

Indoor Air Quality and Student Performance

Recent data suggest that poor indoor air quality may directly reduce a person's ability to perform specific mental tasks requiring concentration, calculation, or memory. The evidence is increasing in studies of both schools and other settings that indoor pollution or inadequate ventilation can decrease student and teacher performance.

Good indoor air quality (IAQ) in schools, including pollutant control and adequate ventilation, appears to improve student and teacher health, increases school attendance, and therefore improves student performance.

The U.S Environmental Protection Agency (EPA) and its Science Advisory Board consistently rank indoor air pollution among the top five environmental health risks. According to the EPA, IAQ levels of pollution may be two to five times and sometimes more than 100 times higher than the outdoor levels. The costs of poor IAQ related to sick building syndrome and asthma may be as high as \$20 billion including productivity losses.

Research has shown that poor IAQ plays a strong role in triggering asthma episodes. This is a major problem in schools because more than 6 million children have asthma. Children with asthma miss more than 14 million school days each year, affecting their learning and school performance.

School nurses and classroom teachers are working collaboratively with the LAUSD Office of Environmental Health and Safety to implement a nationally recognized indoor air quality program called ***Tools for Schools***. School teams work together to assess indoor air quality conditions in each classroom, identify any problems, and develop plans to resolve them. ***The goals are to optimize the performances of students and teachers in the classroom and to increase student attendance and performance at school.***

If you would like this program at your school please contact Susan LaCombe at District Nursing--213-763-8374. A special grant from the Environmental Protection Agency (EPA) will pay a \$250 stipend for each site leader upon completion of the program.

What They Are Saying About TOOLS FOR SCHOOLS in LAUSD

Short term goals were met without much expense. The pest control department set rodent traps. When I spoke to the home room teacher, she had not had any problems since the winter break. Long term goals—our school is on the right track.

--- Barton Hill Elementary School

This was a very interesting project. I found out that teachers are very aware of the problems. They came to the health office for more information. The staff is willing to keep a check on the problem areas. They seem to be very aware of asthma problems and air quality. They all want to help in the areas that affect students.

---Reed Middle School

We educated the teachers and staff about things we could do to improve indoor air quality in their classrooms. Food should not be in the classroom unless stored in airtight containers. Plants should be minimized in the classroom. We addressed the problems of temperature control and thermostat problems.

---Carnegie Middle School

Our school does not have air conditioning. We must rely on the ocean breezes for clean, cool air. Unfortunately, our buildings were painted last year and the windows were painted shut. We were able to get a crew to unstick the windows. Everyone was very appreciative since warmer weather is coming soon. The teachers expected something to be done after venting their complaints and fortunately most of the indoor air quality problems could be resolved with very little effort and expense.

--San Pedro High School

Our greatest concern was the lack of heat or too much heat in some of the classrooms. Bond funds are scheduled to replace the central heating system next year. Our temporary solution is to run the heater 2 hours prior to the start of the school day. Teachers have reported that this is a significant improvement. In addition, filters will be checked more frequently and changed per schedule or earlier if requested.

--Venice High School

A leaking pipe under the sink in one classroom was repaired. This leak had not been reported. The teacher realized after participating in the staff development and walk around inspection that it was a problem.

--Corona Elementary School

How School Nurses Can Make a Difference

Asthma is the most common chronic childhood illness. Asthma morbidity and mortality are increasing despite improvements in asthma therapy. The burden of asthma is particularly significant for children living in the inner city.

Recent guidelines from the National Heart, Lung, and Blood Institute recommend daily use of maintenance (control) medications for all children with mild persistent to severe persistent asthma. However, studies have shown that inadequate therapy with maintenance medication is common, particularly for poor urban children.

A recent study showed that 74% of children were receiving inadequate maintenance medications for asthma. Many providers were not aware of the child's symptoms either because the family did not communicate them to the provider or because they were not seen regularly by the same provider.

How can school nurses help improve the care received by their students with asthma?

District Nursing is offering two programs to help students understand their asthma, use their medications, and avoid their environmental triggers. We believe that learning these skills empowers the child and his/her family to communicate more effectively with their health care provider.

Open Airways for Schools is an elementary school program sponsored by the American Lung Association for children age 8 to 12. Middle and High School students are taught ***Power Breathing***, a self management program developed by the Asthma and Allergy Foundation.

Our grant from the CDC allows us to pay school nurses \$250 for completing these programs at their school sites. If you are interested in making a difference in the life of a child with asthma contact Susan LaCombe at District Nursing to be part of these programs.

Karen Maiorca Honored

Asthma and Allergy Foundation of America, Southern California Chapter, honored Karen Maiorca, Director of Nursing Services for Los Angeles Unified School District, for her work promoting asthma awareness and care. She was honored on May 4, 2004, the date celebrated world-wide as World Asthma Day.

Mrs. Maiorca received the Patricia A. McClure Award for her significant contributions to the Breathmobile® program and for her commitment to the health of the school children of the Los Angeles Unified School District. Through Karen's leadership, hundreds of dedicated school nurses and staff members have been trained to identify children with asthma and other respiratory problems.

The Breathmobile® program now serves more than 80 schools in our school district. Four mobile units now provide free medical care to children with asthma. This program continues to keep kids "in" school and "out" of the emergency room.

Karen has been Director of Nursing Services for LAUSD since 1999 and leads the more than 600 school nurses that serve over 750,000 students. She has been in school nursing nearly 28 years and is a past president of the California School Nurses Organization—Southern Section. She has been a member of the executive board of that organization for the past 20 years.

Her peers describe her as a global visionary for advancing school nursing; an exemplary leader; a calm, caring communicator; and a wise mentor. She is indeed an inspiration for the 600 LAUSD School Nurses.

Pilot Asthma Program Showing Promising Results

Local District H is piloting a special program for children with asthma that addresses their needs in their homes. This program is funded by a grant from the US Environmental Protection Agency. School Nurse Yolanda Cuevas is leading the effort to bring asthma care to students' homes. Yolanda is an experienced respiratory therapist and is bilingual in Spanish and English.

Yolanda is visiting families of students who have excessive absences and/or ER visits due to asthma. She works with parents and students to eliminate asthma triggers in their homes, to properly use their medications, and to obtain medical care to manage asthma. She works with both PSA counselors and school nurses to identify students who would benefit from these services.

We are encouraged by the initial results. We believe that the data will show an increase in school attendance and a decrease in visits to the ER. We are now in the process of seeking additional grant funds to expand this program to other areas of LAUSD.