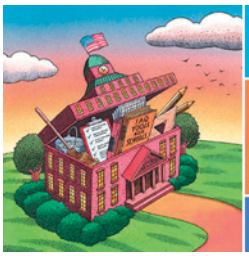


EPA

Indoor Air Quality Tools for Schools

Indoor Air Quality (IAQ) Tools

IN THIS ISSUE

THE STATE OF OUR SCHOOLS: IAQ MANAGEMENT RESULTS FROM THE 2012 SCHOOL HEALTH POLICIES AND PRACTICES STUDY (SHPPS)

The School Health Policies and Practices Study (SHPPS) is a national survey periodically conducted to assess school health policies and practices at the state, district, school and classroom levels. SHPPS was conducted at all levels in 1994, 2000 and 2006. The 2012 study collected data at the state and district levels only. School- and classroom-level data collection will take place in 2014.

SHPPS assessed the characteristics of eight components of school health: health education, physical education and activity, health services, mental health and social services, nutrition services, faculty and staff health promotion, family and community involvement, and healthy and safe school environment. Under the healthy and safe school environment component, SHPPS examined a variety of policies

Many Districts Require Regular Walkthroughs and Inspections:

More than two-thirds of districts require schools to conduct periodic inspections for:

- Mold (71.7%);
- Heating, ventilation and air conditioning systems (78.4%);
- Building foundations, walls and roofs for cracks, leaks or past water damage (72.2%);
- Clutter that prevents effective cleaning and maintenance (70.9%); and
- Plumbing systems (69.7%).

Test Your IAQ Management Knowledge…

According to the 2012 SHPPS Report, what percentage of school districts have an indoor air quality (IAQ) management program?

a. 22 percent

b. 48 percent

c. 71 percent

d. 100 percent

Click here to learn the answer.

Do you have other questions on IAQ management?

Post them on the Schools IAQ Connector Email Discussion List. **Join today** by sending a blank email message to schools_iaq_connector-subscribe@lists.epa.gov. Check your email inbox for confirmation and membership details.

and practices related to the physical school environment such as transportation, joint use agreements, indoor air quality (IAQ), pest control, drinking water, hazardous materials, engine idling reduction programs, school construction and renovations, training for custodial or maintenance staff, and professional development.

State- and district-level data were collected via Web-based questionnaires completed by designated respondents. These respondents had primary responsibility for or were the most knowledgeable about the particular school health program component. At the district level, the respondent was most knowledgeable about the district policies and practices specific to each school heath program component, with an emphasis on policy.

Access Previous Connector E-Newsletters Online

Can't find a previous *IAQ Tools for Schools* Connector e-newsletter in your inbox? No problem! Visit the e-newsletter archive on the *IAQ Tools for Schools* website to access printable versions (PDFs) of all past editions.

At the district level, between 2006 and 2012, SHPPS identified a significant increase in districts that had an IAQ management program (35.4 to 47.7%) and that had implemented an engine idling reduction program for school buses (35.3 to 53.8%). During this same time period, the percentage of districts that had adopted a policy to purchase low-emitting products for use in and around the school (25.6 to 36.3%) and a policy to include green building design when building new school buildings or renovating existing buildings (13.4 to 30.0%) also increased significantly.

Other encouraging findings include the fact that many districts required schools to implement a variety of integrated pest management strategies such as:

- Sealing openings in walls, floors, doors and windows with caulk or weather stripping (82.1% of districts);
- Storing food in plastic, glass or metal containers with tight lids so that it is inaccessible to pests (81.3%); and
- Using spot treatments and baiting rather than widespread application of pesticides (80.9%).

Though these findings are promising and suggest a movement toward policies and practices that promote student health, there remains much room for improvement. In 21.5 percent of districts, schools were not required to notify staff, students and families prior to the application of pesticides and only 55.0 percent of districts required schools to mark indoor and outdoor areas after having been treated with pesticides. Approximately two-thirds (67.5%) of districts prohibited all tobacco use during any school-related activity and 37.0 percent of districts required that schools be tested for radon.

A growing body of literature supports the importance of the physical school environment on both student health and academic achievement. Policies that promote clean indoor air, safe drinking water and protection from hazardous materials; policies that promote school construction and renovation that minimizes the impact on the environment and fosters active transport; and policies that ensure schools and districts have well-trained custodial and maintenance staff on issues related to the physical school environment are paramount to ensuring that schools provide a healthy and safe learning environment.

HOW EPA IS WORKING TO CLOSE THE GAP

Although many of the SHPPS results show promising progress in creating healthy indoor environments in schools, the study found that there is still room for improvement, even in the schools with IAQ programs, in the areas of radon testing, mold and moisture control, smoke-free environments, integrated pest management, product purchasing policies and ventilation standards. In addition, many school districts need additional training and technical assistance to implement best practices. More than one-half of school districts

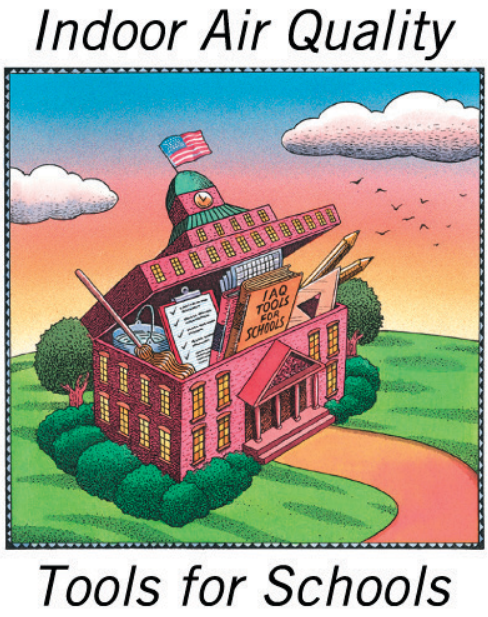
require formal training on the physical environment of buildings for new staff who oversee custodial, maintenance and environmental issues. EPA's Indoor Air Quality Tools for Schools Action Kit and other guidance can serve as key components of this training.

There also are new opportunities to create healthy indoor environments. For example, 30 percent of districts had adopted a policy to include green building design when building new school buildings or renovating existing buildings. This is more than double the percentage that had such a policy in 2006 (13.4%). As green policies for improved construction, renovation, and operation and maintenance practices at schools begin to take hold, continued efforts to educate the broad schools community about the benefits and techniques for healthy and green building practices, including the purchase and use of low-emitting products, are needed. The study suggests that increased policy-related and technical assistance from states on green building design and construction, as well as dissemination of information to districts on the health and economic benefits of green building design and construction, might increase the implementation of district-level policies related to IAQ and energy conservation. EPA is committed to developing, disseminating and delivering this information, training and technical assistance to school districts and schools to promote student health and academic achievement.

You can learn more about how EPA's school-related programs are actively working to address these gaps and increase collaboration to provide the tools, education and resources school districts need to provide safe and healthy learning environments below.

Indoor Environments Division

EPA's Indoor Environments Division has made significant strides in raising awareness of the importance of implementing IAQ management programs and equipping school personnel at the state, district and school level with the necessary knowledge and tools to create healthy indoor environments in schools. Among the school districts with an IAQ management program, 82.3 percent are based on the *IAQ Tools for Schools* guidance, making it the principal guidance used for IAQ management in schools. Despite the progress demonstrated by SHPPS 2012, there are still about 25 million children in the other half of our Nation's schools—which is nearly 60,000 schools—who are not yet protected by IAQ management programs. It is important that we continue to promote action to provide them with a healthy and productive learning environment.



Although 67.5 percent of districts prohibited all tobacco use in all locations, EPA guidance recommends that all schools prevent exposure to secondhand smoke by providing smoke-free environments for students and staff. Exposure to environmental tobacco smoke (ETS) or secondhand smoke is a serious health risk, and children are particularly vulnerable because they are still developing physically, have higher breathing rates than adults, and have little control over their indoor environments. Exposure to secondhand smoke can cause new cases of asthma in children who have not previously shown symptoms and can trigger asthma attacks and make asthma symptoms more severe for children and adults with asthma. You can learn more about the health effects of secondhand smoke at http://www.epa.gov/smokefree/healtheffects.html.

Approximately 7 million (or 1 in 10) children in the United States have asthma, making it one of the leading chronic childhood diseases. Did you know that asthma is a leading cause of school absenteeism, responsible for about 11 million missed days each year? Although there is no known cure for asthma, reducing exposure to environmental triggers through effective IAQ management plans can significantly reduce the frequency and severity of asthma attacks and improve school attendance and performance. SHHPS 2012 found that the percentage of school districts that require asthma education for students was 46.1 percent for elementary, 53.4 percent for middle, and 54.3 percent for high school level. If you are in

one of these school districts, congratulations! If your school district is not addressing indoor environmental asthma triggers, EPA equips school organizations to manage asthma in the school environment and provide asthma education programs. May is Asthma Awareness Month, so this is a perfect time to learn more about managing asthma in your school.

Another important trend and opportunity identified in SHHPS 2012 is new school construction and renovation. Thirty percent of districts had a policy to include green building design when building new school buildings or renovating existing buildings. Of these, 48.5 percent required the use of a third-party green building certification, labeling or rating system, such as the Collaborative for High Performance Schools (CHPS), LEED for Schools from the U.S. Green Building Council and Green Globes. Two of the three most common practices for new school campuses or renovations addressed in policies adopted by districts nationwide were use of energy efficient lighting and electrical systems, and use of procedures or systems to protect IAQ. EPA's soon to be released *Energy Savings Plus Health: IAQ Guidelines for School Building Upgrades* expertly combines these two practices to promote health protections and energy and cost savings. This new guidance also addresses hazardous materials, which is especially important because SHHPS 2012 found that nearly 93 percent of districts had at least one school building constructed before 1980. Some of these districts had adopted a policy requiring these schools to be inspected for PCBs in caulking around windows and doors (25.5%) and in fluorescent light ballasts (24.8%). Others reported that PCBs had previously been identified and remediated in caulking (29.8%) and in fluorescent light ballasts (41.0%). EPA's new *Energy Savings Plus Health: IAQ Guidelines for School Building Upgrades* addresses these issues in more detail. This guidance document will be published in summer 2014.

Integrated Pest Management (IPM) in Schools

Since 1996, EPA has been working with schools to practice Integrated Pest Management (IPM), especially encouraging schools to avoid routine scheduled applications of pesticides without first evaluating whether the pesticide application is actually needed. In 2012, EPA launched *School IPM 2015: a Strategic Plan for Integrated Pest Management in Schools in the United States*. This initiative calls for a 70 percent reduction in both pest complaints and pesticide use in schools. It relies on the coordinated efforts of teachers, custodians, food service staff, school administrators, pest management professionals, USDA Agricultural Extension staff, regulators, architects and parents to reduce pesticide risk in our schools. EPA website: http://www.epa.gov/pesticides/ipm/index.htm.

The guidance explains how school districts can adopt a smart, sensible and sustainable approach to pest control. Smart—because IPM creates a safer and healthier learning environment by managing pests and reducing children's exposure to pests and pesticides. Sensible—because practical strategies are used to reduce sources of food, water and shelter for pests in school buildings and grounds. Sustainable—because the emphasis is on prevention that makes it an economically advantageous approach. IPM is a safer and less costly but effective pest management approach. Because IPM is not a "one size fits all" approach, districts are encouraged to check out EPA's Web pages on IPM and pesticides and the Strategic Implementation Plan for School IPM. For more information on integrated pest management and to learn from case studies, listen to the IPM webinar or review the webinar resources.

Idle Reduction Campaign

Unnecessary school bus idling affects human health, pollutes the air, wastes fuel and causes excess engine wear. EPA encourages participating in the Clean School Bus' National Idle Reduction Campaign to help your community take action toward a cleaner, healthier environment. It recognizes the important role of the school bus driver as a professional who is responsible for the safety and security of children. To help get buy-in at your school to participate in the Clean School Bus Idle Reduction Campaign, check out the Fuel Saving Calculator and Bus-Idling Policy on the right-hand side of the Web page.

Smart Growth and Office of Children's Health Protection

Smart Growth encourages communities across the country to use creative strategies to develop in ways that preserve natural lands and critical environmental areas, protect water and air quality, and reuse already-developed land, which includes where to build or expand schools. This year, EPA awarded $130,000 to five communities to fund locally based projects that improve and create healthy environments for children. These grants represent the most innovative examples of community development and promotion that link sustainable growth policies with protecting children's health. For more information on Smart Growth, read the School Siting Guidelines.

NEWS AND EVENTS

- **School Integrated Pest Management Grants Awarded.** U.S. EPA recently announced three grants to facilitate integrated pest management practices in schools. The funding will help reduce student's exposure to pests and pesticides in the Nation's schools, while saving money, energy and pesticide treatment costs. For additional information on the three funded grants and IPM in schools, visit: www.epa.gov/pestwise/ipminschools/grants.
- **Register for the Upcoming Virtual School Walkthrough Webinar,** April 8, 2014, at 1:00 p.m. EDT. This important webinar will feature IAQ Expert Dave Blake (NW Clean Air Agency) and will provide information on how to perform a comprehensive and effective process for identifying, diagnosing and solving common IAQ issues.
- **National Healthy Schools Day,** April 8, 2014. National Healthy Schools Day is coordinated by the Healthy Schools Network, Inc., in partnership with many agencies and organizations, to promote the use of EPA's *IAQ Tools for Schools* guidance and other EPA environmental health guidelines and programs for schools and children's health.
- **2014 Maine Indoor Air Quality Conference,** April 16 – 17, 2014, Portland, ME. The Maine Indoor Air Quality Conference is the largest IAQ conference in northern New England. Professionals throughout the region come together to share new and proven concepts for achieving safe and healthy indoor environments.
- **Closing the Gap: Addressing Asthma Disparities in Schools Webinar,** Thursday, May 1, 2014. Join this webinar to hear how two innovative programs used a comprehensive, partnership-based approach to reduce the burden of asthma in their school systems. The Los Angeles Unified School District (LAUSD) is the second largest public school district in the Nation, with about 650,000 students, many of whom are from families living at or below the national poverty level. LAUSD's program is remarkable: it reduced the number of ER visits and hospitalizations for its kids, increased attendance rates and brought in an additional $100,000 in revenue to the district as a result of improved attendance. The Pediatric/Adult Asthma Coalition of New Jersey (PACNJ) partners with schools, physicians, health insurance companies, community groups, child care providers and environmental agencies to reach many of the largest inner city school districts in New Jersey struggling with asthma disparities. To promote asthma-friendly environments, PACNJ developed the criteria-based Asthma Friendly School Award. More than 600 schools have received the award demonstrating their commitment to IAQ.
- **May Is Asthma Awareness Month.** Learn about successful strategies for improving asthma health outcomes in schools. Download helpful tools like the Event Planning Kit in the Resource Bank. Plan an event in your school and post it on the Events Calendar to connect and share resources with other school programs.

GET ANSWERS TO YOUR QUESTIONS

Is there a topic you want to see covered in an *IAQ Tools for Schools* Connector e-newsletter? Do you have suggestions for a webinar or e-newsletter feature, or do you have questions about a specific IAQ topic? If so, send us an email at IAQTfSConnector@cadmusgroup.com.

Share YOUR news and events! Send us information to share with the school IAQ community. It could be featured in the next Connector e-newsletter. Email your news and events to IAQTfSConnector@cadmusgroup.com.

The *IAQ Tools for Schools* guidance is a comprehensive resource designed to help schools maintain a healthy environment in school buildings by identifying, correcting and preventing IAQ problems. Learn more about the *IAQ Tools for Schools* guidance at http://www.epa.gov/iaq/schools.