

Protecting Vermont's Children from Poor Indoor Air Quality in Schools: A Report Card on Act 125

Introduction

Improving indoor air quality (IAQ) in schools is essential to providing safe and healthy learning environments for children. Harmful chemicals found in cleaning supplies, pesticides, and other products can negatively impact the health of students. A growing awareness of this problem has resulted in the implementation of IAQ and “healthy schools” reform policies in states and school districts across the country. The United States Environmental Protection Agency introduced its IAQ Tools for Schools program in 1996, and Vermont responded to the “healthy schools” movement in 2000 by passing Act 125. Act 125 resulted in the creation of the Envision: Promoting Healthy School Environments program (administered by the Vermont Department of Health) and relied on the voluntary participation of schools to establish and maintain environmental health management plans. Unfortunately, this voluntary program has not only failed to meet its established goals, but has clearly failed to protect the majority of Vermont’s children and school personnel from polluted indoor air.

At school, our children may be exposed to harmful chemicals from:

- **Pesticides**
- **Cleaning products**
- **Arts and crafts materials**
- **Maintenance and renovation projects**
- **Furnishings and building materials**

This report card examines the problems associated with poor indoor air quality, the impact of Act 125, the reasons behind its failing grade, and recommendations to create healthier learning environments across the state.

Children are more vulnerable to the effects of chemicals:

- **Pound-for-pound, children breathe more air, drink more water, and eat more food than adults**
- **Children play close to the ground and engage in repeated hand-to-mouth activity**
- **Children are less able to metabolize and excrete most toxic substances**
- **The organs and critical systems of children’s bodies are still developing**

Environmental Health Threats in Schools

Each day in Vermont, approximately 94,000 children and more than 19,000 staff members spend a significant portion of their time at school facilities. Days are spent not just in the classroom learning, but can also include after-hours care or extracurricular activities as well. Even on the weekends, schools have become gathering places for community meetings and events. This ever-increasing activity on school grounds makes the need for healthy facilities imperative. Unfortunately, schools across Vermont face persistent environmental health threats due to poor indoor air quality, the routine use of toxic chemicals such as pesticides, and problems stemming from molds, asbestos, lead, and other hazards.

Science has linked exposure to poor indoor air quality and toxic chemicals with an array of health effects that can impair the ability of children to learn, play and eventually become productive working adults. These effects include new onset asthma, cancer, reproductive problems, developmental disorders, and hormone disruption.

According to the National Center for Chronic Disease Prevention and Health Promotion, “asthma is a leading chronic illness among children and

In Vermont, 8% or approximately 10,000 children suffer from asthma.

Source: Vermont Department of Health,
<http://healthvermont.gov/research/asthma/documents/Prevalence.pdf>

youth in the United States” and “one of the leading causes of school absenteeism.”ⁱ Nearly seven million children in the United States currently suffer from asthmaⁱⁱ and approximately 13 million school days are missed annually due to asthma-related reasons.ⁱⁱⁱ

This impact of the school environment on children’s health cannot be dismissed. Children are extremely vulnerable to chemicals and contaminated air due to a host of biological and behavioral factors. Children have developing organs, do not detoxify as quickly, breathe more air per pound of body weight than adults, and have frequent hand-to-mouth contact.^{iv} These increased risks of adverse exposures are not only physically dangerous for students, but create atmospheres where it can become difficult to learn.

Schools across the country have implemented and benefited from the U.S. EPA’s Tools for Schools (TfS) Program designed to address indoor air quality problems:

- **50% reduction in visits to the office for the use of asthma inhalers (G.W. Carver Elementary School, CA)**
- **Absenteeism cut by more than half (Elementary school in Hamden, CT)**
- **25% reduction in the number of visits to the school nurse with complaints of stomach aches and headaches within the first 5 months of implementation of TfS (Little Harbour School, NH)**

Source: Environmental Protection Agency, Office of Air and Radiation Indoor Environments Division, *Indoor Air Quality Tools for Schools Program: Benefits of Improving Air Quality in the School Environment*, EPA 402-K-02-005, February 2003.

Fortunately, research shows that implementing healthy school policies such as using non-toxic products, restricting the use of pesticides, and taking other measures to address air quality in classrooms will foster healthier and more productive learning environments including better attendance and increased test scores.

Vermont’s Act 125

The Vermont Legislature took action in the year 2000, responding to growing concerns about environmental health in Vermont schools. The new law encouraged schools to implement healthy building policies and practices. Act 125 also charged the Commissioners of Health, Education, and Buildings and General Services (BGS) to provide “resources, information, and access to a model environmental health management plan to all Vermont schools.”^v

Specifically, Act 125 mandated the State’s development of a model school environmental health policy and plan. It also requires that an environmental health certificate be awarded to schools that have “demonstrated exemplary progress...beyond the adoption of the” models.^{vi} However, the law does not require schools to develop the policies or even to implement them. Instead, the Legislature opted for a voluntary program that relies primarily on the Vermont Department of Health to be the catalyst for creating healthy schools.

To ensure that the legislation would truly have an impact on Vermont’s children, Act 125 established a goal of having at least 50% of schools qualify for an environmental health certificate by January 2005. The following analysis of Act 125 uses this modest goal as the benchmark for the law’s progress.

Grading Act 125 : F

**Grade:
Failing**

The goal of Act 125 was to have at least 50% of Vermont schools qualify for an environmental health certificate by January 2005.

Only 7% of schools have been awarded certificates.

In order to meet the requirements outlined in Act 125, the Vermont Department of Health created the Envision: Promoting Healthy School Environments program. Envision is designed to assist schools with the development of an environmental health plan. Schools that choose to enroll in Envision are supposed to receive guidance and support from the program's one dedicated staff person. Enrollment in Envision puts schools on the pathway to receiving an environmental health certificate.

While Act 125 has failed to meet its goal, some schools have embraced practices to improve environmental health in classrooms:

- **90 schools have received guidance on switching to environmentally preferable cleaning products.**
- **In 2007 and 2008, 25 schools received National Healthy Schools Day awards for greatly improving indoor air quality at their facilities.**

Schools are eligible for certification in the Envision program when they have completed a list of core and optional requirements addressing policies, plans and practices that improve and protect indoor air quality. Unfortunately, the Envision program has been largely ineffective in addressing poor indoor air quality and other similar health issues in the majority of Vermont's schools. The goal of Act 125 was to have at least 50% of schools qualify for an environmental health certificate by January 2005. According to the Health Department's most recent legislative report, only 7% of schools had been awarded a Certificate of Achievement by the end of 2006.^{vii}

This inability to meet the already modest goal established by the Legislature is unacceptable. The spirit and intent of Act 125 was to substantially improve environmental health in schools and, by any standard, this has failed to happen.

Why the failing grade?

1) Act 125 created a voluntary program

Among the factors that have contributed to this failing score is the fact that Act 125 created a voluntary healthy schools program that has resulted in only 7% of schools earning a Certificate of Achievement. By not requiring school participation, school officials may disregard practices and policies designed to create safe and healthy learning environments. While some schools are willing to try new products and implement new maintenance practices, others remain resistant to change or may not fully understand the importance of addressing environmental health hazards. Children's vulnerability to toxic exposures, of course, remains constant regardless of a school's policy. It is crucial therefore, that children not be penalized because their school officials are unaware of Envision or choose not to enroll.

Core and optional requirements of the Envision Program that schools may adopt include but are not limited to:

- **Documenting potential and immediate environmental health issues**
- **Reducing exposure to pesticides**
- **Purchasing cost-neutral less-toxic supplies such as cleaning products**
- **Isolating and storing toxic materials that cannot be eliminated**

2) The State has failed to make environmental health in schools a priority

Envision does not receive any funding from the State. The program's primary source of funding is from an asthma-related grant from the Centers for Disease Control and Prevention. Given its limited funds, Envision does not publicize its existence in any official capacity. Instead, Envision relies on staff, partners, and other agencies to market the program through word of mouth. This has left many schools across Vermont with little to no knowledge of Envision or its offered services.

In addition, the program lacks a full-time staff person. Until recently, Envision did have a full-time coordinator, but current staff is now required to split time between Envision and other work at the

Department of Health. In fact, environmental health positions at the Department have, in general, been reduced in recent years.

Finally, the Envision program has had difficulty in tracking the progress of participating schools and currently has no system for following up with schools that have already received a Certificate of Achievement. This means there is no way of knowing if a school is maintaining practices to address poor indoor air quality or other environmental health threats.

Recommendations for creating healthy schools in Vermont

More must be done to ensure that Vermont's children are protected at schools. While well-intentioned, Act 125 and Envision have been unsuccessful in accomplishing this objective. Now, we must turn to new opportunities and solutions for creating healthy schools in Vermont. We recommend that the following three steps be taken:

- 1) **Implement a comprehensive required healthy schools program:** Vermont must establish a comprehensive healthy schools program that mandates school participation. This program should be adequately funded and should evaluate and address all aspects of environmental health including but not limited to siting, construction, ventilation, cleaning products, pesticides, and other toxic exposures.
- 2) **Require schools to purchase environmentally preferable cleaning products:** Vermont's state buildings have already made this transition as the result of the Clean State Program created by Executive Order in 2004. In addition, 90 schools in Vermont have received guidance on switching to environmentally preferable cleaning products and the vast majority have found these less-toxic alternatives to be cost neutral and equally effective. It is time for all Vermont schools to follow the example set by our State and others by using environmentally preferable cleaning products.
- 3) **Eliminate high-risk pesticides and establish integrated pest management programs at schools:** Pesticides are poisons designed to kill living things. When applied in school buildings or on school grounds pesticides (including insecticides, herbicides and fungicides) can contaminate the air, soil, and water and can easily come into contact with children. Good Integrated Pest Management (IPM) programs are designed to reduce the sources of pest problems and eliminate the use of the highest-risk pesticides. Instead of regularly applying a chemical Band-Aid to an infestation of ants or mice, IPM strategies identify and repair the root cause of those infestations such as repairing screens and cracks or isolating food use. By doing this, an IPM program can reduce a school's long-term costs while protecting the health of children and school employees.



Conclusion

Eight years after Act 125 was adopted, the spirit of law remains unrealized. The majority of Vermont's school children remain vulnerable to poor indoor air quality in schools, and the State has consistently failed to make children's environmental health and safety in schools a priority. However, there are solutions that would enable Vermont to immediately improve the health and learning of our children and our school buildings. What is needed now is the political will to make it happen.

References

- ⁱ National Center for Chronic Disease Prevention and Health Promotion, Division of Adolescent and School Health: <http://www.cdc.gov/HealthyYouth/asthma/>
- ⁱⁱ National Center for Health Statistics, Asthma: <http://www.cdc.gov/nchs/fastats/asthma.htm>
- ⁱⁱⁱ National Center for Chronic Disease Prevention and Health Promotion, Division of Adolescent and School Health: <http://www.cdc.gov/HealthyYouth/asthma/>
- ^{iv} United States Environmental Protection Agency, Children's Health Protection: http://yosemite.epa.gov/oalp/oalpweb.nsf/content/whowe_leadership.htm
- ^v Vermont Department of Health. Envision: Promoting Healthy School Environments Manual. Section 1, page 1.
- ^{vi} Act 125: An Act Relating to Toxic Materials and Indoor Air Quality in Vermont Public Schools. Section 3 (e): <http://www.leg.state.vt.us/DOCS/2000/ACTS/ACT125.HTM>
- ^{vii} Vermont Department of Health. Vermont 2007: School Environmental Health; Report to the Legislature on Act 125 (2000). January, 15, 2008. Page 5.