Asthma in North Carolina

Asthma is a chronic lung disease that affects an estimated 16.4 million adults (aged ≥ 18 years)\(^1\) and 7.0 million children (aged< 18 years)\(^1\) in the United States (U.S.), regardless of age, sex, race, or ethnicity. Although the exact cause of asthma is unknown and it cannot be cured, it can be controlled with self-management education, appropriate medical care, and avoiding exposure to environmental triggers. The following data provide an overview of the burden of asthma in North Carolina (NC) compared with the U.S. All stated comparisons (e.g., higher, lower, similar) indicate that the group is statistically significantly different than the reference group (e.g., adults aged 18-24 years, men, non-Hispanic whites, children aged 12-17 years, and boys).

### Asthma Prevalence

In 2008, an estimated 519,735 adults in North Carolina had asthma. Adult lifetime asthma prevalence was 11.7% and adult current asthma prevalence was 7.6% compared with U.S. rates of 13.3% and 8.5%, respectively\(^2\).

**Adult Current Asthma Prevalence by Age, BRFSS, 2008**

In 2007, an estimated 322,007 children in North Carolina had asthma. Child current asthma prevalence was 9.2% compared with the U.S. rate of 9.0%\(^2\).

**Child Current Asthma Prevalence by Age, NSCH, 2007**

Child current asthma prevalence was higher among non-Hispanic blacks and non-Hispanic multirace persons throughout the U.S. Comparisons between race/ethnic groups in North Carolina were not reported due to sample size.

- \*The estimate is unstable.
- **The estimate is suppressed.

Adult current asthma prevalence was higher among non-Hispanic persons of other races and lower among Hispanics than non-Hispanic whites in North Carolina; however, rates were higher among non-Hispanic multirace persons and non-Hispanic blacks throughout the U.S.

Adult current asthma prevalence was higher among women than men in North Carolina. A similar pattern occurred throughout the U.S.

Child current asthma prevalence was similar among boys and girls in North Carolina; however, the rate was higher among boys throughout the U.S.

Adult current asthma prevalence was similar among all age groups when compared with adults aged 18-24 years in North Carolina; however, the rate was highest among adults aged 18-24 years throughout the U.S.

Child current asthma prevalence was similar among all age groups when compared with children aged 12-17 years in North Carolina; however, the rate was lower among children aged 0-5 years throughout the U.S.

National Center for Environmental Health
Division of Environmental Hazards and Health Effects
Asthma in North Carolina

Asthma Hospitalizations
North Carolina Hospital Discharge Data, 2007

The age-adjusted asthma hospitalization rate in North Carolina was 115.0/100,000 persons compared with the U.S. rate of 144/100,000 persons. In North Carolina, the hospitalization rate for children was 142.1/100,000 persons and for adults was 107.9/100,000 persons.

Asthma Deaths
Age-Adjusted Asthma Mortality Rate by Race, NVSS, 2007

Asthma was the underlying cause of death for 132 adults and less than 10 children in North Carolina. The age-adjusted asthma mortality rate in North Carolina was 15.1/million and the U.S. rate was 11.0/million.

**The estimate is suppressed.

Asthma Patient Education and Medication Use

The National Heart, Lung, and Blood Institute (NHLBI) Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma includes recommendations by medical and public health experts to aid in the clinical practice of managing asthma. The NHLBI Guidelines focus on four areas of asthma management and care: Assessment and Monitoring, Patient Education, Control of Environmental Factors Contributing to Asthma Severity, and Pharmacologic Treatment. The state of North Carolina does not have data available from the Asthma Call-back Survey.

<table>
<thead>
<tr>
<th>Patient Education: Adults with Current Asthma</th>
<th>Respondents</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever taught how to recognize early signs or symptoms of an asthma episode</td>
<td>not available</td>
<td>not available</td>
</tr>
<tr>
<td>Ever told what to do during an asthma attack</td>
<td>not available</td>
<td>not available</td>
</tr>
<tr>
<td>Ever taught how to use a peak flow meter to adjust daily medications</td>
<td>not available</td>
<td>not available</td>
</tr>
<tr>
<td>Ever given an asthma action plan</td>
<td>not available</td>
<td>not available</td>
</tr>
<tr>
<td>Ever taken a course on how to manage asthma</td>
<td>not available</td>
<td>not available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medication Use: Adults with Current Asthma</th>
<th>Respondents</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used a prescription asthma medication in the past 3 months</td>
<td>not available</td>
<td>not available</td>
</tr>
</tbody>
</table>

NOTES:
1. National Health Interview Survey (NHIS), 2008
   When the sample size is fewer than 50, prevalence estimates are considered unstable and should be interpreted with caution. Indicated with an asterisk (*)
   When estimates are based on sample sizes too small to meet standards for reliability or precision, data are suppressed due to confidentiality. Indicated with double asterisks (**) All stated comparisons (e.g., higher, lower, similar) indicate that the group is statistically significantly different than the reference group (e.g., adults aged 18-24 years, men, non-Hispanic whites, children aged 15-17 years, and boys).
3. State Hospital Discharge Data, 2007
   When estimates are based on fewer than 60 hospitalizations, they are considered unstable and should be interpreted with caution. Indicated with an asterisk (*)
   When estimates are based on fewer than 20 deaths in the numerator, they are considered unstable and should be interpreted with caution. Indicated with an asterisk (*)
   When estimates are based on fewer than 10 deaths in the numerator, data are suppressed due to confidentiality. Indicated with double asterisks (**) 6. Asthma Call-back Survey, 2008
7. Medication includes inhalers, pills, syrups, and nebulizers.