September 14, 2020

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Dear Madam and Sir:

On behalf of the 1,940 Providence Teachers Union members who teach and support 26,000 students in the 40 schools and campuses of the Providence (R.I.) Public School District, I am writing to request a Health Hazard Evaluation or modified research initiative on the heightened risk or impact of coronavirus exposure on school employees as they return to an in-person school setting.

A large percentage of Providence teachers are at an increased risk of serious illness if they become infected with the coronavirus. Forty-six percent of teachers are over the age of 50, and 15 percent are over 60. Just 7.5 percent of Providence teachers are under the age of 30.

There are at least two potential sources of exposure to the coronavirus for teachers and school staff: infected students and infected colleagues/co-workers. These individuals will not always present with symptoms. The current research indicates that at least 20 percent or more infected individuals are asymptomatic or pre-symptomatic. These infected individuals pose a serious risk to everyone in the school community.
School staff and students also risk exposure through their activities outside of school, and that risk may be heightened among students. An overwhelming majority of our students live in high-risk communities. Sixty-five percent of students are Latinx, and 16 percent are Black. Many students live in households with family members who are essential workers with heightened risk of exposure. Some live in crowded households or experience housing insecurity.

The PPSD plans to offer in-person and hybrid instruction in various forms or stages. Most immediately, the district will open schools full time at full capacity for grades preK-1 on Monday, Sept. 14, and will be phasing-in additional grade levels over the next few weeks, as outlined below:

- Students enrolled in prekindergarten, kindergarten and first grade will begin in-person learning on Monday, Sept. 14.
- Students enrolled in second and third grades will return to in-person learning on Thursday, Sept. 17. For these students, Sept. 14, 15 and 16 will be distance learning days.
- Students enrolled in fourth and fifth grades will return to in-person learning on Monday, Sept. 21. For these students, Sept. 14-18 will be a week of distance learning.
- Students in grades 6 and 9 will begin an alternating schedule on Monday, Sept. 14.
- At this writing, students in grades 7 and 10 are scheduled to begin the school year with distance learning only and will transition to an alternating in-person schedule by Sept. 28.
- Also at this writing, students in grades 8, 11 and 12 will begin the school year with distance learning only and transition to an alternating in-person schedule by Oct. 13.

We are especially concerned about teachers and staff who will be working full time in full capacity classrooms with very few mitigation strategies in place.

For grades pre-K to 8, in-person instruction will be conducted in “stable groups” and will be limited to 30 people, including students and staff. However, other staff will rotate between groups, increasing the potential for any “stable group” to include as many as 35 people. High school staff and students (grades 9 to 12) will return on a partial in-person basis. This means that only approximately 50 percent of the students can be physically present in the school at one time, so an A/B schedule will be implemented.

PPSD will also prioritize in-person instruction for educationally vulnerable students, including approximately 4,500 students with disabilities and certain special populations of sixth to 12th graders, such as multilingual learners and students in self-contained
special education programs. These students will be able to return to school in person, either daily or on an alternative schedule, beginning Sept. 14.

We request that the agency focus on the potential adverse health impact on teachers and staff who teach and provide services to students who are returning to brick-and-mortar buildings.

On the surface, reopening Providence schools for in-person instruction would appear to be relatively safe. Community spread in Providence is low. The case rate over the last seven days is 69 cases per 100,000. However, according to Rachel Patzer, Emory University associate professor of epidemiology, schools should not reopen when community case rates are above 25 per 100,000, and those that do are likely to cycle through disruptive periods of closing and opening.

The district has developed its reopening plan based on a set of assumptions about the risk of exposure for staff that is not altogether based on evidence and/or Centers for Disease Control and Prevention guidance. Growing evidence indicates that older children's transmission of the virus is similar or identical to that of adults.\(^1\) There is limited evidence that the risk of transmission of the coronavirus from young children to adults is lower than the risk of transmission from older children to adults.\(^[i]\) However, at least one study shows that the viral load of young infected children is comparable to that of adults and older children.\(^[ii]\)

In addition, infected children seem to be able to maintain a viral load even as they develop antibodies, so they may be able to transmit the virus for longer periods of time.\(^[iii]\) The potential for transmission from young children to staff is further complicated by the fact that a large percentage of infected children may be asymptomatic.\(^[iv]\) All these studies bring into question the district’s assumption about the risk of exposure infected children of all ages may pose to teachers and other school staff.

The district’s primary mitigation strategy for pre-K to eighth grade appears to be assembling students in “stable groups” or cohorts of up to 30 students and limiting classroom occupancy up to 35 occupants (including teachers and other staff). If classroom occupancy is not more restricted, there is no realistic way that schools can adhere to the CDC recommendation of spacing students 6 feet apart. Examples of mitigation strategies for preK-8 that the district’s plan alters or relaxes include permitting:

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- Flexible social distance requirements in classrooms within the stable groups; desks can be spaced apart “depending on educational needs”;
- Student seat spacing less than 6 feet in stable groups when masks are worn;
- Mask “breaks” when staff and students are working independently and spaced 6 feet apart; and
- Deviation from other CDC guidance if not feasible.

For high school, the primary mitigation strategy appears to be a reduction of building/classroom capacity to 50 percent.

The plan includes cleaning, enhanced cleaning and disinfection mitigation strategies. However, the district has privatized custodial services, and the cleaning under the current Aramark contract calls for cleaning to a level of “reasonable dinginess.” It is not clear that this level of cleaning will be compatible with effective disinfection of high-touch surfaces and objects.

The district reopening plan and subsequent memo on ventilation concerns fails to adequately address the latest scientific data that shows that the coronavirus is not only transmitted by droplet or fomite transmission, but by airborne/aerosol transmission. Classrooms are places where a lot of talking takes place; children are not going to be perfect at social distancing; and the more people in a room, the more opportunities for aerosols to accumulate if the ventilation is poor.

It is unclear exactly what the district is doing to address this major transmission source for the virus. The majority of the school buildings in Providence were built in the 1920s and have natural ventilation; some have a combination of mechanical and natural ventilation. The district states it will be “addressing air circulation and ventilation in (your) buildings by working with an HVAC engineer to develop school-by-school and classroom-by-classroom solutions. For buildings with air conditioning, this will include increasing outside air intake, as well as running the buildings on “occupied” mode for longer periods of time prior to the school day. For buildings without air conditioning, this will include a combination of window fans, box fans and/or HEPA-filtered air purifiers depending on the room’s specific layout.” We do not know if these interventions will adequately address enhanced ventilation or will even be completed before staff and students return to the buildings.

According to the latest CDC guidance and recommendations in “Operating Schools During COVID-19: CDC Considerations,” the CDC cites the American Society of Heating, Refrigerating and Air-Conditioning Engineers’ “Guidance for Building Operations During the COVID-19 Pandemic” and additional guidelines for schools and universities. It is unclear if these guidance recommendations are being implemented by the district, and there are no practical measures to assess whether adequate dilution
ventilation (mechanical or natural) or efficient HVAC filtration (MERV 13, etc.) will be provided.

These types of ventilation issues are nothing new in public schools. A recent report from the Government Accountability Office from June 2020, titled “School Districts Frequently Identified Multiple Building Systems Needing Updates or Replacement,” found that, an estimated 41 percent of districts have significant ventilation issues that will require updating or replacing systems. Addressing the coronavirus in these compromised ventilation conditions is especially challenging, and steps need to be taken to enhance ventilation as a primary mitigation strategy for both natural and mechanical systems.

Rhode Island is one of the few states where the majority of schools have a school nurse. However, PPSD does at times rely on a single school nurse for multiple schools. The PPSD plan details the role of school nurses in screening and isolating suspected cases of COVID-19 infection in students and provides for isolation rooms in schools. Additionally, nurses will be responsible for determining if students who are experiencing symptoms at school should be isolated and sent home, and for notifying the school administration that the stable group must move to another space to allow custodial staff to clean the room. But there are no provisions to quarantine that stable group as a result of that potential exposure, and school nurses have no role in surveillance of and care for staff who present with symptoms.

Overall, the PPSD plan does not include any dedicated hazard assessment efforts to assess exposures of school staff and to inform control measures to reduce exposure as recommended by the CDC’s “Strategies to Protect K-12 School Staff from COVID-19.” The district resorts to a one-size-fits-all approach in prescribing personal protective equipment and facial masks. Special education teachers and staff would benefit from a thorough assessment of their exposures. They more than likely can be expected to have consistent close contact (less than 6 feet) for long periods of time (less than 15 minutes) with students who are developmentally challenged and/or who cannot observe the social distancing recommendations. Such an assessment would probably lead to providing more protective respiratory equipment (i.e., respirators) and other PPE for these personnel.

The weight of implementing and maintaining all the classroom and student support mitigation strategies falls on teachers and staff. They will have to be hyper-vigilant to ensure that social distancing, masking, hand hygiene and other strategies are practiced consistently day in and day out. That added responsibility will be taxing for school employees and will increased their work-related stress and strain.

This is an unusual Health Hazard Evaluation request. The evaluation should be prospective over the course of the next few months—probably through the end of the school year. The scope of the evaluation will have to be broad. It should be designed to
identify and track the sources and patterns of infection for school staff. At the same time, it must be able to evaluate which balance, combination or layering of mitigation strategies is the most effective at reducing potential exposure to the coronavirus. Special attention should also be given to assessing the level and consequences of school staff’s exposure to hazardous stress.

We recognize that this HHE will require a multidisciplinary approach and will present significant logistical challenges associated with the pandemic and controlling exposures for investigators. However, we believe it can be conducted through a combination of creative and innovative methods that will allow the evaluation to proceed. For example, the HHE protocol could incorporate:

- Limited on-site visits;
- Virtual sessions where administrators, facility managers and school staff can be interviewed and medically assessed;
- Record reviews;
- Correspondence with public health authorities; and
- Surveys.

This HHE has implications not only for our members as they cope with pandemic exposure challenges but also for school staff and administrators throughout the country. All school systems are in the midst of an enormous experiment to determine the best mitigation strategies to protect staff and students from coronavirus exposure. This HHE would be an enormous step forward in determining the most effective mitigation strategies.

We would welcome an opportunity to further discuss this request with NIOSH or to learn of other research and investigation approaches that might be considered to evaluate and investigate the consequences of school staff exposures.

Thank you for your consideration.

Sincerely,

Maribeth K. Calabro
President

MKC/mmf

Cc: Frank Hearl, Chief of Staff at National Institute for Occupational Safety and Health


[v] “K-12 Education: School Districts Frequently Identified Multiple Building Systems Needing Updates or Replacement,” GAO-20-494, June 4, 2020, https://www.gao.gov/products/GAO-20-494#summary. For more information, contact Jacqueline M. Nowicki at 617-788-0580 or nowickij@gao.gov: “About half (an estimated 54 percent) of public school districts need to update or replace multiple building systems or features in their schools, according to GAO’s national survey of school districts. For example, an estimated 41 percent of districts need to update or replace heating, ventilation, and air conditioning (HVAC) systems in at least half of their schools, representing about 36,000 schools nationwide that need HVAC updates.”