Asthma in New Hampshire

Asthma Risk Factors and Co-Morbidities

I. Background

Risk factors and co-morbidities further complicate asthma treatment and control. Smoking, weight status, and physical activity level can impact asthma control and the quality of life of people with asthma. Co-morbidities place people with asthma at higher risk of medication interactions, hospitalization, and lower quality of life.

This report summarizes data from "Chapter 3: Asthma Risk Factors and Co-Morbidities," Asthma Burden Report - New Hampshire 2010, available at www.dhhs.nh.gov/dphs/cdpc/asthma/publications.htm. The data are primarily from the New Hampshire Behavioral Risk Factor Surveillance System survey (NH BRFSS) and the National Survey of Children's Health (NSCH).

II. Risk Factors

Many behavioral and environmental risk factors are associated with asthma. The focus here is on health behaviors; subsequent reports will cover selected environmental asthma triggers.

Smoking and Secondhand Smoke

Smoking has been shown to aggravate asthma symptoms and decrease quality of life for people with asthma.[1,2] It has also been shown to decrease the effectiveness of inhaled corticosteriods, which are used frequently to treat asthma symptoms.[3,4]

In 2007-2008, approximately 21% of adults with asthma in New Hampshire were current smokers, and though smoking rates have decreased among adults without asthma, they have not among people with asthma.

Secondhand tobacco smoke also poses a risk to people with asthma, especially children. Despite this, **more than 30% of children with asthma in New Hampshire lived in a household with someone who smokes**.

Physical Activity

Physical activity is important to stay healthy and fit. People with asthma who participate in regular physical activity are less likely to have an asthma exacerbation and tend to utilize fewer health care services.[5,6]

The United States Department of Health and Human Services recommends that adults participate in two and a half hours of moderate physical activity, an hour and fifteen minutes of vigorous activity, or some combination of these weekly to maintain a healthy level of fitness.[7]

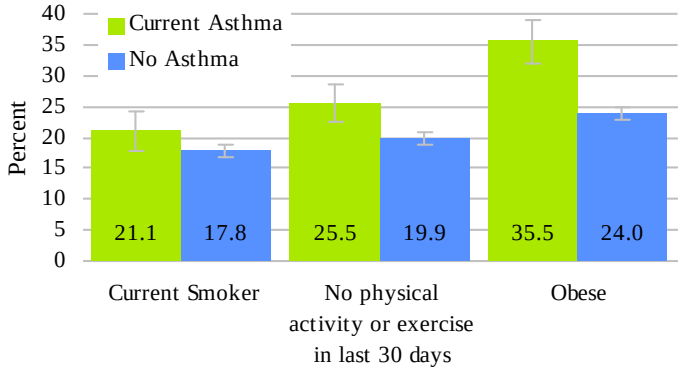
In New Hampshire, **approximately 1/3 of adults and over 2/3 of children with asthma did not meet the recommended guidelines for weekly physical activity.** Nearly 1 out of 4 people with asthma did not participate in any physical activity in the last 30 days.

Weight Status

The exact cause and effect relationship between asthma and obesity is complex and not fully understood.[8] Although it is not clear whether obesity is a primary risk factor for the development of asthma or simply exacerbates existing asthma or both, it has been shown to be an important source of respiratory morbidity.[9]

In New Hampshire, adults with asthma had a statistically significant higher prevalence of obesity compared with adults without asthma, at 35.5% versus 24.0%. **The prevalence of obesity is increasing nearly twice as fast among adults with asthma as compared with adults who do not have asthma.**

Prevalence of asthma risk factors among adults 18+ years old by asthma status - New Hampshire, 2007-2008



Data Source: 2007-2008 NH BRFSS

III. Co-Morbidities

Individuals with asthma are more likely to report other chronic conditions compared with people without asthma,[10] and many of the conditions reported are not respiratory conditions.[11] The National Heart, Lung, and Blood Institute (NHLBI) Expert Panel Report 3 (EPR3) *Guidelines for the Diagnosis and Management of Asthma* recommends that healthcare providers evaluate patients for the presence of a chronic co-morbid condition when their asthma cannot be well controlled.

Depression

Adults with asthma in New Hampshire were almost twice as likely to have ever been diagnosed with depression compared with adults without asthma and **more than three times as likely to have reported having major depression** in 2006. Studies have found depression is associated with reduced treatment adherence and poor health outcomes for people with asthma.[12,13]

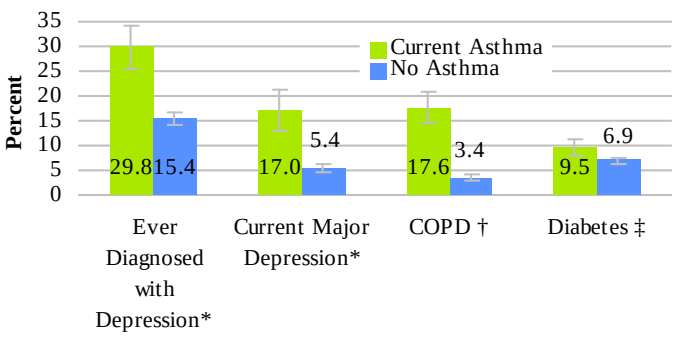
COPD

While asthma and chronic obstructive pulmonary disease (COPD) are both respiratory conditions and share similar characteristics, they are two distinct conditions in terms of disease onset, frequency of symptoms, reversibility of airway obstruction and pharmacologic treatment. In 2008, it was estimated that New Hampshire adults with asthma were **more than five times as likely to be diagnosed with COPD** as adults who did not have asthma.

Other Conditions

Co-morbidities that occur with asthma are not always respiratory diseases. Studies have shown that adults with asthma have higher rates of cardiovascular disease,[10,14] stroke,[15] and other smoking-related conditions.[10] At least one study has suggested a relationship between diabetes and asthma.[16]

Prevalence of selected co-morbidities among adults 18+ years old by asthma status - New Hampshire, 2006- 2008



Data Sources: *2006, †2008, ‡2007-2008 NH BRFSS

IV. Where To Go For More Information

For more information on the data presented here or to receive a copy of other reports on asthma, contact the New Hampshire Asthma Control Program at **1-800-852-3345 ext. 0856.**

Reports can also be downloaded from the New Hampshire Department of Health and Human Services Website at www.dhhs.nh.gov/dphs/cdpc/asthma/publications.htm.

For information on **New Hampshire Asthma Collaborative** partners and activities addressing asthma in New Hampshire, contact the New Hampshire Asthma Control Program at **1-800-852-3345 ext. 0855.**

V. References

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