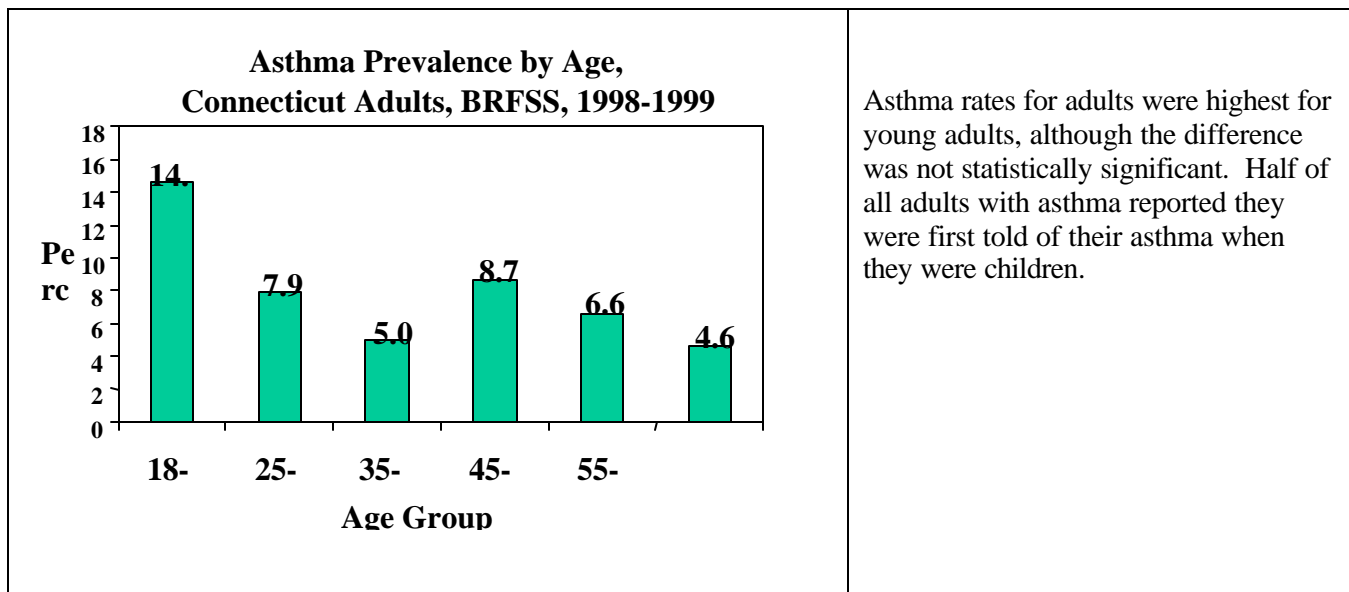# EPIDEMIOLOGY OF ASTHMA IN CONNECTICUT

The Connecticut Department of Public Health is tracking asthma in the state in a number of ways. Key data sources include the Behavioral Risk Factor Surveillance System (BRFSS), hospital admission and emergency room data, and the Department's vital records. Each data source provides a different piece of information about the burden of asthma in Connecticut. Through disease surveillance we can determine the burden of disease within a population, by answering questions like How many? How severe? How well managed? Who's at greatest risk? and What are the costs? Surveillance of asthma, particularly among children, is critical to helping focus asthma intervention activities and public health programs.
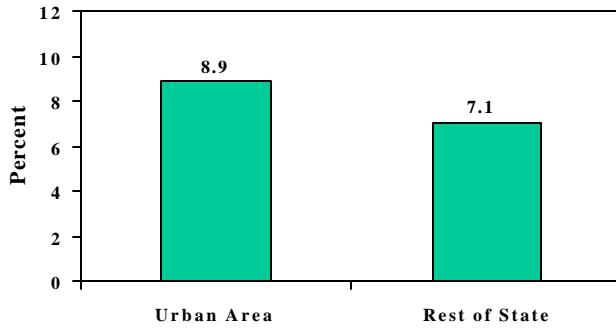
Asthma Prevalence

The BRFSS is a statewide telephone survey that is coordinated by the Centers for Disease Control and Prevention (CDC) and is conducted in all 50 states. Interviews of randomly selected adults are conducted throughout the year and combined and adjusted by CDC to be representative of all adults in the state. All states ask the same core questions but are free to add questions on topics of local interest. In 1998 and 1999 Connecticut included questions to find out how many household members, including children, had been told by a physician that they had asthma.

Key findings:

- An estimated 7.3% of Connecticut adults (180,000) have asthma. The rate is substantially higher for women (9.1%) than men (5.4%)
- An estimated 10.4% of Connecticut children under the age of 18 have asthma (86,000).
- Hispanic and black children had slightly higher rates of asthma than white children. However, asthma rates among adults were similar for whites, blacks and Hispanics.
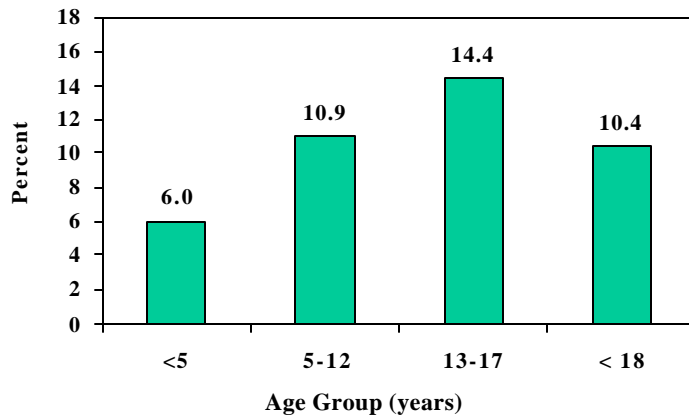

Asthma Prevalence by Age, Connecticut Adults, BRFSS, 1998-1999

Asthma rates for adults were highest for young adults, although the difference was not statistically significant. Half of all adults with asthma reported they were first told of their asthma when they were children.

Asthma Prevalence by Geographic Areas, Connecticut Adults, BRFSS, 1998-1999

Urban Area	8.9
Rest of State	7.1

(Bar chart — Percent on vertical axis 0 to 12; Urban Area = 8.9, Rest of State = 7.1)

Adult asthma prevalence was similar in the urban areas when compared to the rest of the state. The urban area comprised the cities of Hartford, New Haven, Waterbury and Bridgeport.

Prevalence was also similar for high and low-income households and for other measures of socioeconomic status.

Asthma Prevalence by Age, Connecticut Children, BRFSS, 1998-1999

(Bar chart — Percent on vertical axis 0 to 18; Age Group (years): <5 = 6.0, 5-12 = 10.9, 13-17 = 14.4, < 18 = 10.4)
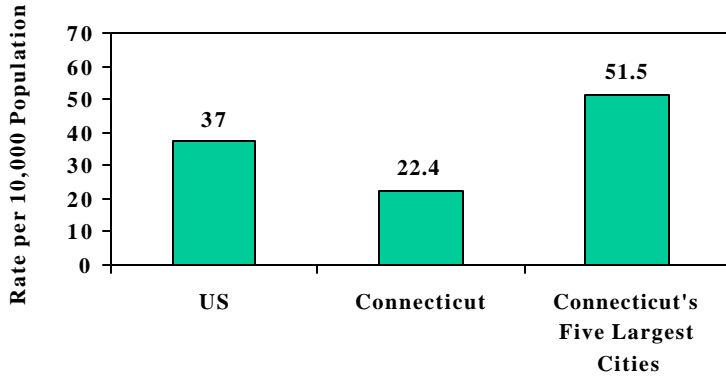
The overall asthma prevalence rate for children was 10.4%, representing 86,000 children. Asthma prevalence among children increased with age to 14.4% for teens. This rate was similar to the rate for 18-24 year old adults of 14.6% Respondents were twice as likely to report a child with asthma in the household if they had asthma themselves.

Hospital Admissions and Emergency Room Data

In addition to using the BRFSS to learn more about the number of people in Connecticut with asthma, the CT DPH evaluates the hospital admission and emergency room data for children age 0-14 with asthma. Hospitalization and emergency room data only provide information on people who have accessed hospitals for care. These statistics represent only the most severe cases or those who may use hospitals for their care. Despite these limitations, these data can be very helpful in identifying children whose asthma may not be well controlled. This can help target interventions or programs that can help these children and their families better control their asthma.
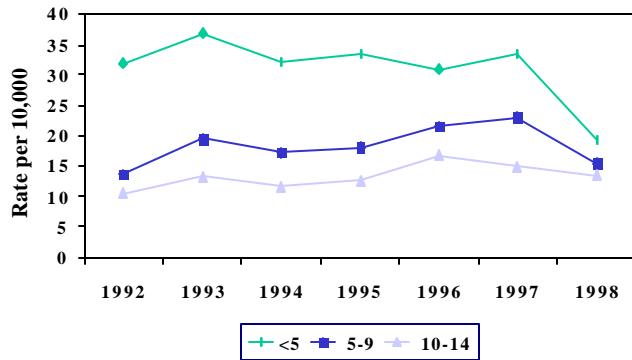
Each year in Connecticut there are approximately 1400 hospital admissions and 6,000 emergency room visits with a primary diagnosis of asthma in children less than 15 years of age. According to data from CT Office of Health Care Access, the median charge per hospital admission is approximately $3,085.

Asthma Hospitalization Rates, Children Age 0-14 Years in US and Connecticut, 1995

Rate per 10,000 Population

US	Connecticut	Connecticut's Five Largest Cities
37	22.4	51.5

The asthma hospitalization rate for Connecticut children is lower than that for children in the United States (U.S.). However, asthma hospitalization rates among children living in Connecticut's five largest cities (Hartford, New Haven, Bridgeport, Waterbury and Stamford) are much higher than the rate of the entire state and that in the U.S.

Asthma Hospitalization Rates* by Age Group and Year, Connecticut, 1992-1998

Rate per 10,000

Years: 1992, 1993, 1994, 1995, 1996, 1997, 1998
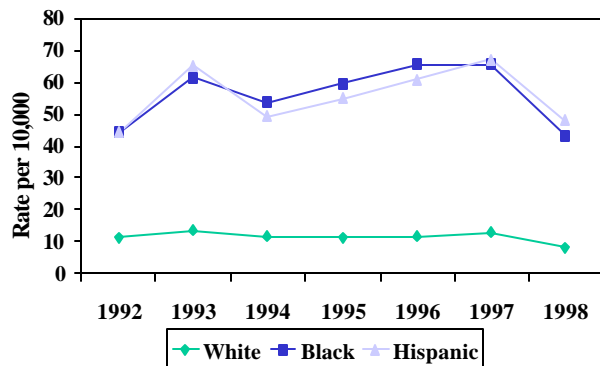
Legend: —+— <5   —■— 5-9   —▲— 10-14

*Primary Diagnosis

Hospitalization rates are highest among very young children. In Connecticut, the average annual hospitalization rate for children 0-4 years of age from 1992-1998 was 31.2/10,000.

Nationally, hospitalization rates were highest among children less than 5 years of age, with a rate of 49.7/10,000 in 1993-94.

Asthma Hospitalization Rates* by Race/Ethnicity and Year, Children Age 0-14 Years, Connecticut,1992-1998

Rate per 10,000

Years: 1992, 1993, 1994, 1995, 1996, 1997, 1998
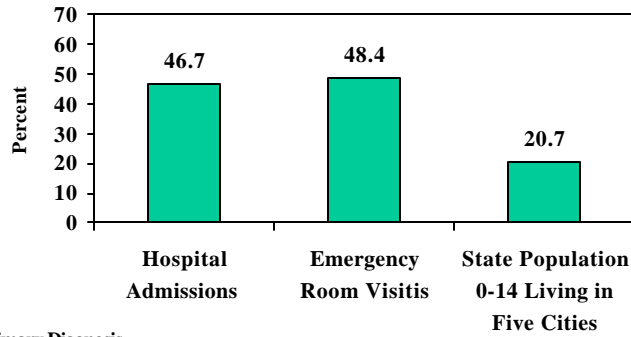
Legend: —◆— White   —■— Black   —▲— Hispanic

*Primary Diagnosis

Hospitalization rates are much higher among black and Hispanic children than white children. In Connecticut, the average annual hospitalization rate for black children from 1992-1998 was 58/10,000, almost five times higher than the annual average for white children, 12/10,000.

Nationally, hospitalization rates among blacks (adults and children) are approximately 3 times higher than whites.
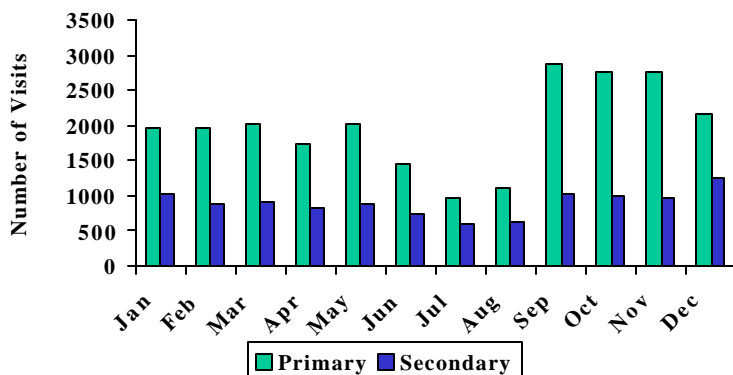
Asthma Hospitalizations and Emergency Room Visits* in Five Major Cities, Children Age 0-14 Years, Connecticut, 1998

* Primary Diagnosis

In cities, more children use hospitals for asthma care. Approximately 20% of the State's children 0-14 years of age resided in the cities of Bridgeport, Hartford, New Haven, Stamford and Waterbury, whereas children in these cities accounted for almost 50% of all hospitalizations and emergency room visits for asthma.

Emergency Room Visits for Asthma by Month of Visit Children Age 0-14 Years, Connecticut, 1995-1998

Emergency room visits with a primary diagnosis of asthma were markedly seasonal. Visits associated with a secondary diagnosis of asthma were not seasonal, but tended to remain fairly constant across the months. Primary visits peaked in the early fall and accounted for the least number of visits during the summer.

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