



EVALUATION BRIEF



DEBRA HEATH

MARCH 2009

APS ASTHMA PROGRAM EVALUATION 2003 – 2008

BACKGROUND

Asthma is estimated to affect over seven percent of children in New Mexico and is a leading cause of missed school days. **The average APS elementary school student with asthma misses as many as eleven school days each year, about nine of which are illness-related.**¹ Additional losses in learning time result from asthma symptoms that are poorly managed at school. With today's medicines, most symptoms could be prevented or quickly treated in the classroom or nurse's office. Teachers and students need to be educated in how to help prevent, recognize and manage asthma symptoms. Nurses need information and organizational supports in order to connect students with medical care and insurance coverage. Most children with asthma should not be at higher academic risk than any other child, they should be able to participate in the full spectrum of educational activities, and they should have no asthma-related absences.²

The Health and Wellness department of Albuquerque Public Schools (APS) initiated the Coordinated School Health Program for Asthma in the fall of 2003, with multi-year funding from the Centers for Disease Control and Prevention. The overall program goal is "to improve health outcomes and reduce absenteeism for youth with asthma who attend APS elementary schools, by raising awareness of asthma and ensuring that students have asthma care plans and access to primary care providers." This brief summarizes evaluation results from the program's fifth year of implementation, and contextualizes them with findings from the entire five years of the grant-funded program.

RESULTS

Evaluation results suggest that the APS asthma program improved the asthma management knowledge, attitudes and practices of elementary school staff and students. Individual nurse reports and nationally published studies link such advances to improved health outcomes and reduced absenteeism.

Program Impacts

As a result of the APS asthma program, students with asthma are more likely to:

- Employ asthma prevention and control methods, and use them appropriately.
- Have a medical care provider who is involved in their asthma care.
- Have health insurance coverage.

¹ Between 2004-05 and 2007-08, students with asthma were reported to have an average of 5.1 to 6.6 absence days out of each 108 day period studied, or up to 0.061 absences per day. In a full 180 day school year, this is an average of up to 11 absence days. Between 75% and 82% of absences were attributed to illness each year. Absences may be underreported.

² Merkle, S., Wheeler, L., Gerald, L., Taggart, V. (2006). Introduction: Learning From Each Other About Managing Asthma in Schools. *Journal of School Health*, 76(6), 202-204.

Improve Staff Knowledge and Attitudes about Asthma

The APS asthma program provided nurses with asthma education in multiples venues and on a range of topics, including asthma care, student education, symptom sign scores, asthma emergency management, and health insurance coverage. Results of the spring 2008 Survey of Nurses suggest widespread improvements in nurses' asthma care knowledge and practices, especially at the elementary school level where the vast majority of program activity occurred.

Improved Asthma Care Practices and Attitudes*

- Over 90% of elementary school nurses report increased knowledge and self-confidence related to helping students with asthma.
- 89% say they do more to help students manage their asthma.
- Over 95% agree that nurses should play a strong role as asthma advocates and change agents at their schools.

Teachers, too, are more knowledgeable about asthma and are taking action to create asthma-friendly schools. In 2007-08, the APS nurses and asthma program staff reached a total of 6,046 school staff members with presentations, asthma emergency information, and/or web-based information & training. Nurse survey results suggest that asthma education activities, paired with face-to-face conversations, improved the knowledge and practices of teachers, principals and physical education instructors.

Actions to Create Asthma-Friendly Schools*

- 71% of nurses say the P.E. teacher made adjustments so students with asthma can participate in P.E. activities.
- 87% of nurses report that their school's principal made sure staff had adequate time to receive Asthma Basics training.
- 53% of nurses report that teachers made adjustments to prevent asthma episodes.

Identify Students with Asthma

The APS asthma program strives to identify all students with moderate to severe asthma so they can be educated, monitored and connected with appropriate services. In 2007-08, the asthma program identified and tracked a total of 1,782 students in 85 elementary schools.

Survey results suggest that asthma program activities raised asthma awareness and mobilized school staff to help identify and support students with asthma. Of 56 elementary school nurses responding to the spring 2008 Survey of Nurses:

- 89% say the APS asthma program increased their awareness of students with asthma,
- 87% embrace responsibility for identifying students with asthma,
- 73% report that at least one teacher approached them to get asthma information or discuss a student's asthma-related needs.

Improve Students' Asthma-Related Knowledge, Attitudes, Skills & Behaviors

Another activity to improve asthma management and control is student and parent education. Over five years, 1,370 students with moderate to severe asthma at 85 elementary schools received *Open Airways*[®] classes and parent education materials. In 2007-08, a total of 338 students at 84 schools participated.

For the fifth year in a row, students participating in the *Open Airways*[®] curriculum showed statistically significant improvements in knowledge and ability to:

- Take asthma medicine appropriately,
- Handle asthma episodes,
- Recognize asthma triggers,
- Judge the severity of asthma episodes, and
- Talk to teachers about asthma and removing triggers from the classroom.

By the end of the six *Open Airways*[®] classes, about three-quarters of students reported having asthma management knowledge and abilities. In addition, sadness about having asthma declined from 55% of students to 42%. Similar positive effects were documented every program year.

Results from the spring 2008 Survey of Nurses provide additional evidence of the program's impact on students' health care practices, as highlighted in the box below.

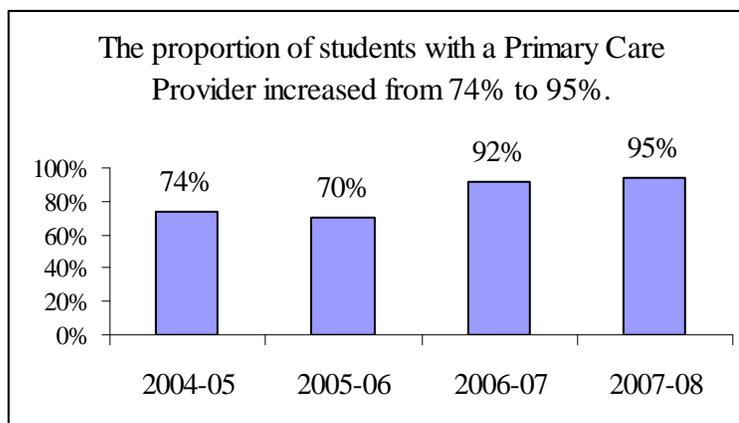
Improved Student Health Care Practices*

- Less use of rescue inhalers
- More regular use of control and preventive medications
- Improved inhaler use
- More peak flow monitoring
- More parents sending medications for use at school
- Fewer health room visits, and
- More students with doctors orders on file

Improve Health Care Access

Optimal asthma management requires involvement of a primary care provider (PCP). When students lack a designated PCP, APS nurses work to fill the gap.

In 2007-08, the proportion of students reported to have a PCP increased for the third year in a row, to 95%, compared to 74% in 2004-05.

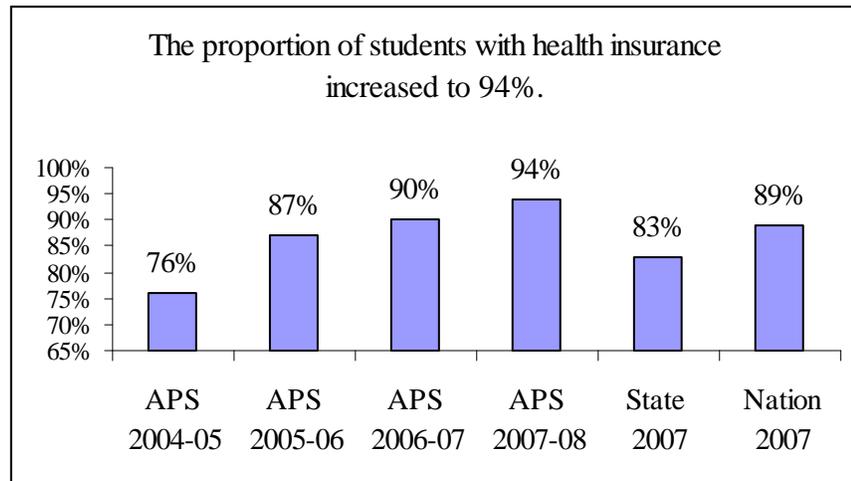


* Survey of Nurses, Spring 2008, n = 56 APS elementary school nurses

Expand Health Insurance Coverage

Program records suggest that the asthma program's efforts to ensure that every student with asthma has health care insurance coverage are succeeding. Nurses refer uncovered students to APS Medicaid enrollment staff.

In 2007-08, 94% of asthma program students were covered by insurance. This marked the peak of a steady upward trend from 2004-05, when only 76 percent of students had documented insurance coverage. Insurance coverage of APS students with asthma is higher than the percent of insured children reported at both the state (83%) and national (89%) levels.



Reduce Absenteeism Due To Asthma

Conclusions about the program's impact on absenteeism are obscured by inherent biases and variations in the collection of absence data. Available attendance data do not reveal any effect the program may have had.

- The average number of absences per student with asthma fluctuated in no consistent direction between 2004-05 and 2007-08, between a low of 5.1 and a high of 6.6 absences.
- The proportion of absences attributed to illness was fairly stable across years (around 80%), which might suggest that the program had little effect if any on absenteeism.

Data from other sources suggest that the attendance of some students with asthma may have improved.

- Forty-four percent of elementary school nurses surveyed in the spring of 2008 estimate that students were absent less often in 2007-08 than in the previous year.
- Nurses attribute attendance increases to students' improved use of medications, enhanced parent awareness and trust of school health supports, and expanded nurse communications with doctors and parents.