

Public Schools of Brookline - Expert Advisory Panel #4 (Public Health, Safety, and Logistics)

Panel Statement on Physical Distancing

Final - Adopted by Unanimous Vote November 6, 2020

Our panel is composed of Brookline parents with expertise in public health, medicine, occupational health, diagnostics, and operations who are assisting the Public Schools of Brookline (PSB) with the difficult process of re-opening and operations during the COVID-19 pandemic. Below is a summary of the discussions the panel has had since June 12, 2020 on the subject of the role of physical distancing in minimizing the risk of in-school transmission of SARS-CoV-2, the novel coronavirus which causes COVID-19. For more technical information, other panel statements, and recordings of our meetings, please refer to the Panel 4 section of the [PSB Remote Learning Task Force website](#).

Advisory Panel 4 Members

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[Physical distancing \(sometimes called "social distancing"\)](#) is among the most familiar measures being used to prevent transmission of the novel coronavirus. We know the SARS-CoV-2 virus can be transmitted via droplet, aerosol, and direct contact mechanisms. Available data indicate that SARS-CoV-2 spreads primarily through respiratory droplet transmission within a short range (e.g., less than six feet). [Respiratory droplets](#) are [expelled in various sizes](#) when an infected and contagious individual coughs, sneezes, sings, talks, or breathes. Therefore, distancing is an important safeguard against transmission, along with mask-wearing and good hand hygiene. (Other protection measures, including enhanced ventilation/air filtration and surface cleaning, are aimed primarily at reducing the risks of aerosol and surface/direct contact transmission.)

Thus, physical distancing is one among many ways to reduce the risk of coronavirus transmission and it should be understood in the context of the entire suite of protective measures in place in any setting. Risks of short-range droplet-based transmission can be kept low by amplifying other protective measures (*e.g.* mask wearing, hand hygiene, physical barriers, etc.) when full measures of physical distancing are difficult to maintain.

Federal, state, and international agencies have issued a significant amount of guidance on physical distancing, both for general contexts and specifically for school contexts:

General

- The U.S. Centers for Disease Control (CDC) has long recommended maintaining 6 feet of physical distancing in most community settings ([Guidance 9/11/2020](#); [Guidance 7/15/2020](#)).
- The Massachusetts Department of Public Health (MA DPH) has issued similar [recommendations](#) for 6 feet of physical distancing in public settings.
- The [World Health Organization](#) (WHO) recommends people maintain “at least a 1 metre [3.3 foot] distance” between themselves and others and an “even greater distance ... when indoors”--“[t]he further away, the better.” Several European countries and [Australia](#) are using a [1.5 metre](#) (4.9 foot) distance guideline.

School-Specific Contexts

- CDC recommends that schools “[s]pace seating/desks at least 6 feet apart when feasible” or “if possible,” but also recognizes that 6 feet of distancing will not always be feasible in school settings and recommends additional control measures (*e.g.*, physical partitions) to compensate in such circumstances. CDC further recommends, “[a]s feasible, have children eat meals outdoors or in classrooms, while maintaining social distance (at least 6 feet apart) as much as possible, instead of in a communal dining hall or cafeteria.” ([Guidance 8/20/2020](#); [Guidance 10/29/2020](#))
- The Massachusetts Department of Elementary and Secondary Education (MA DESE) has recommended that PK-12 schools “aim for 6 feet of distance where feasible,” with a minimum of 3 feet when masks are worn ([Protocols 9/14/2020](#)), while specifying that 6 feet of distancing should be strictly maintained during all unmasked times (mask breaks and meal times) ([FAQs 9/21/2020](#)).
- MA DPH has signed onto a [8/19/2020 joint guidance document](#) with DESE expressing agreement with the 3-6 foot guideline for schools, while noting that both CDC and DPH more generally recommend 6 feet of distancing.

Six-foot physical distancing is not a bright line in terms of risk. One is not “safe” beyond a 6-foot radius but “unsafe” at 5 ½ feet. As with most transmission risk factors and anti-transmission measures, [distance provides a gradient](#) of risk mitigation, and risk levels also depend on the specific activity being conducted (*e.g.* listening at one's desk, speaking, singing, etc.) and many other factors.

The following graph [from Chu, et al. in *The Lancet*, June 1, 2020](#) may be particularly helpful in understanding the nature of the relationship between distancing and infection risk mitigation:

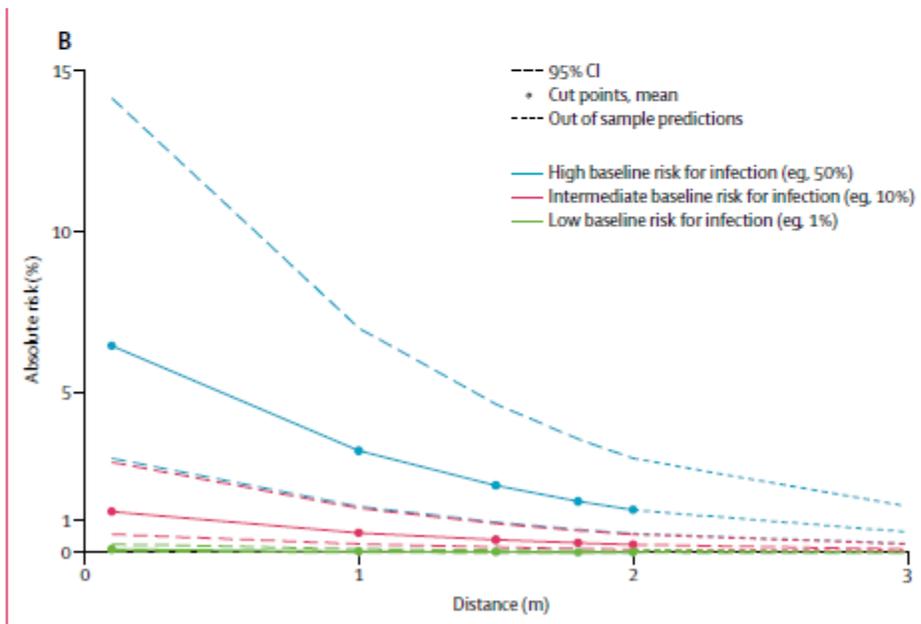


Figure 3: Change in relative risk with increasing distance and absolute risk with increasing distance
 Meta-regression of change in relative risk with increasing distance from an infected individual (A). Absolute risk of transmission from an individual infected with SARS-CoV-2, SARS-CoV, or MERS-CoV with varying baseline risk and increasing distance (B). SARS-CoV-2=severe acute respiratory syndrome coronavirus 2. SARS-CoV=severe acute respiratory syndrome coronavirus. MERS-CoV=Middle East respiratory syndrome coronavirus.

PSB Superintendent Dr. Marini has set 6-foot distancing between desks/seats as PSB’s policy since the summer, and we are not aware of any plans by PSB to change that policy in the near-term. To support greater understanding of this issue, and to support longer-term planning, however, we make the following graded recommendations that reflect the multiple factors that combine to determine risk, including compliance with other preventive measures and activities being performed. This recommended approach would provide greater protection in the highest risk school settings but also greater flexibility in lower risk school settings.

1. **Whenever feasible, physical distancing of at least 6 feet between seats or stations should be maintained indoors**--regardless of other protective measures in place. This recommendation applies to distancing among individuals over extended periods of time (greater than 15 minutes cumulatively during the day). In contrast, spending a few seconds or a minute within six feet of another individual, such as passing another’s desk on the way to the sink, briefly looking over a student’s shoulder at the student’s desk, passing students an assignment, passing between desks, or passing in the hallway are not considered high risk exposures due to their short durations.

2. When universal masking is in place, physical distancing of less than six feet (but greater than three feet) is reasonable to consider in certain indoor settings based on the **activities being performed** and **compliance with other preventive measures**. A reduction of the 6 ft rule should only be considered in settings where: (a) masks are worn by all occupants (we expect to soon issue a statement of guidance around PPE to provide more detail), and (b) activities do not include high-exertion physical exercise, singing, shouting, playing wind instruments, or the like. To the extent that physical distancing of less than six feet results in room occupancies closer to pre-pandemic levels, enhanced clean air ventilation of at least 5 air changes per hour or 30 cubic feet per minute per occupant should also be maintained, to mitigate airborne transmission risks (please see our [statement of ventilation recommendations](#) for more detail). These measures should be in addition to diligent handwashing/sanitizing, daily symptom checks, and other public health mitigation steps being employed across PSB. In such circumstances, distancing should be as close to 6 feet as feasible for as much of the time as possible. PSB may also want to consider additional physical barriers (*e.g.* face shields for staff and/or desk-mounted plastic dividers) in some circumstances.
3. Given growing evidence about lower risk of infection and transmission among younger children (up to roughly age 10) (see [Panel 4's latest Evidence Review](#)), as well as the greater benefits of in-person learning, using a lower distancing threshold for these students is reasonable to consider, as followed in many [other countries](#) and other school settings here in the U.S. In general, given these age-based differences in transmission risk, maintaining 6-foot distancing between individuals should be prioritized as follows: (a) between adults and other adults (highest relative importance), (b) between adults and children (*e.g.*, between teachers and students), and (c) between children and other children (lowest relative importance).
4. When universal masking is **not** in place, such as during meals, snacks, and designated mask breaks, physical distancing of at least 6 feet should be strictly maintained at all times. We recommend that such unmasked times occur outdoors as much as possible, but we understand that that will not always be practically feasible. Limited unmasked times (such as in-school meals) in indoor settings are reasonable alternatives, provided that 6-foot distancing is strictly maintained while masks are off (unless other physical barriers--*e.g.* plastic or plexiglass partitions--are used to divide each unmasked individual from all other individuals to the front and sides of the unmasked individual instead, to provide a different barrier against droplet-based transmission). We formulate this guidance in part by benchmarking our recommendations against other settings in which people must eat meals in a congregate, indoor setting, such as hospitals and research labs, where 6-foot distancing is the current practice for low-risk meal times.

5. When students and staff are outdoors, physical distancing remains helpful, but it does not need not be strictly enforced as long as masks are worn. Reasonable efforts still should be made to limit the time that individuals spend within 6 feet of one another, but unless students are sitting down together in close proximity over several minutes, staff members need not actively police outdoor distancing when masks are worn. 6-foot distancing should be maintained more strictly during designated outdoor mask breaks.
6. Decision-makers should keep in mind that the current definition of “close contact” for tracing and quarantine purposes includes the time spent within 6 feet of an individual who tests positive for the virus. Employment of distancing measures of less than 6 feet, even if limited to certain circumstances as discussed above, is likely to have an impact on the number of individuals who will be considered close contacts of any infected student or staff member by the contact tracing team, even if masks, hand hygiene, ventilation, and other measures are carefully deployed to mitigate actual risk.

We anticipate that there will be changes in these distancing recommendations as more scientific studies are published. We will continue to monitor the science and will revisit these recommendations whenever developments merit. We also may supplement this statement with additional recommendations for PSB regarding the timing and process for any decisions to modify distancing policies, as at least some members of our panel think such issues are important for us to address explicitly.