

# Coordinated School Health Program for Asthma in Charlotte Mecklenburg Schools

## Initiative Description

To address the needs of children with asthma, Charlotte Mecklenburg Schools (CMS) established an asthma program in 2002. The program includes five key components that reach both the student and school levels.

Student-level components include

- Case management of students with asthma provided by the school nurse.
- Respiratory therapy provided by professional respiratory therapists for students with asthma.
- Open Airways for Schools, an asthma education curriculum for 3<sup>rd</sup>–5<sup>th</sup> grade students with asthma.

School-level components include

- Staff development and education.
- School health teams with a focus on asthma.

## Evaluation

In 2007–2008, 12 elementary schools and 2 high schools participated in the evaluation. Data were collected from 234 elementary school students using paper-and-pencil questionnaires about asthma management behaviors (e.g., appropriate use of inhalers, peak flow meters, or spacers), self-efficacy (i.e., students' certainty they could perform asthma management behaviors), and difficulties (e.g., waking up at night or going to the hospital because of asthma). Additional qualitative data were gathered through interviews with 41 district and asthma program staff and focus groups with 16 parents, 54 elementary school students, and 26 high school students. For quantitative analysis, each student was categorized as having a low, medium, or high level of need for intervention based on the higher of two scores: (1) nurse's rating of level of need based on perception of control, clinical indicators, and lack of resources and/or health care providers, or (2) students' responses to asthma management difficulties items on the questionnaire.

## Findings

Evaluation results revealed

- Approximately half of the students with medium or high levels of need for the intervention were formally enrolled in at least one student-level component of the program.
- At posttest, students who received at least one student-level component of the program demonstrated higher asthma management self-efficacy than students not enrolled in any student-level component.
- Medium and high need students who received at least one student-level component of the program demonstrated improvement in asthma management difficulties from pretest to posttest.
- 26% of students reported that they could always get to their inhalers quickly during the school day.
- Elementary school students who were exposed to environmental tobacco smoke (ETS) reported significantly higher levels of asthma management difficulties than students not exposed to ETS. In addition, exposure to ETS was commonly reported by high school students with asthma.

## Implications

CMS is using the evaluation findings to improve their program. Specifically, asthma program staff plan to re-examine the ways students are selected for asthma program services; better market the district's policy allowing self-carry and self-administration of asthma medications; and integrate smoking cessation classes into their current system for providing parent education.

### *The Public Health Problem*

Asthma is a serious problem for our nation's children.

- More than 5 million school-aged youth have asthma.
- Asthma is the leading cause of school absences resulting from a chronic illness, accounting for almost 8 days of missed school for each student with asthma, and more hospitalizations than any other childhood disease.
- The death rate for children younger than 19 years of age has increased by nearly 80% since 1980.



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