

Good afternoon honorable members of the Senate Education Committee

For the record, I am Dr. Harry Chen, former Commissioner of Health and recently Interim Commissioner of the Department for Children and Families. I also served as a school board member for over 12 years in Mendon. Thank you for allowing me to discuss H.486 with you and specifically its provision to pause the PCB testing program in Vermont's schools.

While the PCB legislation and the proposal came after my tenure as Health Commissioner, we had our share of challenges with environmental poisons to deal with (PFOA, lead, pesticides).

PCBs (polychlorinated biphenyls) are a mixture of 209 different manmade chemicals. They were manufactured up until 1979 when they were federally banned. Their half-lives vary and can be over 100 years. Because of this, they persist and can be released into the environment over a long period. PCBs cause several adverse health effects including cancer and noncancer effects.

While increased cancer risk for staff who work in the school for 30 years is a significant and serious outcome, the noncancer health effects are more relevant in the school setting, considering students are exposed for fewer years than staff, and most staff don't remain for that long. Noncancer health risk is based on at least one year of exposure.

Cancer Risk

PCBs cause malignant melanoma and are associated with non-Hodgkin's Lymphoma, breast, and liver cancer. The EPA considers it a probable human carcinogen and the International Agency for Research on Cancer (IARC) classifies it as carcinogenic to humans. The National Institute for Occupational Safety and Health (NIOSH) considers it a potential occupational carcinogen.

The noncancer health effects of PCBs include effects on the immune, reproductive, nervous, and endocrine systems. These effects are well documented in animals and supported by studies in humans.

Immune System

Studies have revealed serious effects on the immune system after exposure to PCBs:

- Significant decrease in the size of the thymus gland, which is critical to immune systems of infants
- Reductions in the response of the immune system
- Decreased resistance to Epstein-Barr virus and other infections
- Suppression of the immune system, which is thought to be a reason why PCBs also cause cancer

Reproductive System

PCBs can alter the sex hormone systems and have been found to lower the age at which a girl reaches puberty and can reduce the levels of the male hormone, testosterone. Studies have shown other potentially serious effects on the reproductive system including:

- Reduced conception rate
- Reduced live birth rates
- Reduced sperm counts
- Decreased birth weight
- Significant decrease in gestational age (fetal development)

Nervous System

Proper development of the nervous system is critical for early learning and can impact the health and intellectual/cognitive capabilities of individuals throughout their lives.

Experimental animal studies in non-human primate and rodent models confirm that developmental PCB exposures negatively impact cognitive function distinct from adverse effects on reproduction or birth outcomes.

Studies have also shown PCBs have negative effects on nervous system development, leading to:

- Significant and persistent deficits in neurological development, including visual recognition, short-term memory, and learning.
- Learning deficits and changes in activity after exposure to PCBs

Endocrine System

Thyroid hormone levels are critical for normal growth and development. Studies have shown that PCBs:

- Decrease thyroid hormone levels, which results in developmental deficits, including decreased hearing
- Are associated with changes in thyroid hormone levels in infants

Vermont in its wisdom passed a “first in the nation” law to test for and mitigate PCBs. I understand that more than 40 schools have been tested so far and not a single school has been closed. PCBs have been found in more than a quarter of them with 5 of the schools having results above an immediate action level. These schools were able to take ameliorative measures that improved the safety for students and staff alike while the students stayed in class.

The law is doing what it was intended to do – detect and address PCBs in our schools.

There are many steps schools have taken or could take to address the elevated levels – not using the affected rooms and switching to other rooms, using the rooms fewer hours per day/week, placing carbon filtration systems in rooms with elevated levels to decrease levels, increasing the percent of outdoor air via HVAC systems, opening windows to increase outdoor air, and sealing over PCB sources with special paint or plastic.

The program to address PCBs when unacceptable levels are discovered through testing is designed to keep children in school. DEC has 6 consultants on contract and has staffed up to do the work. A pause could result in the contracts ending and either Vermonters losing jobs or consulting companies taking on other work and not being available when testing restarts. Momentum is a powerful force when shutting down or restarting a program.

Now is not the time to step back or pause this important initiative that protects the health of Vermonters. Part and parcel of this effort is to inform and work with our school communities to ensure they have the tools and resources to keep their vital work going and keep children in school. We must ensure transparent fact-based communication with staff, students, and families to address their legitimate concerns.

I've also heard that school communities want to be an active part of the conversation as we adjust the program moving forward. As a former school board member and member of the House Education Committee, I acknowledge their concerns and feel that they have valuable input to provide that can improve the current system. This is a step we should take regardless of the outcome of H.486.

To summarize, we can keep kids in school and mitigate the potential – and very real – PCB-related health risks. Testing provides the data for action; it's a vital step we shouldn't delay. Let's all agree that there are dual goals – keeping kids in school and protecting public health. Let's keep moving forward with both. The adage that what we don't know won't hurt us simply does not apply when it comes to toxins in our environment.

Harry Chen M.D.
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