

Asthma in School Children

This section summarizes school-based asthma surveillance system (SBASS) data for the Fall 2006 through Spring 2009 school years in Connecticut. The *Connecticut School-based Asthma Report 2010* (Nguyen, Peng, & Hargrove, 2010) presents these data in detail, including district-level data. The table below summarizes the number of school districts and schools that provided data for the three school years that are discussed herein.

Table 15. Reporting School Districts, Schools, and Students with Asthma, Connecticut, 2006 – 2009

	School Year		
	2006 – 2007	2007 – 2008	2008 – 2009
# School Districts (%)	186 (96.9%)	186 (96.9%)	185 (96.4%)
#Schools	1,154	1,168	1,163
#Students	18,440	18,637	20,605

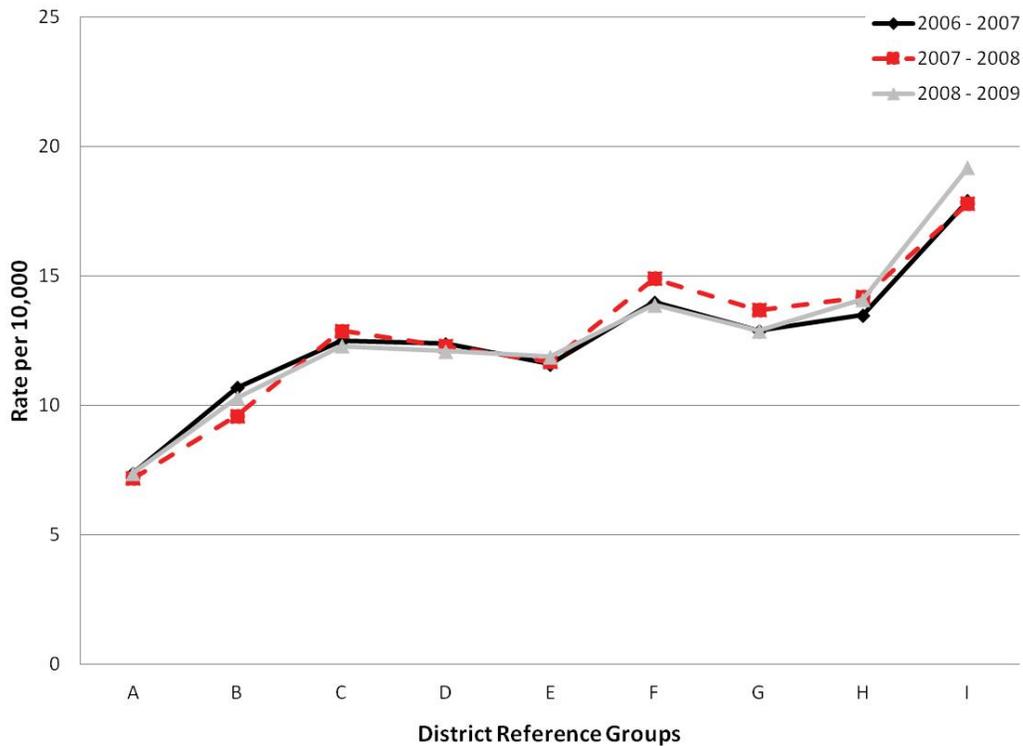
Using the data that were extracted from the Health Assessment Record (HAR) for specific grades across school districts, the calculated asthma prevalence rates among the school-aged children in the participating Connecticut public and private schools for the 2006 - 2007, 2007 - 2008, and 2008 - 2009 school years were 13.2%, 13.2%, and 13.1%, respectively. Overall, asthma prevalence rates were higher among students in pre-kindergarten (PK) or kindergarten (K) when compared to students in grades 6 or 7, and grades 9, 10, or 11. Asthma prevalence rates were higher for males than females for each of the three school years considered. Students classified as “Hispanic” had the highest rates of asthma compared to other race/ethnic groups; however, because the race/ethnicity category classifications for 8.8% of students were reported as “Unknown,” the asthma prevalence rates by race/ethnicity were potentially underestimated.

School districts in four of the five largest cities (Bridgeport, Hartford, New Haven, and Waterbury) had the highest asthma rates. Each of these cities was classified in District Reference Group (DRG) I at the time of data collection. The DRG classification is based on specific socioeconomic (SES) characteristics of families that live in the district with children who attend public school (Prowda, 2006). DRG I districts rank the lowest in SES and highest in need (Canny, 2006), while DRG A districts have the highest SES and least need. In general, as the DRG classifications moved from A to I, student asthma rates increased (Figure 37) indicating that asthma prevalence increased with decreasing household SES (as summarized by the DRG class).

With regard to illness severity, the majority of asthma cases reported in public and private schools were mild. The percentage of mild asthma cases was greater for males than females. Mild asthma was most frequent among non-Hispanic Whites, while moderate asthma was most prevalent among non-

Hispanic Blacks. The percentage of exercise-induced asthma increased with increasing grade level. Females showed higher percentages of exercise-induced asthma compared to males, and exercise-induced asthma was more prevalent in non-Hispanic White students than non-Hispanic Black and Hispanic students.

Figure 37. Asthma Prevalence Rates by District Reference Groups, Connecticut, 2006 – 2009



Documentation of asthma in the school health record was assessed by examining the reported presence of the following: 1) health care provider diagnosis of asthma recorded on the HAR; 2) Asthma Action Plan (AAP) completed by the health care provider; 3) a medication order from the health care provider; 4) a self-carry medication approval; 5) a note from a parent; 6) any other documented observations of asthma symptoms; and 7) any other documentation indicating that the child has asthma. Among the asthma cases reported through the SBASS for the Fall 2006 through Spring 2009 school years, an asthma diagnosis was recorded in the HAR for approximately three out of every four students; a medication order was on file for approximately one out of every three students; and an AAP was on file for one out of every 20 students. With regard to race/ethnicity: “The HAR was the most likely source and AAP was the least likely source of an asthma diagnosis for all races in both public and private schools” (Nguyen, Peng, & Hargrove, 2010, p. 6).