



Cynthia Branger Muñoz
Senior Policy Advisor
Oregon Health Authority
Salem, OR 97301

VIA EMAIL

September 19, 2022

Dear Cynthia,

Thank you and your team for all you've done to support Oregon public schools, particularly during the global pandemic. The relationship between public health, especially the Oregon Health Authority ("OHA"), and our schools are critical to ensuring our community remains informed and is better protected against COVID-19 and other infectious diseases.

Thank you for taking my phone call and corresponding via email last week. As I shared with you, *The Oregonian* plans to release a follow-up article to their story "[Below the Bare Minimum](#)." Unfortunately, *The Oregonian* is reporting a particular narrative that suggests that classrooms below three air changes per hour are not safe. To make the argument, they'll quote OHA's Deputy State Epidemiologist, Dr. Ali Hamade, who suggested OHA is "recommending 3 to 6 air changes per hour for schools and all indoor public spaces." Of course, this contradicts what you shared with me earlier in the week that the "OHA is not specifically recommending 3-6 air changes per hour in classrooms."

I believe the source of the confusion is this [2021 OHA document](#). A sub-bullet about the benefits of additional air purifiers notes, "Scientists from the University of Colorado Boulder and Harvard University developed a tool to combine air cleaner and ventilation rate specifications to achieve a desired 3-6 air changes per hour for classrooms."

First, PPS agrees that frequent air changes are critical but not the sole element of good air quality in classrooms. To improve air quality in our schools, PPS has taken unprecedented steps:

- Increased all building mechanical system filter standards from MERV-8 to MERV-13
- Every PPS learning space has a portable air purifier
- PPS aims to replace every school's HVAC systems with new and upgraded ones. We've made the first installment of \$75 million from the 2020 general obligation bond to improve air quality in four schools.
- All heat, ventilation, and A/C systems are independently inspected for quality by an outside expert organization quarterly.
- PPS completed and published a year-long sampling study of airflow in schools to support the prioritization of HVAC system improvements.

Secondly, air quality is much more complicated than air changes per hour and requires a complete view of other elements like:

- Regular maintenance of equipment
- Amount of outside air supply
- Airflow patterns between students; spaces between students



- Temperature
- Humidity
- Impact of improved filtration systems (i.e., MERV13, HEPA filters, etc.)

Unfortunately, *The Oregonian* continues to focus exclusively on air changes per hour, implying that classrooms with less than three air changes are unsafe. **Based on the advice from public health and air quality experts, we are confident that our classrooms are safe.** We are also committed to improving air quality across every school.

We take advice from public health experts seriously, continue making adjustments based on new data and updated science, and apply what we learn to make enhancements in our schools and classrooms. We will always follow local and state directives for health services and infectious disease control.

We need to receive more definitive clarity from OHA on its recommendation and perspective regarding air quality in Oregon classrooms. An ambiguity or conflicting language leads to media coverage or a level of public mistrust. This clarity will help PPS, our staff, and families—and other school districts around the state—understand what they need to consider about air quality and schools:

- What does OHA consider to be the acceptable air quality standard in classrooms?
- Does OHA have a specific air change per hour recommendation for schools?
- Does OHA consider classrooms with a recorded air exchange of less than 3 per hour unsafe? If so, what does OHA recommend schools do to address this issue?
- Based on the steps we've outlined above for improving air quality in schools, are there additional steps we should take to enhance the air quality in schools?

This clarity from OHA will be an essential artifact to reference and share with PPS staff and families. *The Oregonian* has created a narrative among some in our community that our classrooms are unsafe. Your role as a public health expert to clarify what OHA defines as acceptable air quality would help guide school districts and communities. Thank you in advance for your partnership and support in building broader community confidence that keeps our students and staff healthy and safe.

Warm Regards,

A handwritten signature in black ink, appearing to read 'Jonathan Garcia', with a large, sweeping flourish extending to the right.

Jonathan Garcia
Chief of Staff
Portland Public Schools

cc: Rachael Banks, Public Health Director, Oregon Health Authority
Colt Gill, Director, Oregon Department of Education
Guadalupe Guerrero, Superintendent, Portland Public Schools



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September 22, 2022

Jonathan Garcia
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RE: School air quality

Dear Mr. Garcia,

Thank you for reaching out for clarity and additional guidance related to school air quality and ventilation in Oregon's classrooms. Improved indoor air quality is associated with improved productivity and better learning and health outcomes, regardless of COVID-19. Improvements on those conditions can provide benefits extending beyond mitigating infectious disease transmission.

Please see responses to your questions listed below.

1. What does Oregon Health Authority (OHA) consider to be the acceptable air quality standard in classrooms?

Airflow and circulation are part of [the recommended layered health and safety measures for schools](#) to reduce spread. The layered safety measures are general recommendations, but not requirements for schools. Airflow, ventilation, HEPA filters and increased circulation are all practices that will reduce the spread of viruses.

In the [Communicable Disease Guidance for Schools](#), an OHA and Oregon Department of Education (ODE) collaborative product updated Summer 2022, we state, "schools should ensure effective ventilation and improve indoor air quality by increasing the amount of fresh outside air that is introduced into the system, exhaust air from indoors to the outdoors, and clean the air that is recirculating indoors with effective filtration methods (e.g., HEPA filters" (p.6)). The guide also includes a link to the [Center for Disease Control and Prevention: Ventilation in Schools and Childcare Programs](#) with suggestions for how schools can implement the recommendations.

2. Does OHA have a specific air change per hour recommendation for schools?

OHA promotes best practices that aim to reduce infectious disease transmission by reducing airborne virus-containing particles. The number of air changes is only one layer that schools can apply to that end. Other layers include wearing a mask, and proper hand hygiene. Temperature and humidity also play a role in the survival time of the virus in air. OHA recommends a range

of 3-6 air changes per hour along with implementation of other best practices for public indoor spaces. These multiple measures can considerably reduce particles in the air, some of which can contain viruses. You can find more information here: [COVID-19 Public Health Recommendations: Indoor air considerations for smaller spaces](#).

3. Does OHA consider classrooms with a recorded air exchange of less than 3 per hour unsafe? If so, what does OHA recommend schools do to address this issue?

Schools are encouraged to follow best practices as part of a layered mitigation approach to reduce any virus in the air. The number of air changes for an indoor location is one tool in the toolkit to help reduce the risk of COVID transmission and other airborne virus circulation. OHA recommends following layered mitigation practices including masking, opening doors/windows when possible, using fans in windows to blow potentially contaminated air out, and pull new air in through other open windows, as well as using air purifiers.

It is conceivable that not all institutions are able to achieve 3-6 of air changes per hour. Having a lower number of air changes does not mean an automatically increased risk of disease transmission. This depends on the other layers mentioned above, community transmission rates, vaccination status, previous infection, and others. Building administrators can consider all the aforementioned tools when working to reduce the risk of COVID transmission indoors.

4. Based on the steps we've outlined above for improving air quality in schools, are there additional steps we should take to enhance the air quality in schools?

Please see the resources listed above for best practices related to improving air quality in indoor spaces, including schools. OHA appreciates the steps that Portland Public Schools has taken to improve indoor air quality in schools.

Sincerely,



Rachael Banks, MPA

Public Health Director

Oregon Health Authority

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<http://www.oregon.gov/OHA>