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JUNE 2021

COVID-19 Prevention Strategies in K-12 Schools:

Findings from Parents, Students, Teachers and other School Staff, March–May 2021

MONITORING SCHOOL COVID-19 PREVENTION STRATEGIES PROJECT: TRIANGULATED REPORT

Project background

To make informed decisions, public health, schools and elected officials need timely, actionable, and school-specific data to help successfully prevent the spread of the COVID-19 virus in K-12 settings—and to make sure schools can open for in-person learning and stay open safely.

The CDC Foundation, in partnership with Deloitte and technical assistance from the Centers for Disease Control and Prevention (CDC), launched the Monitoring School COVID-19 Prevention Strategies project to collect data on the impact of COVID-19 on the social, emotional, academic and mental health of the K-12 community. Through multiple data collection methods, the aim of the project is to collect, analyze and disseminate near real-time data to:

- Help school districts and community members (e.g., superintendents, principals, teachers, parents, students) make **actionable, informed, data-driven decisions** to prevent the spread of the COVID-19 virus in K-12 settings.
- Characterize **policies, practices, and interventions** to support implementation of school COVID-19 prevention strategies.
- Build awareness around **successes and challenges** related to COVID-19 in K-12 settings.
- Improve understanding of **social, emotional, academic, and mental health** impacts on school communities.

Parent helping a child get ready for school

Report overview

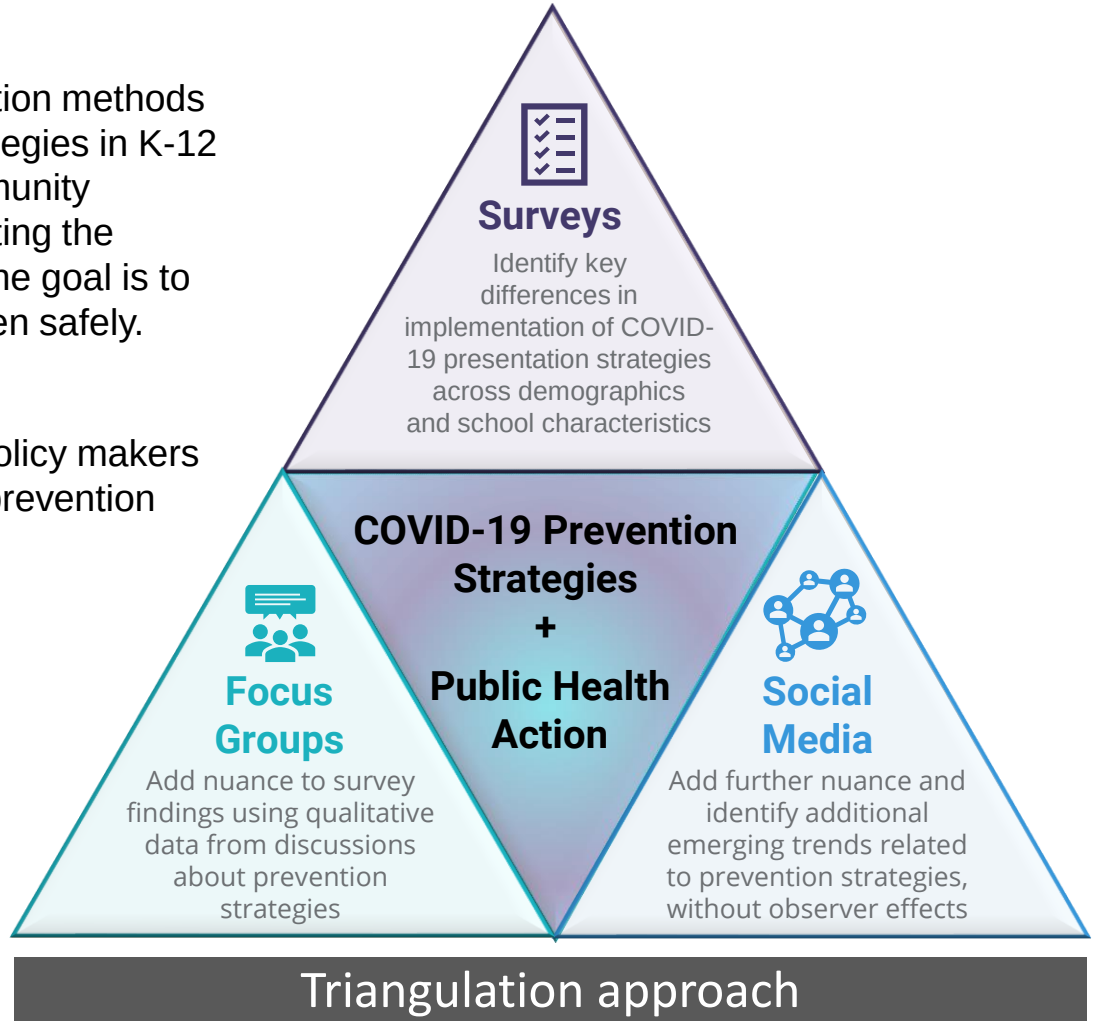
Purpose

The purpose of this report is to triangulate data across several data collection methods and different perspectives to better understand COVID-19 prevention strategies in K-12 schools. Findings focus on individual actions and behavior of school community members, district policies and other practices in schools related to preventing the spread of COVID-19 in K-12 settings during the 2020/2021 school year. The goal is to inform decisions and improve support to help schools reopen and stay open safely.

Audience

This report is intended to be used by public health professionals, school policy makers and the school community to better understand differences in COVID-19 prevention strategy adoption and implementation across K-12 schools.

Contents



Report focus and guiding questions

This report aims to inform three guiding questions on K-12 prevention strategies:

1. **SCHOOL POLICY LANDSCAPE**

   What prevention strategies were implemented during the 2020/2021 school year in K-12 schools in the US and how do these strategies differ by key school characteristics?

2. **ADOPTION BY RESPONDENT GROUPS**

   How likely were the different members of the school community to adopt prevention strategies during the 2020/2021 school year and what differences were observed among groups?

3. **BARRIERS AND FACILITATORS**

   What were the key barriers and facilitators for implementation and adherence to various COVID-19 prevention strategies in schools during the 2020/2021 school year?

The 5 prevention strategies of focus in this report are:

- Mask-wearing
- Physical Distancing
- Hand Hygiene
- Cleaning and Ventilation
- Contact Tracing

Quantitative data sources

The project includes data from three types of cross-sectional online surveys to identify key findings across different respondent groups. See Appendix B for additional details on the data samples, weighting methods, limitations and learning model definitions.

Web Panels [Weighted]

Parents, students and teachers reported on a variety of topics related to COVID-19 and reopening schools safely

Parents of K-12 students (3/2/21 – 3/10/21)

- n = 4,039 | N = 70,372,798 across all teaching models
- n = 2,208 | N = 38,113,939 hybrid and in-person models

Teachers of K-12 students (3/3/21 – 3/31/21)

- n = 1,842 | N = 3,734,000 across all teaching models
- n = 1,358 | N = 2,847,244 teachers in hybrid and in-person models
- n = 1,306 | N = 2,745,500 teachers with students in hybrid and in-person models

Students (age 13-20) (3/24/21 – 4/11/21)

- n = 2,200 | N = 20,927,203 K-12 across all learning models
- n = 1,248 | N = 12,722,271 hybrid and in-person models

Sector Surveys

Principals and facilities staff reported on a variety of topics related to COVID-19 and reopening schools safely.

Principals and vice-principals (4/7/21 – 4/17/21) [Weighted]

- n = 576 | N = 117,110 across all learning models
- n = 440 | N = 95,315 hybrid and in-person models

Facilities staff (4/15/21-5/17/21) [Unweighted]

- n = 708
- *Facilities staff includes custodial staff, maintenance staff and HVAC specialists. For the remainder of this report "Facilities staff" is used to refer to this group*

Crowdsourcing Surveys [Unweighted]

Teachers, parents and school staff reported on prevention strategies and special education school services

K-12 teachers

Prevention strategies (3/29/21 – 4/5/21)

- n = 558

Special education school services (3/5/21-3/12/21)

- n = 434

Parents of K-12 students

Prevention strategies (3/29/21 – 3/31/21)

- n = 1,500

K-12 school staff

Prevention strategies (3/29/21 – 4/5/21)

- n = 491
- *School staff include food/nutrition services staff, learning specialist, low incidence disability specialist, occupational therapist, paraprofessional, physical therapist, school counselor, social worker, psychologist, or therapist, special education teacher and speech and language pathologist*

The results included in this report focus on data from the web panel and sector surveys; however, findings shown were also elaborated on with crowdsourced data, where available. For the remainder of the report, "**Survey Findings**" refers to web panels or sector survey data. Crowdsourced, focus groups, or social media findings will be noted separately.

Note: n = unweighted, N = weighted. See Appendix B for additional detail on weighting

Qualitative data sources

The project includes data from two qualitative methods to identify unique findings and provide context for quantitative findings.

Virtual focus groups

Parents of Students with Special Education Needs
Parents (n = 5) shared experiences related to navigating school with their children with special education needs during the pandemic during a focus group held on 3/27/21

Teachers from Rural Areas
Teachers (n = 11, across 2 focus groups) shared experiences related to teaching during the pandemic, with a focus on rural-specific successes and challenges with prevention strategies during two focus groups held on 3/15/21 with 7 participants and on 5/25/21 with 4 participants

Superintendents
Superintendents (n = 5) shared experiences reopening and/or closing school districts during the pandemic and policies and practices related to prevention strategies during a focus group held on 3/16/21

High School Students of Color
Students (n = 8, across 2 focus groups) shared their experiences related to attending school during the pandemic and how prevention strategies are being implemented day-to-day during two focus groups held on 4/5/21 with 4 participants and on 4/6/21 with 4 participants

Food Service Workers
Food Service Workers (n = 6) from the school district and state level shared experiences on providing meals to students and their community during the pandemic during a focus group held on 3/22/21

Social media listening

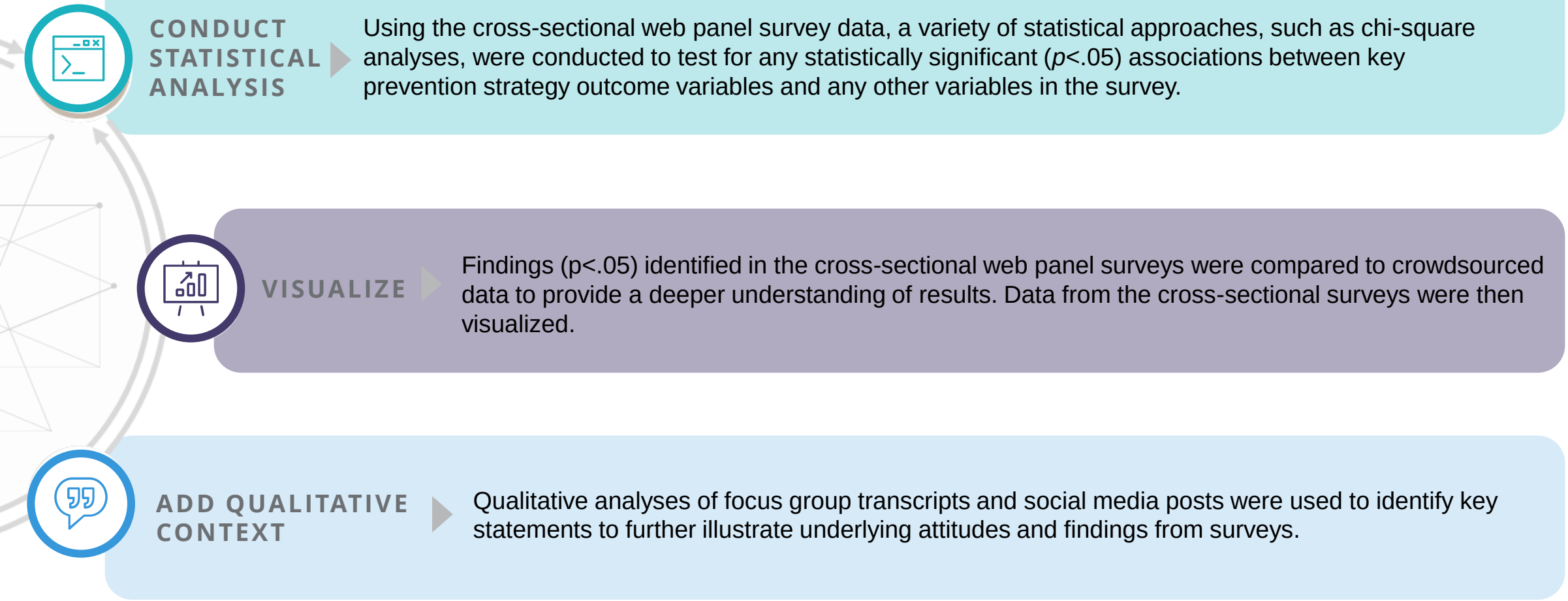
Public Online Conversations
Public social media posts from Twitter, Facebook, Instagram, YouTube, Reddit, forums, blogs, reviews, Quora and WordPress were collected using keyword queries aimed at retrieving posts containing words and phrases related to the five core CDC-recommended COVID-19 prevention strategies for schools.

- n = 1.1 million publicly-available social media posts made between 3/1/21 and 5/16/21

Prevention Strategy Queries
Written using Boolean logic and were tailored to include only posts related to the prevention strategies in the context of K-12 schools. Mentions are aggregated by Sprinklr and calculated by summing each occurrence of posts containing the keywords as written in the Boolean-constructed queries. Please refer to the appendix slides for details and the full queries.

Process for identifying key findings

The process below was used to identify insights and triangulate across data collection methods. See Appendix B for notes and limitations regarding the collection and analysis.



CONDUCT STATISTICAL ANALYSIS

Using the cross-sectional web panel survey data, a variety of statistical approaches, such as chi-square analyses, were conducted to test for any statistically significant ($p<.05$) associations between key prevention strategy outcome variables and any other variables in the survey.

VISUALIZE

Findings ($p<.05$) identified in the cross-sectional web panel surveys were compared to crowdsourced data to provide a deeper understanding of results. Data from the cross-sectional surveys were then visualized.

ADD QUALITATIVE CONTEXT

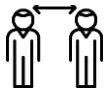
Qualitative analyses of focus group transcripts and social media posts were used to identify key statements to further illustrate underlying attitudes and findings from surveys.

COVID-19 Prevention strategies

Surveys designed between February and April 2021 focused on five prevention strategies that were recommended by CDC for safe delivery of in-person instruction and to prevent transmission of the COVID-19 virus in K-12 schools. While vaccination is another important prevention strategy of focus in the surveys, it was not included in this report.

Mask-wearing*

Universal and correct use of masks, meaning that masks are worn at all times, by all people in school facilities (with exceptions based on specific individual circumstances or in certain settings, such as while eating or drinking). Masks should be required in all classroom and non-classroom settings, including hallways, school offices, restrooms, gyms, auditoriums, etc.



Adequate physical distancing*

Maintaining at least 3 feet of distance between students in classrooms, at least 6 feet of distance between adult staff members and between students and adult staff members, facing desks in the same direction in classrooms, limiting school visitors where possible and **using cohorts or pods**, which are distinct groups of children and teachers or specific school staff that stay together throughout an entire day.

Proper hand hygiene

Washing hands with soap and water for at least 20 seconds, especially for certain activities such as before and after eating, after using the restroom and after coughing or sneezing. If handwashing is not possible, hand sanitizer containing at least 60% alcohol should be used.

Maintenance of healthy facilities*

Increased cleaning: Cleaning and disinfection of high-touch surfaces and objects at school at least daily and as often as possible between uses.

Improved ventilation: Increasing the introduction of outdoor air and delivery of clean air by managing HVAC settings to maximize ventilation, opening windows, improving air filtration to reduce contaminants and using exhaust fans in restrooms and kitchens.

Contact tracing

Contact tracing (in combination with isolation and quarantine), meaning schools collaborate with health departments to confidentially provide information about people diagnosed with or exposed to COVID-19. This includes encouraging students and staff to stay home when they have symptoms and support notification of exposure and quarantine of those with close contact to a known or suspected COVID-19 case at K-12 school facilities or events.

As of May 13, 2021, CDC announced that fully vaccinated people no longer needed to wear a mask or physically distance in indoor or outdoor settings, unless required by federal, state, local, tribal or territorial laws, including local business and workplace requirements. These guidelines were not in effect at the time of survey distribution: https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html. Similarly, CDC released updated guidance on disinfecting after a majority of the data were collected: https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html.

Source: Centers for Disease Control and Prevention. "Operational Strategy for K-12 Schools through Phased Prevention," 20 May 2021. https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/operation-strategy.html

Summary of Findings and Implications

Summary of crosscutting findings on COVID-19 prevention strategies in K-12 schools

Across all prevention strategies, there are findings that highlight differences and trends in overall implementation and barriers. See pages 15-19 for additional data on these findings.

Adoption of prevention strategies varied based on school and respondent characteristics. Examples include:

- **Geographic location:** Greater adoption of prevention strategies were reported in schools in the Northeast.
- **School type:** Mask-wearing and physical distancing were reported more often in public schools than in private schools.
- **Respondent type:** Compared to principals, teachers reported that barriers more negatively impacted implementation of prevention strategies.
- **School level:** Middle school and high school teachers reported less difficulty wearing masks while teaching and implementing physical distancing in the classroom, compared to elementary school teachers.

The 3 most common barriers to implementing prevention strategies were:

- **Lack of key staff to carry out prevention measures,** include enough teachers, nurses, bus drivers, custodians and back-up staff (substitute teachers).
- **School physical infrastructure issues**, including availability of hot water, operable windows in classrooms and other physical aspects of the school.
- **Lack of adherence** or acceptance to mitigation measures from teachers or school staff.

Summary of key differences among COVID-19 prevention strategies in K-12 schools

In analyzing data for each of the five prevention strategies, there were key differences based on region, school type, school level and among respondents.

Region

- Respondents in the Northeast were implementing physical distancing the most when compared to other regions.
- Teachers in the Northeast more often enforced physical distancing for students and most often used cohorting or podding strategies to support physical distancing compared to other regions.
- Parents in the Midwest and Northeast more often reported that their child's school had a contact tracing process in place.
- Principals in the Southern and Western regions reported issues caused by inadequate cleaning supplies more often than other regions.
- Teachers in the South reported the lowest adoption of the ventilation school policy when compared to their peers in other regions.

School Type and Level

- Wearing masks was the most challenging for elementary school teachers.
- Private schools may have implemented ventilation improvements more frequently than public schools.
- Elementary school teachers reported observing consistent hand hygiene practices among their students more often than teachers at other grade levels.
- High school teachers reported that their students were not disinfecting desks or personal items as frequently as students at other grade levels.

Respondent Type

- Principals reported students were required to wear a mask in all school settings more frequently than reported by teachers and students.
- Students, more than teachers, found it difficult to hear what others were saying while wearing masks.
- Students reported teachers were more likely to enforce students physical distancing compared to student peer-to-peer enforcement.
- Mixed levels of confidence in honesty and transparency of COVID-19 case reporting were reported across different respondents.
- While facilities staff have primary responsibility for cleaning and disinfecting, teachers still helped with some of these tasks.
- Rates of increased cleaning practices were more common than ventilation improvements, but reports differed across school staff.

Summary of findings: Individual level COVID-19 prevention strategies in K-12 schools

For each of the prevention strategies of focus, significant findings emerged and are summarized below. The following sections of this report provide a deep dive for each prevention strategy with supporting data.

Mask-Wearing

About **90%** of students and teachers reported wearing masks in **classrooms, hallways and offices**

- Principals reported students were required to wear a mask in all school settings more than reported by teachers and students.
- Most students and teachers reported students required to wear a mask in school settings, especially classrooms and indoor common areas.
- Teachers reported that they would be likely to correct students who were not wearing their mask or not wearing it correctly in the classroom.
- Students endorsed various negative sentiments about wearing a mask at higher rates than teachers (e.g., finding it difficult to hear what others were saying while wearing a mask).
- Wearing masks was the most challenging for elementary school teachers.

Physical Distancing

83% of teachers reported that their schools had a **policy for implementing physical distancing** strategies to prevent COVID-19

- The Northeastern region implemented physical distancing the most and teachers in the Northeast more often enforced physical distancing for students.
- Schools adopted physical distancing by facing student desks in the same direction, placing physical guides to account for movement and spaced seating.
- Teachers in the Northeastern region more often enforced physical distancing for students and more often used cohorting strategies to support physical distancing.
- Students reported teachers were more likely to enforce students physical distancing compared to student peer-to-peer enforcement.
- Teachers reported that it was easier to keep a distance from other adults and older students.

Hand Hygiene

69% of teachers reported that they often view students **practicing proper hand hygiene**

- Most students reported practicing proper hand hygiene both at school and outside of school and were likely to correct others who weren't.
- Elementary school teachers reported observing consistent hand hygiene practices among their students more often than teachers at other grade levels.
- Teachers were likely to remind students to observe proper hand hygiene practices when incorrect behavior was observed.

Summary of findings: School-wide COVID-19 prevention strategies in K-12 schools

For each of the prevention strategies of focus, significant findings emerged and are summarized below. The following sections of this report provide a deep dive for each prevention strategy with supporting data.

Cleaning & Ventilation

66% of principals reported **improved ventilation** and **85%** reported **daily cleaning and disinfection policies** in place at their school

- Increased cleaning practices were more commonly reported than ventilation improvements.
- Private schools implemented ventilation improvements more frequently than public schools.
- Over half of facilities staff reported participating in various key prevention measures, including ventilation system maintenance.
- While facilities staff had primary responsibility for cleaning and disinfecting, teachers still helped with these tasks.
- Areas used by school staff tend to be cleaned less frequently than areas used by students.
- High school students were not disinfecting their desks or personal items as frequently as other grade levels.
- Teachers in the South reported the lowest adoption of the ventilation school policy when compared to their peers in other regions.
- Opening windows was the most common strategy to increase ventilation.

Contact Tracing

83% of principals reported their district has **a publicly available tracker noting all cases in a given school** to date and **73%** reported the **tracker is updated daily** as cases occur

- Schools often reported having designated staff for contact tracing as well as data-driven tracking tools for noting all COVID-19 cases to date.
- Parents in the Midwest and Northeast more often reported that their child's school had a contact tracing process in place.
- Teachers and parents were committed to communicating confirmed cases of COVID-19 to schools.
- Mixed levels of confidence in honesty and transparency of COVID-19 case reporting were reported across school community groups.
- Referrals to primary care and health departments were the most frequent settings for diagnostic testing.

Key themes and implications for public health action

This report provides new insights that can be used to improve successful implementation of COVID-19 prevention strategies in K-12 settings and ultimately create safer in-person learning environments that can protect the overall health and educational outcomes of students.

Themes

- Overall, cornerstones of CDC's guidance for COVID-19 prevention in schools – mask-wearing, physical distancing and hand washing – were **widely adopted and used concurrently.**
- **Regional differences** in implementation of and adherence to COVID-19 prevention strategies exist, which may be the result of differing state policies and other contextual factors (e.g., weather, infrastructure, social norms, etc.).
- Students at **different grade levels and school types** have different experiences and unique barriers to adopting and adhering to prevention strategies in school.
- There are **mixed perspectives** related to the implementation of prevention strategies across school community groups (e.g., teachers and principals at times have different understandings of the same strategy).

Opportunities and Actions

- As some prevention strategy requirements are relaxed, school leadership may need **additional, updated guidance around how these strategies interact with and impact transmission risk** (e.g., without masks, may need to social distance; if vaccinated, contact tracing protocols change).
- Given differences in the policy landscape across states, **provide support for implementing prevention strategies at the state and local level.**
- **Tailor guidance to K-12 schools** based on school level and other key school characteristics (e.g., strategies for teachers working with younger students, material directly for teens). Audience-specific communications and education will be important to make sure unique school audiences understand guidance and their role in supporting a safe environment at school.
- **Provide resources** based on school type and considering the unique contexts and barriers different schools face (e.g., resources to improve ventilation in public schools).

Overall COVID-19 prevention strategy adoption and barriers

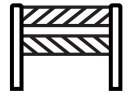
Overall prevention strategy adoption and barriers

There were several key findings and differences related to overall adoption and barriers to prevention strategies. This chapter provides a few of these crosscutting findings while the remaining chapters of this report include deep dives on each of the 5 strategies.

Prevention Strategies in Place

Across schools, there was high concurrence of having both mask requirements and physical distancing policies in place. These prevention strategies were seen more often in public schools than private schools**.**

Schools in the Northeast were more closely adhering to prevention strategies than schools in other regions. This included teachers enforcing policies, having contact tracing processes and adjusting how meals were delivered.



Barriers to Prevention Strategies

Both teachers and principals reported similar barriers to implementing prevention strategies. The most common barriers were lack of key staff, school physical infrastructure issues and lack of adherence from teachers and school staff.

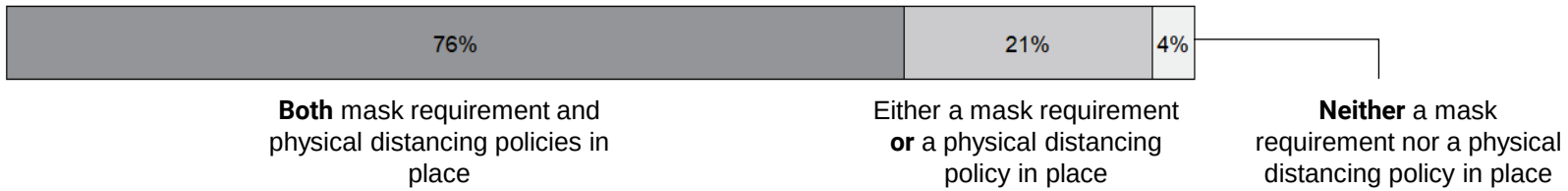
Adherence to specific prevention strategies in place differed by school level. For example, kindergarten and elementary school teachers reported the most difficulty with mask-wearing and maintaining distance with students, while middle school teachers reported more difficulty with maintaining distance from school staff.

Mask and physical distancing policies in place

SURVEY FINDINGS

Proportion of teachers who reported mask requirements and/or physical distancing policies in place at their school (2020/2021 School Year)

n = 1,358 | N = 2,847,244 (weighted)

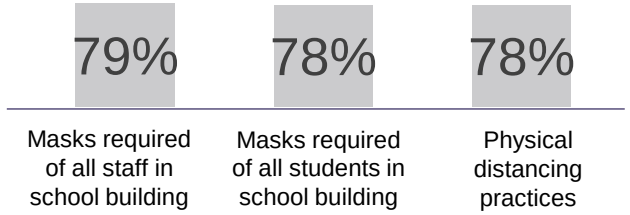


76% of teachers reported that their school was **both requiring masks and implementing physical distancing** strategies.

CROWDSOURCED INSIGHTS

Proportion of respondents who reported masking and physical distancing COVID-19 prevention strategies in place

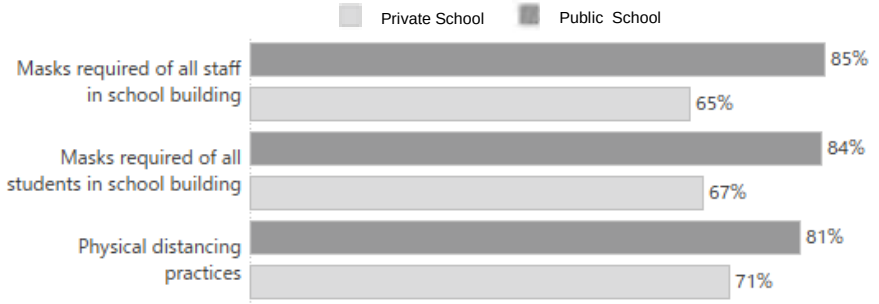
n = 805 teachers and school staff members



Nearly 80% of crowdsource respondents indicated that their school had mask requirements and physical distancing **strategies in place**.

Proportion of respondents who reported masks and physical distancing COVID-19 prevention strategies in place, by school type

n = 759 teachers and school staff members



Public school staff reported higher rates of adherence to mask requirements and social distancing policies **than private school staff.**

FOCUS GROUP INSIGHTS

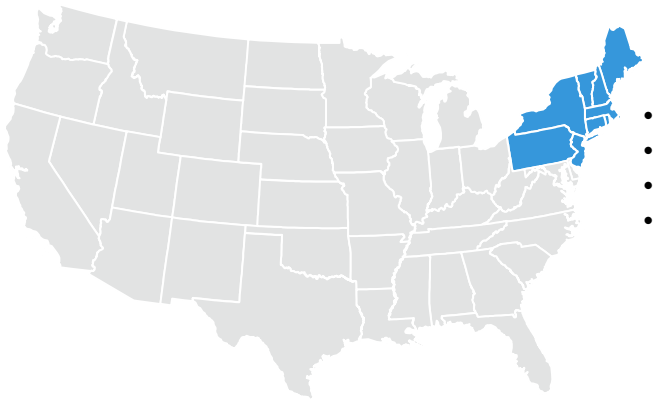
An elementary special education teacher from West Virginia discussed how impressed they were with how well their students adopted COVID-19 mitigation strategies.

"*We did some neat things with the kids: we do zombie arms to keep their— distance and **I've just been amazed by the kids. From the beginning, keeping their masks on, even down to our pre-K kids**.*"

Better implementation of and adherence to prevention strategies among schools in the Northeast

CONTEXT

Regional differences in both the implementation of and adherence to key prevention strategies and behaviors in schools has been observed in the data collected as part of this study and have been the topic of various other research[1,2] and conversations in the media. Across sources, findings suggested big gaps in preventive behaviors and beliefs when comparing Americans in the Northeast to those living in the South and Midwest.



The Northeast region contains:

- Connecticut
- Maine
- Massachusetts
- New Hampshire
- New Jersey
- New York
- Pennsylvania
- Rhode Island
- Vermont

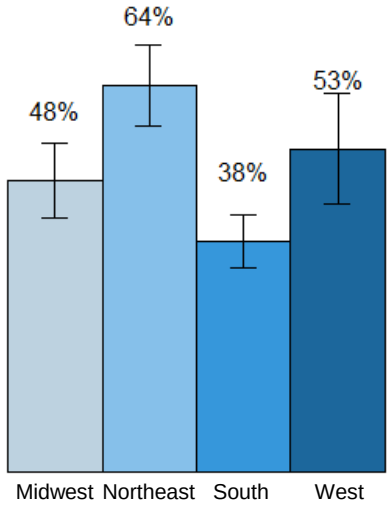
The United States is divided by the U.S. Census Bureau into four major regions: Northeast, South, Midwest and West. For regional analysis, respondents' region was determined based on the reported state in which they (or their child) were working or attending school.

SURVEY FINDINGS

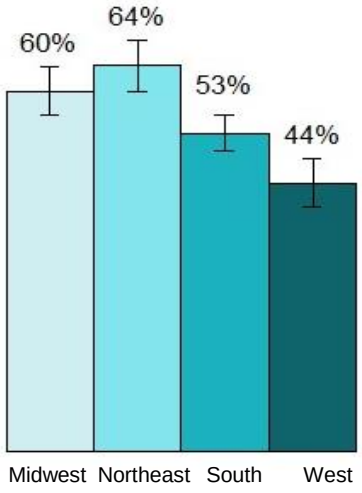
Schools in the Northeast region were closely adhering to physical distancing the most, including the podding/cohort policy (see page 8 for definition), as well as changes in dining plans (lunch served differently or take-home lunch) compared to other regions.

Teachers in the Northeast were enforcing physical distancing for students the most and most often had a process in place to notify close contacts of a school community member who had been infected by COVID-19.

Proportion of teachers who reported that podding or cohorting strategies were in place at their school, by region
n = 1,358 | N = 2,847,244 (weighted)



Proportion of parents who reported that their school had a process for obtaining COVID-19 case information, by region
n = 2,208 | N = 38,113,939 (weighted)



[1]Johns Hopkins University, "Regional Divide Found in COVID-19 Prevention Behaviors in United States, India," 14 October, 2020. ccp.jhu.edu/2020/10/14/covid19-prevention-behaviors-united-states-india-dashboard/
[2]https://www.americanprogress.org/issues/healthcare/news/2020/08/06/488775/new-strategy-contain-coronavirus/

Compared to principals, teachers reported that barriers more negatively impacted implementation of prevention strategies

SURVEY FINDINGS

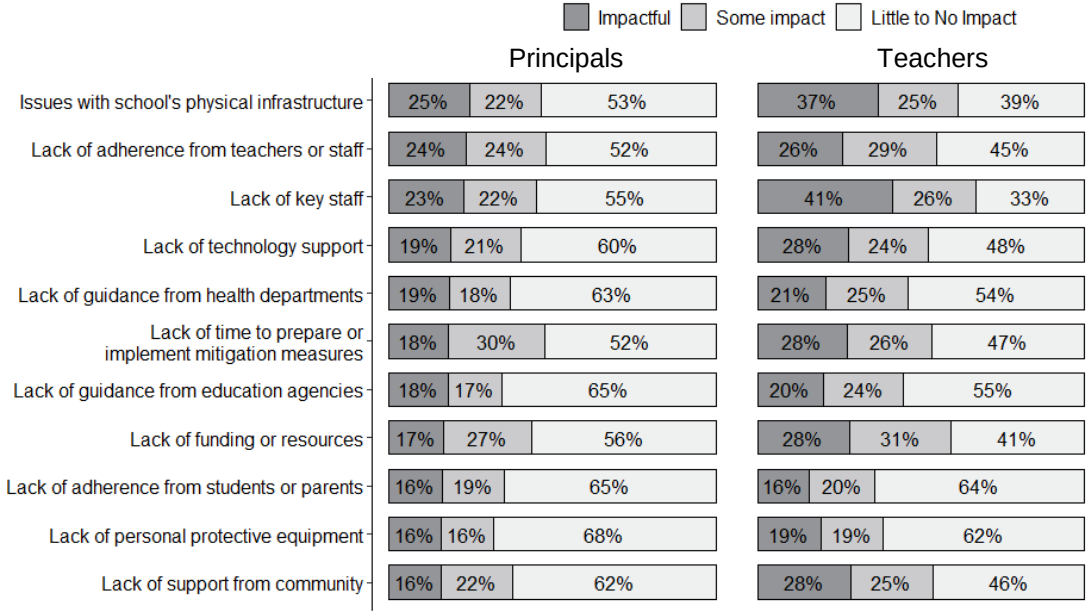
Overall, teachers reported that barriers had more of a negative impact on their ability to implement COVID-19 prevention strategies than principals. This finding highlights the fact that teachers have experienced the day-to-day effects of such barriers, while principals may be further removed and involved more in planning or administrative activities where barriers are less salient.

The top barriers to implementation of prevention strategies reported by both teachers and principals were **physical infrastructure issues** and **lack of key staff**, both of which likely affect daily tasks and responsibilities related to COVID-19 prevention (e.g., when teachers call in sick or when windows do not open properly).

While **28% of teachers reported that the lack of community support** was a very impactful barrier, **only 16% of principals reported** this barrier as having an impact.

Comparison of principal and teacher perspectives on the impact of various barriers on implementation of COVID-19 prevention strategies at school

n = 440 | N = 117,110 principals (weighted) || n = 1,358 | N = 2,847,244 teachers (weighted)



FOCUS GROUP INSIGHTS

One superintendent from Washington State discussed the difficulties they had experienced in keeping up with various COVID-19 prevention practices

*"**Just the rule fatigue of having to wear masks** and having to do our attestations…**I think what I found in our system is there's been rule fatigue and some of the adults have not followed the rules**."*

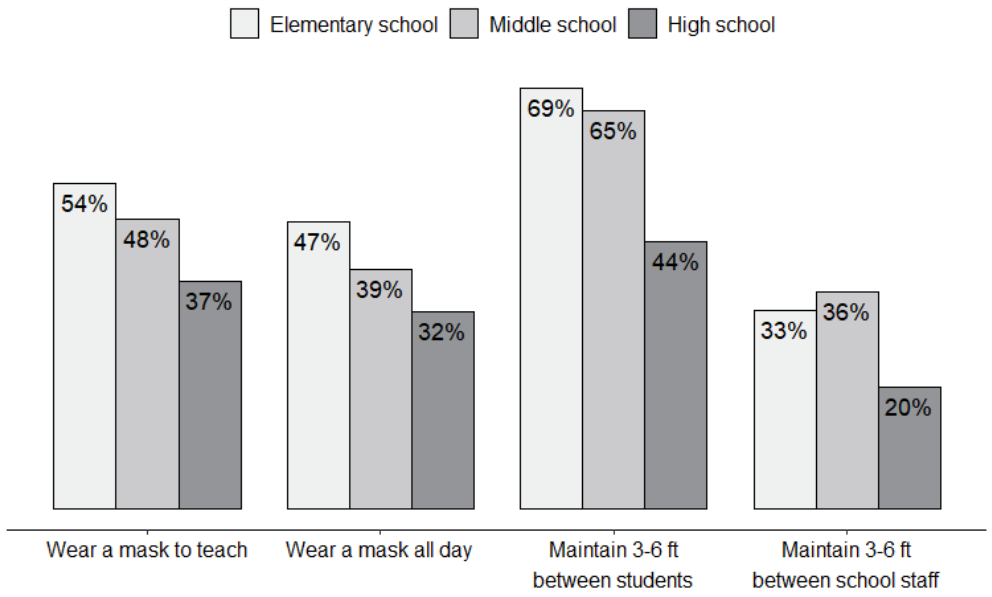
In general, elementary school teachers reported difficulty adhering to prevention strategies more often than other teachers

SURVEY FINDINGS

Across key prevention strategies, the proportion of teachers that reported **difficulty with adherence decreased as grade level increased**, except for maintaining distance from other school staff, for which similar proportions of elementary and middle school teachers reported difficulty.

Proportion of teachers who reported difficulty adhering to key COVID-19 prevention strategies at work, by grade level taught

n = 1,358 | N = 2,847,244 (weighted)

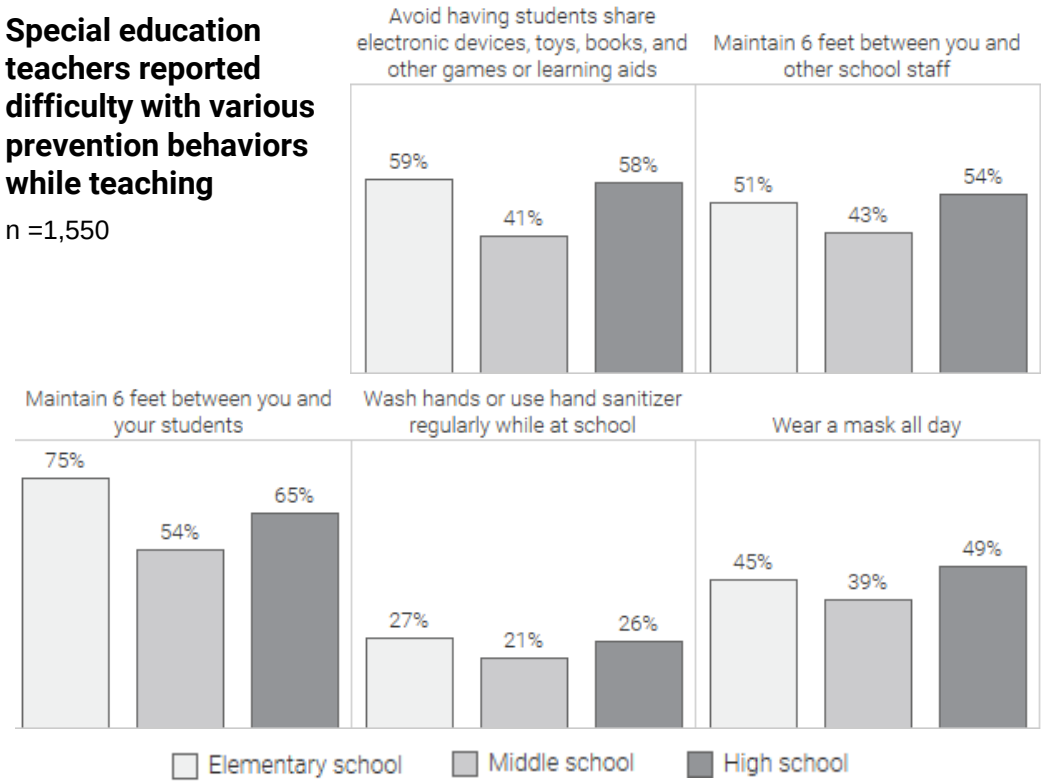


CROWDSOURCED INSIGHTS

Special education teachers reported difficulty with various preventive behaviors at similar proportions across grade levels. Like web-panel teacher respondents, these **special education teachers reported more difficulty** maintaining distance between themselves and their students.

Special education teachers reported difficulty with various prevention behaviors while teaching

n =1,550



Mask-wearing

Findings in this section reflect weighted cross sectional survey data and unweighted crowdsourcing and focus group data. Data were collected between March-April 2021.

Data in this section reflect respondents in hybrid or in-person school settings only, unless otherwise noted.

Wearing masks in school to prevent COVID-19

Analysis across data collection methods reveals a generally positive attitude towards and high implementation rates of mask requirements in school settings by students, teachers and other school staff.

Student mask requirements have been implemented at high rates in schools

Most students and teachers reported that students were required to wear a mask in school settings, especially in classrooms and indoor common areas, where physical distancing may be more difficult. Principals reported students required to wear a mask in all school settings more than teachers and students.

Student beliefs and social norms favored wearing a mask

Most students reported that they believe wearing a mask at school is important, helps to prevent the spread of COVID-19 and wasn't so bad once they got used to it. Roughly half of students also reported that they would be more likely to wear a mask if they saw more adults and other kids wearing one.

Teachers have been enforcing mask requirements

Nearly all teachers reported that they would be highly likely to correct any student seen not wearing a mask in the classroom.

Mask-wearing has been especially challenging for teachers of younger students

Kindergarten and elementary school teachers found it most difficult to wear a mask while working all day than middle and high school teachers.

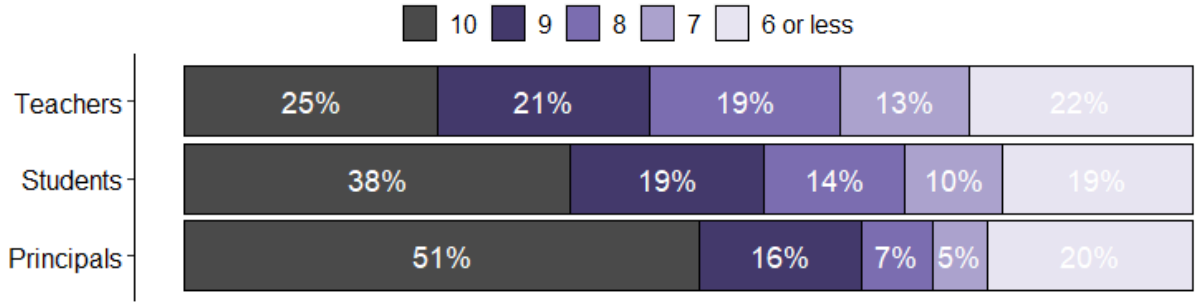
Principals reported students required to wear a mask in all school settings more than reported by teachers and students

SURVEY FINDINGS

Principals reported students were required to wear masks in all school settings, unless they have a medical waiver, more than reported by teachers and students.

Number of settings in which respondents reported students required to wear masks, by respondent group

n = 1,358 | N = 2,847,244 teachers (weighted) || n = 1,248 | N = 12,722,271 students (weighted) || n = 440 | N = 95,315 principals (weighted)



Settings include classroom, hallways, school offices, restrooms, gym, auditorium, cafeteria, drop-off and pick-up zones, outdoor areas/playground and the school bus

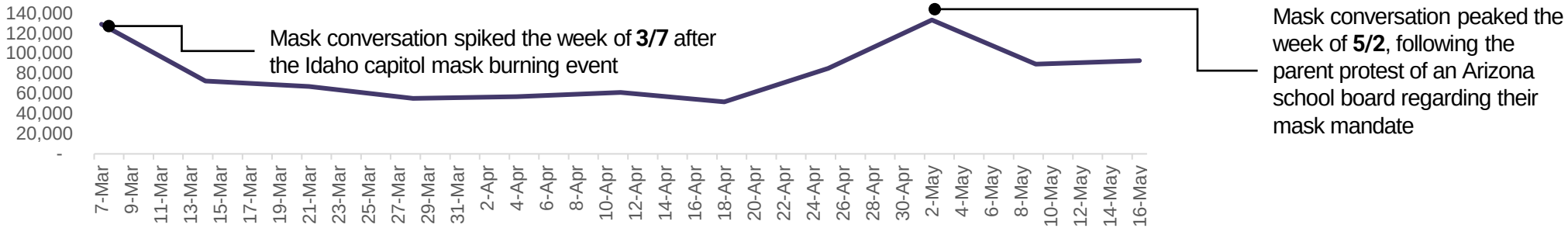
FOCUS GROUP INSIGHTS

One high school student from New Jersey explained their school's policy on masks.

*"You **have to be able to wear the mask properly from 7:50 when you go in [to school] to 12:30 when you leave**…I remembered once [another student] had their mask up to their nose and [the teacher] is like, 'You have to put it above your nose. If we warn you again within the next week of you doing this, you're not coming back.' **Like our school is that strict with masks."***

SOCIAL MEDIA INSIGHTS

Volume of mask mentions



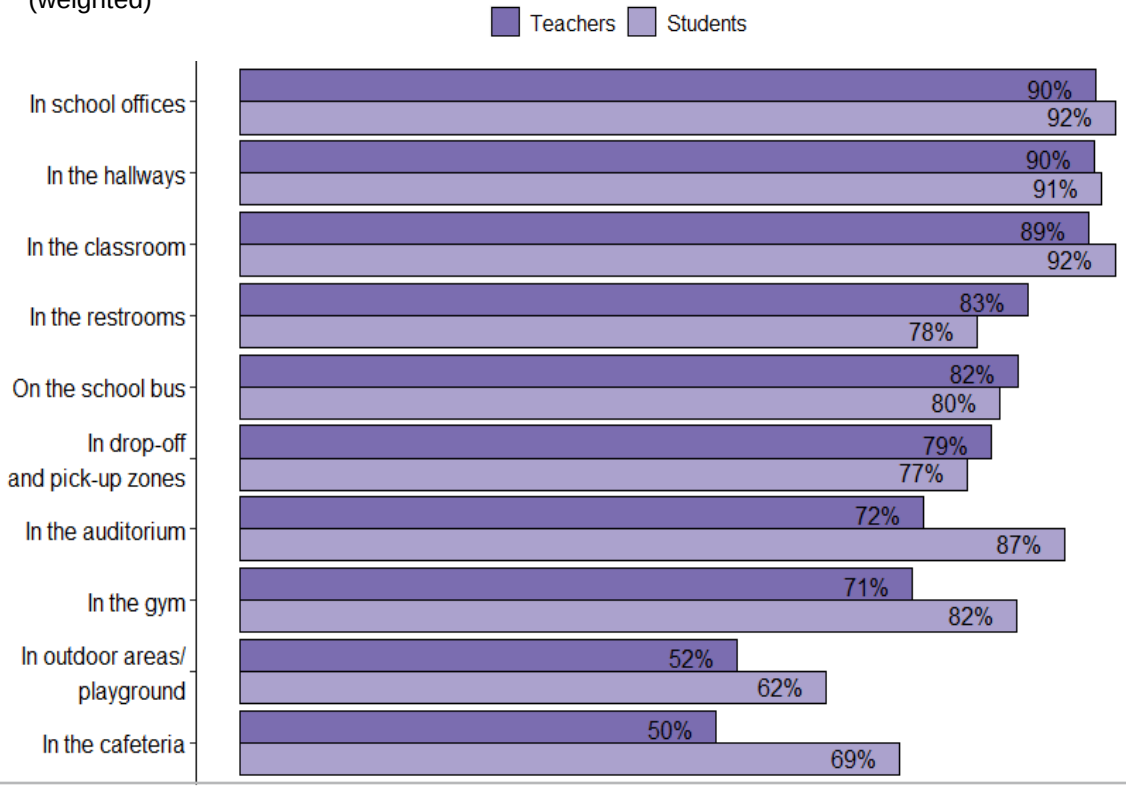
Volume chart depicts trend line of mentions for the mask query. n = 893,669. Sources: Twitter, Facebook, Instagram, YouTube, Reddit, forums, blogs, reviews, Quora and WordPress.

Most students and teachers reported students wearing masks in school settings, including classrooms and indoor common areas

SURVEY FINDINGS

Proportion of teachers and students who reported where students were required to wear a mask in various school settings

n = 1,358 | N = 2,847,244 teachers (weighted) || n = 1,248 | N = 12,722,271 students (weighted)



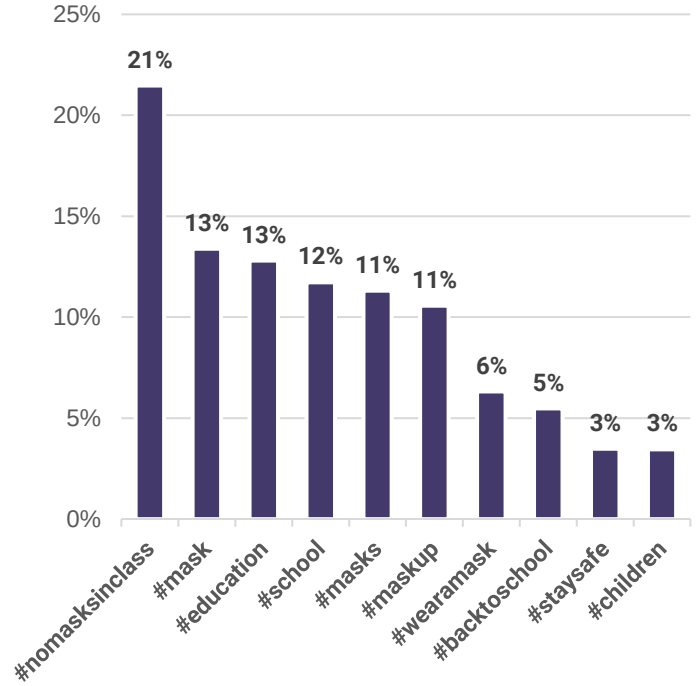
Mask requirements for students were highest in indoor spaces where it may be more difficult to physically distance, such as classrooms, hallways and school offices.

Most teachers and students reported that students were required to wear masks in most school settings except for the cafeteria (50% and 69% respectively).

Both teachers and students were least likely to report students were required to wear a mask in outdoor recreation areas on school grounds (52% and 62%, respectively), though most still reported students required to wear a mask in drop-off and pick-up zones.

SOCIAL MEDIA INSIGHTS

Top Hashtags Used in Social Media Posts Related to Masks, Based on Number of Mentions



Bar chart depicts proportionality of each hashtag of total top 10 hashtag mentions for the mask query. n = 32,442. Sources: Twitter, Instagram, Blogs, Facebook, YouTube, Forums, Reddit, Quora and WordPress

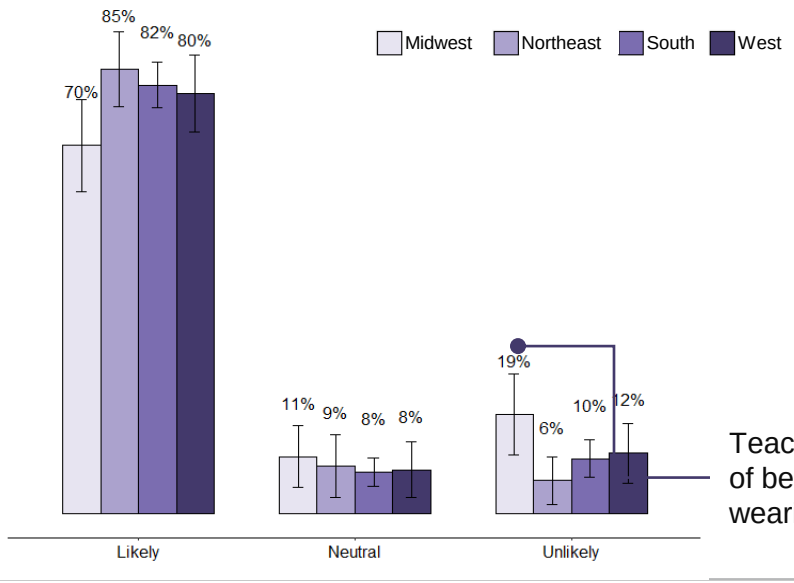
Almost all teachers reported that they would be likely to correct students who were not wearing their mask or not wearing it correctly in the classroom

SURVEY FINDINGS

Overall, almost all teachers reported that they were likely to correct students who were not wearing a mask, or not wearing one correctly, in the classroom. Regional differences were detected, with Midwestern teachers being the least inclined to correct this behavior. This suggests that teachers have been enforcing both consistent *and* correct mask use in schools.

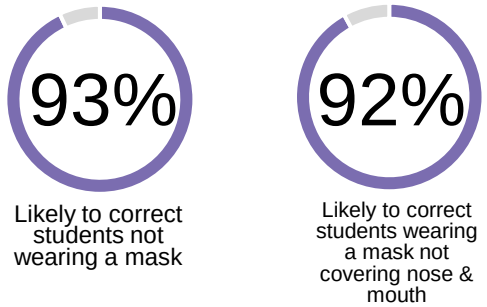
Teacher-reported likelihood of correcting improper mask-wearing behaviors among students, by region

n = 1,358 | N = 2,847,244 (weighted)



Teacher-reported likelihood of correcting improper mask-wearing behaviors among students

n = 1,358 | N = 2,847,244 (weighted)



Teachers in the **Midwest** reported the highest proportion of being *unlikely* to correct students' improper mask-wearing behaviors

FOCUS GROUP INSIGHTS

One teacher from rural California explained that they are likely to enforce mask-wearing, even while teaching virtually.

*"Even on—even on Zoom. If I'm teaching from one place and [the student is] in another classroom, you know, with another teacher, and one didn't have his mask on like, 'How—I see you're in the classroom, how are you—**why is your mask off?**' And he's like, 'Oh,' you know, and grabs it and puts it back on, so they're good about it."*

A teacher in rural California mentioned that although they occasionally had to remind their high school students, they were usually wearing their masks properly.

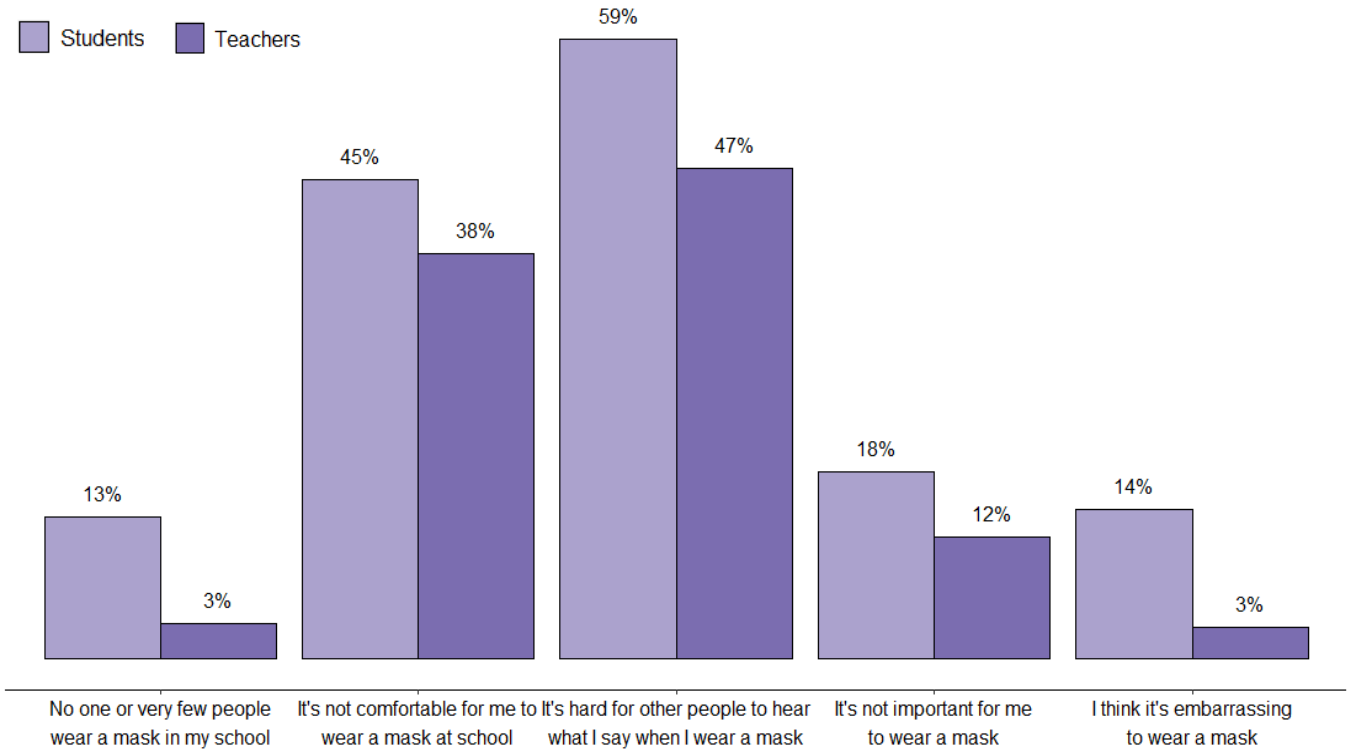
*"[The students] pull [their masks] between— beneath their nose sometimes and…I just go, 'pull it up,' and then they do, so I teach high school…**they're pretty self regulatory**, for the most part."*

Students endorsed various negative sentiments about wearing a mask at higher rates than teachers

SURVEY FINDINGS

When asked to indicate their agreement with the following beliefs about wearing masks at school, both students and teachers reported facing obstacles to masking, despite their ongoing adherence. Overall, students agreed with the following sentiments at higher rates, suggesting that students carry more negative sentiments towards masking.

Beliefs about wearing a mask to prevent the spread of COVID-19, by respondent group
n = 2,200 | N = 20,927,203 students (weighted) || n = 1,358 | N = 2,847,244 teachers (weighted)



FOCUS GROUP INSIGHTS

A teacher from Illinois explained that their students seemed to be encouraging each other to remember to wear masks and practice other healthy behaviors.

"I do think social norms play a big role… I come from a school that doesn't have a lot of, like, rebellion, like masks—like just ***being difficult isn't really widely accepted among my population and so they kind of influence each other to do the right thing*** *in a lot of cases."*

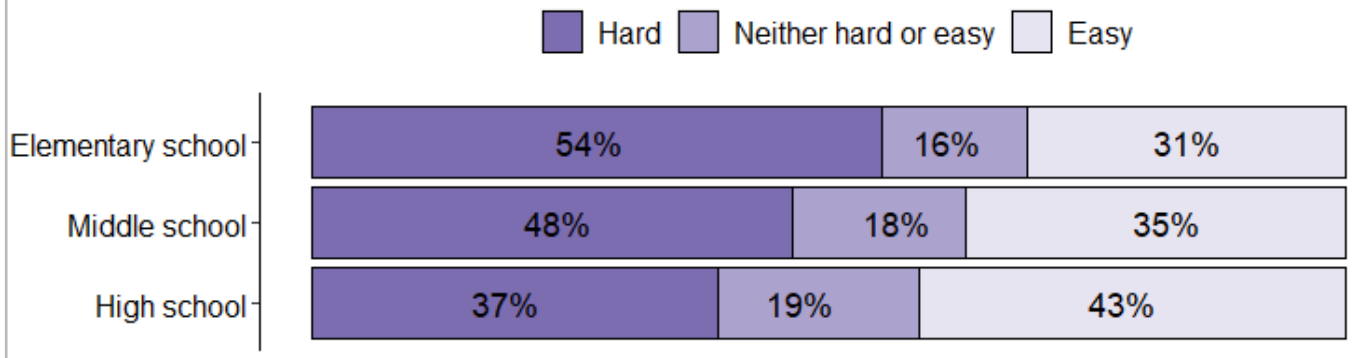
A parent of a child with special educational needs from Iowa mentioned that wearing a mask was not explicitly enforced for students with special education needs at their son's school.

"My son will wear a mask for a little bit, but then he takes it off. ***It helps when he sees other people wearing it****. But they don't make the special needs kids wear it all the time."*

Wearing masks is most challenging for elementary school teachers

SURVEY FINDINGS

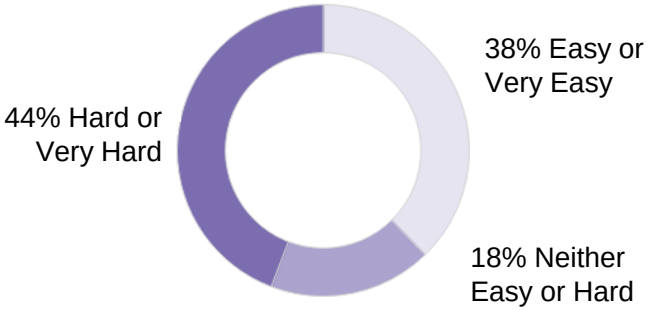
Teacher-reported level of difficulty teaching while wearing a mask, by grade level
n = 1,358 | N = 2,847,244 (weighted)



Age of students appear to impact teacher's ability to adhere to mask-wearing policy. More than half of elementary school teachers reported it was hard for them to teach their students while wearing a mask, compared to smaller proportions of middle and high school teachers (48% and 37%, respectively).

CROWDSOURCED INSIGHTS

K-12 special education teachers reported level of difficulty teaching while wearing a mask
n = 310



FOCUS GROUP INSIGHTS

One high school teacher from Illinois explained that organized mask breaks have helped students to wear their masks consistently throughout the day.

*"We do have mask breaks, so that kids have a chance to take it down, and that's when they're allowed to pull it down… We don't have a lot of issues, and I think the **breaks make a big difference**, simply because they have you know, those few minutes, 10 minutes to just pull it down, and as long as they're spread apart outside, then we allow it."*

Physical distancing

Findings in this section reflect weighted cross sectional survey data and unweighted crowdsourcing and focus group data. Data were collected between March-April 2021.

Data in this section reflect respondents in hybrid or in-person school settings only, unless otherwise noted.

Physical distancing in schools to prevent COVID-19

Analysis across data collection methods reveals widespread uptake in physical distancing prevention strategies across principals, teachers and students.

Less invasive physical distancing strategies were more common

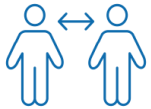
As reported by principals, the top three modifications implemented in schools were facing student desks in the same direction, placing physical guides to account for movement and spacing of desks to abide by the physical distancing prevention strategy. These strategies are all outlined in CDC's K-12 COVID-19 Mitigation Toolkit.

Physical distancing practices and enforcement differed across regions

Compared to teachers in other regions, teachers from the Northeastern U.S. reported at the highest proportion that their schools had physical distancing policies in place and that they (the teachers) were enforcing them. Teachers from the Northeast also reported the use of cohorting or podding techniques at higher rates than teachers in other regions.

Students were less likely than teachers to correct their peers' distancing behavior

When asked about the likelihood of enforcing physical distancing prevention strategies, students reported that teachers were more likely to address improper physical distancing practices than other students.



Distancing has been easier to practice with older students and adults

Both teachers and principals reported it was easier maintaining physical distancing practices with other adults compared to students. While teachers reported more difficulty maintaining distancing with students generally, the reported difficulties eased as grade level became higher.

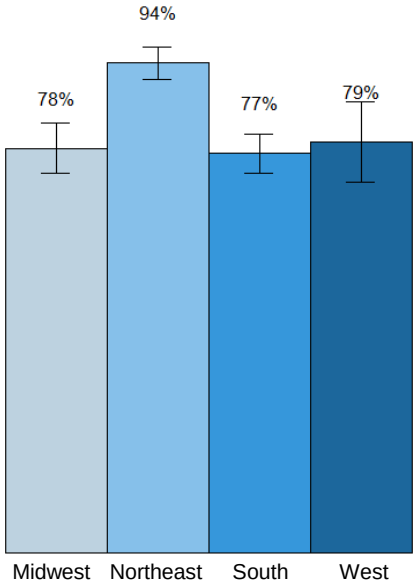
The Northeastern region implemented physical distancing the most and teachers more often enforced physical distancing for students

SURVEY FINDINGS

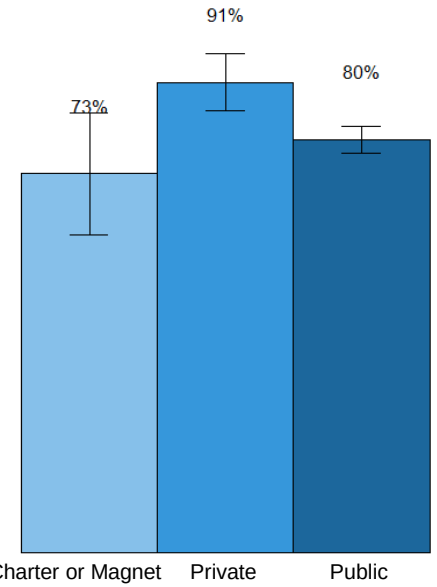
83%
IMPLEMENTING PHYSICAL DISTANCING

Most teachers (83%) reported that their schools had a policy for implementing physical distancing strategies to prevent COVID-19. Teachers from the Northeast reported abiding physical distancing policies at their schools the highest when compared to teachers in other regions. Additionally, physical distancing policies are most prevalent in private schools compared to other school types.

Proportion of teachers who reported physical distancing policies in place, by region
n = 1,358 | N = 2,847,244 (weighted)



Proportion of teachers who reported physical distancing policies in place, by school type*
n = 1,358 | N = 2,847,244 (weighted)

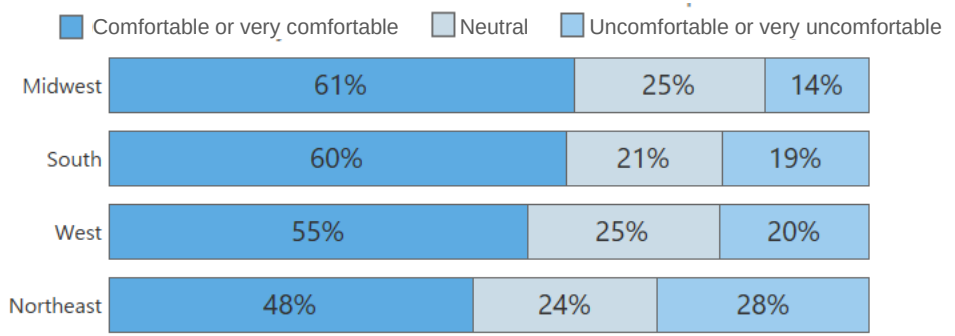


CROWDSOURCED INSIGHTS

In March of 2021, CDC announced **updated guidelines** for K-12 schools for operating safely during the COVID-19 pandemic, reducing the recommended physical distance between students in classroom settings **from 6 feet to 3 feet**.[1] Shortly thereafter, crowdsourced opinions on the new guidance were collected.

Level of comfort with teaching or working in-person at school with physical distancing requirements set to 3 feet apart, by region

n = 948 teachers and school staff members,* fielded 3/29/21 – 4/5/21



*n = 99 respondents excluded due to unknown location

While **more than half of teachers and school staff reported they would be comfortable going to work in-person with the new guidance**, opinions differed by region. The region with the highest proportion of teachers and staff reporting comfort with the new 3-foot distance was the Midwest (61% comfortable), while less than half (48%) of teachers and staff in the Northeast said that they were comfortable with the new distance.

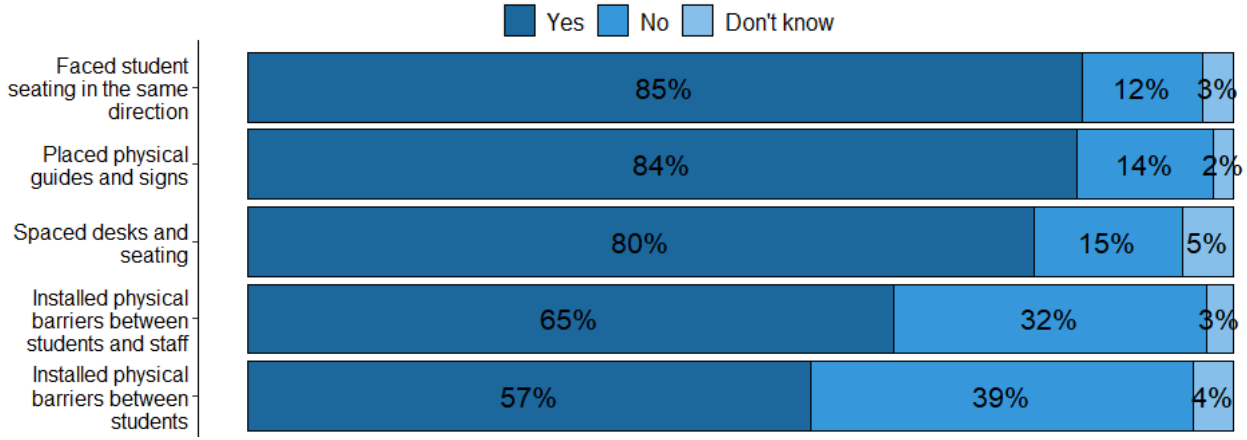
[1] "CDC Updates Operational Strategy for K-12 Schools to Reflect New Evidence on Physical Distance in Classrooms." *CDC Newsroom*, 19 March 2021, https://www.cdc.gov/media/releases/2021/p0319-new-evidence-classroom-physical-distance.html

*Boarding/residential school and "other" school types were excluded due to small cell counts.

Many schools adopted physical distancing by facing student desks in the same direction, placing physical guides to account for movement and spaced seating

SURVEY FINDINGS

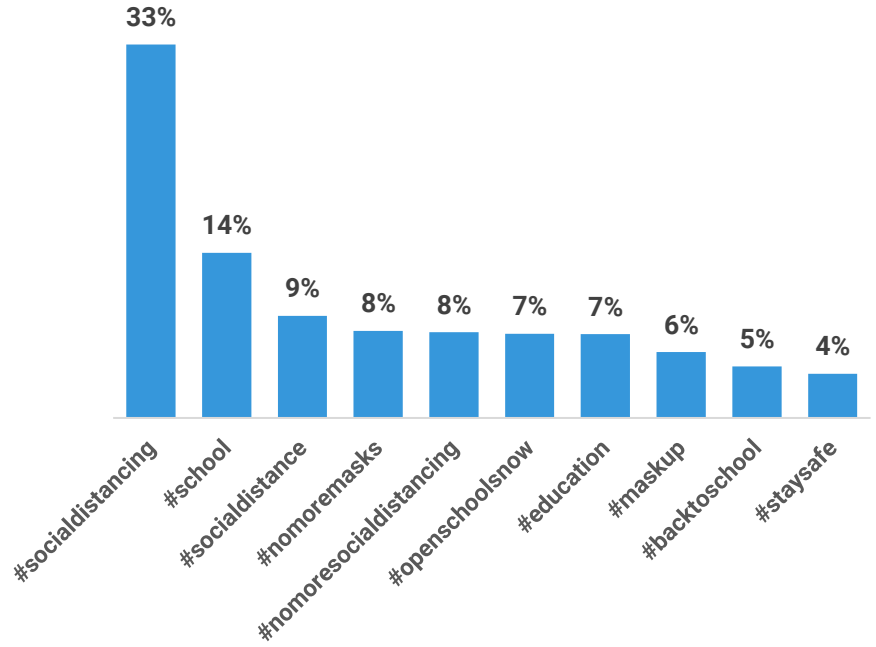
Principal-reported modifications in school to enable physical distancing prevention strategies
n = 440 | N = 95,315 (weighted)



Most principals reported implementation of CDC-recommended classroom modifications for facilitating physical distancing (students facing the same direct, physical guides and signs, desks spaced apart)[1]. While the use of physical barriers has been removed from CDC guidance,[2] at the time of the survey over half of principals reported that their schools had installed physical barriers to separate students from staff and from one another.

SOCIAL MEDIA INSIGHTS

Top Hashtags Used in Social Media Posts Related to Physical Distancing, Based on Number of Mentions



Bar chart depicts proportionality of each hashtag of total top 10 hashtag mentions for the physical distancing query. n = 11,933. Sources: Instagram, Twitter, Blogs, Facebook, Forums, Reddit and WordPress.

[1] "K-12 Schools COVID-19 Mitigation Toolkit." *Centers for Disease Control and Prevention*, 3 December, 2020. https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/FINAL-0321420_B_K-12_Mitigation_Toolkit508.pdf
[2] "Operational Strategy for K-12 Schools through Phased Prevention," *Centers for Disease Control and Prevention*, 15 May, 2021. https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/operation-strategy.html#anchor_1616080084165

Teachers in the Northeast more often enforced physical distancing for students compared to other regions

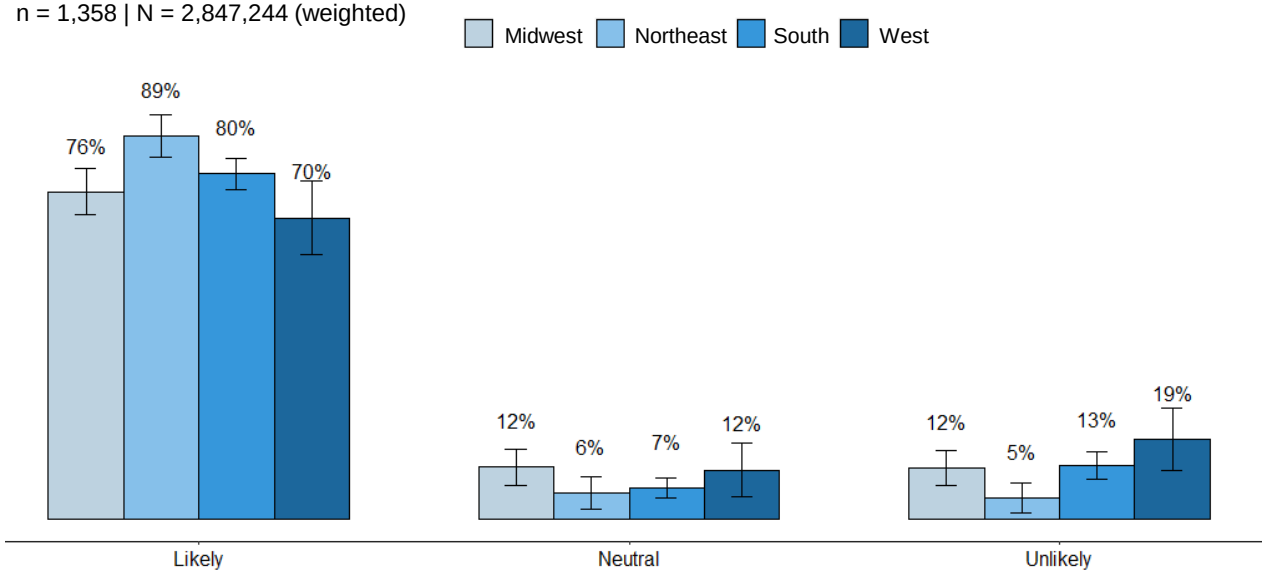
SURVEY FINDINGS

80%
ENFORCING PHYSICAL DISTANCING

When asked about upholding safe physical distancing practices, most teachers (80%) reported they would likely address students' incorrect physical distancing practices. However, **teachers in the Northeast reported the highest likelihood** of their intervention compared to teachers in other regions. This finding aligns with regional trends in correcting mask-wearing behavior.

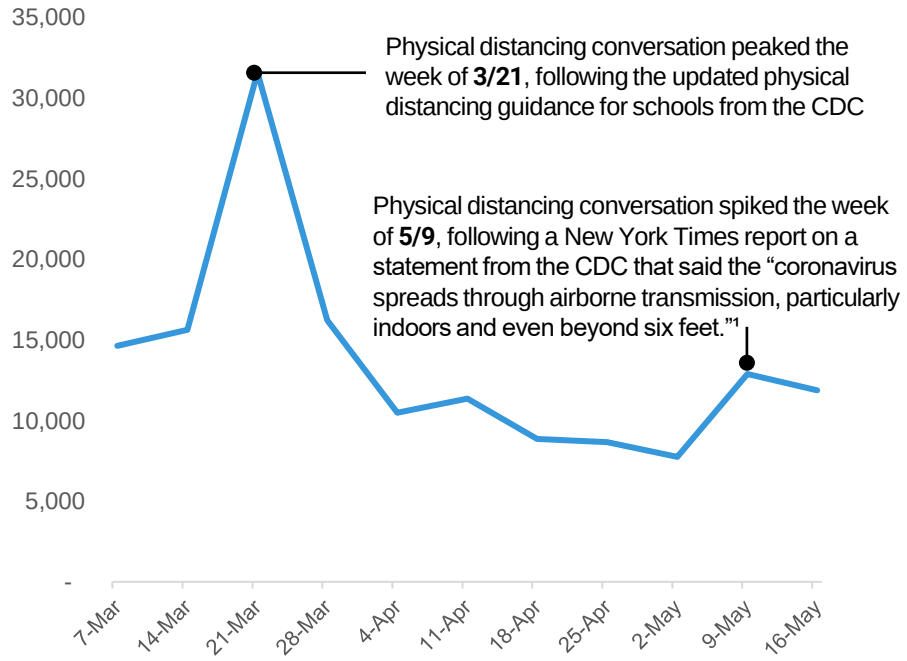
Teacher-reported likelihood of addressing students' lack of practicing physical distancing, by region

n = 1,358 | N = 2,847,244 (weighted)



SOCIAL MEDIA INSIGHTS

Volume of Physical Distancing Mentions



Volume chart depicts trend line of mentions for the physical distancing query. n = 148,993. Sources: Twitter, Facebook, Instagram, YouTube, Reddit, forums, blogs, reviews, Quora and WordPress

Rabin, Roni Caryn, and Emily Anthes. "The Virus Is an Airborne Threat, the C.D.C. Acknowledges." The New York Times. The New York Times, May 7, 2021. https://www.nytimes.com/2021/05/07/health/coronavirus-airborne-threat.html?smtyp=cur&smid=tw-nytimes.

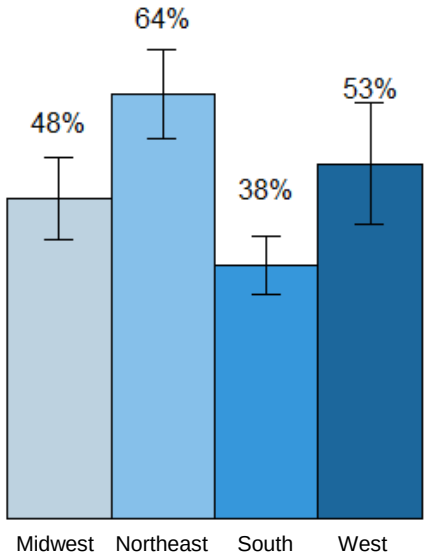
Use of cohorting or podding strategies to support physical distancing were most commonly reported by teachers in the Northeast

SURVEY FINDINGS

47%
USING PODDING OR COHORTING

Almost half (47%) of teachers reported the use of podding or cohorting as a physical distancing prevention strategy. However, when stratified by region, teachers in the South reported the lowest levels of cohorting and podding adoption compared to teachers in other regions in the U.S.

Proportion of teacher-reported podding or cohorting strategies in place at their school, by region
n = 1,358 | N = 2,847,244 (weighted)



CROWDSOURCED INSIGHTS

Proportion of parents indicating that their child's school used cohorting, by region
n = 801 parents of K-12 students*

*Excludes n = 168 parents with missing location data

Crowdsourced survey data gathered from parents of K-12 students corroborates regional differences observed in the cross-sectional survey data, such that parents in the Northeastern U.S. were most likely to report use of cohorts or pods, and parents in the South were least likely to report use of cohorts or pods.

FOCUS GROUP INSIGHTS

One superintendent from Oregon explained how cohorts work in their school district.

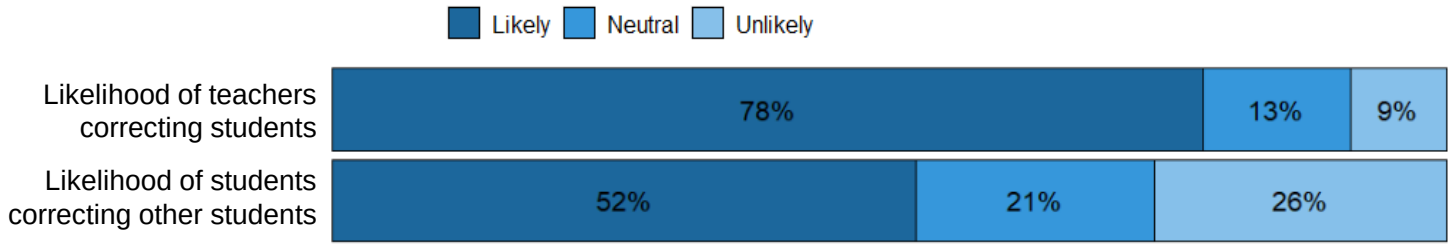
*"So hybrid for us is cohorts of kids not to exceed **12 kids at a time that are together with one teacher, that's it**…they're participating in online learning with that teacher…and then they have 90 minutes of actual hands-on learning with that teacher in that classroom."*

Students reported teachers were more likely to enforce students' physical distancing compared to student peer-to-peer enforcement

SURVEY FINDINGS

When asked about the likelihood of verbally correcting students' lack of adherence to physical distancing prevention strategies, students reported that they are less likely to address their peers' behavior than teachers are. This finding suggests that the burden of enforcement falls on teachers as opposed to peer-to-peer enforcement of norms around maintaining appropriate distance from others.

Student-reported likelihood of improper physical distancing practices being corrected
n = 1,248 | N = 12,722,271 students (weighted)



A notable proportion (26%) of students reported that students are *unlikely* to correct the behavior of other students when it comes to physical distancing.

FOCUS GROUP INSIGHTS

One high school student from New Jersey explained how physical distancing was largely enforced by teachers in their school.

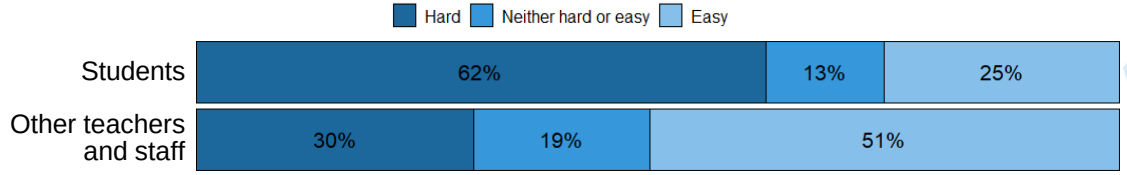
"[Physical distancing] is strictly enforced. We have three stairwells in the building. Two you can only go down, and one you can only go up. ***There are teachers at the top and bottom of each stairwell that enforce you. Like they're like, 'What way are you going? Oh, you're going up? You can't, this is the down.'*** *And it's a pain in the butt if you got to go all the way to the top, which is at one end of the school, then down is all the way at the other.* ***But like, there's one hallway that isn't guarded that kids can use whenever to go up or down because it's all the way in the back and no one ever uses it."***

Teachers reported that it was easier to keep a distance from other adults and older students

SURVEY FINDINGS

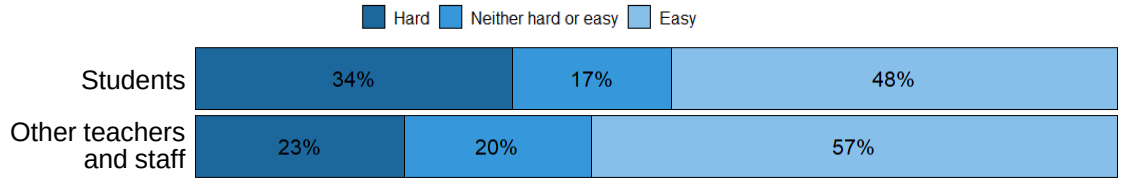
Teacher-reported difficulty adhering to physical distancing protocols from students vs. from other school staff

n = 1,358 | N = 2,847,244 (weighted)



Principal-reported difficulty adhering to physical distancing protocols from students vs. from other school staff

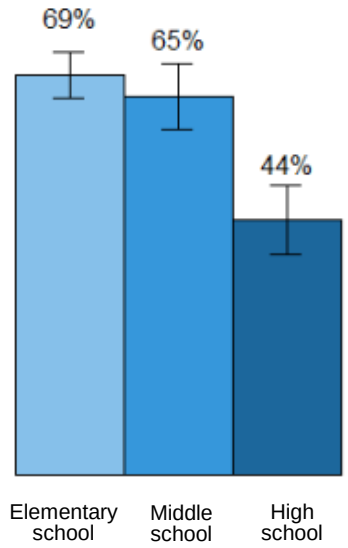
n = 440 | N = 95,315 (weighted)



When asked about the challenges related to physical distancing, both principals and teachers found it easier to maintain physical distance with peer-level individuals. However, teachers reported much more difficulty maintaining physical distancing with students than principals (62% vs. 34%).

Proportion of teacher-reported difficulty maintaining physical distance from students at school, by grade level taught

n = 1,358 | N = 2,847,244 (weighted)



The proportion of high school teachers who reported that it was hard to maintain physical distance from students while at school was significantly lower than elementary and middle school teachers. Elementary and middle school teachers reported having difficulty at similar rates.

Hand hygiene

Findings in this section reflect weighted cross sectional survey data and unweighted crowdsourcing and focus group data. Data were collected between March-April 2021.

Data in this section reflect respondents in hybrid or in-person school settings only, unless otherwise noted.

Proper hand hygiene in school to prevent COVID-19

Analysis across data collection methods highlights high rates of adherence to proper hand hygiene practices overall but with some room for improvement among older students

Most students and teachers reported practicing hand hygiene

Most students and teachers reported that they were washing their hands consistently and correctly at school.

Older students may be practicing proper hand hygiene less often

According to teachers, proper hand hygiene was observed the most often among elementary school students and decreased among middle and high school students.

Teachers enforced proper hand hygiene, especially at lower grade levels

Teachers reported that they were likely to remind students, especially those in lower grade levels, to observe proper hand hygiene practices when incorrect behavior was observed.

More than half of students said they would correct peers' hand hygiene

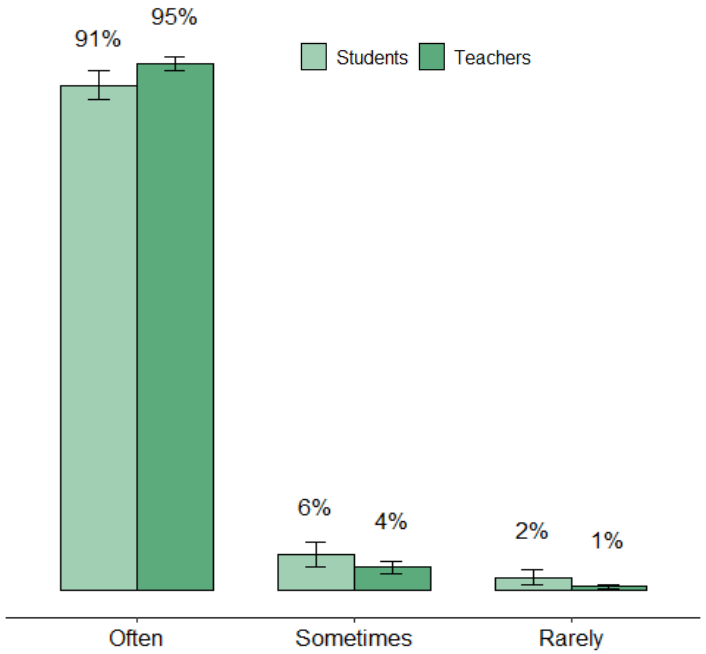
Students were less likely than teachers to correct other students, but more than half of students reported that they would correct their peers both inside and outside of school if improper hand hygiene was observed.

Most students reported practicing proper hand hygiene both at school and outside of school and were likely to correct others who weren't

SURVEY FINDINGS

Self-reported frequency of practicing proper hand hygiene by respondent group

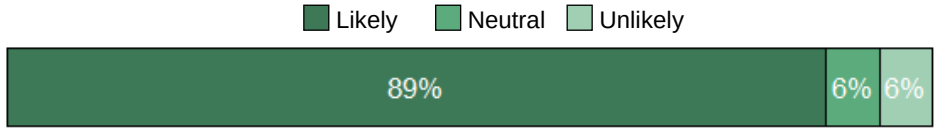
n = 1,248 | N = 12,722,271 students (weighted) || n = 1,358 | N = 2,847,244 teachers (weighted)



Nearly all students and teachers said that they were consistently practicing proper hand hygiene at school.

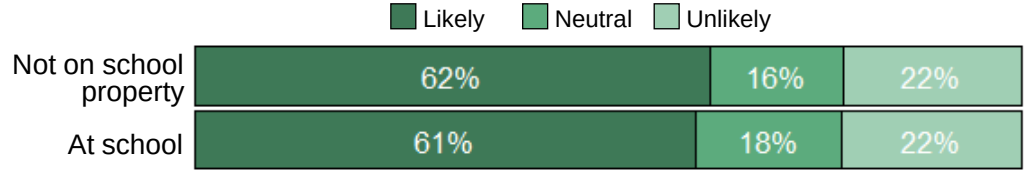
Student-reported likelihood of self-practicing hand hygiene off school property

n = 2,200 | N = 20,927,203 (weighted)



Student-reported likelihood of addressing incorrect hand hygiene practices among peers

Not on school property: n = 2,200 | N = 20,927,203 (weighted)
At school: n = 1,248 | N = 12,722,271 (weighted)



Students largely reported that they were likely to practice proper hand hygiene outside of school and address their peers' incorrect hand hygiene practices in and outside of school.

Elementary school teachers reported observing consistent hand hygiene practices among their students the most often than other teachers

SURVEY FINDINGS

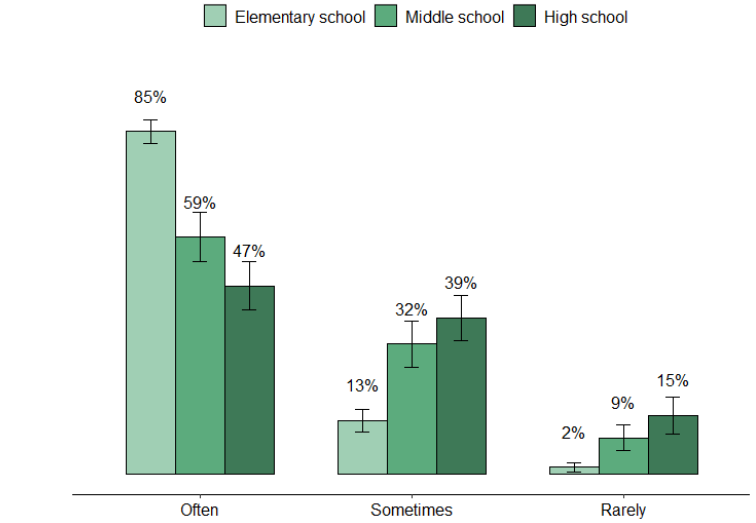
Teacher observations of the frequency with which students were washing hands or using hand sanitizer

n = 1,358 | N = 2,847,244 (weighted)

Most teachers (69%) reported that they often view students practicing proper hand hygiene.

Teacher observations of the frequency with which students were washing hands or using hand sanitizer, by grade level

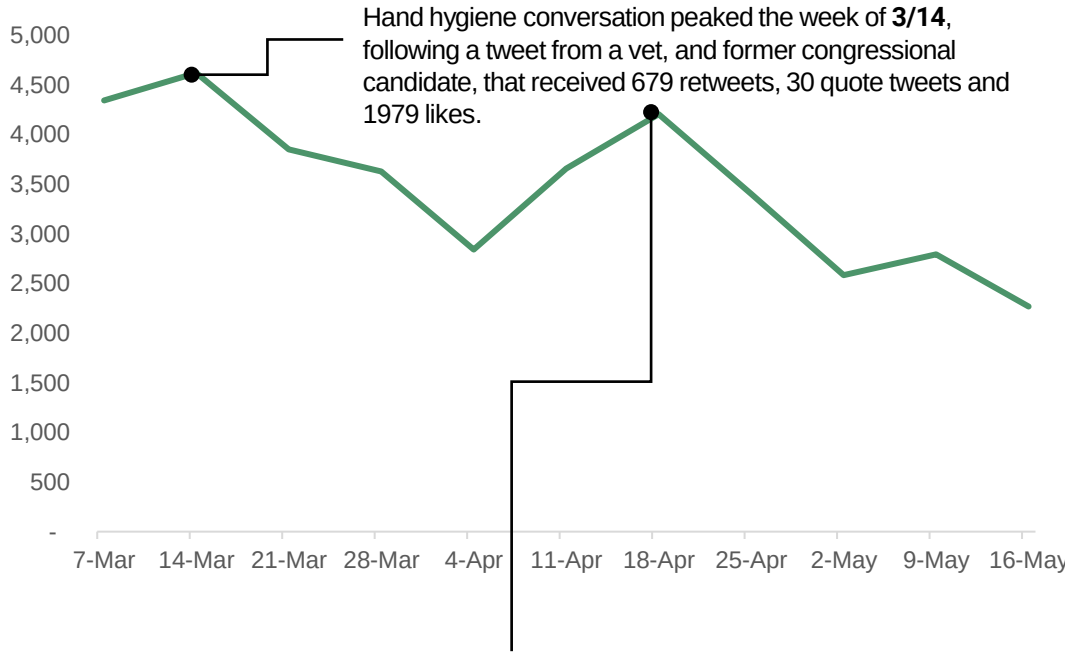
n = 1,306 | N = 2,745,500 (weighted)



The data show a relationship between grade level and the frequency with which teachers were observing proper hand hygiene among their students.

SOCIAL MEDIA INSIGHTS

Volume of Hand Hygiene Mentions



Hand hygiene conversation spiked the week of **4/18**, driven by what appears to be a coordinated campaign, disseminating a false narrative regarding hand sanitizer, race and destruction of property. The bot-like accounts were analyzed by Bot Sentinel[1] and all have since been suspended.

Volume chart depicts trend line of mentions for the hand hygiene query. n = 38,211. Sources: Twitter, Facebook, Instagram, YouTube, Reddit, forums, blogs, reviews, Quora and WordPress.

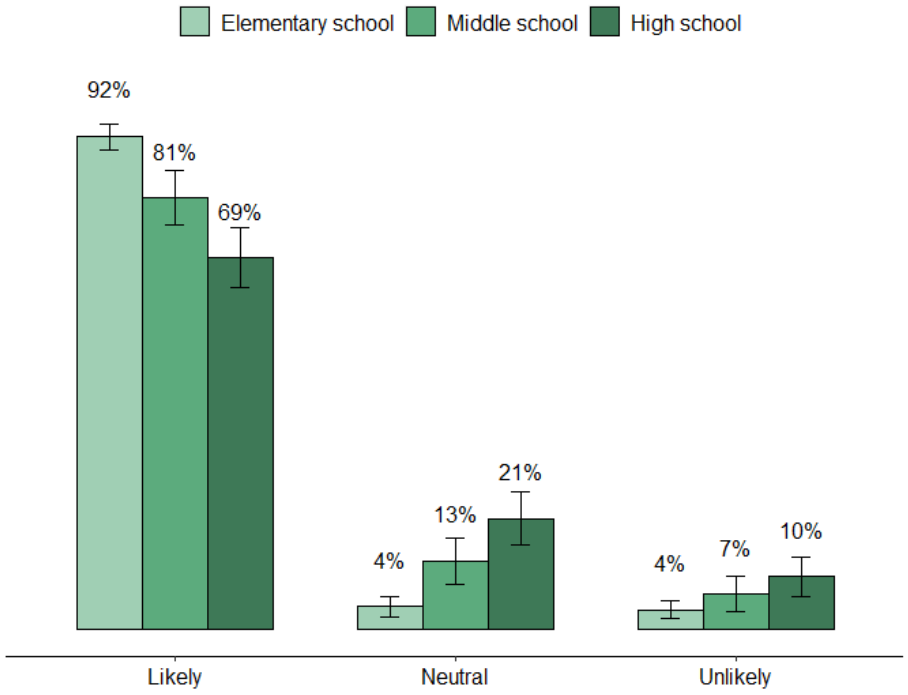
1. "Bot Sentinel - Dashboard." Bot Sentinel. Accessed April 20, 2021. https://botsentinel.com/..

Teachers were likely to remind students to observe proper hand hygiene practices when incorrect behavior was observed

SURVEY FINDINGS

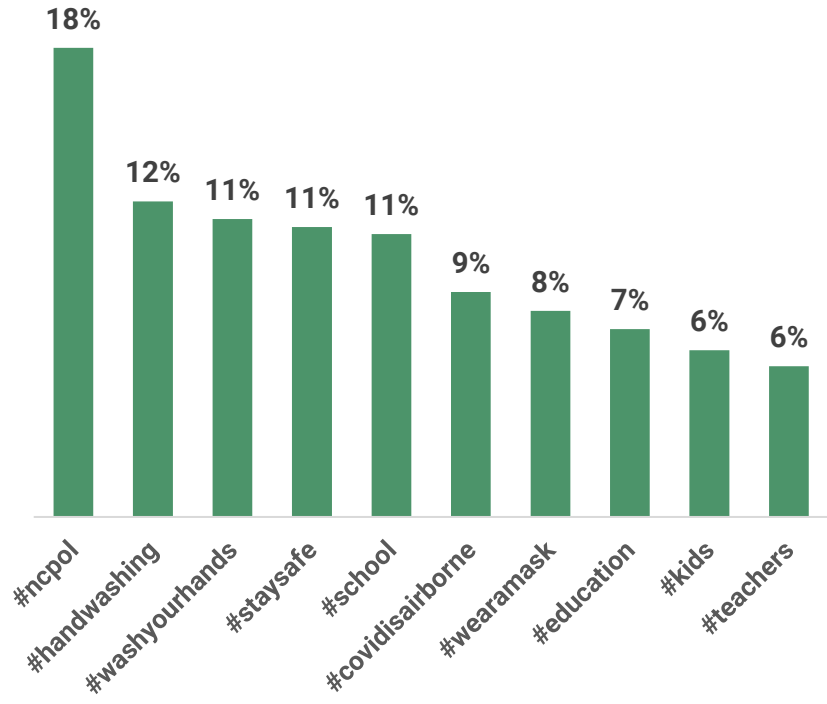
When on school property, teachers of younger students most frequently reported that they were likely to correct improper hand hygiene behaviors among their students as compared to teachers of older students.

Teacher-reported likelihood of correcting students' improper hand hygiene behaviors
n = 1,306 | N = 2,745,500 (weighted)



SOCIAL MEDIA INSIGHTS

Top Hashtags Used in Social Media Posts Related to Hand Hygiene, Based on Number of Mentions



Bar chart depicts proportionality of each hashtag of total top 10 hashtag mentions for the hand hygiene query. n = 3,574. Sources: Twitter, Instagram, Reddit, Facebook, Blogs and WordPress.

Cleaning and ventilation

Findings in this section reflect weighted cross sectional survey data (except for facilities staff data which is unweighted) and unweighted crowdsourcing and focus group data. Data were collected between March-May 2021.

Data in this section reflect respondents in hybrid or in-person school settings only, unless otherwise noted.

Increased cleaning and ventilation in schools to prevent COVID-19

Analysis across data collection methods reveals higher uptake of cleaning-based prevention practices versus ventilation-based practices.

Cleaning-based prevention strategies were widely implemented

Most principals, teachers and facilities staff reported that their school's COVID-19 prevention policies included more frequent cleaning and disinfection. Throughout the schools, principals reported more frequency in cleaning sports equipment and the cafeteria.

Ventilation improvements were less common than increased cleaning

Respondents across groups were consistently less likely to report that their school had a policy for improving ventilation than they were to report that their school had a policy for increased cleaning and disinfection protocols. Comparison across groups suggests that public schools and schools in the South were making ventilation improvements less often than others.

Less frequent cleaning was reported in teacher-designated areas

When comparing cleaning schedules (as reported by principals) across various key areas of schools, it appears that classrooms and other student common areas of the school were being cleaned with high frequency. By comparison, reported cleaning of teacher lounges, staff restrooms and administrative offices were less frequent.

Cleaning responsibilities have been shared across school staff

While facilities staff have primary responsibility for cleaning and disinfecting, principals reported that teachers and other non-facilities staff were conducting some cleaning duties as well.

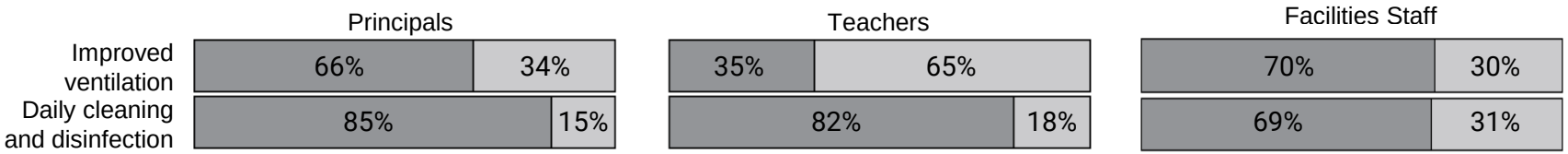
Increased daily cleaning and disinfection practices were more commonly reported than ventilation improvements, though rates differed across school staff

SURVEY FINDINGS

Across all school staff groups, respondents were more likely to report that increased cleaning and disinfection were part of their school's COVID-19 prevention plan than they were to report that strategies for improving ventilation were part of the plan. There were also notable differences between groups–similar proportions of principals and school facilities staff (66% and 70%, respectively), reported that there had been improvements to their school's ventilation, while only about a third of teachers reported any ventilation improvement. More research is needed to determine the source of these reporting differences, but they may be reflective of differing levels of access and knowledge about school infrastructure changes.

Proportion of school staff who reported improved ventilation and daily cleaning and disinfection policies in place at their school, by role

n = 440 | N = 95,315 principals (weighted) || n = 1,358 | N = 2,847,244 teachers (weighted) || n = 708 facilities staff



FOCUS GROUP INSIGHTS

One superintendent from Missouri highlighted how increasing cleaning and disinfection was relatively simple and easier to control than other prevention measures, given the presence of existing cleaning staff who can prioritize disinfection tasks as well as existing relationships with cleaning supply vendors.

"***I just think [cleaning] is the easiest to control, right?*** *You got more control over your custodians in their schedule and what they're able to do, and you know, everybody bought all those crazy ionizing guns and, no joke about our numbers, we used 30,000 gallons of disinfectant over the last 12 months. That's in fact, that doesn't count how much soap and water and hand sanitizer we've used.* ***You know, you walk our buildings and custodians are cleaning doorknobs and any handle non-stop, so it's shifted kind of how they get to spend their time…"***

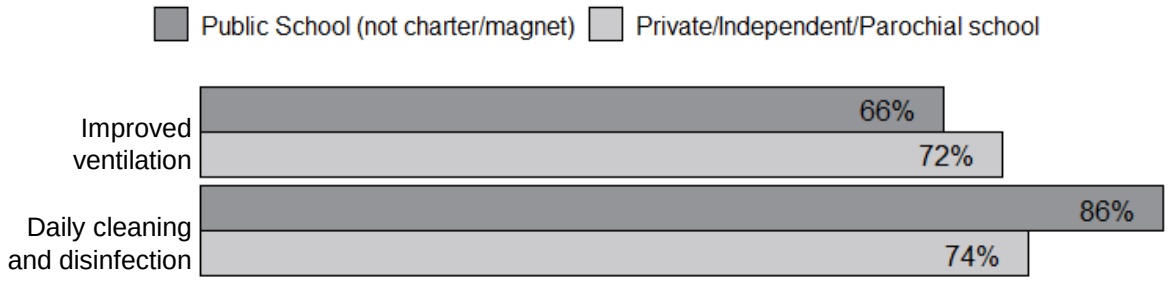
Private schools reported implementing ventilation improvements more frequently than public schools

SURVEY FINDINGS

According to data collected from principals, private schools may have implemented ventilation improvement measures at higher rates than public schools. The proportion of private school principals who reported increased cleaning practices was roughly equal to the proportion who reported ventilation improvements.

Proportion of principals reported improved ventilation and daily cleaning and disinfection practices at their school as part of COVID-19 prevention strategy, by school type*

n = 440 | N = 95,315 (weighted)

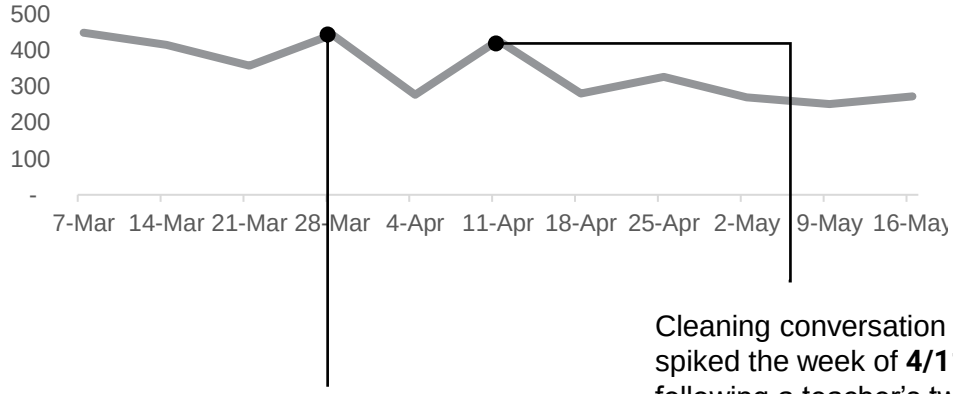


**Charter/magnet, boarding/residential school and "other" school types were excluded due to small cell counts.*

SOCIAL MEDIA INSIGHTS

Analysis of social media posts from Spring 2021 related to cleaning and disinfection reveals some spikes in conversation around this topic at the end of March and middle of April, with mentions declining steadily since the end of April.

Volume of social media posts related to cleaning and disinfection



Cleaning conversation spiked the week of **4/11**, following a teacher's tweet to fundraise for cleaning supplies.

Cleaning and disinfecting conversation peaked the week of **3/28**, following a story about Franklin High School (MA) using COVID relief funds to install an ultraviolet germicidal irradiation system to inactivate the virus that causes COVID-19[1].

Volume chart depicts trend line of mentions for the cleaning and disinfecting query. n = 3,776. Sources: Twitter, Facebook, Instagram, YouTube, Reddit, forums, blogs, reviews, Quora and WordPress.

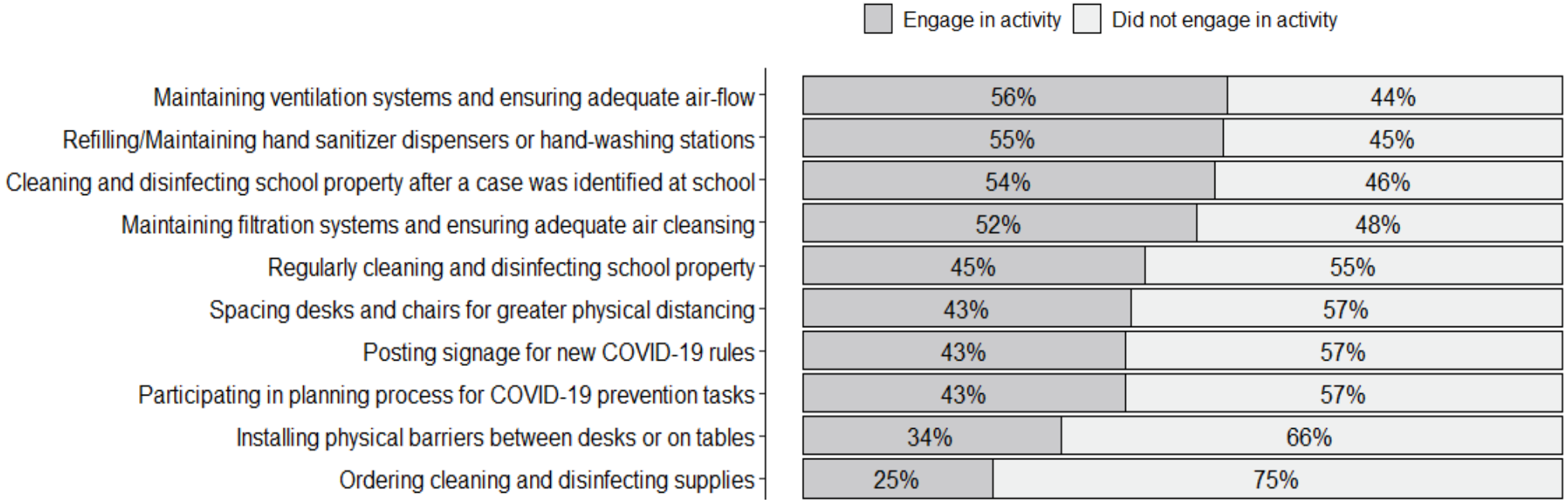
1. Meiler, Anna. "Franklin High School Gets UV Disinfectant System To Kill COVID In Classroom Air." CBS Boston. CBS Boston, March 26, 2021. https://boston.cbslocal.com/2021/03/26/franklin-high-school-uv-ultra-violet-disinfectant-system-covid-coronavirus-massachusetts/.

Over half of facilities staff reported participating in various key prevention measures, including ventilation system maintenance

SURVEY FINDINGS

School facilities staff most often reported that they were responsible for maintaining and ensuring adequate air flow and air cleansing, refilling hand hygiene stations and cleaning following positive COVID-19 cases.

Proportion of school facilities staff that reported participation in various COVID-19 prevention measures and activities
n = 708

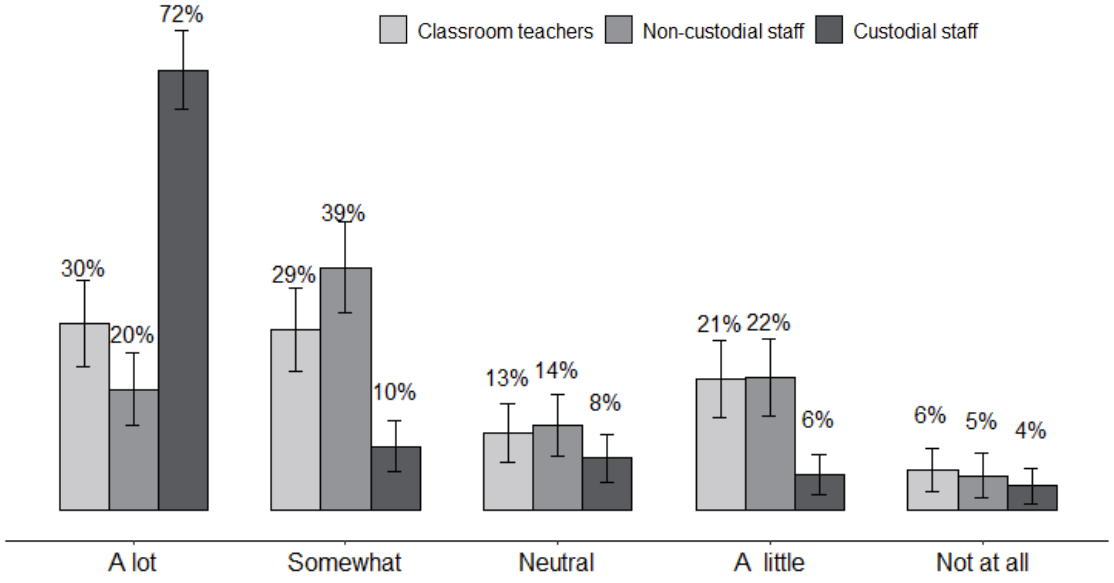


While facilities staff had primary responsibility for cleaning and disinfecting, teachers still helped with some of these tasks

SURVEY FINDINGS

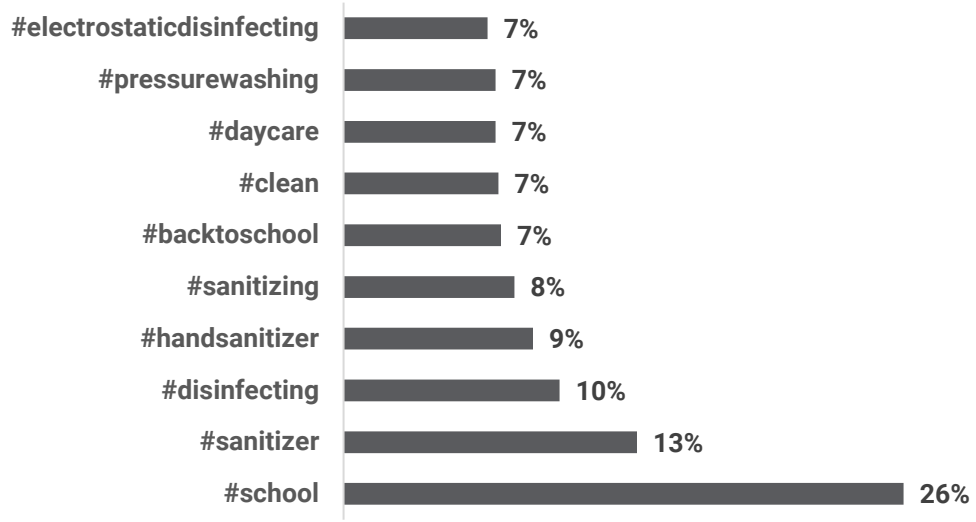
Principal-reported amount of cleaning responsibility, by role

n = 440 | N = 95,315 (weighted)



SOCIAL MEDIA INSIGHTS

Top Hashtags Used in Social Media Posts Related to Cleaning and Disinfecting, Based on Number of Mentions



Bar chart depicts proportionality of each hashtag of total top 10 hashtag mentions for the cleaning and disinfecting query. n = 821. Sources: Instagram, Twitter and Facebook.

FOCUS GROUP INSIGHTS

An art teacher from New York detailed how they share some of the burden of cleaning with the facilities staff at their school.

"Everywhere I go, anything that touches my cart, needs to be cleaned. Also, if they use the materials that they don't already have, I have to clean them like between classes, which is not easy, in the slightest. Luckily, we have a great cleaning staff and during their lunch time…they come in and try to clean the room…so I know for them ***it's a lot of extra cleaning on our staff…****So, not only for me is that a lot of extra cleaning, but I know it's putting a strain on the people that are in our school doing that cleaning."*

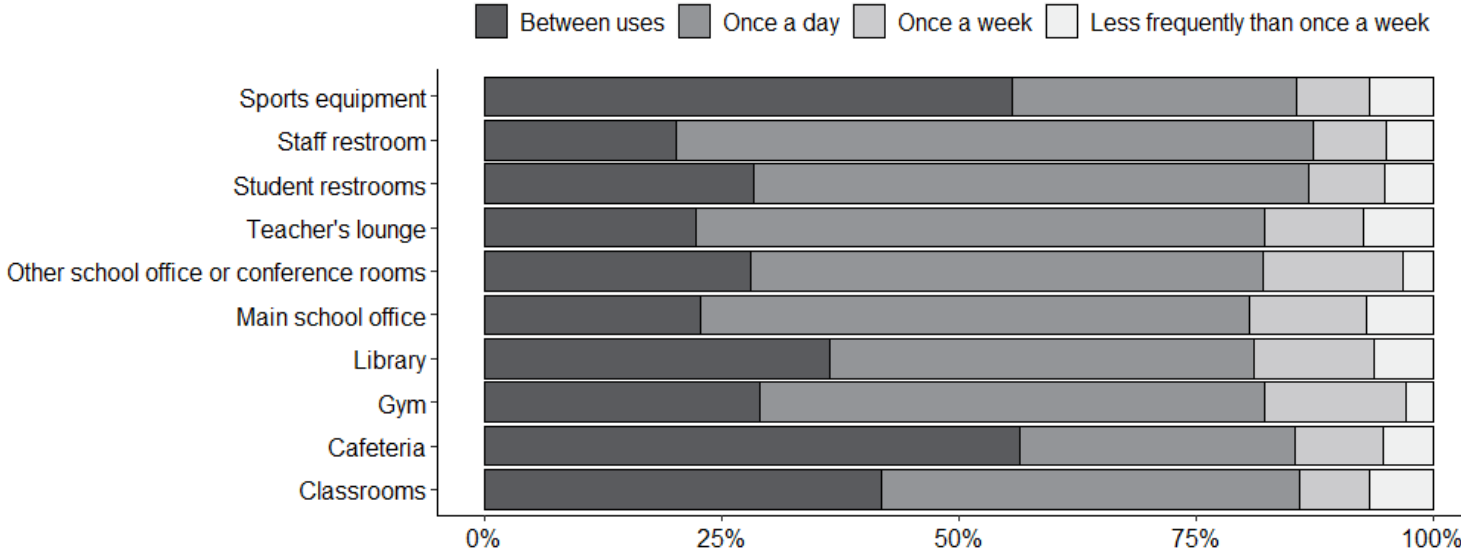
According to principals, areas used primarily by school staff tend to be cleaned less frequently than areas used by students

SURVEY FINDINGS

Despite adult school staff being at higher risk for contracting COVID-19 and developing more serious complications, principals reported that designated staff areas such as the teacher's lounge, main office and staff restrooms are cleaned less frequently than other common areas and restrooms primarily used by students.

Cleaning schedules for various school areas and items, as reported by principals

n = 440 | N = 95,315 (weighted)

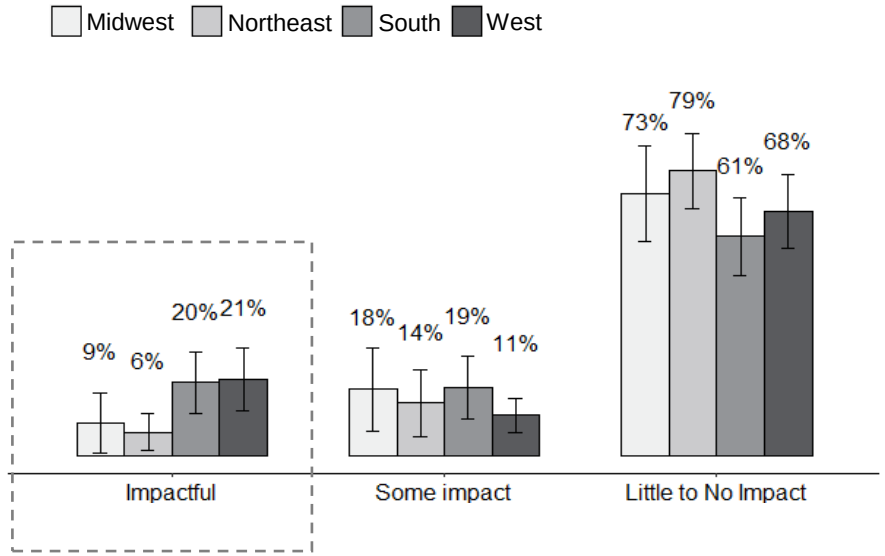


*Respondents who answered "don't know" were excluded from the denominator for each area / item.
**"Between uses" indicates that cleaning occurs more than once a day

While most principals reported that availability of cleaning supplies had little or no negative impact on their school's ability to implement measures to prevent COVID-19, those who did report a lack of cleaning supplies negatively impacted their ability was the most from the South (20%) and the West (21%).

Principal-reported impact of inadequate cleaning supplies on COVID-19 prevention efforts, by region

n = 440 | N = 95,315 (weighted)

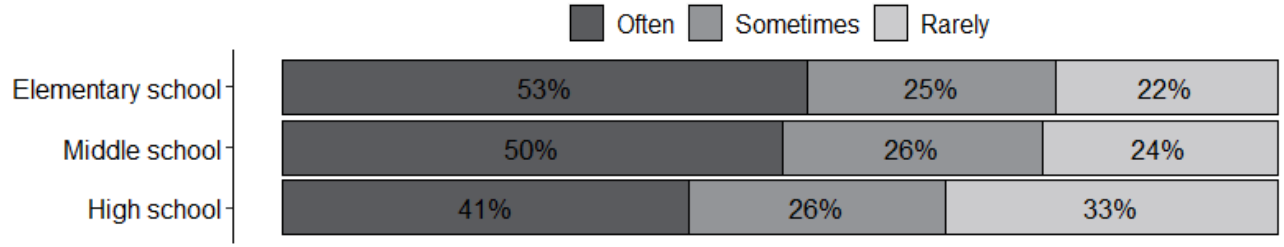


Teachers reported that high school students were not disinfecting their desks or personal items as frequently, compared to younger students

SURVEY FINDINGS

A third (33%) of high school teachers reported that their students were rarely or never disinfecting their desks or personal items, compared to just 24% of middle school teachers and 22% of elementary and kindergarten teachers. Echoing findings around other key preventive behaviors, older students may be less diligent about disinfecting their personal areas and items.

Teacher-reported frequency of student disinfecting behaviors, by grade level
n = 1,358 | N = 2,847,244 (weighted)



FOCUS GROUP INSIGHTS

An elementary school art teacher from Maine described the cleaning protocols for art materials used by students and having to use other teachers' classroom to teach.

"I'm exposed to every single child and every single classroom and ***I'm "Art on a Cart", so they don't come to me, I go to them… I'm also, you know, having to be very aware of quarantining supplies that are touched by students, what they're allowed to use again, and what they're not allowed to use again, disinfecting...It has been incredibly challenging."***

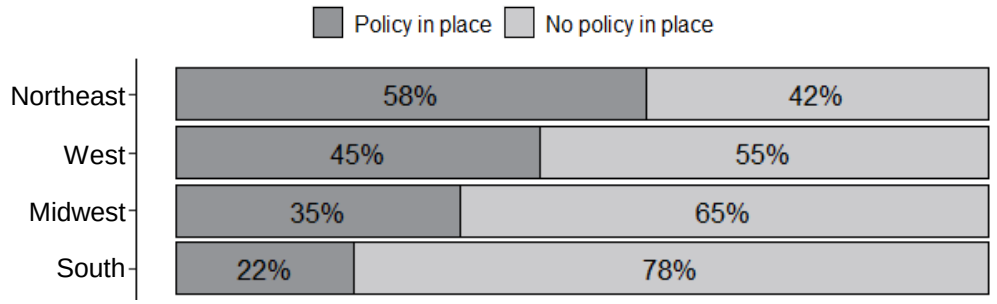
Teachers in the South reported the lowest adoption of the ventilation school policy when compared to their peers in other regions

SURVEY FINDINGS

Only 22% of teachers in the South reported ventilation improvement as part of their school or district COVID-19 response strategy.

Proportion of teachers whose school or district COVID-19 policies contain ventilation guidance, by region

n = 1,358 | N = 2,847,244 (weighted)



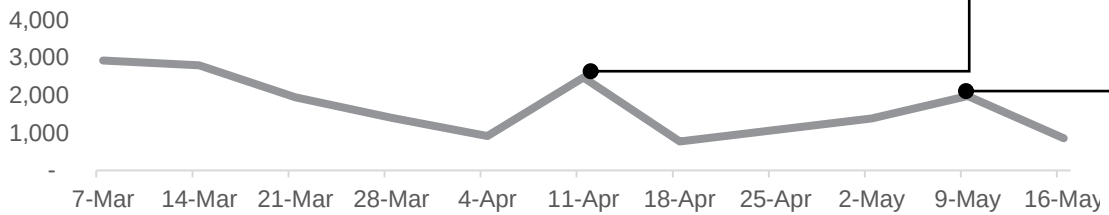
FOCUS GROUP INSIGHTS

An elementary special education teacher from rural West Virginia discussed receiving ionization filters in their school and the drawbacks of opening windows to increase ventilation in their classroom.

> "*We did have an extensive reopening of schools plan that is being followed with the mitigation, and **they did purchase the ionizers and the ionizers that go in the filters. Those are really wonderful**, but what we've ran into is, of course you're supposed to have your windows open, and we have smart boards in our room, and so some of the—the heating with the smart boards is not working, because it makes the smart boards go off.*"

SOCIAL MEDIA INSIGHTS

Volume of posts related to ventilation



Ventilation conversation spiked the week of **4/11**, following an epidemiologist's tweet thread discussing the importance of, and suggestions for, properly ventilating school buildings.

Ventilation conversations spiked the week of **5/9**, following a university dean's tweet about the low cost of replacing HEPA filters in schools.

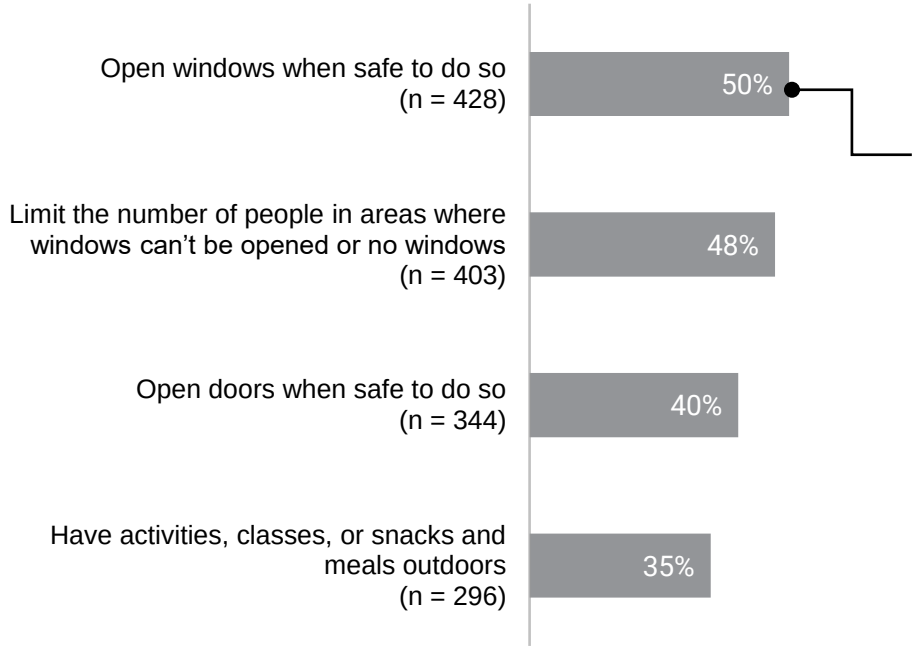
Volume chart depicts trend line of mentions for the ventilation query. n = 18,488. Sources: Twitter, Facebook, Instagram, YouTube, Reddit, forums, blogs, reviews, Quora and WordPress.

Opening windows was the most common strategy to increase ventilation

CROWDSOURCED INSIGHTS

Teachers and staff report utilizing several strategies for increasing ventilation at school, with opening windows being the most common and conducting activities outdoors the least common.

Overall strategies schools are taking to increase ventilation
n = 1047



Of the 428 respondents who reported that they try to open windows when safe to do so, **60% said they have often been unable to keep windows open** during the school day due to extreme weather conditions.

FOCUS GROUP INSIGHTS

A public middle school teacher from rural Arizona expressed challenges that their school experienced in trying to improve ventilation, highlighting unique challenges that may be faced by some schools depending on their physical design, layout, age and availability of appropriate supplies.

"I mean I'm sure all of our filters are not the right filters, and we don't have any windows that open *and so, basically, we got some spray and some paper towels and that was it."*

Contact tracing

Findings in this section reflect weighted cross sectional survey data and unweighted crowdsourcing and focus group data. Data were collected between March-April 2021.

Data in this section reflect respondents in hybrid or in-person school settings only, unless otherwise noted.

Contact tracing in schools to prevent COVID-19

Data-driven tools and adherence to case reporting rules from parents and teachers aid in contact tracing efforts, though trust in accuracy of case reporting has been mixed

Schools were leveraging data-driven tools and designated staff

As reported by principals and parents, many schools had an established process for tracking and reporting COVID-19 cases. The bulk of principals reported having a designated staff member and public tracker to monitor COVID-19 cases.

Implementing contact tracing protocols varied by region

While over half of parents reported that their child's school had a process in place for notifying close contacts of individuals who may have been exposed to COVID-19, parents in the Midwest and Northeast were most likely to do so.

Most parents and teachers said they would report positive cases

Regardless of symptom severity, both teachers and parents reported a high likelihood of reporting personal instances of positive COVID-19 cases.

Levels of trust around COVID-19 case and exposure reporting were mixed

Most parents were confident that they were receiving accurate information about COVID-19 cases and exposures from their child's school, while 20% of principals said they were not confident that parents were reporting COVID-19 cases in their children (though most principals were confident that their staff was reporting cases appropriately).

Primary care and health departments were used the most for diagnostic testing

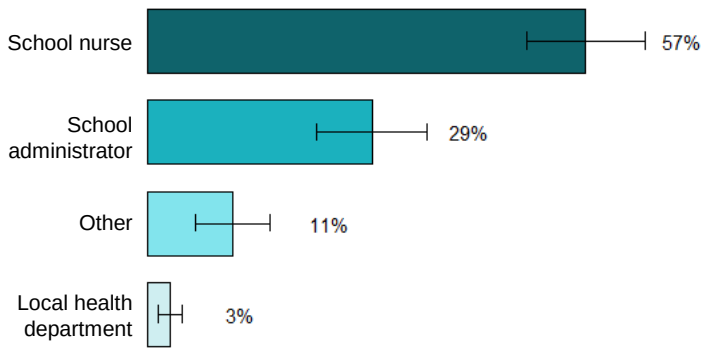
Principals, teachers, school staff and parents reported that referrals to primary care and health departments were the most used settings for diagnostic testing.

Schools reported having designated staff for contact tracing as well as data-driven tracking tools for noting all COVID-19 cases to date

SURVEY FINDINGS

Nearly all principals (96%) reported there is a designated staff person assigned to track students who have tested positive for COVID-19. If they indicated there is a designated staff person, then that staff person assigned is primarily either a school nurse (57%) or administrator (principal or vice principal) (29%).

Type of staff designated to track COVID-19 cases as reported by principals
n = 576 | N = 117,110 (weighted)



With the rise of various publicly-available COVID-19 case tracking tools online (i.e., dashboards and other data visualizations), principals reported that they too were using case tracking tools to monitor their schools.

Proportion of principals whose school has a public COVID-19 case tracking tool
n = 576 | N = 117,110 (weighted)

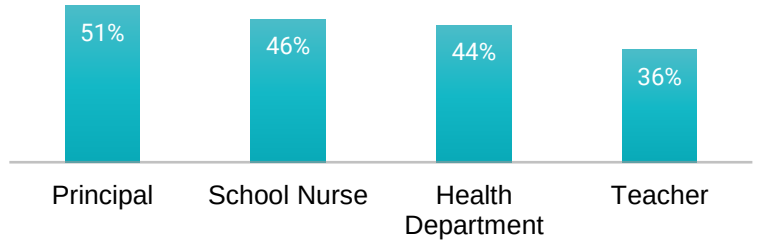
83% of principals reported their district has a public tracker noting all cases in a given school to date (all learning models). Of those that reported a tracker exists, 73% reported the tracker is updated daily or as cases occur.

CROWDSOURCED INSIGHTS

About 90% of teachers and over 80% of school staff reported that they knew who to contact at their school if they test positive for COVID-19 and believed that “members of the school community (e.g., teachers, staff, families) should stay home after having close contact with another teacher, staff or family member who has tested positive for COVID-19.”

In comparison, only 67% of parents reported they knew who to contact at their school if their child tests positive for COVID-19 and 73% believed “members of the school community should stay home after having close contact with another teacher, staff or family member who has tested positive for COVID-19.”

Parents received information on school COVID-19 cases, contact tracing and guidance for quarantine from the following
n = 1,500



Parents in the Midwest and Northeast more often reported that their child's school had a contact tracing process in place

SURVEY FINDINGS

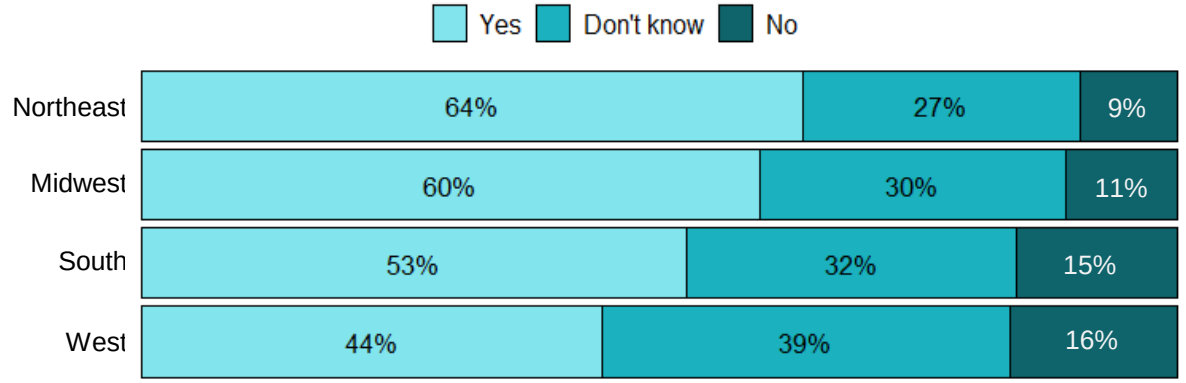
Overall, just over half (54%) of parents reported that their child's school had a process in place for notifying individuals if they were in close contact with someone who may have been exposed to COVID-19. Stratification by region illuminates geographic differences in such contact tracing processes in schools–64% of parents in the Northeast reported that a contract tracing process was in place at their child's school while only 44% of those from the West said that their child's school had one.

54%

OF PARENTS REPORTED CONTACT TRACING PROTOCOL IN PLACE

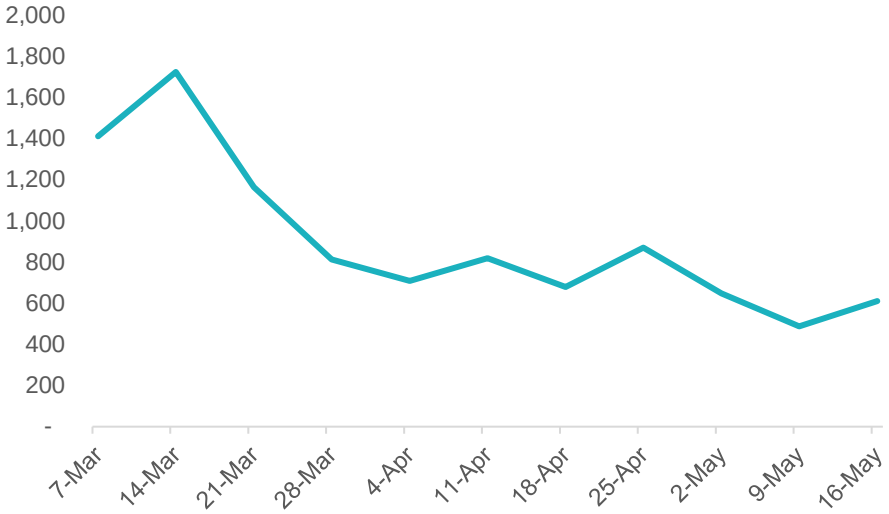
Parents reporting whether a process was in place at their child's school for notifying if individuals were in close contact with someone who may have been exposed to COVID-19

n = 4,039 | N = 70,372,798 (weighted)



SOCIAL MEDIA INSIGHTS

Volume of Contact Tracing Mentions



Contact tracing conversation peaked the week of **3/14**, following a story from STAT, showing how school nurses have expanded their roles with COVID-19 vaccinations and contact tracing.[1]

Volume chart depicts trend line of mentions for the contact tracing query. n = 9,919. Sources: Twitter, Facebook, Instagram, YouTube, Reddit, forums, blogs, reviews, Quora and WordPress.

1. Rebecca Sohn March, Rebecca Sohn, Janice L says: and Barbara Gkickstein says: "School Nurses Greatly Expand Role with Covid Vaccinations, Contact Tracing." STAT, March 10, 2021. https://www.statnews.com/2021/03/10/school-nurses-greatly-expand-role-with-covid-19-vaccinations-contact-tracing/.

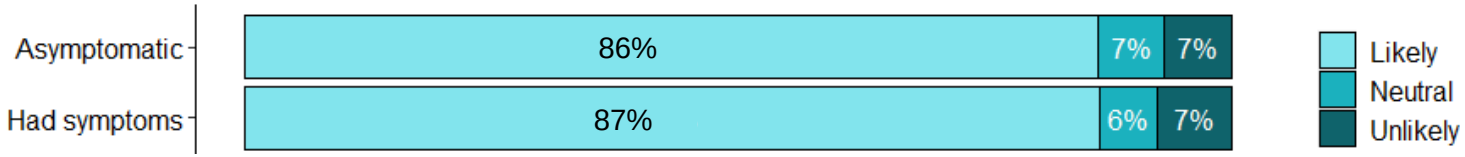
Teacher and parent responses reflected commitment to communicating confirmed cases of COVID-19 to their schools

SURVEY FINDINGS

When asked how likely they would be to report that their child had a confirmed case of COVID-19 to the school (in the event that their child tested positive), most parents said that they were likely or very likely to report it. Encouragingly, a nearly equal proportion of parents (87% and 86%) said that they were likely to report to the school whether their child was experiencing symptoms or not.

Parent likelihood of reporting positive-testing students, by symptom severity

n = 4,039 | N = 70,372,798 (weighted)



Proportion of teachers who notified their school after testing positive for COVID-19

(Universe includes teachers who reported that they had tested positive for COVID-19 during the 2020-2021 school year)

n = 208 | N = 412,592 (weighted)

98%

OF TEACHERS WHO TESTED POSITIVE NOTIFIED SCHOOL

Among teachers who reported testing positive for COVID-19 at some point during the 2020-2021 school year, nearly all of them said that they had reported it to their school, facilitating proper contact tracing protocols.

FOCUS GROUP INSIGHTS

A superintendent from Georgia shared how their district communicated with the school community on their operating plan and COVID-19 case numbers during the pandemic.

"***We provided tons and tons of data, beyond just a dashboard***, *and we also put a big task on our principals to really video chat with our families once a week, and to be there and to provide questions and respond to their questions over the past year…****we were able to communicate with those families quite well****."*

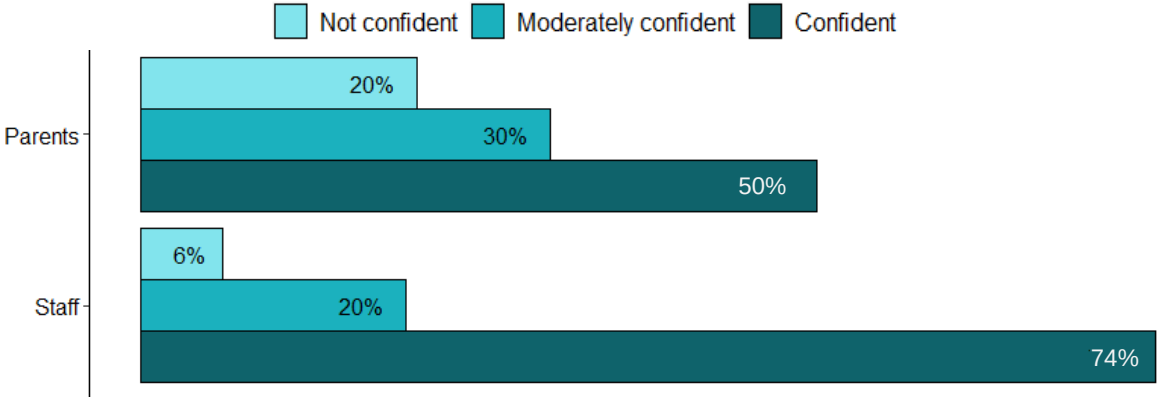
Mixed levels of confidence in honesty and transparency of COVID-19 case reporting were reported across school stakeholder groups

SURVEY FINDINGS

20% of principals expressed that they were not confident that all parents of students in their school were reporting when their children tested positive for COVID-19 but did seem confident that they could rely on school staff to report any potential positive test results (only 6% were not confident that staff were reporting).

Principal confidence in school staff vs. parent reporting of COVID-19

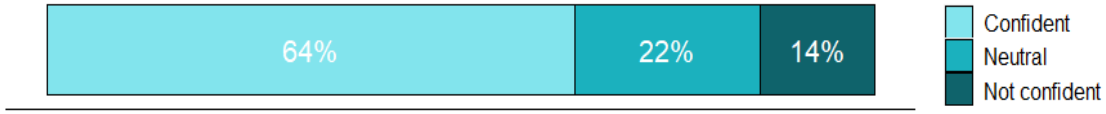
n = 576 | N = 117,110 (weighted)



About two thirds (64%) of parents indicated that they were somewhat or very confident that their child's school shares accurate information about COVID-19 exposures in school, with only 14% expressing lack of confidence and 22% neutral on the matter.

Parent confidence in receiving accurate COVID-19 exposure information

n = 4,039 | N = 70,372,798 (weighted)



FOCUS GROUP INSIGHTS

A parent of an elementary student with special education needs in New York shared their confidence in their school's handling of COVID-19 exposures.

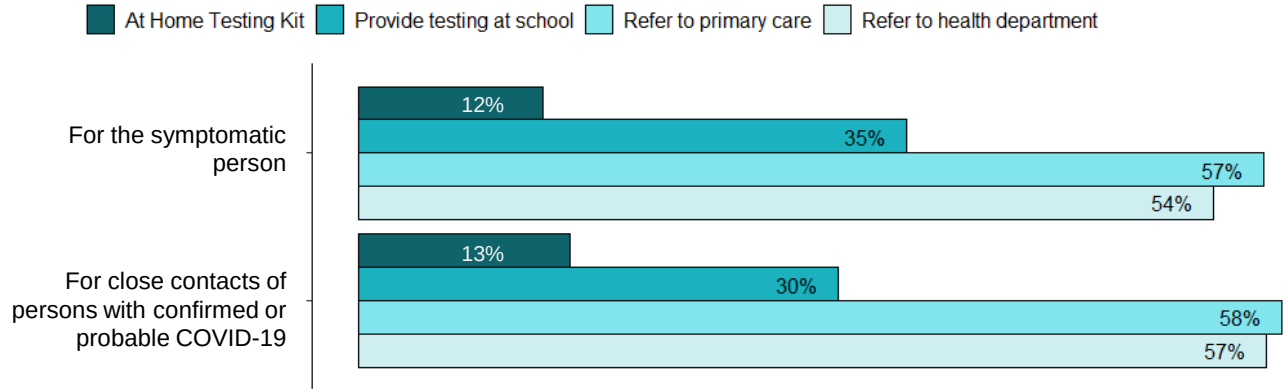
"So this school has been operating—she got one-time quarantined for 10 days, because one of her classmates was tested positive. But that was just that one time, so the school continues to monitor these COVID-19 cases…Some quarantine the class, sometimes they'll quarantine the individual, and so they say there's no student-to-student transmissions, staff-to-student transmission, and vice versa, so ***they keep it very clean, and the COVID case is only like 1% in the school district****…"*

Referrals to primary care and health departments were the most frequent settings for diagnostic testing

SURVEY FINDINGS

Principals reported referrals to primary care and health departments were part of the plan in place for conducting or referring students, teachers and staff to test for SARS-CoV-2, the virus that causes COVID-19.

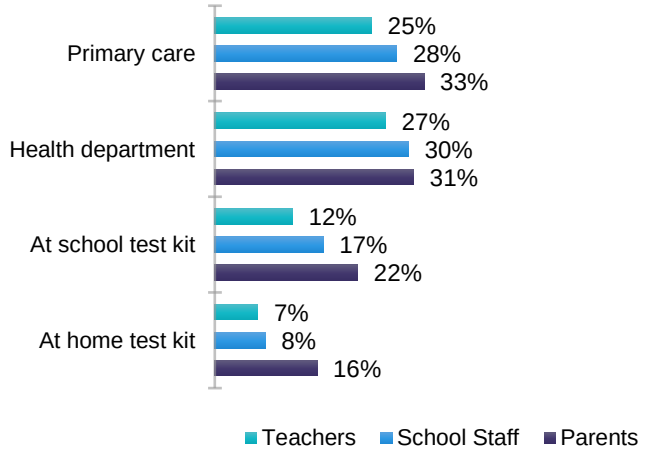
Principal-reported plans for conducting or referring test for SARS-CoV-2
n = 576 | N = 117,110 (weighted)



CROWDSOURCED INSIGHTS

Primary care offices and health departments were the most common settings for diagnostic testing.

For close contacts of persons with **confirmed or probable COVID-19**, the following methods are in place for diagnostic testing (n = 2,544)



FOCUS GROUP INSIGHTS

A teacher from Arizona shared their doubts that positive cases of COVID-19 were being reported to her school when they occurred.

"***They'd try contact tracing, but people weren't being honest***. *And they're taking temperatures still in the morning when kids come in—they're not allowed in without a mask or without their temperature being taken. But I don't know that they really took anybody [to quarantine]—plus people in my district…[they] just let the district do what they want. And, plus, my town is a pretty conservative town, so they all wanted to go to school."*

Conclusion and Call to Action

CONCLUSION

Key Takeaways and Moving Forward

The findings in this report suggest there may be significant differences in how COVID-19 prevention strategies are implemented in K-12 schools based on region, school level and other school and individual characteristics. This information may be useful to school leadership and public health officials as they continue to work toward minimizing the impact of COVID-19 on students and school staff in different school environments

As some prevention strategy requirements are relaxed, school leadership may need additional, updated guidance around how these strategies interact with and impact transmission risk (e.g., if no mask requirement, may need to social distance; if students/staff are vaccinated, contact tracing protocols change). Given differences in the policy landscape across states, the type of support needed at the regional, state and local levels may vary. Furthermore, future resources and guidance to K-12 schools may need to be tailored based on school level and other key school characteristics (e.g., strategies focused on younger students, infrastructure needs at public schools, etc.) based on school type and considering unique contexts and barriers different schools face.

Moving Forward

The COVID-19 landscape is dynamic, especially in relation to polices and practices for preventing the spread of the COVID-19 virus in schools. Since the data presented in this report were collected, CDC recommendations have been updated (Community, Work, and School | COVID-19 | CDC) and vaccine age eligibility has been expanded. As the COVID-19 pandemic continues to evolve, and prevention strategies and recommendations change accordingly, public health officials should routinely update community guidance and clearly communicate implications for K-12 school settings.

The data, findings and opportunities outlined in this report reflect a single point in time during a rapidly changing environment. However, no matter how specific prevention strategies shift, expand, or change, the swift and successful adoption of CDC and state/local guidance around prevention strategies is essential for the safety of students and school staff in the future. Adoption and adherence to these types of strategies is also critical to overall well-being and mental health. In another report developed as part of this project, teachers who reported higher impact of barriers also reported symptoms of anxiety and depression more frequently.

As the COVID-19 pandemic evolves, the lessons learned about successes and challenges that schools faced during the 2020/2021 school year provide insights for how future prevention activities might be implemented and what additional resources and guidance schools may need to create safer in-person learning environments that can protect the overall health and educational outcomes of students.

Appendix A Prevention and School Based Services

Supplemental findings related to the provision and maintenance of school-based services

Prevention strategies during school mealtime

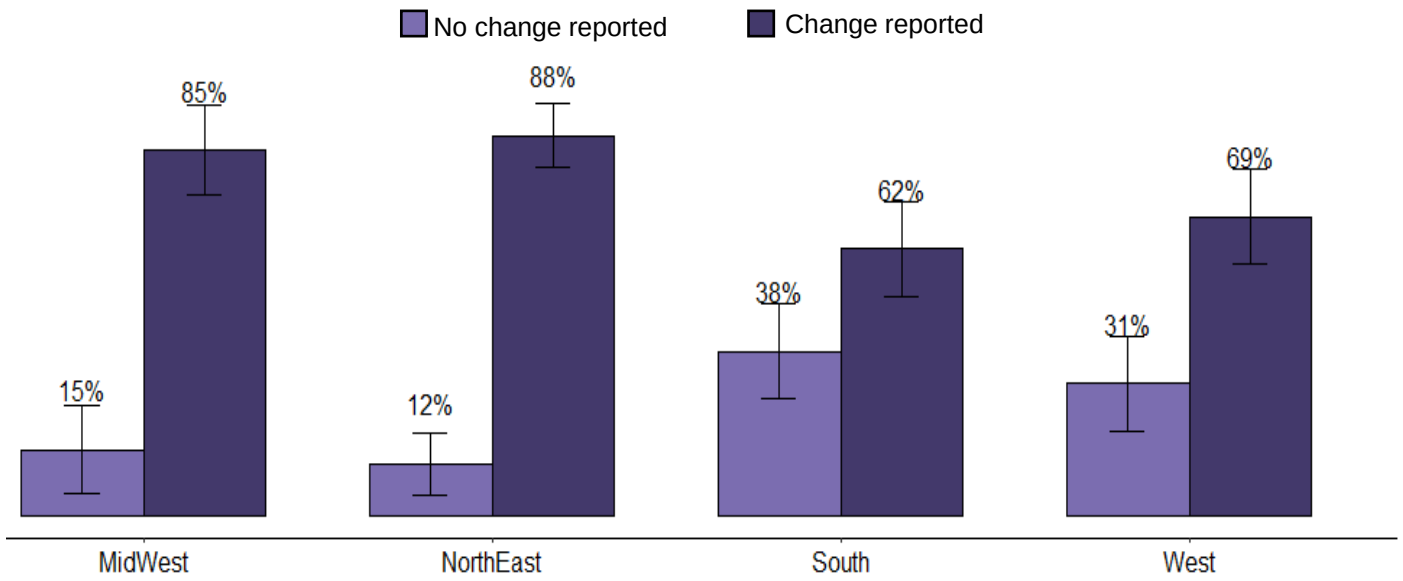
FOCUS GROUP INSIGHTS

One superintendent from Georgia described their process for distributing meals during the pandemic.

*"We're 100% free and reduced lunch also. And so **we had meals set up, even if there were days that we were out of school, quarantined, whatever the heck our status was, or we were on hybrid. We still provided breakfast and lunch to those students and at all of our schools**, we have portions of our city where students can walk, come in, and get them. But we also have section of the community that we had to get them out. We had great partners, community partners, in terms of making sure that we were getting to all families."*

SURVEY FINDINGS

Proportion of principals who reported a change in dining policy during the current school year, by region
n = 576 | N = 117,110



More principals in the Midwest and Northeast reported changes in school dining, whether it was lunch served differently or take-home lunch, to enable the implementation of prevention strategies.

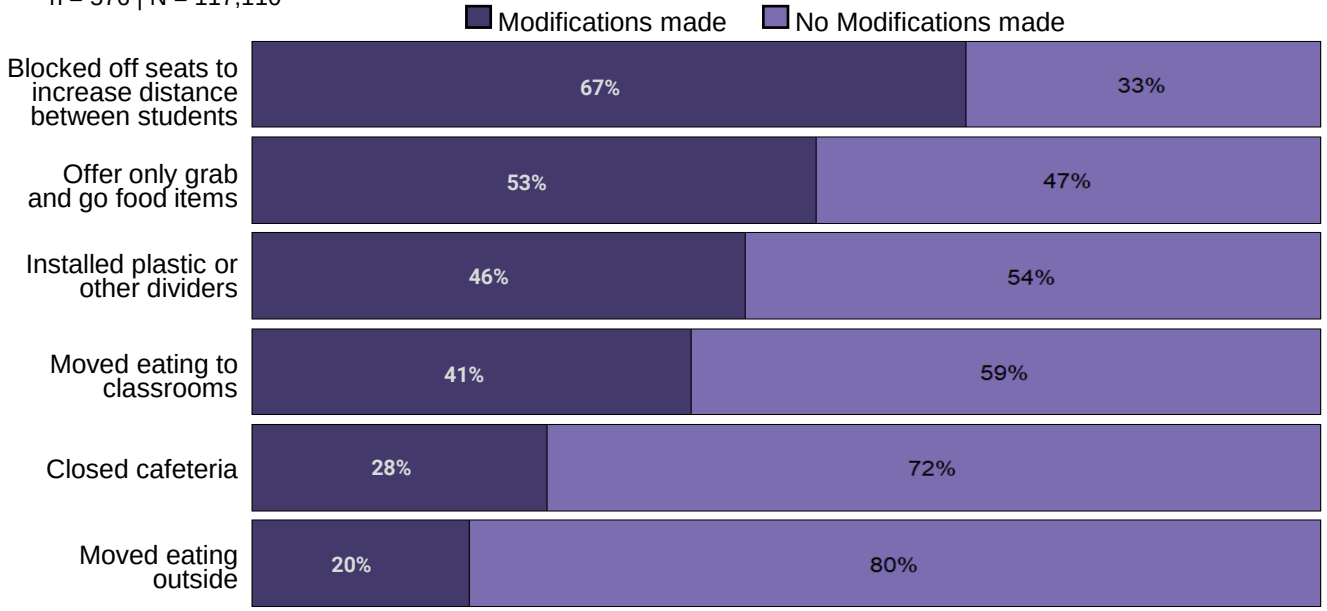
*Due to rounding, values in this table total more than 100%

Prevention strategies during school mealtime

SURVEY FINDINGS

Modifications to school food service operations, as reported by principals

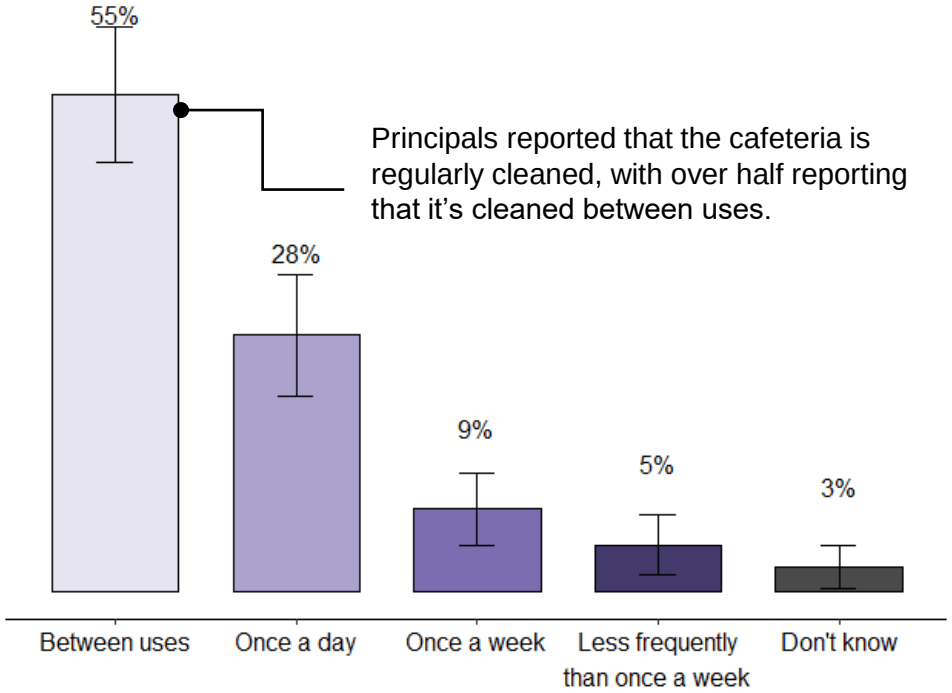
n = 576 | N = 117,110



The most frequently reported modifications made to food service to enable prevention strategies included blocking off seats to increase distance between students and offering only grab and go food items.

Cafeteria cleaning frequency, as reported by principals

n = 576 | N = 117,110



Principals reported that the cafeteria is regularly cleaned, with over half reporting that it's cleaned between uses.

FOCUS GROUP INSIGHTS

One food service director from Maryland noted why physically distancing was difficult for cafeteria and food preparation staff.

*"Physical distance was a challenge for us because we typically **work in small kitchen areas** and many of our employees, like to buddy up and do projects together."*

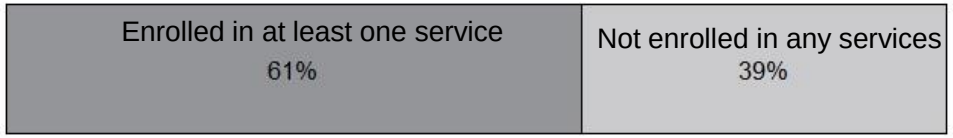
Prevention strategies for students in school-based services

SURVEY FINDINGS

Almost two thirds of students are enrolled in at least one school service*. Majority of students enrolled in school-based services are adhering to prevention strategies in school.

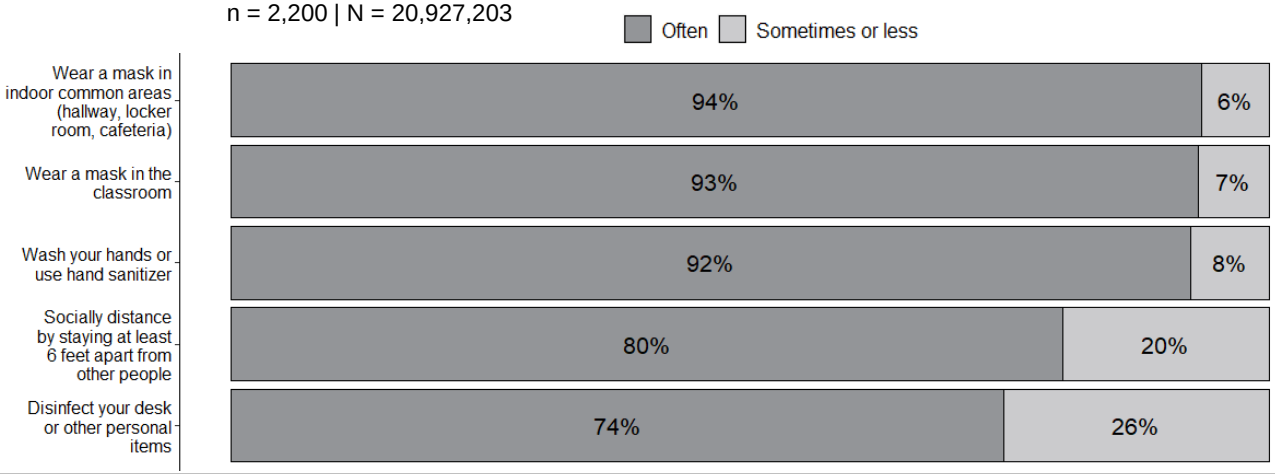
Proportion of students enrolled in school-based services

n = 2,200 | N = 20,927,203



Prevention practices of students enrolled in school-based services

n = 2,200 | N = 20,927,203



*School services are:

- Individual classroom support (a second teacher or aide helping me in the classroom)
- Speech therapy
- Academic support (changes to classroom assignments or extra help from the teacher)
- Behavioral or mental health support (by school counselor, classroom teacher, or other school staff member)
- Physical therapy
- Occupational therapy
- Medical support (for asthma, food allergy, diabetes, etc.)
- Dental

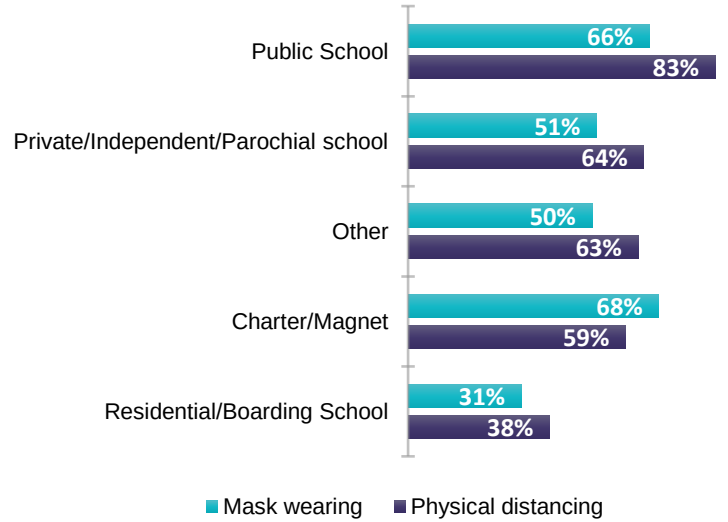
CROWDSOURCED INSIGHTS

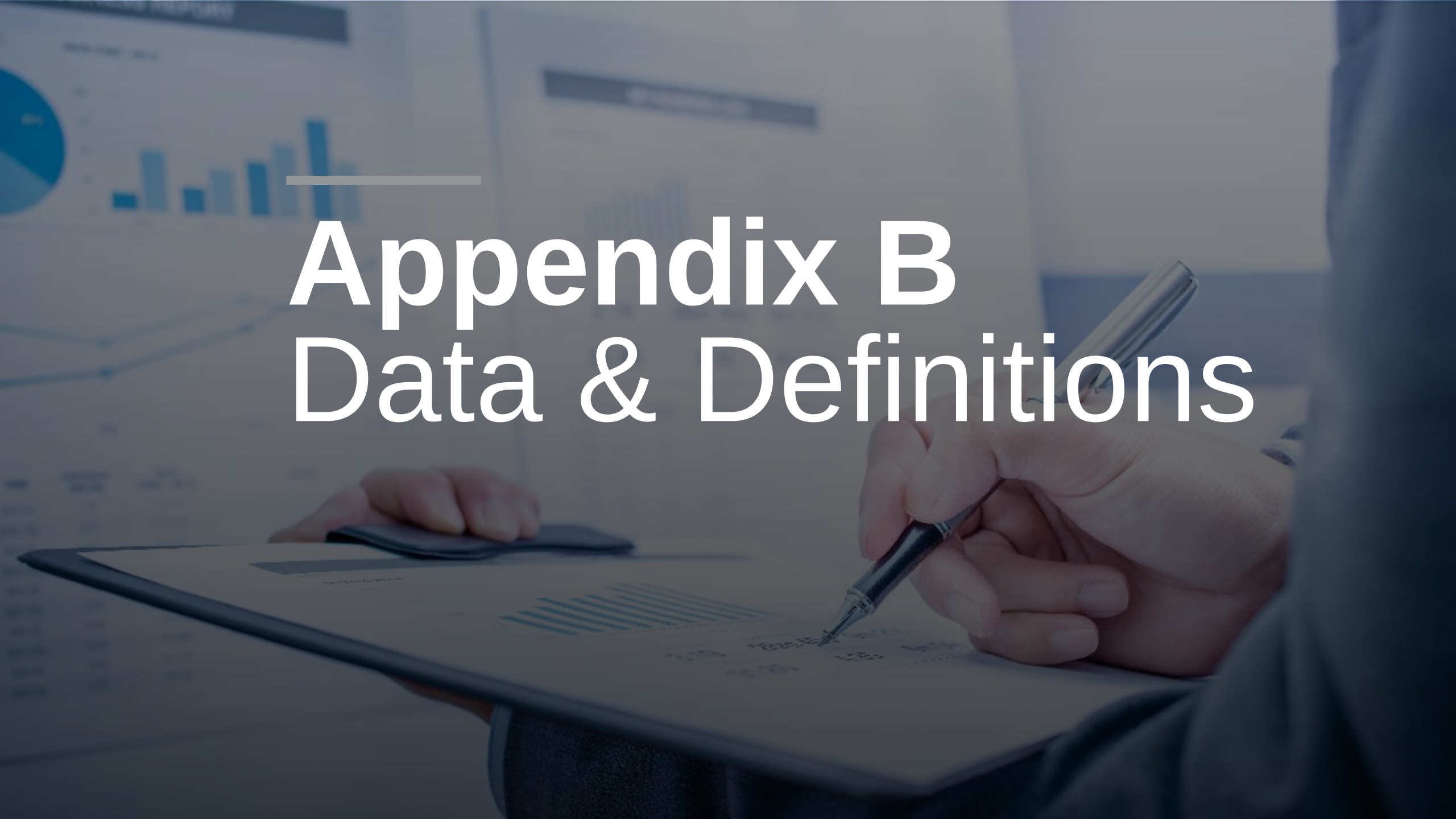
Special education teachers reported that physical distancing, hand hygiene practices and other COVID-19 school guidelines are difficult to follow while at school.

- Overall (67%) of special education teachers found it hard or very hard to maintain 6 feet between themselves and students. Elementary school special education teachers (77%) more often reported this difficulty compared to middle school (53%) and high school (65%) special education teachers.

- Special education teachers (61%) said it was either very easy or easy for them to wash their hands or use hand sanitizer regularly while at school but there was a difference in public school teachers reporting (69%) and private school teachers (44%).

The level of difficulty (i.e., found it very hard or hard) to follow physical distance and mask wearing protocols for students varies by school type (n = 306)





Appendix B
Data & Definitions

Notes and Limitations

The research team acknowledges several important caveats that may affect data interpretation.

- Post-collection manipulations such as data cleaning (to ensure responses are in line with skip and logic patterns) and imputation (to correct for incomplete item responses) were conducted on the cross-sectional web panel survey data collected from both parents and teachers.
- Data collected from both self-report items and items asking respondents to report their observations of others' behavior may be prone to known biases such as self-selection, social desirability and misclassification. These items should not be interpreted to infer causality.
- In some analyses, Likert-type response options have been collapsed into a smaller number of broad categories for ease of interpretation and to avoid small cell counts. For example, a 5-point Likert scale including response options "very unsatisfied," "unsatisfied," "neutral," "satisfied," and "very satisfied" may be combined to simply "unsatisfied," "neutral," and "satisfied."
- Some surveys included items using the phrase "social distancing," which was then updated in later surveys to "physical distancing" in order to reflect language used in CDC guidelines. "Physical distancing" will be used throughout this report.
- While individuals using all learning or teaching models (100% in-person, 100% virtual, or hybrid) responded to our surveys, items related to in-school policies and behaviors were only posed to those attending school in-person in some capacity at the time of survey distribution. Such items are identified via direct notation of charts throughout this report.
- Response rates for these survey were not captured due to the various recruitment strategies (different platforms, distributions partners, etc) used across surveys.

Weighting methodology

The sample data were weighted, meaning assigned a heavier or lighter importance, using demographic variables, such as age, gender, region, location, race and income, in order to be representative of the national US population.

For the cross-sectional parent, student, teacher and principal analyses, a multipurpose Iterative Proportional Fitting (IPF) procedure was used to calibrate individual-level weights (using R statistical software). This procedure simultaneously adjusted for:

1) Population estimates from the 2019 National Health Interview Survey (student and parent data) and the 2017-2018 National Teachers and Principals Survey (principal and teacher survey data)

2) Bloc-level non-response adjustment based on calibration in the quintiles of estimated propensity to respond to surveys

3) Weight trimming procedures (removed 5% of extreme high/low estimates) to create generalizable nationally-representative population estimates.

School learning models defined

Term	Working Definition
Teaching model	Teachers were asked how they were providing instruction to students, regardless of and separate from where students were receiving the instruction. For example, teachers may indicate that they were teaching virtually while students were attending school in-person, teachers may teach in person at school and stream video for online learners. Only teacher survey respondents were asked separately about teaching and learning models, whereas other respondents were asked about the model being used by their students. Where applicable, teaching model is used instead of learning model in analyses of teacher survey data.
Learning model	The mode in which students were receiving instruction at their schools–either 100% in-person, hybrid, or 100% virtual/remote. Learning model was reported by all survey respondents and is used in most analyses of differences by school model cited throughout this report.
100% in-person	Students and teachers engage in all classes, activities and other events in-person at school.
100% virtual/remote	Students and teachers engage in virtual-only classes, activities and events.
Hybrid	Some students participate in virtual learning while other students participate in in-person learning. For a given student, this may mean attending school in-person some days of the week and participating virtually on other days.

Demographic Characteristics: Parent Cross-sectional Data (March 2-10, 2021)

Parent data were collected via a Qualtrics web panel. Parents sample data have been weighted using these demographic characteristics for the purpose of analysis.

Geography n(%)		Location n(%)		Race/Ethnicity n(%)		School Type n(%)		Grade level n(%)	
Midwest	858 (21%)	Urban	1,278 (32%)	NH White	2,496 (62%)	Private school	408 (10%)	Kindergarten	416 (10%)
Northeast	694 (17%)	Suburban	1,955 (48%)	NH Black	500 (12%)	Public school	3,364 (83%)	Elementary school	1,465 (36%)
South	1,551 (38%)	Rural	806 (20%)	Hispanic	808 (20%)	Charter/magnet	229 (6%)	Middle school	904 (22%)
West	936 (23%)			NH Other	235 (6%)	Boarding school	11 (0.3%)	High school	1,254 (31%)
						Other	27 (0.7%)		

Age n(%)		Income n(%)		Gender n(%)		Learning Model n(%)	
Under 40 years	2,048 (51%)	Under $49,999	1,696 (42%)	Male	1,974 (49%)	In-person	866 (21%)
40+ years	1,991 (49%)	Between $50,000 and $99,999	1,395 (35%)	Female	2,038 (50%)	Hybrid	1,342 (33%)
		$100,000 or more	948 (23%)	Transgender/ non-binary/gender non-conforming	27 (1%)	Remote/virtual	1,831 (45%)

Demographic Characteristics: Teacher Cross-Sectional Data (March 3-31, 2021)

Teacher data were collected via a Qualtrics web panel. Teacher sample data have been weighted using these demographic characteristics for the purpose of analysis.

Geography n(%)		Location n(%)		Race/Ethnicity n(%)		School Type n(%)		Grade level n(%)	
Midwest	389 (21%)	Urban	593 (32%)	NH White	1,431 (78%)	Private school	138 (7%)	Kindergarten and elementary school	888 (48%)
Northeast	314 (17%)	Suburban	831 (45%)	NH Black	124 (7%)	Public school	1,598 (87%)	Middle school	456 (25%)
South	703 (38%)	Rural	418 (23%)	Hispanic	209 (11%)	Charter/magnet	93 (5%)	High school	498 (27%)
West	436 (23%)			NH Other	78 (4%)	Boarding school	4 (0.2%)		
						Other	9 (0.5%)		

Age n(%)		Income n(%)		Gender n(%)		Learning Model n(%)	
Under 40 yrs	510 (28%)	Under $49,999	236 (13%)	Male	422 (23%)	In-person	422 (23%)
40+ years	1,332 (72%)	Between $50,000 and $99,999	962 (52%)	Female	1,414 (77%)	Hybrid	884 (48%)
		$100,000 or more	644 (35%)	Transgender/ non-binary/gender non-conforming	6 (0.3%)	Remote/virtual	536 (29%)

Demographic Characteristics: Student Cross-Sectional Data (March 24-April 11, 2021)

Student data were collected via a Qualtrics web panel. Students sample data have been weighted using these demographic characteristics for the purpose of analysis.

Geography n(%)		Location n(%)		Race/Ethnicity n(%)		School Type n(%)		Grade level n(%)	
Midwest	410 (19%)	Urban	892 (41%)	NH White	1160 (53%)	Private school	318 (14%)	Middle school	777 (35%)
Northeast	417 (19%)	Suburban	945 (43%)	NH Black	326 (15%)	Public school	1728 (79%)	High school	1423 (65%)
South	874 (40%)	Rural	363 (16%)	Hispanic	489 (22%)	Charter/magnet	127 (6%)		
West	499 (22%)			NH Other	225 (10%)	Boarding school	14 (0.5%)		
						Other	13 (0.5%)		

Age n(%)		Gender n(%)		Learning Model n(%)	
13-15 years	1528 (69%)	Male	1089 (49.5%)	In-person	343 (16%)
16-20 years	672 (31%)	Female	1090 (49.5%)	Hybrid	905 (41%)
		Transgender/ non-binary/gender non-conforming	21 (1%)	Remote/virtual	952 (43%)

Demographic Characteristics: Principal Cross Sectional Data (April 7-17, 2021)

Principal data were collected through partner dissemination channels. Sample data have been weighted using these demographic characteristics for the purpose of analysis.

Geography n(%)		Location n(%)		Race/Ethnicity n(%)		School Type n(%)	
Midwest	81 (14%)	Urban	344 (60%)	NH White	408 (71%)	Private school	122 (21%)
Northeast	107 (19%)	Suburban	144 (25%)	NH Black	66 (11%)	Public school	433 (75%)
South	119 (21%)	Rural	88 (15%)	Hispanic	28 (5%)	Charter/magnet	6 (1%)
West	269 (47%)			NH Other	74 (13%)	Boarding school	12 (2%)
						Other	3 (0.1%)

Age n(%)		Gender n(%)		Learning Model n(%)	
Under 40 yrs	119 (21%)	Male	387 (67%)	In-person	136 (24%)
40+ years	457 (79%)	Female	189 (33%)	Hybrid	304 (53%)
				Remote/virtual	136 (24%)

Demographic Characteristics: Facilities Cross Sectional Data (April 15-May 17, 2021)

Facilities data were collected through partner dissemination channels. Sample data are unweighted.

Geography n(%)		Location n(%)		Race/Ethnicity n(%)		School Type n(%)	
Midwest	175 (25%)	Urban	514 (73%)	NH White	492 (69%)	Private school	253 (36%)
Northeast	95 (13%)	Suburban	154 (22%)	NH Black	71 (10%)	Public school	437 (62%)
South	257 (36%)	Rural	40 (5%)	Hispanic	42 (6%)	Charter/magnet	3 (0.4%)
West	181 (26%)			NH Other	103 (15%)	Boarding school	14 (2%)
						Other	3 (0.4%)

Age n(%)		Gender n(%)	
Under 40 yrs	491 (69%)	Male	568 (80%)
40+ years	217 (31%)	Female	139 (20%)

Demographic Characteristics: Parents Crowdsourced Data (3/29/21 – 3/31/21)

Parents data for handwashing, masking, and distancing was collected through Pollfish (n = 1495). These data were not weighted in the analysis.

Geography n(%)		Race/Ethnicity n(%)		School Type n(%)		Grade Level n(%)	
Midwest	235 (16%)	American Indian or Alaska native	50 (3.3%)	Public School	932 (62%)	Elementary school	690 (46%)
Northeast	235 (16%)	Asian or Asian American	100 (6.7%)	Private School	272 (18%)	Middle school	408 (27%)
South	480 (32%)	Black or African American	348 (23%)	Charter/Magnet	133 (8.9%)	High school	397 (27%)
West	286 (19%)	Latino/a, Hispanic, or Latinx	350 (23%)	Boarding School	92 (6.2%)		
Unknown	259 (17%)	Native Hawaiian or other Pacific Islander	49 (3.3%)	Other	66 (4.4%)		
		White	495 (33%)				
		Some other race or origin	49 (3.3%)				
		Prefer not to respond	4 (0.3%)				
		Multiple races	50 (3.3%)				

Learning Model n(%)		Gender n(%)		Age n(%)	
Hybrid	575 (38%)	Male	698 (47%)	21 – 24	74 (4.9%)
In-person	394 (26%)	Female	797 (53%)	25 – 34	340 (23%)
Remote/virtual	526 (35%)			35 – 44	638 (43%)
				45 – 54	290 (19%)
				55 – 64	115 (7.7%)
				65 – 99	38 (2.5%)

Demographic Characteristics: Parents Crowdsourced Data (4/05/21 – 4/06/21)

Parents data for contact tracing were collected through Pollfish (n = 1500). These data were not weighted in the analysis.

Geography n(%)		Race/Ethnicity n(%)		School Type n(%)		Grade Level n(%)	
Midwest	229 (15%)	American Indian or Alaska native	50 (3.3%)	Public School	791 (53%)	Elementary school	634 (42%)
Northeast	267 (18%)	Asian or Asian American	100 (6.7%)	Private School	328 (22%)	Middle school	459 (31%)
South	430 (29%)	Black or African American	350 (23%)	Charter/Magnet	176 (12%)	High school	407 (27%)
West	200 (13%)	Latino/a, Hispanic, or Latinx	350 (23%)	Boarding School	110 (7.3%)		
Unknown	374 (25%)	Native Hawaiian or other Pacific Islander	50 (3.3%)	Other	95 (6.3%)		
		White	496 (33%)				
		Some other race or origin	50 (3.3%)				
		Prefer not to respond	4 (0.3%)				
		Multiple races	50 (3.3%)				

Learning Model n(%)		Gender n(%)		Age n(%)	
Hybrid	563 (38%)	Male	802 (53%)	21 – 24	65 (4.3%)
In-person	421 (28%)	Female	698 (47%)	25 – 34	308 (21%)
Remote/virtual	516 (34%)			35 – 44	648 (43%)
				45 – 54	299 (20%)
				55 – 64	114 (7.6%)
				65 – 99	66 (4.4%)

Demographic Characteristics: Teacher Crowdsourced Data (3/29/21 – 4/05/21)

Teacher data for handwashing, masking, and distancing were collected through Pollfish (n = 556). These data were not weighted in the analysis.

Geography n(%)		Race/Ethnicity n(%)		School Type n(%)		Grade Level n(%)	
Midwest	124 (22%)	American Indian or Alaska native	23 (4.1%)	Public School	442 (79%)	Elementary school	210 (38%)
Northeast	116 (21%)	Asian or Asian American	24 (4.3%)	Private School	69 (12%)	Middle school	161 (29%)
South	205 (37%)	Black or African American	38 (6.8%)	Charter/Magnet	27 (4.9%)	High school	185 (33%)
West	81 (15%)	Latino/a, Hispanic, or Latinx	52 (9.4%)	Boarding School	10 (1.8%)		
Unknown	30 (5.4%)	Native Hawaiian or other Pacific Islander	5 (2.7%)	Other	8 (1.4%)		
		White	449 (81%)				
		Some other race or origin	14 (2.5%)				
		Prefer not to respond	11 (2.0%)				

Learning Model n(%)		Gender n(%)		Age n(%)	
Hybrid	305 (55%)	Male	209 (38%)	20 – 29	95 (17%)
In-person	158 (28%)	Female	347 (62%)	30 – 49	326 (59%)
Remote/virtual	93 (17%)			50 – 54	49 (8.8%)
				55 – 64	55 (9.9%)
				65 - 99	31 (5.6%)

Demographic Characteristics: Teacher Crowdsourced Data (4/05/21– 4/12/21)

Teacher data for contact tracing were collected through Pollfish (n = 566). These data were not weighted in the analysis.

Geography n(%)		Race/Ethnicity n(%)		School Type n(%)		Grade Level n(%)	
Midwest	122 (22%)	American Indian or Alaska native	25 (4.4%)	Public School	443 (78%)	Elementary school	223 (39%)
Northeast	119 (21%)	Asian or Asian American	42 (7.4%)	Private School	74 (13%)	Middle school	163 (29%)
South	198 (35%)	Black or African American	39 (6.9%)	Charter/Magnet	32 (5.7%)	High school	180 (32%)
West	97 (17%)	Latino/a, Hispanic, or Latinx	63 (11%)	Boarding School	9 (1.6%)		
Unknown	30 (5.3%)	Native Hawaiian or other Pacific Islander	17 (3.0%)	Other	8 (1.4%)		
		White	438 (77%)				
		Some other race or origin	14 (2.5%)				
		Prefer not to respond	12 (2.1%)				

Learning Model n(%)		Gender n(%)		Age n(%)	
Hybrid	279 (49%)	Male	237 (42%)	20 – 29	92 (16%)
In-person	187 (33%)	Female	329 (58%)	30 – 49	333 (59%)
Remote/virtual	100 (18%)			50 – 54	43 (7.6%)
				55 – 64	57 (10%)
				65 - 99	41 (7.2%)

Demographic Characteristics: School Staff Crowdsourced Data (3/29/21 – 4/05/21)

School staff data for handwashing, masking, and distancing were collected through Pollfish (n = 491). These data were not weighted in the analysis.

Geography n(%)		Race/Ethnicity n(%)		School Type n(%)		Grade Level n(%)	
Midwest	100 (20%)	American Indian or Alaska native	47 (9.6%)	Public School	327 (67%)	Elementary school	202 (41%)
Northeast	95 (19%)	Asian or Asian American	56 (11%)	Private School	74 (15%)	Middle school	125 (25%)
South	141 (29%)	Black or African American	83 (17%)	Charter/Magnet	48 (9.8%)	High school	164 (33%)
West	86 (18%)	Latino/a, Hispanic, or Latinx	78 (16%)	Boarding School	21 (4.3%)		
Unknown	69 (14%)	Native Hawaiian or other Pacific Islander	49 (10.0%)	Other	21 (4.3%)		
		White	320 (65%)				
		Some other race or origin	36 (7.3%)				
		Prefer not to respond	14 (2.9%)				

Learning Model n(%)		Gender n(%)		Age n(%)	
Hybrid	197 (40%)	Male	196 (40%)	20 – 29	170 (35%)
In-person	190 (39%)	Female	295 (60%)	30 – 49	196 (40%)
Remote/virtual	104 (21%)			50 – 54	30 (6.1%)
				55 – 64	67 (14%)
				65 - 99	28 (5.7%)

APPENDIX

Demographic Characteristics: School Staff Crowdsourced Data (4/05/21– 4/12/21)

School staff data for contact tracing were collected through Pollfish (n = 478). These data were not weighted in the analysis.

Geography n(%)		Race/Ethnicity n(%)		School Type n(%)		Grade Level n(%)	
Midwest	94 (20%)	American Indian or Alaska native	42 (8.8%)	Public School	311 (65%)	Elementary school	185 (39%)
Northeast	85 (18%)	Asian or Asian American	67 (14%)	Private School	76 (16%)	Middle school	119 (25%)
South	141 (29%)	Black or African American	76 (16%)	Charter/Magnet	37 (7.7%)	High school	174 (36%)
West	91 (19%)	Latino/a, Hispanic, or Latinx	74 (15%)	Boarding School	31 (6.5%)		
Unknown	67 (14%)	Native Hawaiian or other Pacific Islander	38 (7.9%)	Other	23 (4.8%)		
		White	321 (67%)				
		Some other race or origin	30 (6.3%)				
		Prefer not to respond	11 (2.3%)				

Learning Model n(%)		Gender n(%)		Age n(%)	
Hybrid	198 (41%)	Male	178 (37%)	20 – 29	134 (28%)
In-person	193 (40%)	Female	300 (63%)	30 – 49	216 (45%)
Remote/virtual	87 (18%)			50 – 54	40 (8.4%)
				55 – 64	64 (13%)
				65 - 99	24 (5.0%)