



August 13, 2021

Mr. Light & Dr. Bentley,

My strong recommendation is for all students and staff to follow a universal masking policy as we begin the year. The American Academy of Pediatrics (AAP) and the Centers for Disease Control & Prevention (CDC) have both recommended universal masking for K-12 schools regardless of vaccination status. Directly from the AAP's "[COVID19 Guidance for Safe Schools](#)", the reasons for recommending universal masking are (I've underlined some for emphasis):

- a significant portion of the student population is not eligible for vaccination
- protection of unvaccinated students from COVID-19 and to reduce transmission
- lack of a system to monitor vaccine status among students, teachers and staff
- potential difficulty in monitoring or enforcing mask policies for those who are not vaccinated; in the absence of schools being able to conduct this monitoring, universal masking is the best and most effective strategy to create consistent messages, expectations, enforcement, and compliance without the added burden of needing to monitor vaccination status
- possibility of low vaccination uptake within the surrounding school community
- continued concerns for variants that are more easily spread among children, adolescents, and adults
- an added benefit of universal masking is protection of students and staff against other respiratory illnesses that would take time away from school

The purposes of the vaccines were 1) to decrease morbidity & mortality and 2) to decrease transmission. With the Delta variant we are still seeing decreased morbidity and mortality in vaccinated individuals, but we are seeing more breakthrough cases than with the original strain or even the Alpha variant (which everyone was worried about at the end of March). Many students who are vaccinated have unvaccinated younger siblings at home. There are likely

students and staff within the district who are vaccinated but who may be immunocompromised and had a suboptimal response to the vaccine and are still at risk of COVID19. Last year the high school needed to switch to remote learning at least twice due not to the number of COVID19 cases in the school community but the number of people who were out isolating, quarantining, or awaiting test results. From what I remember, it was felt that the school was not able to adequately educate the student population in an equitable way unless switching to remote learning. My hope is that this will never need to occur this year in any of the schools.

Ideally, all staff and students - regardless of vaccination status - will mask as we begin the school year to help protect our school community and achieve our goal of keeping kids safe and in school. Additionally, the CDC recommends universal masking (vaccinated and unvaccinated individuals) in communities with "substantial" or "high" transmission. By CDC's definition, Middlesex county, [as reported in their COVID19 Data Tracker](#), currently has "substantial" transmission. However, as you well know, our county vs. Acton-Boxborough case rates have been discrepant at times during the last 1.5 years. As of 8/13/2021 the 14-day average daily incidence rate as reported by the MA DPH was 4.2/100k in Acton and 11.3/100k in Boxborough. At the state level, our 7-day average of confirmed cases is where we were in mid-October 2020 (as we began the surge into winter). We have seen a 10-fold increase in cases in the last 4 weeks. In comparison to last year, students and staff - regardless of vaccination status - are doing far more outside of school than they likely were previously. It is important to remember that people feel comfortable doing activities and travel while vaccinated because the vaccines save lives; at this point, masking is what significantly helps stop transmission.

With regards on "on ramp" and "off ramp" for universal masking, to get to the current "Procedure" as written, there is [an article just submitted for pre-print](#) (not yet peer-reviewed) authored by physicians and health policy experts from Harvard, Stanford, Brown, Johns Hopkins, MGH (to name a few) that tried to quantify this using a computer model. Here's a summary Andrea Ciaranello, MD, MPH, one of the co-authors, gave to me:

"Using a computer model of SARS-CoV-2 in schools developed by my colleagues, we evaluated the risks of two important outcomes: the chance of having at least one in-school transmission per school per month, and the number of additional cases per month added among students, educators/staff, and their household members by having in-person school. You can estimate how effective you think your school's mitigation measures are without masks and

identify the thresholds of COVID-19 case counts in your community at which masks would be needed.

With Delta, 70% of eligible people vaccinated, and our best estimate of the risk reduction without masking (from opening windows, maintaining current HVAC systems, limited HEPA filters, washing hands), the metrics for needing masks are approximately:

- 4/100K/day to prevent a 50% chance of in-school transmission/month (a more conservative threshold, for example if your goal is to avoid infection, reassure families returning from remote school or with vulnerable household members, and avoid disruptions from isolation and quarantine)
- 16/100K/day to prevent 10 added cases among students, educators/staff, and their household members (a less conservative threshold, for example if your goal is to prevent severe illness, hospitalizations, and deaths).

Alternative scenarios with different assumptions about vaccination rates, mitigation effectiveness, and variant infectiousness are in the preprint and the online materials, and if you think your non-mask measures are more or less effective, it's easy to draw the lines in a different place."

We can definitely have a discussion on what metric to use to determine masking but we need to understand what outcome our school community wants to prevent. Is it still in-school transmission? Or "bad outcomes from COVID19"? I'm not sure what other mitigation measures ABRSD has in place for the year such as increased air filtration, HEPA filters, distancing for mask breaks/snack/lunch, outdoors lunch, pooled testing, etc. Additionally, it seems an unfair or impossible task to have teachers(?) monitoring whether unvaccinated individuals are wearing their masks at the upper schools. As we are still just learning about the Delta variant, I would encourage the school community to use a more conservative metric in order to prevent disruption from quarantine/isolation, to prevent children ineligible to be vaccinated from becoming ill, and to help ease the transition for families who were remote last year and now do not have that option. Someday we will have to "live with COVID19 as an endemic disease" the way we do with influenza and move to the goal of preventing severe illness/long-term morbidity, but I think the start of the academic year as cases are surging is too soon for that.

With regards to the Delta variant, we are still just learning about it and its outcomes especially in the pediatric population. Reportedly children are getting sicker with this variant

than the original strain or the Alpha variant but I haven't actually seen published data on this yet, likely because the variant has become the majority of cases in the US only in the past month. Pediatricians across the country are bracing for an increase in MIS-C cases in the coming weeks as their hospitals had far more COVID19 in pediatric patients in the past few weeks as compared to at any point last year. Thankfully, we are not seeing as high of a surge just yet thanks to our high vaccination rates in Massachusetts. Remember the infographics of transmission showing various scenarios of masked and unmasked individuals? Someone who has COVID19 and is unmasked while others are masked is more likely to transmit than that single person wearing a mask with others unmasked. As such, I feel that especially the elementary school teachers should continue to mask as they are working with a population currently ineligible for the COVID19 vaccine.

Circling back to the "but when can we go back to 'normal'?" - Pfizer-BioNTech's vaccine application for 2-11 year olds will likely be heading to the FDA for EUA in the coming months (reportedly Sept/Oct) with potentially 6m-2yo being in Q4 of 2021. The AAP on 8/5/2021 [made a strong case to the FDA to authorize safe & effective COVID19 vaccines for 5-11 year olds as soon as possible](#). Personally, as a community member, a pediatrician, and a mother, I would feel much more comfortable with flipping back and forth between masking based on community transmission once I know that kids <11yo have had the opportunity to be vaccinated.

Happy to discuss further with everyone. Please feel free to share this in its entirety with the School Committee. I look forward to working with you all again this year to keep our school community safe and in school!

Best,

Jasmin S. Darling, MD  
ABRSD School Physician

Resources:

Pre-Print "When do elementary students need masks in school? Model-estimated risk of in-school SARS-CoV-2 transmission and related infections among household members before and after student vaccination":

<https://www.medrxiv.org/content/10.1101/2021.08.04.21261576v1?fbclid=IwAR0VzJMdE6xC2afzONLY2EkwOsE6Tu95pDaLg9yiGZdzznZI1OW1D29CifE>

Detailed Twitter Summary by Andrea Ciaranello, MD, MPH - Infectious Disease physician at MGH: <https://twitter.com/aciaranello/status/1422738020046880769>

AAP's COVID-19 Guidance for Safe Schools: <https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/>

CDC Guidance for COVID19 Prevention in K-12 Schools:

<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-guidance.html>

AAP's Letter to FDA 8/5/2021:

[https://downloads.aap.org/DOFA/AAP%20Letter%20to%20FDA%20on%20Timeline%20for%20Authorization%20of%20COVID-19%20Vaccine%20for%20Children\\_08\\_05\\_21.pdf](https://downloads.aap.org/DOFA/AAP%20Letter%20to%20FDA%20on%20Timeline%20for%20Authorization%20of%20COVID-19%20Vaccine%20for%20Children_08_05_21.pdf)

CDC COVID19 Integrated County View: <https://covid.cdc.gov/covid-data-tracker/#county-view>

MA DPH COVID19 Dashboard: <https://www.mass.gov/info-details/covid-19-response-reporting>