High Schools Urged to Aid in Asthma Management

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Approximately one in six U.S. high school students has asthma, according to the Centers for Disease Control and Prevention. The CDC examined data from the 2003 national Youth Risk Behavior Survey (YRBS) of public and private school students in grades 9-12 in all 50 states and the District of Columbia.

The CDC noted that 18.9% of students had been told by a doctor or nurse at least once that they had asthma; 16.1% had current asthma; and 37.9% of those with current asthma had a wheezing episode or attack during the 12 months preceding the YRBS.

"These findings underscore the need for health care providers, schools, families, and public health care practitioners to be prepared to respond to asthma-related emergencies and to help students manage their asthma," said the CDC (MMWR 2005;54:766-7).

The survey used a three-stage cluster sample design to obtain cross-sectional data representative of the nation’s high school students. The school, student, and overall response rates were 81%, 83%, and 67%, respectively. The first question "Has a doctor or nurse ever told you that you have asthma?" was answered by 13,553 students. The second question "During the past 12 months, have you had an episode of asthma or an asthma attack?" was answered by 13,222 students.

Fewer Hispanic students (15.6%) than black (21.3%) or white (19.3%) reported lifetime asthma. Fewer Hispanic students (12.9%) than black (16.8%) or white (17%) reported current asthma. As did a smaller proportion of 10th-grade students (15%), compared with 9th-grade students (17.5%). In addition, more 9th-grade students with current asthma reported having an attack or episode (45%), compared with 10th (36.4%), 11th (34.6%), and 12th grades (33%). Girls reported higher rates of asthma episodes than did boys (44.5%, compared with 31.1%). All these data reached statistical significance.

These YRBS results differ from those of the 2003 National Health Interview Survey (NHIS) reported by the CDC earlier this year. In that unpublished survey, parents reported 14.5% of their children aged 14-17 years had lifetime asthma; 8.9% had current asthma, and among that group, 57% had an asthma episode or attack during the preceding year. The agency said the differences between the two surveys might be attributable to differences in age (grades 9-12 versus 14-17 years), the fact that data were reported by students and not by parents, and question wording. Further research is needed to better understand the reasons for these differences and their implications for asthma management, the CDC said.

The agency also said it is noteworthy that while other national data sources have revealed black children get asthma more often than do white children, the YRBS survey found no such racial difference for current asthma. Further research also may shed light on why more girls with asthma and more ninth-grade students reported having had an asthma episode or attack during the preceding 12 months.

The YRBS investigators emphasize that their survey has limitations: The data do not include the 5% of adolescents not enrolled in high school; the extent of under- or overreporting of asthma and asthma episodes cannot be determined; and data for Hispanic respondents are derived from a combination of Mexican American, Puerto Rican, and other Hispanic students.

"A primary prevention strategy for asthma does not exist, but asthma can be controlled," the CDC said. "Schools can help improve asthma management among students whose asthma is not well controlled by providing health services, education, and control of environmental triggers. The CDC, other federal agencies, the National Asthma Education and Prevention Program, and national nongovernmental organizations have developed resources to support asthma management activities at schools. CDC’s 'Strategies for Addressing Asthma Within a Coordinated School Health Program' recommends research-based activities for schools to help students manage their asthma." Management includes providing a written action plan for all asthmatic students, ensuring those students receive education on asthma, and enforcing a schoolwide smoking ban.