Asthma in Michigan

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 Michigan (MI) 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 15-17 years, and boys).

**Asthma Prevalence**

In 2008, an estimated 750,954 adults in Michigan had asthma. Adult lifetime asthma prevalence was 15.4% and adult current asthma prevalence was 9.9% compared with U.S. rates of 13.3% and 8.5%, respectively\(^2\).

![Adult Current Asthma Prevalence by Age, BRFSS, 2008](image)

Adult current asthma prevalence was lower among adults aged 25+ years than adults aged 18-24 years in Michigan. A similar pattern occurred throughout the U.S.

![Adult Current Asthma Prevalence by Sex, BRFSS, 2008](image)

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

![Adult Current Asthma Prevalence by Race/Ethnicity, BRFSS, 2008](image)

Adult current asthma prevalence was higher among non-Hispanic multirace persons than non-Hispanic whites in Michigan; however, rates were higher among non-Hispanic multirace persons and non-Hispanic blacks throughout the U.S.

In 2008, an estimated 254,583 children in Michigan had asthma. Child lifetime asthma prevalence was 15.5% and child current asthma prevalence was 10.7% compared with the 38 participating states’ rates of 13.3% and 9.0%, respectively\(^2\).

![Child Current Asthma Prevalence by Age, BRFSS, 2008](image)

Child current asthma prevalence was lower among children aged 0-4 years than children aged 15-17 years in Michigan. A similar pattern occurred throughout the 38 participating states.

![Child Current Asthma Prevalence by Sex, BRFSS, 2008](image)

Child current asthma prevalence was higher among boys than girls in Michigan. A similar pattern occurred throughout the 38 participating states.

![Child Current Asthma Prevalence by Race/Ethnicity, BRFSS, 2008](image)

Child current asthma prevalence was higher among non-Hispanic multirace persons and non-Hispanic blacks than non-Hispanic whites in Michigan. A similar pattern occurred throughout the 38 participating states.

National Center for Environmental Health
Division of Environmental Hazards and Health Effects
The age-adjusted asthma hospitalization rate in Michigan was 162.3/100,000 persons compared with the U.S. rate of 144/100,000 persons. In Michigan, the hospitalization rate for children was 179.6/100,000 persons and for adults was 159.6/100,000 persons.

Asthma was the underlying cause of death for 120 adults and 12 children in Michigan. The age-adjusted mortality rate in Michigan was 12.7/million and the U.S. rate was 11.0/million.

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. Items included in the following table are related to asthma patient education and medication use for adults with current asthma in Michigan.

### Patient Education: Adults with Current Asthma

<table>
<thead>
<tr>
<th>Question</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>510</td>
<td>58%</td>
</tr>
<tr>
<td>Ever told what to do during an asthma attack</td>
<td>503</td>
<td>70%</td>
</tr>
<tr>
<td>Ever taught how to use a peak flow meter to adjust daily medications</td>
<td>511</td>
<td>37%</td>
</tr>
<tr>
<td>Ever given an asthma action plan</td>
<td>502</td>
<td>21%</td>
</tr>
<tr>
<td>Ever taken a course on how to manage asthma</td>
<td>517</td>
<td>4%</td>
</tr>
</tbody>
</table>

### Medication Use: Adults with Current Asthma

<table>
<thead>
<tr>
<th>Question</th>
<th>Respondents</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used a prescription asthma medication in the past 3 months</td>
<td>512</td>
<td>74%</td>
</tr>
</tbody>
</table>

**NOTES:**
1. National Health Interview Survey (NHIS), 2008
2. Behavioral Risk Factor Surveillance System (BRFSS), 2008
   - When the sample size is fewer than 50, prevalence estimates are considered unstable and should be interpreted with caution. Indicated with an asterisk (*)
   - 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, 2008
7. Medication includes inhalers, pills, syrups, and nebulizers.