented them during the analysis period. In this sense, our results might reflect conservative estimates. Similarly, although we were unable to account for measures of policy compliance, we do not anticipate that policy compliance dramatically waned during this period of increasing case rates—at least not because of a lack of pandemic awareness throughout the state.

Second, the MCH survey requested answers to broad questions (Table A, available as a supplement to the online version of this article at http://www.ajph.org). Because of this, the categorical exposure levels in our analysis might obscure nuances in the way distancing, masking, or quarantine policies were implemented in each district or among schools in the district. For example, there were no data available regarding the type of masks required in school districts with masking policies. Evidence shows that different types of masks are associated with different levels of fit, quality, and effectiveness,[30–32] and so our overall risk reduction associated with masking may gloss over more nuanced levels of protection associated with various masks.

Similarly, because of small numbers, we were unable to assess risks of COVID-19 associated with a heterogeneous application of policies, such as the effects of staff masking or student masking alone. We cannot conclude, therefore, whether mask wearing by in-person educators or by students specifically contributed more to the reduction in educator risk. Future work could consider the risk reduction in schools with a mask policy applied only to in-person educators.

Third, there was potential for selection bias in our analysis, although we took care to minimize any potential consequences of this. It is true that, statewide, 11% of all regular K–12 school districts did not report any policy data, and we excluded these from analysis. However, these districts were distributed throughout the state in urban and rural areas, which minimized the concern of unrepresentative data (Figure 2). Similarly, it is possible that educators in different districts were more or less likely to report COVID-19 cases to local health departments, perhaps because of prevailing social willingness to be tested for COVID-19 or the use of self-tests at home. To lessen the impact of this bias, we included a random effect term for school district in our model.

This study builds on the existing literature in 2 notable ways. For one, previous studies investigating COVID-19 prevention policies in schools often lacked comparison groups because of their analysis time frame, which occurred when the vast majority of school districts had implemented similar masking and other prevention policies; these previous studies were limited in ability to contrast policies. Previous studies often considered only schools in which the policy was applied, and thus researchers were unable to determine whether the observed low COVID-19 risk was associated with the presence of the prevention policy itself. In our analysis of heterogenous policy use, we found that the presence of student and staff masking policies in Wisconsin school districts, compared with the absence of such policies, was associated with a significantly reduced rate of COVID-19 among in-person educators.

A second strength of our analysis was our ability to control for a wide range of pertinent person- and community-level confounders. We were able to use data from a variety of state and national data sources to control for educator vaccination status, educator age, community vaccination status, weekly incidence of COVID-19 in the community, urbanicity of the school district, and student to teacher ratio. Additionally, we implemented a random-effects model in an attempt to control for unobserved confounders at the school district level.

Public Health Implications

Our work shows that an in-person educator's risk of infection can be reduced with group mask use—a simple, nonpharmaceutical intervention. Beginning in February 2022, the Omicron variant wave of the COVID-19 pandemic tapered off, prompting the United States and other countries to lift many or all of their societal COVID-19 prevention policies. Fortunately, surveillance data continue to indicate that the risk of severe COVID-19 outcomes in younger children remains rare. But in considering the beneficiaries of masking policies in US K–12 schools, it is important to bear in mind the health of the nation's 5.5 million K–12 educators and the 3 million additional in-school staff.[14]

We want to be clear that our findings do not suggest that a robust mask policy in K–12 schools be applied in perpetuity without consideration of external factors. Instead, our work adds further evidence to underscore the role of mask policies in school environments. Student and staff mask wearing during periods of high community transmission prevented illness in schools among a highly vaccinated population of in-person educators and may be a worthwhile consideration during future periods of high COVID-19 transmission in the community. AJPH

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CONTRIBUTORS

P. M. DeJonge designed the study, led statistical analyses, and drafted the article. P. M. DeJonge, C. Tomasallo, and J. Meiman codeveloped the analysis plan. I. W. Pray and K. McCoy provided epidemiologic and subject matter expertise. R. Gangnon provided statistical expertise and reviewed methods for validity throughout the analysis. C. Tomasallo and J. Meiman provided major contributions in database access and management at the state level. All authors reviewed and revised the final version of the article.

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Note. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention (CDC).

CONFLICTS OF INTEREST

The authors have no potential or actual conflicts of interest from funding or affiliation-related activities to disclose.

HUMAN PARTICIPANT PROTECTION

The CDC reviewed this activity and determined that it met the requirements of public health surveillance as defined in 45 CFR 46.102(l)(2) and was conducted in a manner consistent with applicable federal law and CDC policy. We stored all identifiable information on protected Wisconsin Department of Health Services servers, and analysts used only de-identified data.

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