

September 20, 2023



Re: AB 434 - Indoor air quality inspection and evaluation program for public schools

The American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease, through research, education, and advocacy. The work of the American Lung Association is focused on four strategic imperatives: to defeat lung cancer; to improve the air we breathe; to reduce the burden of lung disease on individuals and their families; and to eliminate tobacco use and tobacco-related diseases.

The American Lung Association strongly supports measures to prevent and reduce the exacerbation of lung disease and supports developing a process for indoor air quality inspection and managing problems that are found. We have developed an [Indoor Air Quality In Schools Guide](#) to be a resource for these issues around the country and here in Wisconsin.

Children's bodies and lungs are still developing — children breathe 2-3 times more often than adults.ⁱ Because of this, their lungs may be more at risk from environmental exposures than those of adults. It is estimated that pollutants may be up to five times higher indoors than outdoors. This is important as children (and adults) spend up to 90% of their time indoors.ⁱⁱ Contaminants in the environment can negatively impact children's development. Indoor air pollutants can cause short and long-term health problems such as: coughing, eye irritation, headaches, allergic reactions, worsened asthma and/or other respiratory illnesses, and in rare cases contribute to life-threatening conditions such as radon-induced lung cancer or carbon monoxide poisoning.

Schools should ideally serve as optimal learning environments for students, but poor air quality in a school's building can actually have negative effects. High carbon dioxide levels and poor ventilation, which plague many buildings, can adversely affect concentration, cognitive ability, and test scores. Furthermore, too high or low temperature and humidity can enable viral transmission which can be detrimental to the body's immune system, causing drowsiness, increased risk of cold and flu. Poor air quality also affects teachers and staff, resulting in reduced focus, fatigue and increased sick leave.ⁱⁱⁱ

Improving indoor air quality in schools has been shown to:

- Improve student performance including addition skills, number comparison, and reading and comprehension.^{iv}
- Reduce absenteeism due to lung diseases such as asthma. Asthma is one of the leading causes of school absenteeism causing an estimated 13.8 million lost school days in children ages 5-17.^{vi} Children with asthma are especially vulnerable to environmental asthma triggers found indoors in many school buildings.^{vii}
- Reduce radon exposure, which is responsible for 21,000 lung cancer deaths in the US each year. According to the EPA, a nationwide survey estimates one in five schools has at least one schoolroom with a short-term radon level above the action level of 4 pCi/L (picocuries per liter of air).^{viii}

Assembly Bill 434 as proposed has some important elements, but we would like to see additional state support for schools to address or mitigate problems that are identified.

We would also encourage AB 434 to more thoroughly compliment the existing state law (Stat. § 118.075) which required the state Department of Public Instruction (DPI) to establish a [model management plan and practices](#) for maintaining indoor environmental quality in public and private schools. The law required each public school district to develop a plan for maintaining indoor air quality in its schools back in 2012. This could be an opportunity to dust off those plans and ensure that school district control is maintained while also adding in requirements that a school or district respond to community complaints with an inspection and then by

addressing any problems that are found. The proposed bill creates some reporting requirements which are very valuable to having a transparent process with the school community and should be included in any local plans.

Under this framework, the Department of Health Services could still establish an indoor air quality inspection and evaluation program. Recently, Indiana passed a law requiring the health department to conduct indoor air quality inspections of schools upon complaint and for establishing criteria that govern the inspection, including specific HVAC maintenance practices and a requirement for schools to keep HVAC maintenance logs. Additionally, Indiana requires schools to post a state IAQ inspection report for 14 consecutive days “in a conspicuous location: (1) on the school’s...website...and (2) at the location of the school...building stated in the report” and to post the school’s response as well.^{ix} They then provide technical assistance but have no enforcement authority to ensure problems are addressed.^x

According to the Centers for Disease Control and Prevention (CDC), the essential elements for safe and healthy schools include adequate ventilation for good indoor air quality. Unfortunately, schools around the country and in our state have long struggled with tight budgets and deferred maintenance. A 2020 study from the U.S. Government Accountability Office found that 41% of school districts need to update or replace the ventilation system in over half of their schools, an estimated 36,000 schools nationwide.^{xi} While there may be [some federal funds available to support these efforts](#), we hope that the State will also provide monetary resources to schools who are shown to need these types of improvements through this inspection process.

In conclusion, thank you for moving to improve indoor air quality for Wisconsin’s students. Please let me know if we can be a resource to you as AB 434 moves forward.

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ⁱ <https://pubmed.ncbi.nlm.nih.gov/21411136/>

ⁱⁱ <https://www.epa.gov/iaq-schools/why-indoor-air-quality-important-schools>

ⁱⁱⁱ <https://www.osha.gov/indoor-air-quality>

^{iv} Fisk, WJ. The ventilation problem in schools: literature review. *Indoor Air*. 2017; 27: 1039– 1051. <https://doi.org/10.1111/ina.12403>

^v S, Jensen KL, Pedersen AL, Rasmussen HS. The effect of increased classroom ventilation rate indicated by reduced CO2 concentration on the performance of schoolwork by children. *Indoor Air*. 2016 Jun;26(3):366-79. doi: 10.1111/ina.12210. Epub 2015 Apr 27. PMID: 25866236.)

^{vi} Centers for Disease Control and Prevention. National Center for Health Statistics. National Health Interview Survey, 2015. Analysis by the American Lung Association Epidemiology and Statistics Unity using SPSS software

^{vii} Moonie PhD, Sheniz, et al. The Relationship between school absence, academic performance, and asthma status. *Journal of School health* (2008). Vol. 78, No. 3

^{viii} Environmental Protection Agency, *Radon in Schools*, <https://www.epa.gov/radon/radon-schools> [accessed 8-22-2022]

^{ix} https://www.eli.org/sites/default/files/files-pdf/Vent%20in%20Schools%20Report_Jan%202023.pdf

^x <https://www.in.gov/health/eph/indoor-air-quality/>

^{xi} K-12 Education: School Districts Frequently Identified Multiple Building Systems Needing updates or Replacement. US Government Accountability Office. June 2020. Accessed at <https://www.gao.gov/assets/gao-20-494.pdf>.