MARCH 18, 2025

State of Rhode Island General Assembly
House Committee on Education
State House, 82 Smith Street
Providence, Rhode Island 02903

Subject: Support for House Bill H5597: Ensuring Clean Indoor Air in Rhode Island Schools

Dear Chairman McNamara and members of the House Committee on Education,

My name is Georgia Lagoudas and I'm writing in my personal capacity in support of H5597. I am currently a Senior Fellow working at Brown University School of Public Health and the Brown Pandemic Center, focused on clean indoor air to improve health. I previously helped launch a clean indoor air initiative at the White House during the COVID-19 response, to improve indoor air quality and reduce disease spread.

A major effort during my time at the White House was helping schools make indoor air quality improvements – from finding funding mechanisms to connecting them with technical assistance. While there is important work to be done at the federal level to support healthier school buildings, fundamentally the major effort in schools happens at the state and local level. That is why I am so excited for Rhode Island to be taking a step forward with House bill 5597. This bill can create positive change, in a cost-effective way, to make cleaner indoor air a reality in schools now and into the future.

We don't have health-based standards or guidelines for indoor air quality. While we have criteria or thresholds for outdoor air (like particulate matter, set by the EPA), we don't have guidelines for metrics of healthy air indoors. When we turn on the tap, we know clean water will flow out. When we walk into a school or public building, we have no idea the quality of air flowing out of the vents. This bill is a serious first step to address this lack of awareness and lack of guidelines. Rhode Island students, teachers, and staff will be healthier and safer because of it.

House bill 5597 calls for the main components: (1) the department of health to establish recommended standards for indoor air quality in schools, (2) incorporating inspection and evaluation of indoor air quality into the ongoing school building assessments, and (3) upgrading air filters in schools to high quality filters, where possible.

This bill is critical to improving the health of students. Clean air can reduce the spread of respiratory disease like covid and flu by 50% or more, which means more students in the classroom, not at home sick. And teachers and parents benefit from fewer sick days too. Clean air improves how our brains work – it can raise standardized test scores by 3 percentage points and help students focus.

However, we don't know what air quality metrics to aim for. While technical building codes set standards for important but harder-to-measure HVAC system characteristics like air changes per hour, there is no quick way to measure these in real-time. However, with low-cost sensors we can measure metrics like carbon dioxide and particulate matter, which give us a signal of the current air quality in the room. There is scientific consensus about what air quality metrics are recommended, but it is necessary for departments of health and leaders to put out clear recommendations for the public. This bill directs the department of health to establish recommended thresholds and rates for key indoor air quality factors, including particulate matter (PM2.5 and PM10), carbon dioxide, temperature, humidity, ventilation, and filtration. It will give us an important goal post and help with the air quality building inspections called for in this bill, providing additional transparency.

Two metrics called for in the bill include particulate matter 2.5 and carbon dioxide, which are important markers for the status of air quality. Particulate matter 2.5 is a measure of particles that are 2.5 microns or smaller; these are the tiny particles that are emitted from things like cars, gas stoves, power plants, wildfires, and other sources. Their small size means that when you breathe them into your lungs, they go deep into the small cavities of your lungs and cause aggravation of your air pathways. This can lead to chronic bronchitis or trigger asthma attacks. The small particles can also enter your bloodstream and cause stress and inflammation that leads to heart disease, stroke, and poorer cognition. We can remove PM2.5 through filtration - moving air through filters in the HVAC system or with portable air cleaners.

Carbon dioxide (CO_2) is a measure of how much re-breathed air there is in the room. Higher CO_2 means we don't have enough ventilation - bringing in fresh outdoor air to dilute the air that we are breathing and sharing. As people gather in a room and exhale, CO_2 goes up and can cause drowsiness, headaches, and poor concentration. Student test scores fall and productivity suffers. Increasing ventilation will lower CO_2 and improve the health of students, teachers, and staff.

Setting recommended indoor air quality metrics will turn the invisible into something visible. Rhode Island has the opportunity to be a leader in prioritizing student and educator health through smart, science-backed policy. I urge this committee to support H5597. Thank you for your time and consideration.

Best,

Georgia Lagoudas, PhD

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