

**Committee:** Environment and Transportation

**Testimony on:** HB 686 – Public Schools – Health & Safety – Carbon Dioxide Monitoring in Classrooms (Safe School Indoor Air Act)

**Position:** Favorable

**Hearing Date:** February 25, 2022

I am a parent and a scientist, and I support the Safe School Indoor Air Act. The air in schools has been problematic for a long time. My son's middle school is known for its mold problem which other bills in the session are trying to address. This school also has inadequate ventilation which can contribute to the mold issue. As a parent, I have been in contact with BCPS facilities since spring 2021. When I could not confirm with BCPS that the ventilation in all schools had been adequately addressed to mitigate the spread of SARS-CoV-2, I offered my expertise to help the school system assess the ventilation in classrooms using carbon dioxide monitors, as suggested by the CDC, EPA, ASHRAE, and many scientists. My offer was declined so instead, I gathered data when schools reopened fully.

Someone gathering their own data might seem problematic. I have worked primarily on outdoor air quality for years for my scientific research and when the COVID-19 pandemic started, I began work on indoor air quality, using equipment I had on hand and carbon dioxide monitors to assess indoor ventilation. Working with friends, colleagues, and their children, I was able to collect data from 8 Baltimore County public schools. While these data are limited in scope, even with these limited measurements, the observations are concerning.

At my son's school, Parkville Middle School, eight out of the 15 classrooms analyzed by two students have carbon dioxide levels over 1200 parts per million and 4 of those had levels over 2000 parts per million, defined as elevated by this bill, with some rooms having closer to 4000 parts per million. We saw similar levels at Parkville High. This wasn't unique to middle and high schools. We were able to gather data in one Warren elementary classroom. In this classroom, carbon dioxide levels climbed to over 2000 parts per million by 10 am and were above that level for an average of 2 hours per day. At the respiration rate of a child, that is equivalent to breathing in about 2 cups of air directly from another person during each school day. BCPS knows this. They have my data and a report on that data but have not acted.

Why are we not doing more to make sure the air is safe? We promote the washing of hands. We don't share utensils or food and for a long-time didn't even share school supplies when schools re-opened, yet we do share the air. We all are breathing the same air.

This bill would solve this problem by compelling schools to assess the indoor air conditions across Maryland. Assessing carbon dioxide levels in classrooms is straightforward and simple to do with inexpensive sensors which other school systems are already doing like Boston Public Schools. Using these data will allow school systems to target the spaces that need improvement which can improve health and learning outcomes even beyond the pandemic. Addressing ventilation and filtration will improve the environment our children learn in and help keep them healthy and in school, learning which is a priority of parents and teachers, and should be a priority of the school systems.

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