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Prospective Pilot Study Evaluating SARS-CoV-2 Transmission-Limiting Measures in an On-Site School

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ABSTRACT

OBJECTIVES: The purpose of our study is to evaluate the feasibility and reliability of a comprehensive set of preventive measures in limiting secondary transmission of COVID-19 in schools.

METHODS: A prospective cohort study was conducted to evaluate SARS-CoV-2 transmission in an independent K-8 school in San Mateo County, California. The research was conducted between September 14, 2020 through March 22, 2021 and consisted of: 1) demographic and epidemiological questionnaires; 2) daily symptom reporting; 3) weekly RT-PCR testing; and 4) periodic on-site qualitative observations.

RESULTS: One hundred eighty (79%) students and 63 (74%) on-site staff/contractors were enrolled. Participants reported symptoms in 144 (<1%) daily surveys of the 19,409 collected. Among those who reported symptoms and exposures, none tested positive during the 22-week study period. Of all participants, a total of 6 tested positive for SARS-CoV-2 at least once by RT-PCR; all were asymptomatic at time of testing. No in-school transmission occurred. Mask adherence was high

among all grades, and incidents of improper mask use mostly occurred during noninstruction time. Physical distancing was well-enforced during class time and snack breaks, although adherence during noninstruction time waned as the school year progressed.

CONCLUSIONS: Our comprehensive, prospective study following COVID-19 transmission over 22 weeks in a K-8 school demonstrates that: 1) surveillance testing is important for detecting asymptomatic infections in schools; 2) monitoring symptoms may not be necessary and/or sufficient for COVID-19; and 3) younger children can adhere to key mitigation measures (eg, masking) which have the potential to limit transmission.

KEYWORDS: COVID-19; mitigation strategies; on-site learning; preventive measures; school reopening

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WHAT'S NEW

Using prospective symptom reporting, weekly testing, and safety protocols, we found that symptom reporting is not effective in predicting COVID-19 cases in schools. Preventive measures might limit in-school transmission provided there are sufficient resources and support in school and community.

Medicine started advocating for in-person learning for children's social, emotional, and overall well-being given that COVID-19 policies are implemented to mitigate transmission risk.^{2,3}

Our work took place in an independent K-8 school in San Mateo County, California, with an independent board of trustees overseeing school operations. In June 2020, the school created a COVID task force comprised of parents and community members – some of whom are health care professionals, scientists, teachers, and school administrators – to develop a protocol for mitigating the transmission of COVID-19 amongst students and staff who chose to participate in a hybrid learning model (vs full-time distance learning). The school also sought RT-PCR

THE COVID-19 PANDEMIC has led to unprecedented disruptions of on-site learning, particularly for K-12 students. By April 1, 2020, most countries had implemented country-wide school closures to reduce the transmission of COVID-19.¹ By late June 2020, the American Academy of Pediatrics (AAP) and the National Academy of

testing and protocol guidance from the Stanford School of Medicine.

The school implemented a multilayered approach to mitigation and resumed on-site learning on September 14, 2020 (Fig. 1). All students and staff were required to wear masks indoors and outdoors at all times while on campus, with the exception of scheduled snack and water breaks outdoors with physical distancing enforced. Six feet physical distancing was enforced in all grades. Low-impact physical exercise was encouraged while maintaining physical distancing within cohorts, but all other extracurricular activities and high-intensity/contact sports were not permitted. Virtual meetings were used for large group gatherings when meaningful (eg, weekly town halls, school assemblies, back-to-school nights, or staff meetings). Students stayed in stable cohorts (≤ 12 students) and were in-person 5 days per week for half days, with grades K-4 on-site in the morning and grades 5-8 on-site in the afternoons. A 2-hour break in between was used for cleaning/aeration of shared spaces, commuting, and eating lunch at home. To maximize ventilation, some classrooms were set outdoors under wind and water-resistant tents. When this was not possible, windows and doors were kept open and multiple fans were used to create cross-ventilation in indoor classrooms. HVAC units were upgraded to Merv 13/HEPA filters and the fresh air percentage was increased from 0 to 30%. For hand hygiene, touchless hand sanitizer stations, faucets, soap dispensers, towel dispensers, and water bottle fillers were added around the campus and handwashing was often enforced by staff. Doors were kept open as much as possible. Other physical infrastructure adjustments included visual reminders for physical distancing (eg, spray-painted turf, color-blocked carpets) and adjusting desks to face the same direction. Finally, daily symptom reporting and weekly RT-PCR

surveillance were required for all staff and students in hybrid learning with strict stay-at-home policies for symptoms, exposure, or positive test.

Studies in the United States, mostly conducted in the Fall of 2020, have associated implementations of preventive measures (eg, mask mandates and physical distancing) with reductions in secondary transmission in schools.⁴⁻¹¹ However, few studies have prospectively evaluated the prevalence of COVID-19 cases in the school setting over time. The purpose of our study – which covers 22 weeks of in-person learning – is to evaluate the feasibility and reliability of various preventive measures from recommended guidelines from the AAP, Centers for Disease Control and Prevention (CDC), and California Department of Public Health in limiting transmission of COVID-19 in schools.^{2,12,13} The impact of mitigation measures was assessed using a weekly RT-PCR testing program to identify index COVID-19 cases and secondary transmissions.

METHODS

STUDY DESIGN AND RECRUITMENT

A prospective, mixed methods cohort study consisting of quantitative and qualitative data collection was used to evaluate school transmission of SARS-CoV-2 from September 14, 2020 through March 22, 2021 (22 school weeks).¹⁴ School breaks were as follows: September 28 through October 2, 2020; November 25, 2020 through January 1, 2021; and February 15 through February 19, 2021. The analysis included 1) demographic and epidemiological data collected by the study team, 2) daily COVID-19 symptoms data collected by the school and provided to the study team via a study ID, 3) weekly RT-PCR test results collected by the study team, and 4)

Preventive Practices	Classroom Adjustments	Physical Infrastructure	Health Screening	Stay-at-home Policies
<ul style="list-style-type: none"> - Mandatory masking for all staff and students (with the exception of designated breaks/snack time). - Eating occurs outdoors with additional distancing (6-10 ft). - Students asked to hand sanitize upon arrival to their classroom and intermittently throughout the day. - High-touch surfaces disinfected by cleaning staff regularly throughout the day. - Supply-sharing at school is minimized and cleaned after each use. - No large in-person group activities (e.g., athletics). Replaced by virtual meetings when meaningful (e.g., weekly town halls, staff meetings, assemblies, or back-to-school nights). 	<ul style="list-style-type: none"> - Option of distance learning or hybrid learning (half-days on campus, 5 days a week) - Students placed in stable cohorts with one teacher (8 students on average, 12 students max), but may interact with other teachers via distance learning. - Larger indoor spaces (e.g., auditorium, cafeteria) converted to classrooms. - Desks face same direction, each 3 ft distance apart. - Addition of ceiling and floor fans to increase cross-ventilation in indoor classrooms. - Addition of portable HEPA fans in bathrooms and learning spaces. - Doors and windows kept open wherever possible. - Placement of automatic hand sanitizer dispensers at entrances and in all learning spaces. 	<ul style="list-style-type: none"> - Addition of outdoor classrooms using semi-permanent shade structures and artificial turf flooring. - Construction to remove walls and open up spaces to improve airflow and spacing for indoor classrooms. - HVAC units upgraded to Merv 13/HEPA filters and fresh air percentage increased from 0 to 30%. - Water fountains taped off to prevent use. - Addition of touchless faucets, soap & towel dispensers, and water bottle fillers. - Addition of visual reminders for physical distancing (e.g., spray-painted turf, color-blocked carpets) 	<ul style="list-style-type: none"> - Daily symptom and temperature reporting. - Weekly COVID-19 exposure reporting. - Weekly RT-PCR testing on campus. 	<ul style="list-style-type: none"> - Students/Staff who test positive must switch to distance learning for 14 days, along with cohorts of all family members. - Students/Staff with symptoms must switch to distance learning (along with family members) until they test negative and symptoms resolve. - Students/Staff with high-risk contact to a positive case must switch to distance learning for 14 days along with cohorts of all family members. - School provided guidelines defining low-risk and high-risk activities. School community encouraged to consider switching to distance learning after engaging in high-risk activities.

Figure 1. Overview of preventive measures implemented.

periodic on-site qualitative observations conducted by the study team.

Weekly testing and daily symptom reporting were required by the school for enrolling in hybrid learning, but participation in the research study was voluntary. Informed consent through REDCap (Research Electronic Data Capture) included permission to use testing results, symptom data, demographic data, and epidemiological data for research and evaluation. Parental consent was required for all student participants and written assent was required for students over 7 years of age. All data were deidentified prior to analysis and assigned unique study IDs and cohort numbers. The Stanford Institutional Review Board approved this study (IRB-57858).

DEMOGRAPHIC AND EPIDEMIOLOGICAL DATA COLLECTION

Upon completing informed consent, participants provided baseline demographic and household information through REDCap. Demographic information included age, zip code, grade level, race/ethnicity, and gender. Household information included parental education attainment level and parents' ability to work remotely.

WEEKLY RT-PCR TESTING

SARS-CoV-2 RT-PCR testing was conducted on campus weekly on Thursdays for hybrid learning students and staff. Staff and students with potential exposure or symptoms were tested separately via drive-through on campus. Results were typically available within 24 to 72 hours of testing. Only those with a negative RT-PCR result were permitted to attend school on-site the following Monday. To maintain confidentiality, school administrators were informed of the stable cohorts that contained a positive result but were not provided any individual identifying information. Families and staff members had individual access to test results and were requested to notify the school in the event of a positive result or extracurricular exposure. Cohorts with a positive RT-PCR result transitioned to distance learning for 14 days. Staff and students were tested a week before the school re-opened in the Fall and after school breaks, and only began in-person learning if test results were negative. All students were in distance learning the week after a school break to ensure time for testing.

SYMPTOMS, EXPOSURE, AND HEALTH BELIEF MODEL DATA COLLECTION

The school required daily symptom reporting for hybrid learning students and staff via a mobile application called *Visitu*.¹⁵ For hybrid learning students, the symptom reporting survey was sent to parents/guardians. If an individual reported a temperature above 100° Fahrenheit, and/or COVID-19-related symptoms per the CDC, the staff or student was required to stay in distance learning until symptoms resolved and they received a negative RT-PCR test result.¹⁶

Beginning October 8, 2020, a weekly survey was added by the school via the same mobile application to assess

risk of exposure to infection and the participants' perceived susceptibility and perceived severity of infection based on the Health Belief Model, a widely used framework for explaining health behaviors and guiding related interventions.¹⁷ An item about staff's vaccination status was added beginning March 4, 2021 as the education sector became eligible for vaccinations in San Mateo County, California beginning February 22, 2021.¹⁸

QUALITATIVE OBSERVATIONS

Two study staff visited the school campus (after receiving a negative RT-PCR result) to conduct unannounced observations on a monthly basis. Study staff walked through and documented implementations and compliance to preventive measures in the areas of physical infrastructure, physical distancing, proper mask use, and hand hygiene. A report was provided to the school administration within 2 days, so corrective action could be taken as appropriate.

STATISTICAL ANALYSIS

Baseline participant characteristics, demographics, and daily symptoms reported by participants were calculated using counts and percentages for categorical variables. Perceived susceptibility and perceived severity were plotted to assess change over time. Differences in responses for perceived susceptibility and perceived severity between staff and parents were assessed at 3 time points using Fisher's exact test, with a two-sided alpha of 0.05. All statistical analyses were performed using R statistical software (version 4.0.3).

RESULTS

Of the 296 students enrolled in the school, 227 (76.7%) were enrolled in hybrid learning during our study period. A total of 85 adults who worked on-site included staff and contractors (eg, coaches, cleaning personnel, construction staff). We consented 180 of 227 (79%) hybrid learning students and 63 of 85 (74%) on-site adults for the study. The number of students and staff on campus varied from day-to-day due to various stay-at-home policies. On average, we received 145 (SD 9) responses from parents and 45 (SD 5) responses from staff per week.

Approximately half of the students in our sample identified as female (94/180; 52%) (Table). Most students were White (76/180; 42%), followed by Asian (44/180; 24%), mixed race (37/180; 21%), Hispanic/Latino (7/180; 4%), and Black or African American (1/180; 1%). Overall, these gender and race/ethnicity proportions were similar to those of all students enrolled in the school. Grade levels were well distributed. The majority (243/333; 73%) of student participants' parents had an education level higher than a bachelor's degree. Additionally, the majority (254/332; 77%) of parents reported that their job allowed them to work remotely.

Of the staff in the study, a majority were female (41/63; 65%) and 40 years old or younger (40/63; 63%) (Table). The majority of staff were White (40/63; 63%), followed

Table. Participant and School Demographics

Demographic Categories	Students Enrolled in Study (n = 180)	All Students Enrolled in School (n = 296)	On-site Staff Enrolled in Study (n = 63)
Gender, n (%)			
Male	86 (48)	148 (50.0)	21 (33)
Female	94 (52)	148 (50.0)	41 (65)
Non-binary	0 (0)	0 (0)	1 (2)
Grade level, n (%)			
K	28 (16)	37 (12.5)	NA
1st grade	22 (12)	30 (10.1)	NA
2nd grade	18 (10)	30 (10.1)	NA
3rd grade	22 (12)	33 (11.2)	NA
4th grade	15 (8)	31 (10.5)	NA
5th grade	21 (12)	39 (13.2)	NA
6th grade	24 (13)	35 (11.8)	NA
7th grade	17 (9)	34 (11.5)	NA
8th grade	13 (7)	27 (9.1)	NA
Age, n (%)			
18–30	NA	NA	17 (27)
31–40	NA	NA	23 (37)
41–50	NA	NA	7 (11)
51–60	NA	NA	11 (18)
61 or older	NA	NA	2 (3)
Unknown	NA	NA	3 (5)
Race/Ethnicity, n (%)			
White	76 (42)	103 (34.6)	40 (63)
Asian	44 (24)	87 (29.2)	11 (17)
Mixed (2 or more races)	37 (21)	87 (29.2)	3 (5)
Hispanic/Latinx	7 (4)	13 (4.4)	5 (8)
Black or African American	1 (1)	2 (0.6)	1 (2)
Other*	15 (8)	6 (2.0)	3 (5)
Parental/staff education attainment, n (%)	333/356 (93.5) [†]		
High school or less	0 (0)	NA	2 (3)
Some college	10 (3.0)	NA	4 (6)
Bachelor's or associate's degree	80 (24.0)	NA	27 (43)
Higher than Bachelor's [‡]	243 (73.0)	NA	28 (44)
Unknown	0 (0)	NA	2 (3)
Parental work situation during COVID-19, n (%)	332/356 (93.2)		
My job allows me to work remotely	254 (76.5)	NA	NA
My job requires me to commute to work	31 (9.3)	NA	NA
I am currently not working	47 (14.2)	NA	NA

*Includes native Hawaiian, other Pacific Islanders, American Indian/Alaska Native, or other.

†Participants were able to provide information for one or both parents.

‡Includes Master's, professional, and doctoral degrees.

by Asian (11/63; 17%), Hispanic/Latino (5/63; 8%), mixed race (3/63; 5%), and Black/African American (1/63; 2%).

Of the 19,409 daily symptom surveys collected, 144 surveys (0.74%) reported at least one symptom from the CDC's list of COVID-19 symptoms.¹⁶ Of the 28 unique staff and 43 unique students who reported symptoms at least once, nasal congestion, sore throat, runny nose, headache, and fatigue were most commonly reported (Fig. 2).

Over the 22 weeks of data collection, "exposure to COVID-19 positive individuals for at least 15 minutes" was reported 25 times by students and 10 times by staff members. Unsure exposure was reported 14 times by students and 17 times by staff. Students reported "traveling within the Bay Area" 179 times, "within the State of California" 40 times, and "outside of the country" 6 times. Staff members reported "traveling within the Bay Area" 50 times and "within the State" 15 times.

We assessed perceived susceptibility and perceived severity at 3 main time points: 1) the beginning of the study during the week of October 8, 2020; 2) following the 7-day case rate peak in the community during the week of January 14, 2021; and 3) the final week of the study, March 18, 2021. Throughout the study period, most parents believed that their child was "unlikely" or "probably unlikely" to be infected, and if they were, their symptoms would likely not be severe ("none," "mild," or "moderate"). Responses of high perceived susceptibility ("possibly likely," "probably likely," or "likely" to be infected) were consistent irrespective of community transmission rates – 13% (19/144) in October 2020, 11% (15/141) in January 2021, and 12% (18/153) in March 2021. The proportion of parents who believed their child would likely have "severe" or "very severe" illness if infected decreased, from 3% (5/144) to 2% (3/141) to 1% (2/153), respectively (Fig. 3).

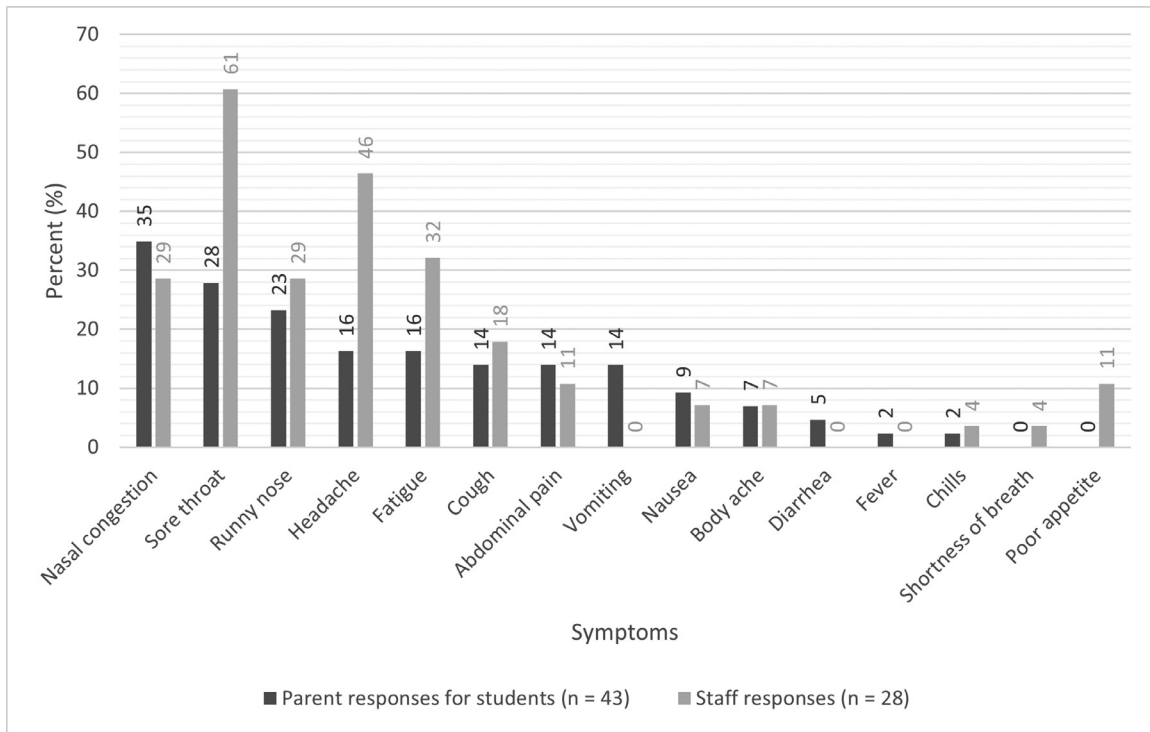


Figure 2. Frequency of unique symptoms reported by participants. Participants reported symptoms in 144 daily surveys. Percentages calculated separately for staff (n = 28) and students (n = 43).

In comparison, most staff also responded with low perceived susceptibility and severity. However, the proportion of staff with high perceived susceptibility fluctuated from 13% (6/48) in October 2020 to 30% (13/44) in January 2021 to 6% (3/51) in March 2021. The proportion of staff with high perceived severity trended downward from 6% (3/48) to 5% (2/44) to 2% (1/51) respectively (Fig. 3). The difference in perceived high susceptibility in contracting COVID-19 between parent and staff responses was significant ($P = .006$) in January following the 7-day case rate peak in the County, but not at the beginning or the end of the study. There was no statistical difference in perceived severity between parent and staff responses at any of the 3 time points.

At the end of the study period, 34% (19/56) of staff who provided vaccination status were fully vaccinated, 59% (33/56) were partially vaccinated, and 7% (4/56) were not vaccinated.

Of all enrolled individuals, 6 (3 adults and 3 students) tested positive at least once by RT-PCR during the 22-week study period. All 6 individuals were asymptomatic at the time of testing and 4 remained asymptomatic. These 6 individuals were distributed across 4 households. Secondary transmission was not observed within or across cohorts in the school during the study period.

A total of 4 on-site observations were conducted by study staff in September, October, November, and February. Throughout the study period, small cohort sizes (an average of 8 students per cohort) were observed with minimal intermingling between different cohorts. Hand sanitizer was accessible throughout the school at every entrance and in all learning spaces. Proper mask use

(covering the mouth and nose) by students and staff was observed in general at each visit. Incidences of improper/no mask use were only observed with students, quickly corrected by staff, and mostly occurred during noninstruction time (eg, during transitions from one classroom to break area, during recess, or while walking to/from the car for pickup/drop-off). Students wearing masks below their nose was typically only observed in at most 2 individuals during each 1-hour visit. Physical distancing was well-enforced during class time but was noticeably more difficult during noninstruction time (eg, recess, drop-off/pick-up, or transitions). Strict adherence to 6-foot distancing appeared to wane as the school year progressed, both among staff members and students. Observations of close contact (eg, talking next to each other within 3 feet) among staff and students were highest during the February observation.

DISCUSSION

The strength of our study is its internal validity, that is, it is a carefully conducted, prospective study which includes surveillance testing, symptom tracking, and mitigation measures implemented in a K-8 school setting. It is one of the longest prospective studies in a school environment so far, with varying community case rates during our study period of 22 school weeks. Seven-day average daily case rates per 100,000 persons in San Mateo County changed from 5.0 on October 8, 2020 to 51.8 on January 14, 2021 to 4.7 on March 18, 2021.¹⁹ During the same periods, California's 7-day average daily case rates per 100,000 persons were 8.4, 83.7, and 5.7 respectively¹⁹; in

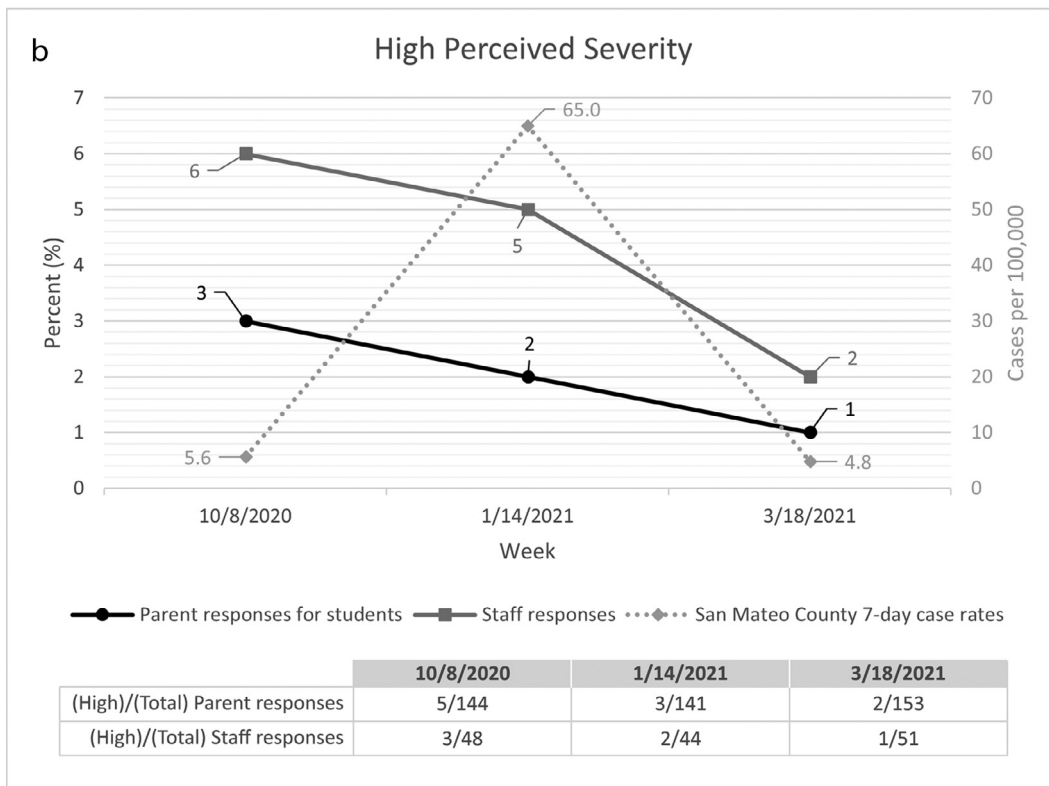
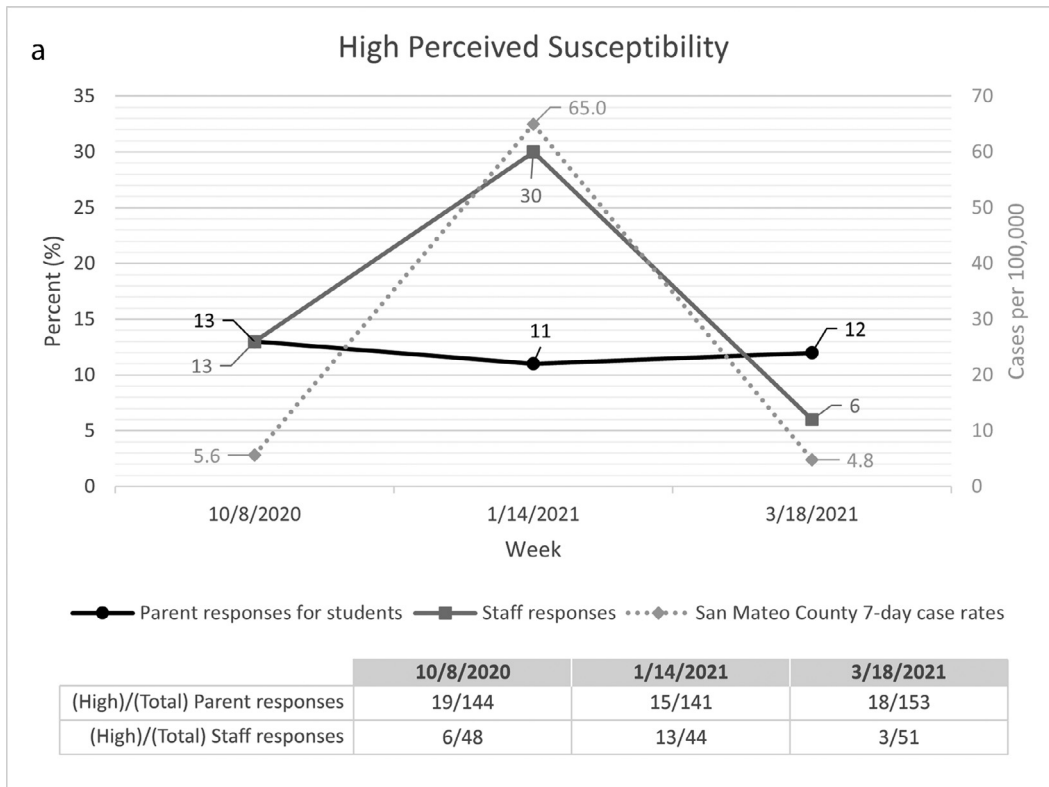


Figure 3. (a) Proportion of participants with high perceived susceptibility of COVID-19. High susceptibility included responses of “possibly likely,” “probably likely,” or “likely” to the question: “At this time, I think my chance of getting COVID-19 is [unlikely, probably unlikely, possibly likely, probably likely, likely].” High perceived susceptibility was significantly different between parents’ responses for students, and staff responses on January 14 ($P = .006$) using Fisher’s exact test with a two-sided alpha; differences during other time points were not significant ($P > .05$). (b) Proportion of participants with high perceived severity of COVID-19. High perceived severity included responses of “severe” or “very severe” to the question: “At this time, if I were to get COVID-19, my symptoms would likely be [none, mild, moderate, severe, very severe].” There were no significant differences between parents’ responses for students, and staff responses during any of the time points ($P > .05$).

the United States, 7-day average daily case rates varied from 99.7 to 493 to 114 respectively.²⁰ Despite lower case rates in San Mateo County, trends were consistent with California and the nation overall – COVID-19 case rates peaked and infection was widespread during the winter months of 2020.

In general, masking and physical distancing may have contributed to an overall lower rate of respiratory infections. In the 2020–2021 influenza season, there was only one pediatric flu death, as compared to 199 pediatric deaths in the previous influenza season.²¹ Similarly, outpatient illness syndromic surveillance reports to the CDC indicate fewer patients seen with influenza-like illness in the 2020–2021 influenza season compared to 2019–2020.²¹

In our study, because the school was able to implement most of the recommended preventive measures, we were able to assess their feasibility and reliability prospectively, especially for younger students. We found that even elementary school students could adhere to mask mandates and that only a small proportion of students and staff reported symptoms. Due to conservative stay-at-home policies, any reported symptom resulted in an individual having to stay home from school, which may have dis-incentivized individuals from reporting mild or subjective symptoms. Furthermore, among those who reported symptoms and exposures, none tested positive; those who tested positive in school were all asymptomatic at the time of testing. This suggests that monitoring symptoms may not be necessary and/or sufficient in controlling the spread of COVID-19, particularly among a pediatric population that is susceptible to various infectious etiologies of the upper and lower respiratory tracts and more likely than adults to experience mild or no symptoms of COVID-19.^{22–25} Though establishing outdoor classrooms may not be feasible in public schools or different climates, schools can focus on improving indoor ventilation, such as upgrading HVAC units and maximizing the percentage of fresh air, using HEPA filtration systems, keeping windows or doors open, and adding fans with consideration for placement.^{26,27}

Throughout the study, most parents and staff did not believe they were highly susceptible to contracting COVID-19, which may provide an indication of confidence in the school's protocols. The proportion of parents with high perceived susceptibility and severity remained consistent. The proportion of staff who believed they were highly susceptible appears to increase with community case rates and decrease after vaccines were offered to the education sector in San Mateo County, California beginning February 22, 2021.¹⁸ This is consistent with the decrease in staff's perceived severity and the decrease in physical distancing observed by study staff in February. Of note, the proportion of individuals in San Mateo County at least partially vaccinated by March 22, 2021 was 45%, which is higher than the proportion of 25% for the nation; however this rate is still too low to mitigate community transmission.^{28,29}

Post the study period in the fall of 2021, when the Delta variant was the dominant strain, the school retained the majority of preventive measures with few exceptions: physical distancing is only enforced for K-6 students who are not yet vaccinated while unmasked and eating; 7th and 8th grade students — who are all vaccinated — utilized indoor classrooms; and regular weekly on-campus RT-PCR testing was replaced with twice weekly at-home rapid nucleic acid amplification testing (NAAT) with rapid antigen testing done on site as needed (ie, onset of symptoms while in school).³⁰

Our study has several limitations. First, it may represent the best-case scenario wherein a well-resourced school was able to maintain a protocol with a comprehensive set of preventive measures. We believe even components of the protocol implemented in our study can still be very effective. It has been shown that during the 2021–2022 academic year, schools without mask mandates have experienced a significantly higher number of cases as compared to schools with mask mandates.¹¹ Multidimensional precautions have proven to be effective, even in congregate settings between school-aged children and adult staff.³¹ Second, our study was conducted at an independent school with a sample that may not be representative of other more diverse or low-resource populations (eg, a majority of parents in our sample were able to perform their work remotely). Populations including individuals with low socioeconomic status and communities of color have seen greater burdens of COVID-19, compared to predominantly white, higher socioeconomic status populations.³² However, conducting the study at an independent school allowed the flexibility and expedient implementation of the study protocol and evaluation of its feasibility, reliability and efficacy. Third, the use of RT-PCR tests may be cost-prohibitive for most public schools and testing every staff and student on-campus may not be feasible with a larger student body. However, strategically testing those exposed and/or randomly testing a selected proportion with less expensive rapid antigen tests for screening, followed by RT-PCR confirmation, may allow schools to scale their testing initiatives.³³ Finally, our study took place in a small school where the expectation is that parents/guardians be partners in the education process, so parent engagement is generally high. The implementation of a comprehensive protocol may be especially effective in schools where partnerships between schools and universities, parents, and community members are in place.

CONCLUSIONS

Our comprehensive, prospective study following COVID-19 transmission over 22 weeks in a K-8 school demonstrates that: 1) surveillance testing is important for detecting asymptomatic infections in schools; 2) monitoring symptoms may not be necessary and/or sufficient for COVID-19; and 3) younger children can adhere to key mitigation measures (eg, masking) which have the potential to

limit transmission. Though all school-aged children are now eligible for vaccination, vaccination rates among this demographic will vary.³⁴ In light of this, identifying asymptomatic infections and maintaining preventive measures such as mask use will be important until the spread of COVID-19 is minimal.

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