Guidance for In-person Education in K-12 Educational Settings

Fall 2021

As school communities across the United States prepare for the 2021-22 school year, they will be on firmer footing than in September 2020. Growing population immunity from natural infection and vaccination has resulted in lower COVID-19 incidence rates so far this summer, particularly in areas with the highest vaccination rates. Overall lower community incidence has allowed for removal of emergency mitigation orders (e.g., universal masking, social distancing, limited building occupancy) throughout the country.

Even as children under 12 remain unvaccinated, the diminishing presence of COVID-19 and the safety afforded to more vulnerable members in our communities gives school leaders the opportunity to reduce some of last year’s COVID-19 prevention measures. This guidance, which replaces PolicyLab guidance from March 2021, seeks to help schools and families interpret the latest evidence on COVID-19 transmission alongside emerging public health guidance in deciding on appropriate safety measures for the upcoming school year. This guidance is offered in the context of lower overall COVID-19 incidence rates across the country this summer. However, we note that rates are increasing in some areas. As such, the guidance provides flexibility to adjust strategies based on local conditions, both for schools and the families they serve.

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Introduction

Despite the lower risk for severe disease from COVID-19 in children as compared to adults and the negative developmental consequences of social distancing on a young child, COVID-19 restrictions placed on children were previously necessary to prevent spread of the virus to more vulnerable adults while we awaited an effective vaccine. We now possess a much stronger understanding of the risk of in-school transmission from COVID-19 and the consequent risks to children and their families. (A full summary of that evidence is available from the Centers for Disease Control and Prevention.) Furthermore, all individuals 12 and older in the U.S. have been offered protection via effective, safe vaccines; by July 14, 68% of individuals 18 years and older and 65% of those 12 and older had received at least one vaccine dose, and 59% of those 18 and older and 56% of those 12 and older are fully vaccinated. The efficiency with which these vaccines were developed, evaluated and deployed puts many parts of the country in a much different place for the start of this school year than last.

In developing school safety plans for fall 2021, we need to acknowledge that the risk of COVID-19 to any one individual is most influenced by their vaccination status. Vaccination of school staff, students (currently ages 12 and above, and eventually all children), and family members is the most reliable intervention for ensuring safety during the upcoming school year and quickly returning schools to pre-pandemic activities.

Schools with high vaccination rates will navigate this school year much more easily than schools with lower vaccination rates, including elementary school settings where students have not yet been offered vaccination. Schools should encourage and facilitate vaccination of students and staff, particularly when vaccines become available for our youngest learners. For further information on COVID-19 vaccination and children, please visit the Centers for Disease Control and Prevention (CDC) or Children's Hospital of Philadelphia's Vaccine Education Center websites.

There is likely to be a lot of variability this year in school health and safety plans. Some health departments, particularly those in large urban areas, will likely require continued masking for children as one mitigation strategy to help return all children to the classroom following a year of largely virtual learning. Los Angeles County, for example, has reinstated indoor masking requirements and has already announced that children will be masked in schools this fall—other cities and states may also follow. However, many other health departments and school communities will likely reduce required mitigation measures after carefully considering the tradeoffs of infection risk with potential for disruption of effective in-school learning. On the heels of recent CDC recommendations, schools will have greater flexibility in making these choices, particularly in schools where vaccinated individuals might be exempt from mitigation recommendations.

With increased flexibility in developing mitigation strategies, it is likely that many schools will be fully repopulated and mask-optional in the fall; families with children at mask-optional schools will need to learn how to choose what strategy will be best for themselves and for their children. The best decisions will reflect the composition of the household, the health status of the staff member or student and the ideal learning situation for the child.
Guidance for School Leaders in Preparing Health and Safety Plans

Even with greater flexibility in decision-making this year, schools will still be required to develop health and safety plans that align with existing public health code to prepare for fall and winter, when cooler, drier weather and family holiday gatherings will increase the potential for COVID-19 transmission in schools. Furthermore, the emergence of variant strains, such as the delta variant, will bear close watching and may necessitate public health departments to issue new (and potentially more restrictive) guidance in some communities. Families should be kept updated on changes required by local or state health departments if and when they change during the year.

As school leaders prepare health and safety plans, they should consider the following:

**Consideration 1: Understanding and aligning with local, state and federal public health requirements for schools**

Last school year, emergency public health orders required social distancing, limited building occupancy, and masking policies above and beyond typical public health code, which enabled public health departments to require disease reporting, contact tracing, and isolation and quarantine when necessary. This year, many emergency orders have been lifted, but public health codes remain. School leaders will need to familiarize themselves with these codes. COVID-19 will likely remain a reportable communicable disease during this school year; if an unvaccinated student or staff member is infected, they will have to isolate, and exposure to an infected individual will require quarantine (unless a modified quarantine or “test-to-stay” option that allows exposed students to remain in school is permissible, as discussed below).

For instance, when an individual infected with COVID-19 is identified within the school, public health authorities are likely to have explicit requirements for contact tracing and quarantining unvaccinated, close contacts they have had at school. This is similar to other infectious diseases such as pertussis (whooping cough), for which children and exposed contacts require isolation and treatment to reduce spread. School leaders will need to plan again with local and state health departments to determine who is responsible for identifying these school-based contacts. Last year, such contact tracing was often done in partnership between school nurses and the local health department, but that responsibility may shift back to health departments this year so that school nurses can focus on other school health priorities.

School leaders will also need to be mindful of the intersection of federal and local requirements, which may change over the year. Schools operating in the largest cities with independent public health departments will need to be responsive to guidance from both the city and state. Some federal requirements, such as masking on public transportation, are likely to extend to school buses as well, even in communities where local restrictions have been waived.
Consideration 2: Monitoring COVID-19 incidence rates in your county and the burden of cases among students in your school district

School leaders should plan for how they will monitor local incidence rates and be in close communication with public health officials to understand how changes in disease burden may alter school mitigation requirements. Ensuring that families in the school community are aware of any changes to health department guidance will be critical for adherence to these requirements or recommendations for families and their children.

Consideration 3: Applying knowledge of your school setting and prior experience to inform mitigation strategies throughout the year

School leaders need to be aware that each school will be in a different place when they return this year. Some school communities, particularly in large, urban cities, may have many students who only learned virtually last year. Other schools, particularly in suburban and rural areas, ended last year with near full in-school operations. These differential experiences may alter the community’s tolerance for certain return-to-school strategies.

School leaders will need to be flexible and engage with family representatives to ensure mitigation measures that are requirements are understood and to highlight where an individual family may have choices in how their student applies optional mitigation measures. This communication will need to be bidirectional so that families understand that school leaders are required to have robust contingency plans that can protect the health and safety of students, families, and staff in the event of local or widespread resurgence of COVID-19.

Adding Flexibility to School Health Plans

In its guidance for the 2021-22 school year, the CDC placed strong emphasis on layered mitigation strategies within schools because many more students will be in classrooms and on campuses than last year. Still, as schools seek to prioritize their resources for safely returning children to in-person learning and activities, they are likely seeking opportunities to simplify their COVID-19 mitigation measures as much as possible.

Below, we present a framework that school leaders can use as they seek flexibility in the adoption of COVID-19 mitigation strategies for their school communities:

- **Masking**

  Assuming your local health department does not require in-school masking, many districts and schools are likely to adopt a “masks-optional” strategy and allow families to decide where and when it is appropriate for their student to wear a mask. The CDC provided an opportunity for schools to consider this by removing the recommendation that vaccinated students and staff mask indoors. Masking in outdoor settings is also no longer required, a change which is supported by a lack of evidence of significant transmission in outdoor environments. High vaccination rates, strong community commitment to testing when individuals feel ill with COVID-like symptoms and low COVID-19 incidence make up the essential foundation for a mask-optional approach.
We strongly encourage schools that adopt a “masks-optional” approach to promote messages that prevent stigmatization of mask wearers, who might include unvaccinated students, those with chronic conditions that increase their susceptibility to infection or risk for developing severe disease, or those who have family members whose own chronic conditions might dilute their immune response to vaccinations, posing increased risk for severe illness from COVID-19.

Large—often urban—school districts with very high enrollment may opt for a more conservative approach, **requiring masks for all when inside,** particularly if they resume instruction with suboptimal community vaccination rates or if they have many families with members at high risk of severe COVID-19 disease. Still others, uncertain about the mechanisms by which to track or enforce separate requirements for vaccinated vs. unvaccinated individuals in their schools, may also choose to require indoor masking, particularly during periods of high COVID-19 transmission. This latter approach can also simplify school operations during fall and winter in schools or communities with surging transmission. The [CDC’s latest guidance](https://www.cdc.gov/coronavirus/2019-ncov/) permits schools with indoor masking requirements to forego quarantining students who are masked when they have close contact with an infected person.

Finally, some schools with the resources to implement more nuanced approaches to masking—that reflect the fact that risk of transmission varies by individual and over time—will adopt **hybrid masking policies.** For example, some schools might require masking during key moments of the day when crowding is likely and mixing of cohorts will occur. Thus, schools may elect to be “mask optional” in the classroom while “mask mandatory” in hallways during classroom transitions. And they may adopt these measures contingent on higher levels of community or in-school transmission.

Even in schools that adopt a “masks-optional” strategy, there are specific situations in which leaders might still require masking. These might include:

- **On school buses:** Children and bus drivers may be asked to mask on buses where risk for transmission from aerosolization of SARS-CoV-2 might be greater, particularly during times of elevated community transmission. For now, federal guidance continues to require masking on public transportation for the upcoming school year, which may obviate this decision locally.

- **If a student who is ill wishes to return to school after testing negative for COVID-19 but before full resolution of respiratory symptoms:** This strategy might limit anxiety as well as spread of other seasonal respiratory viruses like influenza. This practice has long been used overseas.

- **During a modified quarantine in which exposed asymptomatic students are permitted to remain in school:** Prior to the start of the school year, we recommend that school leaders discuss with their health departments whether either an “in-school quarantine” or “test-to-stay” approach might be used after discrete, in-school exposures. Such approaches began to emerge during the prior school year and require all those who are exposed to an individual with COVID-19 and are asymptomatic to mask for at least a week...
following exposure; additional frequent screening testing can be valuable with these approaches, which seek to reduce school absenteeism while providing safeguards for the wider school community against secondary transmission. Vaccinated students need not be considered close contacts based on current CDC guidance; although, with rising evidence of mild infection and transmission among vaccinated individuals exposed to the delta variant, we would caution schools that exempt vaccinated students from quarantine to be rigorous with daily symptom checks and consider masking those individuals for at least a week following exposure.

- **During periods of high circulating COVID-19 infection:** As noted above, temporarily resuming indoor masking of all students and staff during periods of high community or school transmission can simplify mitigation measures and reduce contact tracing and quarantine requirements of close contacts. This may be particularly important in schools with low vaccination coverage, especially while students are gathering in hallways or the cafeteria.

Regardless of the school’s choice of masking strategy, school leaders should share their guidance and the potential times when guidance may change with families long before the school year begins.

**Social distancing**

Schools should plan to resume full in-school occupancy this fall; for many facilities, this will limit the ability to distance students. Schools with significant occupancy challenges can layer additional mitigation strategies, like masking or screening testing, particularly during periods of increased community transmission in order to prioritize full in-school instruction.

That said, some practices that sought to improve spacing of students when rates of COVID-19 were high should be embraced as we move forward, especially during periods of increased influenza infections. If feasible, these include maximizing spacing of students in cafeterias during lunchtime when everyone will be unmasked, using outdoor spaces for learning and other activities on a more routine basis, and reducing class sizes where feasible.

**Ventilation**

Once universally implemented, masking and distancing proved to be highly successful mitigation measures against COVID-19, demonstrating that the primary way SARS-CoV-2 spreads in most community settings is through large droplets. Despite early thinking, the risk of transmission by aerosols that travel large distances is much smaller. Therefore, any inability to update school ventilation systems should not be a barrier to in-school learning especially with widespread vaccination availability for staff, families and students over the age of 12.

School leaders who are still seeking to evaluate and improve the ventilation in their building should consult with local ventilation and engineering experts for appropriate
standards of air exchange, and might consider guidance from the American Society of Heating, Refrigerating and Air-Conditioning Engineers.

- SARS-CoV-2 testing

The availability of SARS-CoV-2 testing has substantially improved in most regions of the U.S. Testing, whether through central labs (PCR tests) or point-of-care rapid tests (both antigen testing and molecular amplification tests), added a strong layer of protection this past year as communities sought to reduce COVID-19 transmission within schools. This year, with significant federal investment in testing, schools have many options to consider.

Increasing vaccination rates among adults and older children and declining community COVID-19 incidence have led some school officials to resist investing resources and energy beyond their educational mission. However, we would encourage continued access to testing for students as it can help differentiate when a child has COVID-19 or another respiratory illness. Testing will also be important to reduce the number of days of in-person education that will be lost if a student is exposed.

From our local experience with Project: ACE-IT, through which we conducted over 350,000 point-of-care tests of staff and students in southeast Pennsylvania schools this past school year, we are actively planning for a year in which schools can consider several testing models.

Precision testing approaches include:

- **Rapid testing of children or staff with respiratory symptoms that develop during the school day:** Schools should be prepared to evaluate children and staff with new COVID-like symptoms, and ideally to perform onsite testing. Most often these tests will be negative, providing much-needed reassurance that the school is not at risk of a COVID-19 outbreak and that the symptomatic person can return to school once well. Equipping schools with rapid testing can expedite decision-making for isolation and quarantine, pursuant to local health guidelines.

- **Monitoring of exposed children to allow continued school attendance during their quarantine (provided they remain asymptomatic):** As COVID-19 is likely to re-emerge in schools this fall, students are at risk of extended absences from the classroom while quarantined at home. If permitted by the local public health department, school leaders can consider two strategies. First, a “masked test-to-stay” approach permits an asymptomatic exposed child to stay in school (provided they remain asymptomatic). In this strategy, episodic testing (at days 1, 3-5 and 6-9) can provide an additional layer of safety while supporting the educational needs of the exposed child. For schools in locations where in-home quarantine will be mandatory, leaders might consider a “test-to-return” approach, in which asymptomatic school-based contacts are tested at 5-7 days after exposure and allowed to return to school early if the test is negative. This strategy is supported
by the CDC. Finally, while new CDC guidance exempts vaccinated individuals from needing to quarantine, emerging data on transmission of new variants (e.g., the delta variant) among vaccinated individuals may lead some schools to favor a more conservative approach that would require even vaccinated individuals to mask after a significant unmasked exposure. Testing of these individuals can be helpful not only for the school community but for family members at home who might still face risk of additional exposure.

Comprehensive testing approaches include:

- **Weekly assurance testing of asymptomatic staff and/or students:** Many places used this strategy during the past school year when few individuals were vaccinated. As vaccination coverage has expanded, and more districts adopt strategies that prioritize family choice over school requirements for specific mitigation measures, school-based programs that require frequent screening testing will be less prevalent.

- **Targeted weekly assurance testing of asymptomatic staff and/or students:** Deploying screening testing for individuals at times when there is an elevated risk of transmission is an alternate strategy to consider. School leaders could opt to perform weekly screening testing of unvaccinated children or staff or of sports teams with low vaccination rates.

Schools that choose screening testing will need to consider the tradeoffs of voluntary vs. mandatory testing, which may differ for staff and students. School leaders should also remember that screening testing can be reliable when participation is high, but may be less valuable when voluntary and with lower rates of participation. Similarly, schools that consider pooled PCR testing as a method for weekly screening should consider whether such an effort is warranted in the absence of full participation, and whether the delayed results would reduce opportunities to minimize in-school spread.

- **Hygiene and disinfection**

  Hand hygiene and disinfection are foundational public health tools that have historically prevented the spread of communicable diseases. While COVID-19 might be less frequently transmitted by surface contact, schools would be wise to maintain practical strategies like hand hygiene stations and frequent disinfection of high-contact surfaces.

**Key Considerations for Families**

With many schools likely to open with a “masks-optional” policy, families will benefit from guidance that helps them navigate their own choices throughout the school year. The decisions a family makes about who should mask and when to mask are not likely to be black and white. Therefore, we offer below some general points of consideration for indoor masking that can help devise a more specific plan for when a child or school staff member might not choose to mask.
Considerations for **indoor masking** during the 2021-22 school year

<table>
<thead>
<tr>
<th>Factors that support masking:</th>
<th>Times during the school day when masking might be prioritized:</th>
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<tbody>
<tr>
<td>o When community incidence is high</td>
<td>o During transportation to and from school on buses or public transportation (Note: this is currently a federal requirement)</td>
</tr>
<tr>
<td>o When substantial numbers of COVID-19 cases are being documented in the school</td>
<td>o During transitions between classes in hallways</td>
</tr>
<tr>
<td>o When cases are growing among children in the community</td>
<td>o When a large group is unable to distance (e.g., in the cafeteria waiting to purchase lunch)</td>
</tr>
<tr>
<td>o Low community or school-based vaccination coverage and/or access</td>
<td>o For children returning to school with respiratory illnesses following a negative COVID-19 test, at least for the duration of symptoms</td>
</tr>
<tr>
<td>o In settings that serve elementary school-aged children who are not yet eligible for vaccination</td>
<td>o For temporary use in classrooms that have been exposed to a contagious child or staff member</td>
</tr>
<tr>
<td>o When there are household members who remain vulnerable to severe disease from COVID-19 due to chronic illness or contraindication to vaccination</td>
<td>o For temporary use in a school with cases identified across multiple classrooms, in order to limit transmission over a two-week period</td>
</tr>
<tr>
<td>o For any unvaccinated child or adult with chronic illness that may make them more susceptible to severe disease</td>
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</tr>
</tbody>
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Families might also consider the following:

**Consideration 1: Balancing the potential consequences of infection among children now that adults have been offered vaccination**

COVID-19 has led to mild infections in the vast majority of children, however, some children have had more significant illness. Among the nearly 80 million children and adolescents in the U.S., there have been more than 4 million documented cases of COVID-19, nearly 17,000 hospitalizations, more than 4,000 cases of Multisystem Inflammatory Syndrome (MIS-C), a delayed, post-infectious complication of COVID-19 infection, and more than 300 deaths. The risk of “long-haul” COVID-19 for children remains unknown.
One family might review these numbers and conclude that the risk of severe disease is too high and have their child wear a mask at school when indoors. Other families may recognize these risks but may weigh the tradeoffs as they relate to educational, socioemotional, or behavioral health needs and prefer that their children not wear masks. The decision not to mask routinely will be easier for a family with children old enough to have been vaccinated. However, even among elementary school-age children who have not been vaccinated, some families might decide that the benefit of not using a mask for their child outweighs the risk from infection.

While these decisions may create anxiety within families and across school communities, we advise families that such flexibility should be viewed in the context of where we are in the pandemic. Mitigation measures, including masking, were more aggressive for children last school year because of the risk that they could spread COVID-19 to vulnerable family members and school staff. Now that adults have been offered vaccination, the decision-making around appropriate mitigation measures for children can be left to a family’s interpretation of the specific risk to their child and household.

**Consideration 2: Appraising whether underlying medical conditions will put the child or a household member at increased risk for severe COVID-19**

Caregivers of a child with an underlying health condition, such as cancer, sickle cell disease, or an immunodeficiency disorder, should discuss with their physician the benefits and risks of mask use even if the child is vaccinated. The same discussion should be had if there is a household member with an illness that may have prevented them from seeking vaccination or may have led them to have an inadequate immune response to vaccination (e.g., those who are immunosuppressed from cancer or are receiving immunosuppressive medication for other conditions).

**Consideration 3: Monitoring local community incidence rates and test positivity**

Even as COVID-19 incidence rates decline in many communities across the U.S., the pandemic has not ended and in some locations, cases have begun to increase again. It is also likely that we will see surges of COVID-19 infections in certain regions throughout the coming fall and winter.

Families should remain informed about their local incidence rates and have a plan that allows them to change their approach to student masking based on the rise and fall of community incidence throughout this school year. We refrain from providing specific thresholds of incidence that would trigger universal mask use as county-level incidence may not always reflect the risk of exposure in a specific school setting. Families should remain in close communication with their school leaders and have good understanding of the frequency of COVID-19 infections in their school system.

**Consideration 4: Monitoring community and school vaccination rates**

Parents might first consider community vaccination rates when deciding about mask use for their child, particularly for elementary school students before they are able to get vaccinated. Schools with high rates of staff and student vaccination will be the most protected against COVID-19 outbreaks this year. Families with children who attend schools with high vaccination rates should feel comforted that the risk of an outbreak in that school will be less than in a school with low vaccination rates and, thus, may elect to resume school without routine mask
use. Younger children that are not yet eligible for vaccination will likely benefit from the immunity of fully vaccinated adults and adolescents around them. While some families and their school communities may view masking of younger children as a necessity in the absence of vaccination access, others may feel differently in light of the lower risk of severe illness in this age group, particularly if household and community members are widely vaccinated.

In regions with low vaccination coverage, however, families—even those with vaccinated children—might carefully consider the value of time-limited mask use, particularly if COVID-19 incidence rates in their location surge or exceed other areas of the country. We have already witnessed a summer resurgence of COVID-19 cases in areas with lower vaccination coverage; that trend is likely to continue into the fall as COVID-19 incidence rates have the potential to increase. Families should be mindful of school or public health advisories locally as community transmission changes through the fall. While children may be at lower risk for severe disease, the sheer magnitude of infections and exposures in schools can become extremely disruptive to classroom learning. Time-limited masking can therefore be viewed as a short-term, simple strategy to navigate the worst part of the season.

**Additional Considerations for the Months Ahead**

New concerns have emerged about the impact of variant SARS-CoV-2 strains on our communities. The latest evidence shows that while some variants may be more easily transmitted, vaccination still provides effective protection. Still, scientists and public health authorities will continue to monitor for variants against which the vaccine is not effective. If these are found, it would necessitate a change in mitigation measures.

As schools reopen this fall, they can do so with optimism that many of the restrictions in place last year may no longer be needed. A more normal school year is on the horizon, but sensible school health and safety plans are essential to ensure that schools are operating safely at full capacity and will not experience large outbreaks throughout the year that could disrupt operations. This will be a year when shared decision-making between school leaders and families and targeted mitigation approaches will help schools navigate toward a post-pandemic world in which COVID-19 hopefully recedes to a more endemic infection that is much less impactful than it was last school year.
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About PolicyLab at Children’s Hospital of Philadelphia: PolicyLab at Children’s Hospital of Philadelphia (CHOP) is dedicated to achieving optimal child health and well-being by informing program and policy changes through interdisciplinary research. Founded in 2008, PolicyLab is a Center of Emphasis within the CHOP Research Institute, one of the largest pediatric research institutes in the country. With more than 30 highly-regarded faculty and 60 passionate staff who bring expertise from myriad of fields covering health, research and health policy, our work focuses on improving public systems, improving health care delivery and improving child health outcomes. For more information, visit www.policylab.chop.edu or contact us at policylab@chop.edu.