



# NAUGATUCK VALLEY HEALTH DISTRICT

ASTHMA TREND ANALYSIS REPORT  
JANUARY 2014

## Background

Asthma is chronic respiratory disease that does not discriminate based on sex, age, location, or socioeconomic status. Although there is no cure, asthma can be managed, so a person can live a normal healthy life, by using appropriate medications on a daily or as needed basis, avoiding individual physical and environmental triggers, regular visits (at least two times a year) to a healthcare provider that specializes in asthma management, and use of an asthma action plan developed by the patient and healthcare provider. The asthma action plan is a tool that helps patients/caregivers manage asthma by providing a list of specific medications and dosages based on an individual's asthma severity, and symptoms as well as identification of all triggers.

Asthma can be fatal despite the severity-a person that has intermittent asthma can have a severe asthma attack and die if the correct treatment is not implemented quickly or at all. Each individual has different triggers and symptoms and it is important for the individual and their families to be aware of the person's symptoms, medications, and asthma action plans. Signs of an asthma attack may include: Cough, wheeze, shortness of breath, chest tightness, and mucus production (these symptoms are usually worse at night).

The severity of an asthma attack can intensify quickly so it is important to treat the signs/symptoms immediately. During an asthma attack, swelling in the lining of the airways increase, the muscles surrounding the airways tighten and thicker mucus is produced. These three factors cause the symptoms of an asthma attack. If treatment is not begun immediately symptoms can escalate and include: severe wheezing , coughing that does not stop, rapid breathing, chest pain or pressure, difficulty talking, blue lips or fingernails, pale or sweaty face, and possibly respiratory arrest/death.

The exact cause of asthma is unknown but it has been seen to run in families and may be a genetically inherited trait. Environmental factors are known to play a key role. It is also believe that allergens and certain respiratory infections that occur during infancy and early childhood play an important role in the development of asthma. According to the American Lung Association (ALA), from 2002 to 2007, the annual economic costs in the United States was \$56 billion – direct health care costs totaling \$50.1 billion and indirect costs (i.e. lost productivity) totaling \$5.9 billion. In 2008, asthma accounted for an estimated 14.4 million lost school days and 14.2 million lost work days nationwide. Asthma related costs in Connecticut in 2009 were \$112 million for acute care, \$80.3 million on hospitalization charges and \$32.6 million on emergency department visit charges, totaling \$224.9 million.

The following trend analysis compiles data from various sources including National Health Interview Survey, Behavioral Risk Factor Surveillance System and the Asthma in CT Report. Further analysis of data specific to NVHD municipalities examines asthma hospitalizations and emergency department visits between 2005 and 2009, and hospital admissions visits between 2006 and 2009.

## **Trend Analysis:**

Asthma does not discriminate and can affect a person at any age. Based on the 2011 National Health Interview Survey, an estimated 39.5 million Americans (129.1 per 1,000) had been diagnosed with asthma at some point during their lifetime. In Connecticut, the lifetime prevalence of asthma, according to the 2010 BRFSS was 411,000 (15.3%). During 2000-2010, the Connecticut lifetime prevalence of asthma in adults was higher than that of the nation and saw a 41.7% increase over ten years compared to the 29.8% nationally. This also holds true for Connecticut children who have remained consistently higher than the national average since 2000. The current prevalence of asthma in both children and adults in Connecticut is also higher than the national average. It is alarming to note that while the Connecticut rate has been increasing, the national rate has seen a slight decrease over the same time.

According to the Asthma in CT Report (2012); within the towns that comprise the Naugatuck Valley Health District, the rates of asthma vary between each of the six towns yet are much lower than that of Connecticut. From 2005 through 2009, Naugatuck saw the highest number of asthma hospitalizations (193), followed by Ansonia (152), Shelton (149), Derby (84), Seymour (66) and Beacon Falls (18). For the same time period, Ansonia was ranked highest for asthma emergency department visits with 1,076, followed by Naugatuck (777), Shelton (661), Derby (655), Seymour (521) and lastly Beacon Falls (122). The prevalence between the towns remained the same in regards to ranking with Ansonia having the highest hospital admissions between 2006 and 2009 (965) followed by Naugatuck (718), Shelton (647), Derby (603), Seymour (465), and Beacon Falls (113).

## **Conclusion:**

Based on the increased incidence and prevalence rates, increased emergency department visits and hospitalizations and the serious effects on the individual's health, asthma is and will continue to be a major public health concern. Proper education must be made readily available to those individuals and/or the families of those suffering with asthma.

Asthma is a chronic yet manageable disease that has seen an increase in the rates for the State of Connecticut even though there has been a national decline. Although the towns within the Naugatuck Valley Health District have seen lower rates than Connecticut, it is uncertain whether this trend will continue. Many local health departments and districts in Connecticut offer "Putting on AIRS", a free in-home education program for families that have children diagnosed with asthma. Participant families are provided education on asthma as a chronic illness and its management, the identification of asthma triggers and ways to reduce or eliminate those triggers, the use of an Asthma Action Plan, medication use and administration techniques. Evidenced based programs such as Putting on AIRS have demonstrated effectiveness in decreasing in school absences, emergency room visits and hospitalizations in communities where they have been implemented, while at the same time increasing awareness and education on a disease that has no cure.

Sources:

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