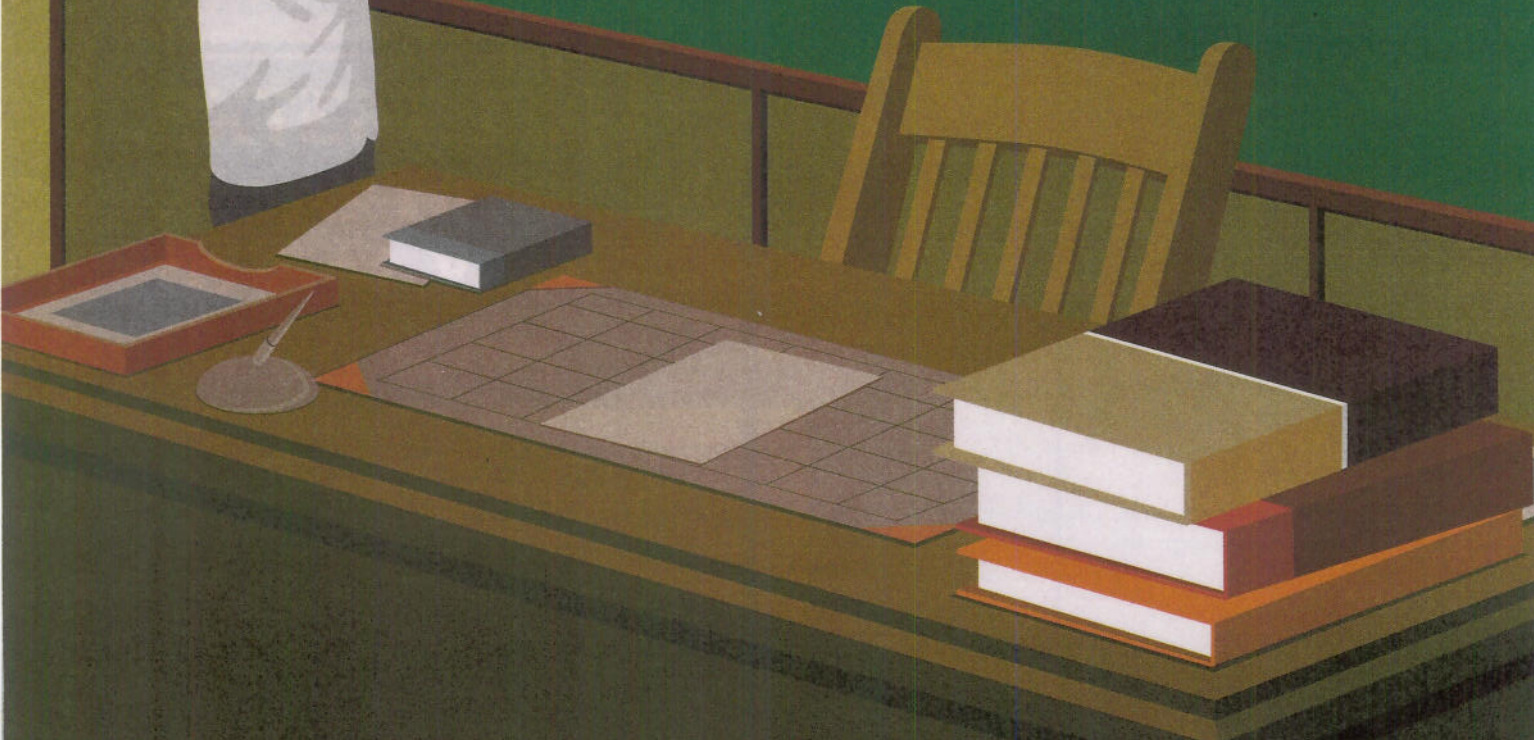


We are what we breathe

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We,



BY AARON G. MARSH

Kids in one Texas school district are breathing cleaner air in school buildings these days — and sick days and trips to the emergency room for students with asthma are down significantly. At the same time, asthma education ranks right up with reading, writing and arithmetic as part of the district's culture.

It's all part of a tailored environmental intervention/asthma awareness program in North East Independent School District in San Antonio, winner of a 2010 National Model of Sustained Excellence Award and featured at the U.S. Environmental Protection Agency's (EPA) National Asthma Forum in June. Program director Diane Rhodes, a respiratory therapist and certified asthma educator, explains how the program improves air quality for all students and faculty and keeps kids with asthma healthier.

"We went from 'Oh, it's just asthma, it's not a big deal' and raised the expectation level of what it means for kids to be in control of their asthma — that they should have no limitations in their lives at all," Rhodes recalls. "It's all about student performance, attendance, and quality of life."

The environmental intervention program works on a number of levels. On the front lines, custodians and maintenance personnel learn to use "green" cleaning techniques and products instead of relying on harmful or toxic chemicals. "These individuals become caretakers not just of buildings but of the health of children and others inside them," Rhodes emphasizes. And — oh, by the way — sick days among the custodial/maintenance team dropped by 25 percent after schools ditched the toxic chemicals.

Behind the scenes, environmental program personnel perform moisture and mold walk-throughs and assessments in classrooms before school begins and on an ongoing basis throughout the year. "You'd be surprised at these classrooms — if you walk through them, you'd see that some look like

messy bedrooms," says Rhodes. Often, the environmental team will find boxes and bins of papers, books, clothes and other items that have been around gathering dust and pests for years because "the last teacher left them here." Air is cleaner and classrooms are less cluttered when these are taken out of the picture.

The environmental team measures moisture and monitors humidity, and teachers are taught not to leave food uncovered in the classroom, to avoid drawing in pests.

HEPA filters are used in all the schools' vacuums.

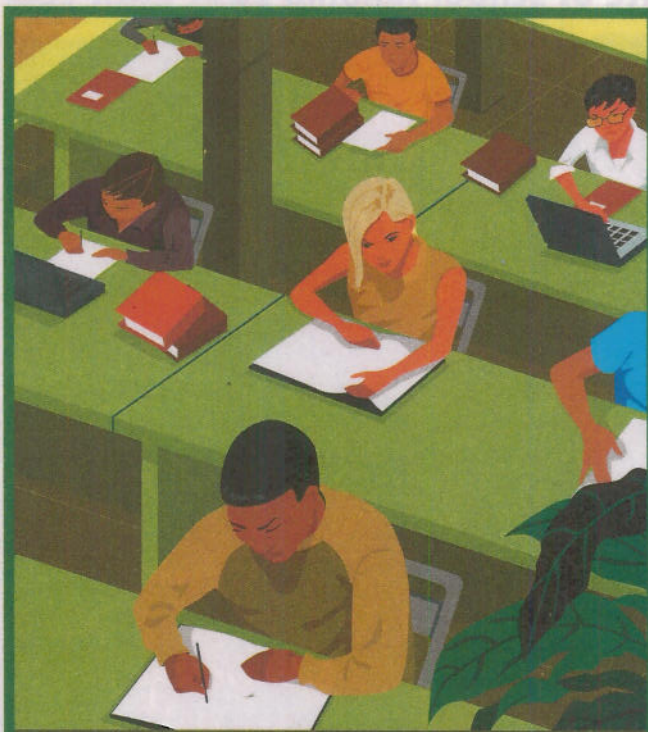
With these and other program actions, the impact on student health has been dramatic. In one elementary school, Rhodes says, "after we went in and did a custodian intervention, cleaned it up and got rid of clutter in the classrooms," unplanned inhaler usage among kids with asthma dropped from some 80 instances one month to 40 the next to just 20 the month after that.

Changing the Culture

Another program spokesperson, Beth Burton of Charlotte-Mecklenburg Schools in Charlotte, NC, notes that leaders of her school district's environmental intervention program realized they couldn't simply address indoor air at schools, similar to experiences in all the programs showcased at the EPA forum. Says Burton, a critical element is to bring asthma awareness education "wherever the parents are —

go into communities, go to churches, go wherever you can to reach them."

District policy now states that asthma awareness must be taught in elementary schools by school nurses, and Burton says the culture in the school district has been changing for the better. "The school system expects annual staff training on asthma issues," she notes. "It's not, 'Can we do this training,' it's 'What day would be best for you — Monday or Friday?'" Every school health team in the district is expected to have asthma awareness activities on its agenda for students, staff and families, Burton adds.



In San Antonio's North East Independent School District of nearly 70,000 schoolchildren, there were an extraordinary 9,000 trips to school nurses during the first six weeks of classes before the environmental intervention program began. The next year, school nurse visits dropped like a rock to half as many during the same period.

HERE'S HOW IT WORKS:

Total student enrollment

X

Local asthma prevalence

X

8.0 average annual missed days of school per student with asthma

X

Daily school funding rate per student

= Basic estimate of school funding LOST each year due to asthma

"School A" has 1,000 students; the local asthma prevalence is 12 percent. The state funding rate for the school is \$25/day per student present.



$$\begin{aligned} & 1,000 \text{ students} \\ & \quad \times \\ & 12\% \text{ local asthma prevalence} \\ & \quad = \\ & 120 \text{ students with asthma} \\ & \quad \times \\ & 8.0 \text{ average missed school days} \\ & \quad \text{per student with asthma} \\ & \quad = \\ & 960 \text{ missed days of school} \\ & \quad \times \\ & \$25 \text{ daily funding rate per student} \\ & \quad = \\ & \mathbf{\$24,000} \\ & \text{Funding School A} \\ & \text{LOSES due to asthma} \end{aligned}$$

Program leader Steven Conti of Austin, TX-based Seton Asthma Center, part of the Seton Healthcare Family health system, says his organization got involved with schools because it was seeking to reduce avoidable ER visits and hospital admissions. Schools in Seton's environmental intervention program are now integrating an asthma curriculum into the mandatory Texas Essential Knowledge and Skills education standards taught in classrooms. "So when a child is being taught math, he might learn how to calculate a peak expiratory flow rate," Conti explains. "In English class, teachers might be teaching some language that's related to asthma."

Show Me the Money

Budgets for schools across the nation are tight, and many of them may view environmental asthma intervention programs as "nice, when you can afford to have them," Conti concedes. But the fact is, keeping students healthier and learning in the classroom — with fewer absences and better grades and performance — is good not only for the students but for school funding.

Using four pieces of information, Conti describes a basic calculation that demonstrates the value of an environmental asthma intervention program. State government websites should have **(1) student enrollment figures** for public schools as well as the **(2) daily school funding rate per student**. The local health department can tell you the **(3) prevalence of**

asthma in your area. And the current **(4) national average number of missed school days per student with asthma each year is eight**, according to the Centers for Disease Control and Prevention.

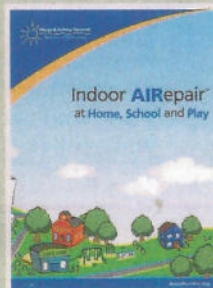
"That's a lot of money — and that's what your school is missing" if it's not trying to do something about it, says Conti. "When we're able to go to a school district and say, 'You're missing millions of dollars a year,' administrators listen. Yes, they care a lot about grades, they care about education, but they're also looking very seriously at that bottom line and they're looking for every penny they can get. Go to them and make that compelling business case."

Bring Success to Your School

EPA has a wealth of resources available at <http://epa.gov/iaq/schools> for parents and others interested in school environmental intervention/indoor air quality programs. Rhodes notes that she herself was a concerned parent who "got the ear of the school administrator" and convinced him to consider implementing a program for the district. Given the strong results these EPA winners have achieved, it should be easier to get attention at your school. "With all the budget cuts that are happening in education, the time is right to approach school administrators on the business side and show them what it's costing *not* to do anything," Rhodes says.

Reviewed by Peyton Eggleston, MD and Cathy Boutin

Read more about EPA award-winning school environmental intervention programs at www.epa.gov/iaq/schools/awards.html. For family-friendly, easy-to-follow tips to find and reduce allergens and irritants indoors, check out Allergy & Asthma Network Mothers of Asthmatics' Indoor AIRepair™ toolkits for home, school and play at www.aanma.org/publication/indoor-air-repair-kit.



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