

ASTHMA IN WISCONSIN 2017

A summary of asthma burden data in Wisconsin describing prevalence, asthma control and management, health care utilization, and mortality

SCOPE OF THE PROBLEM

Over the past decade, Wisconsin has made significant improvements in reducing the asthma burden in some areas, but in other areas asthma remains unchanged.



Significant

- Reducing emergency department (ED) visits
- Reducing hospitalizations
- Reducing mortality rates



Slight Improvements

- Adults with asthma who got a flu shot
- Number of schools with asthma action plans on file for all students with asthma



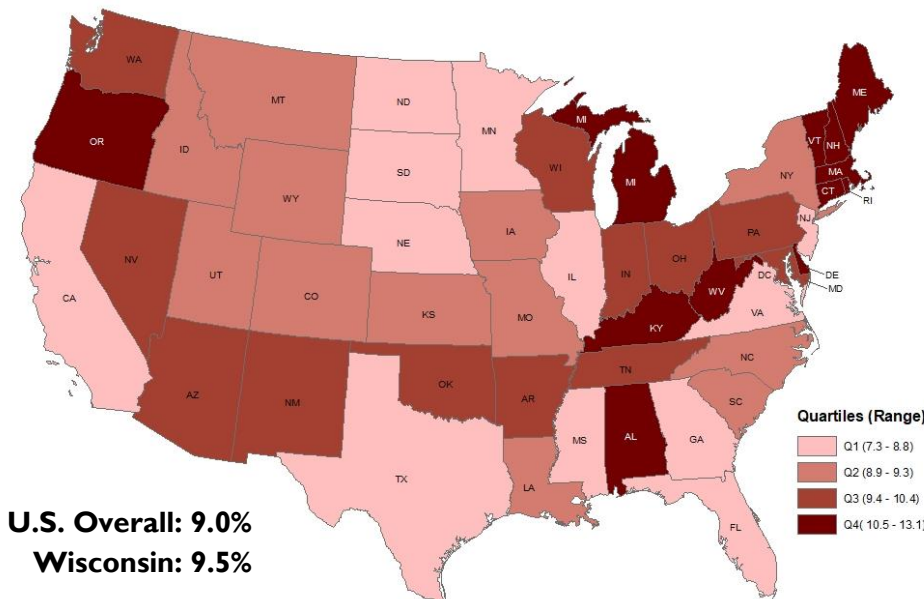
No Change

Racial and ethnic disparities in asthma prevalence, hospitalization rates, and mortality rates

ASTHMA PREVALENCE

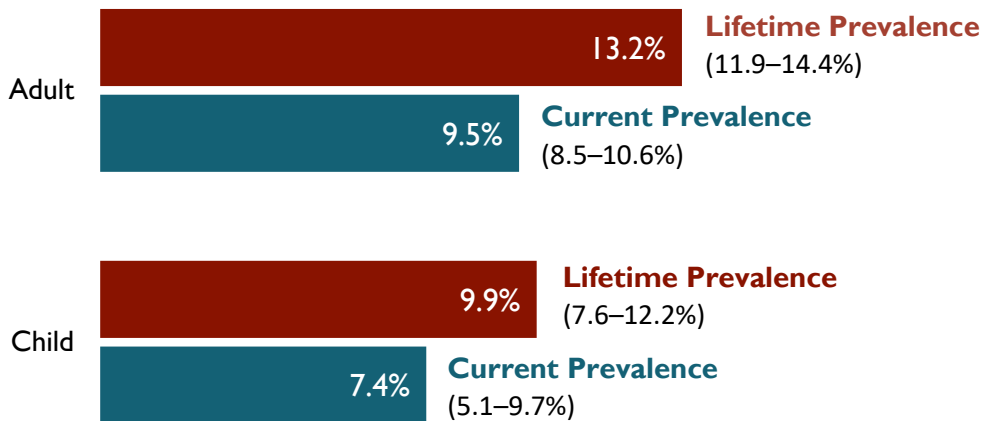
Asthma Prevalence by State, 2017

In 2017, U.S. adult current asthma prevalence was 9%. In Wisconsin, adult current asthma prevalence was 9.5% putting the state in the 75th percentile nationally.



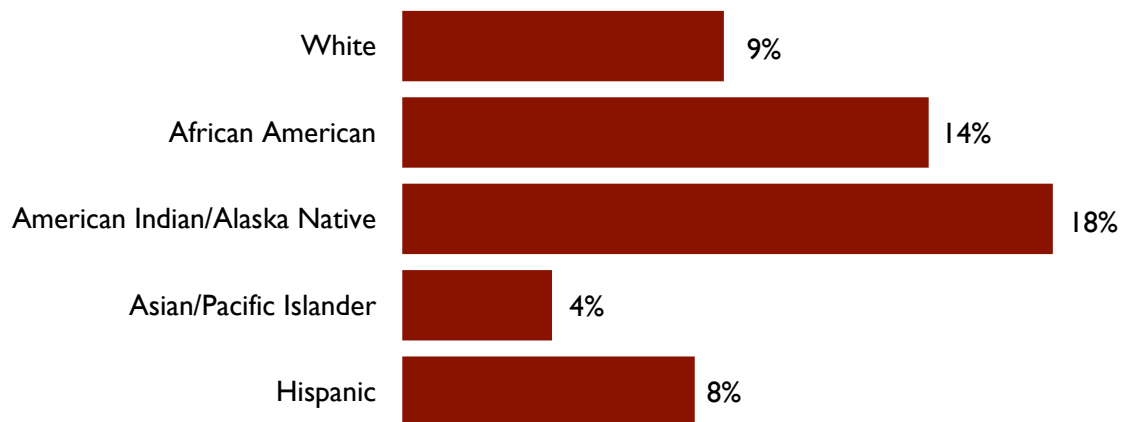
Adult and Child Asthma Prevalence, Wisconsin, 2017

Asthma is a key public health problem. From 2016 to 2017, the prevalence of asthma increased slightly in Wisconsin. This data translates to about 100,000 Wisconsin children and 400,000 Wisconsin adults with current asthma.



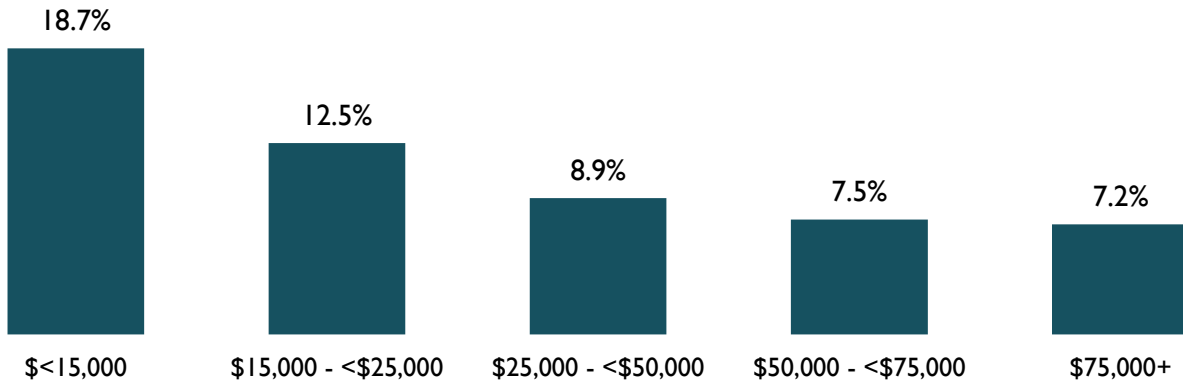
Asthma Prevalence among Wisconsin Adults by Race and Ethnicity, 2015–2017

Similar to the U.S., Wisconsin’s **asthma burden disproportionately falls upon racial and ethnic minority populations.** Non-Hispanic African Americans have an asthma prevalence almost 1.5 times higher than whites, and American Indians have an asthma prevalence twice that of whites. Because of this difference in prevalence, you might expect that there would also be higher rates of adverse asthma outcomes (such as ED visits, hospitalizations, and mortality) among these two populations. In Wisconsin, we see disproportionately higher rates of asthma health care utilization and mortality among African Americans.



Asthma Prevalence among Wisconsin Adults by Income, 2015–2017

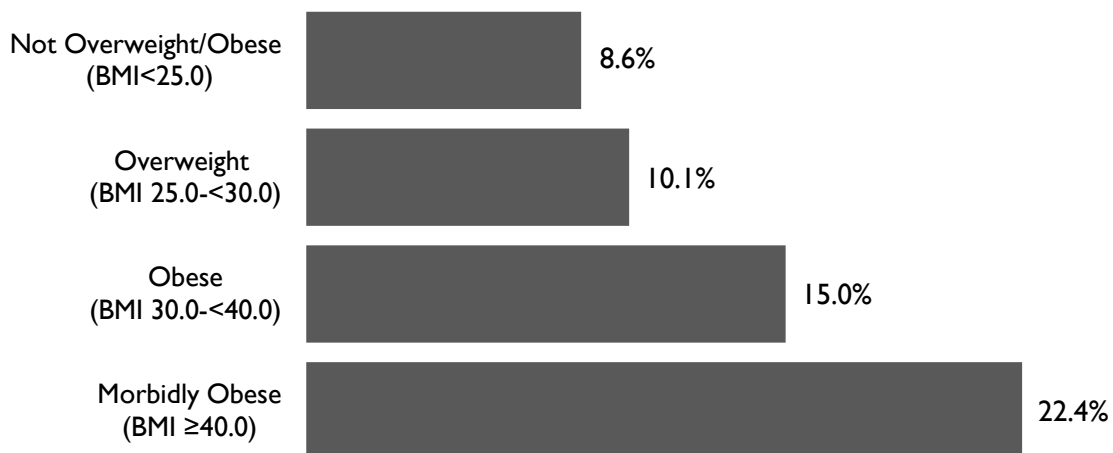
Asthma disparities also exist by other factors, such as annual household income. Adults in the lowest income group have over 2.5 times the rate of asthma as those in the highest income group.



Asthma Prevalence among Wisconsin Adults by Sex and Weight Status, 2015–2017

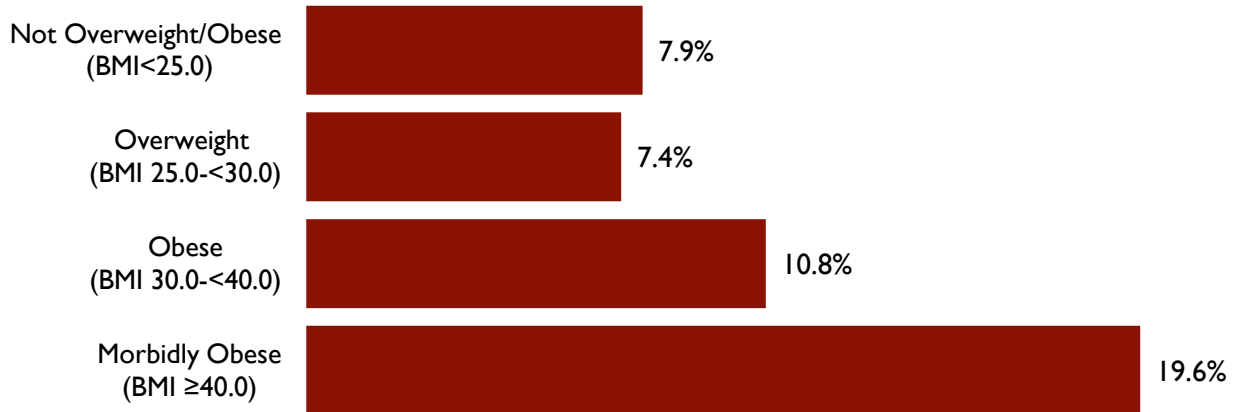
In Wisconsin, obese adults had higher asthma prevalence than both normal and overweight adults, with **dramatically higher prevalence among the morbidly obese.**

All Wisconsin Adults

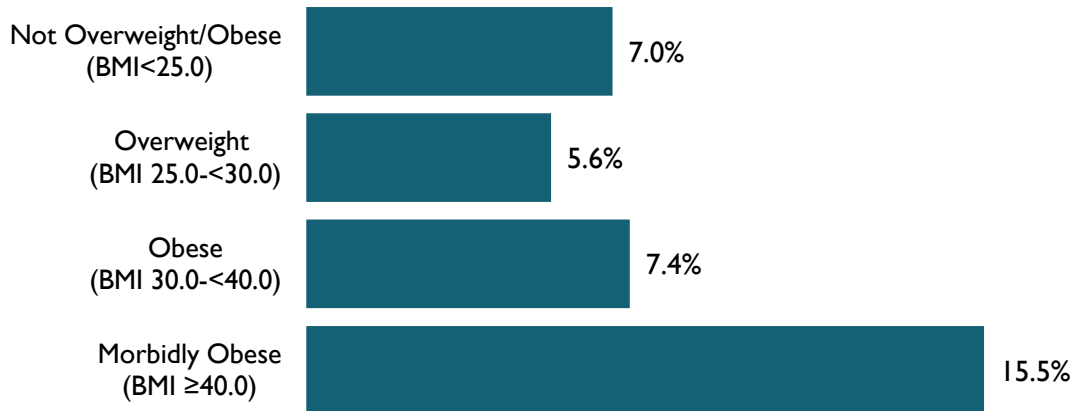


When stratified by sex, we see that a significantly higher percent of obese and morbidly obese females reported having asthma compared to normal weight and overweight females. Men in the morbidly obese group report significantly higher asthma prevalence compared to men in other weight status groups.

Females

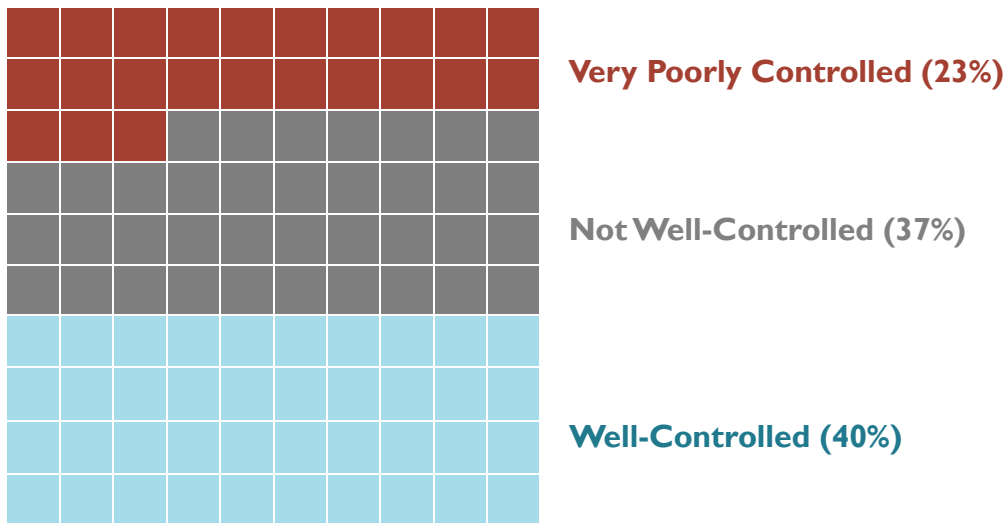


Males



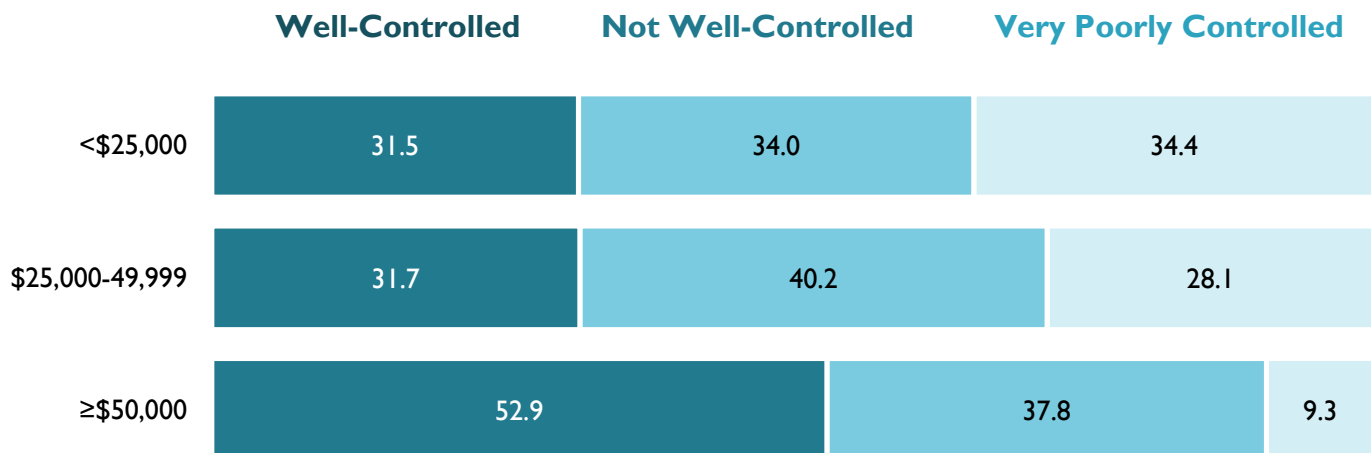
ASTHMA CONTROL

The frequency of asthma symptoms, nighttime awakenings, activity limitations and rescue medication use among persons with asthma were used to classify asthma control into the following categories: well-controlled, not well-controlled, and very poorly controlled. Combining the top two categories in the figure below, we can see that **60% of all adults with asthma reported asthma that was not well-controlled or very poorly controlled.**



Control of Asthma by Income, 2012–2016

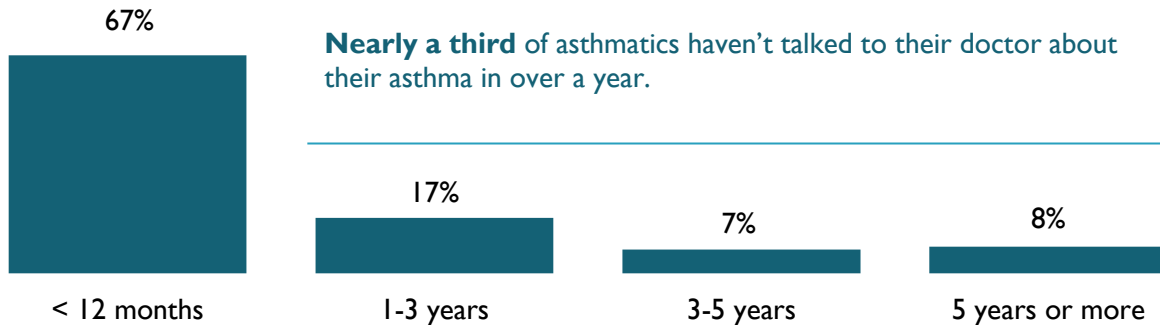
Poor asthma control is also associated with a lower income. Among adults with current asthma, those in the highest income group were more likely to report well-controlled asthma than those in the lower income groups.



ASTHMA MANAGEMENT

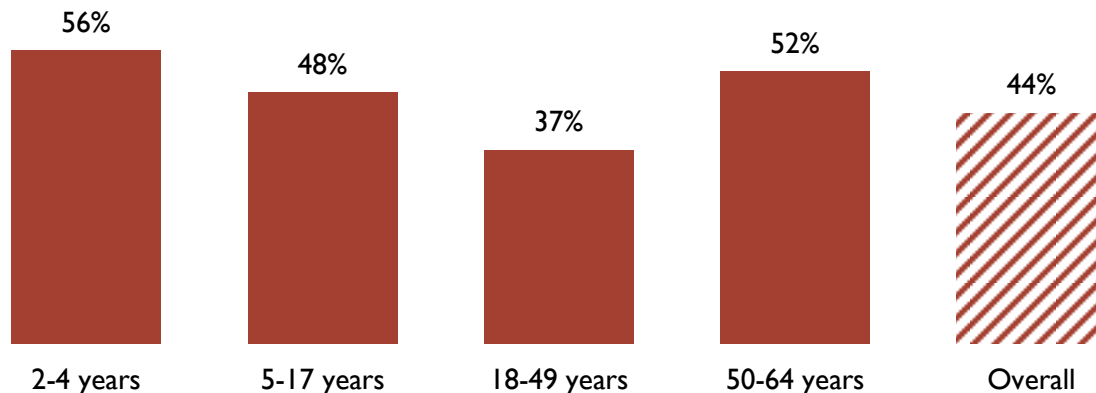
Time Since Patient Talked to Doctor about Asthma, among Current Asthmatics, Wisconsin, 2012–2016

Establishing routine health care visits with a medical provider is an essential part of asthma management. **Nearly one-third of adults with current asthma reported it had been over a year since they discussed asthma with their doctor.**



Percentage of Persistent Asthmatics Who Received a Flu Vaccine by Age Group among Medicaid Population, 2012–2014 Flu Season

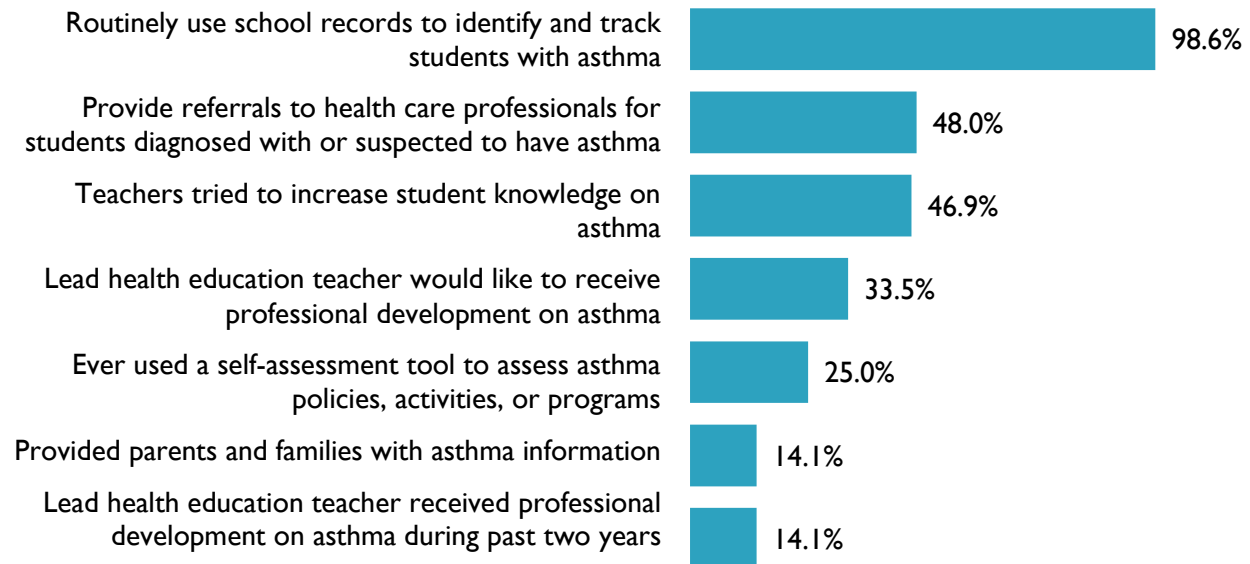
The CDC recommends that all people aged 6 months and older receive a flu vaccine, and it's especially important for those with asthma. The Wisconsin Immunization Registry provided flu vaccination data for Medicaid enrollees with persistent asthma. On average, 44% of Medicaid enrollees with persistent asthma received a flu vaccination.



Control of Asthma by School Practices, 2012–2016

The Health Profiles survey is conducted in Wisconsin high schools among school teachers and principals, and contains some questions on asthma management practices. The 2016 survey revealed that most schools report using school records to identify and track students with asthma. However, other questions revealed that there's still room for improvement on other asthma-related practices. For example, one-third of health education teachers indicated they would like to receive training on asthma, although only 14% actually did in the past two years.

Percentages of schools that...



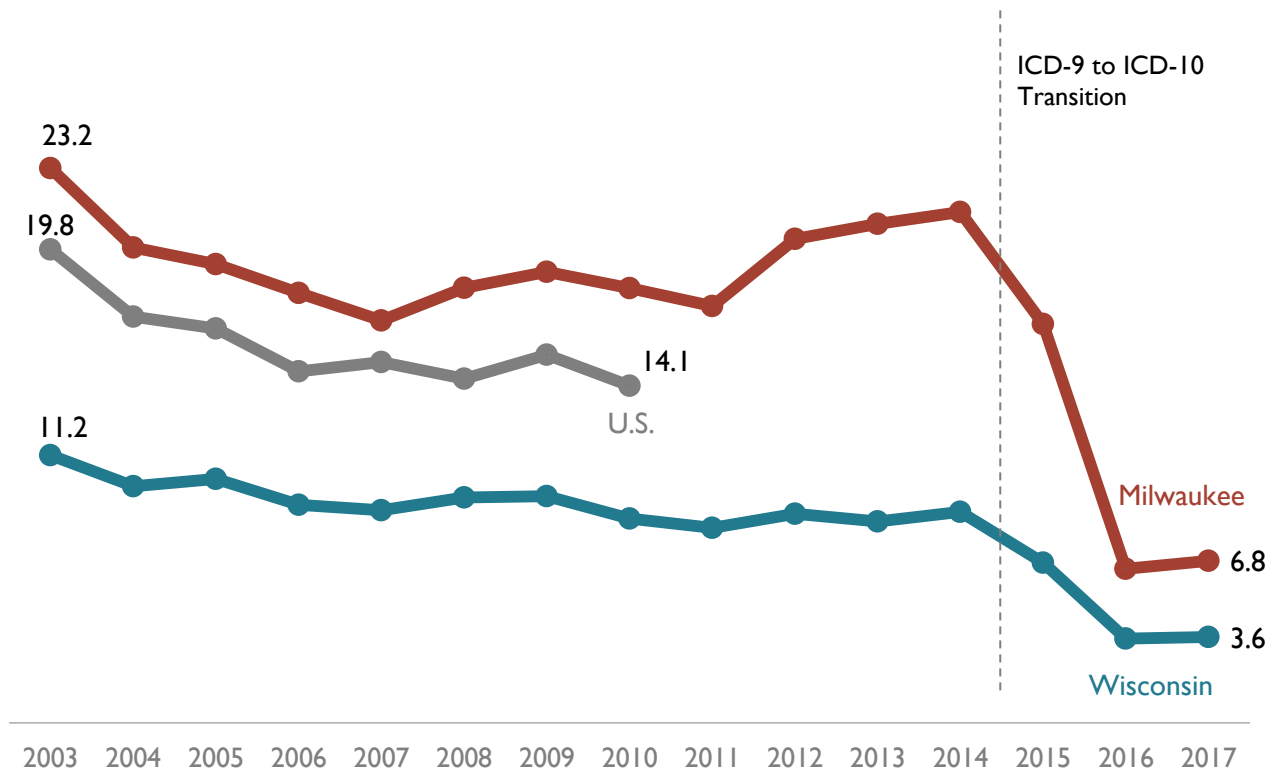
ASTHMA HEALTH CARE UTILIZATION

With proper medication, symptom management, and avoidance of triggers, most ED visits and hospitalizations from asthma can be prevented. These outcomes are an important surveillance endpoint because they help identify populations most in need of asthma management and preventive care.

Asthma Hospitalizations, Milwaukee County and Wisconsin, 2003–2017

Wisconsin has lower rates of asthma hospitalizations than the U.S., but Milwaukee County has rates that are double that of the overall state rate.

Rates per 10,000 people

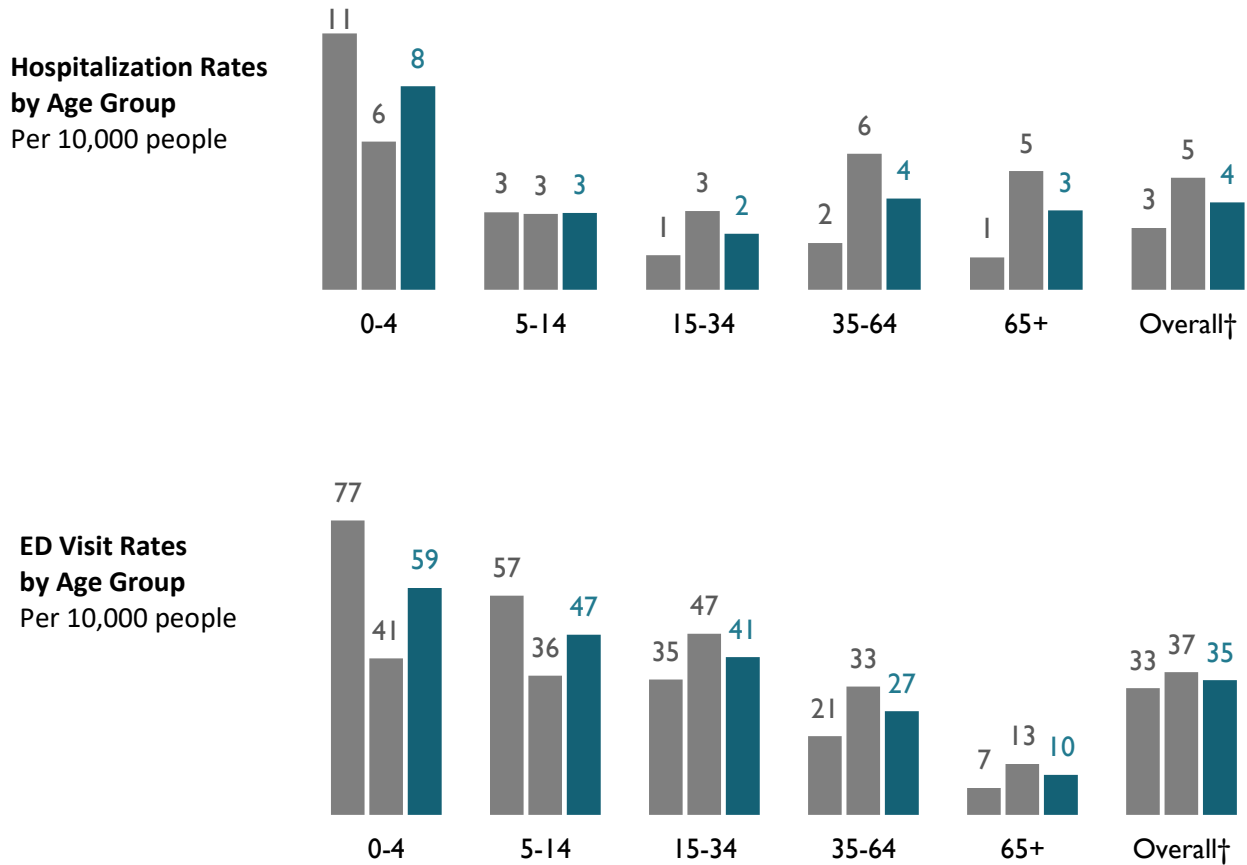


Note: U.S. rates not available past 2010.

Asthma Hospitalizations and ED Visits by Sex and Age Group

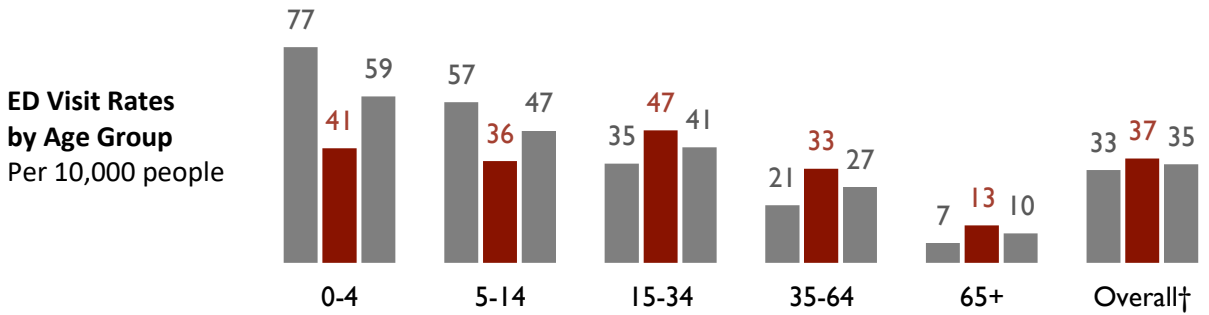
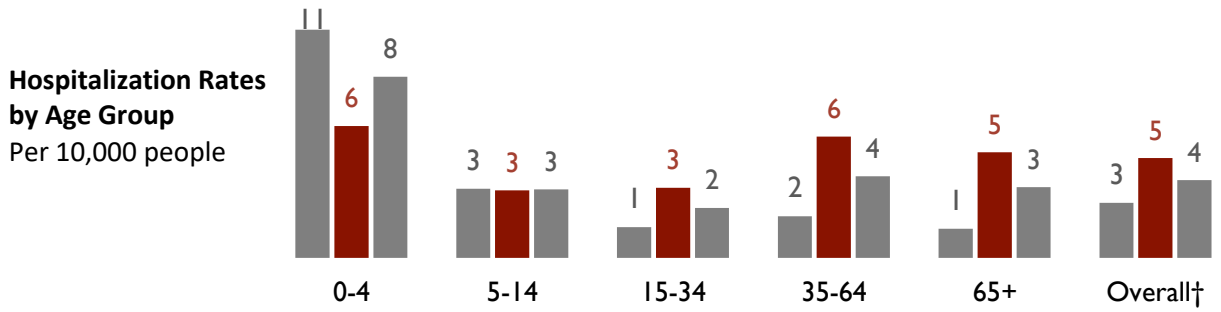
Both Sexes

When we look at asthma health care utilization for both males and females, we see that across age categories, children under five have the highest asthma hospitalization and ED visit rates in Wisconsin (highlighted below).

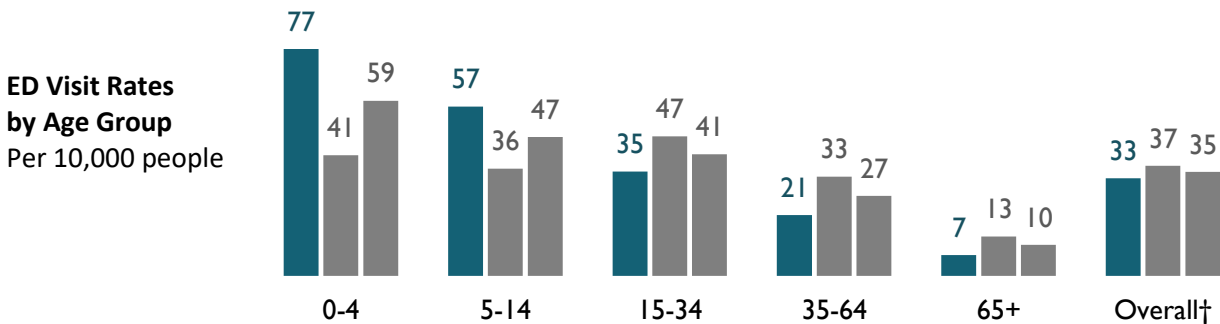
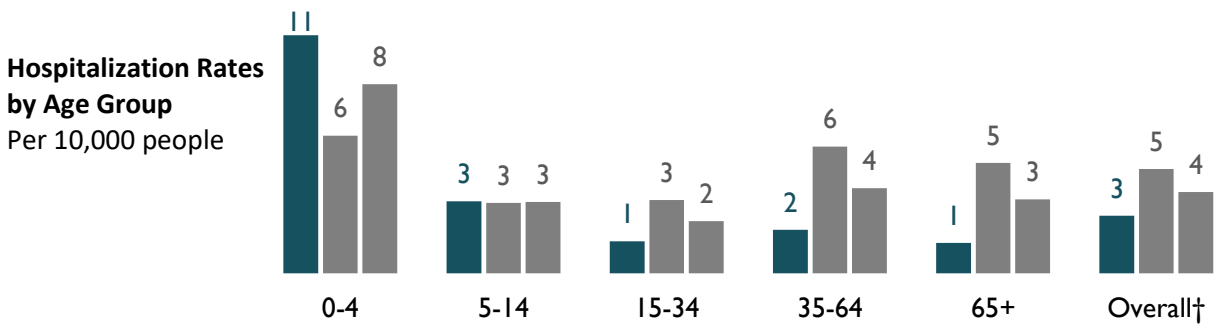


† Overall rates are age-adjusted to the 2000 U.S. standard population

Females. Females (highlighted below) have more frequent adverse asthma outcomes in adulthood compare to adolescence.



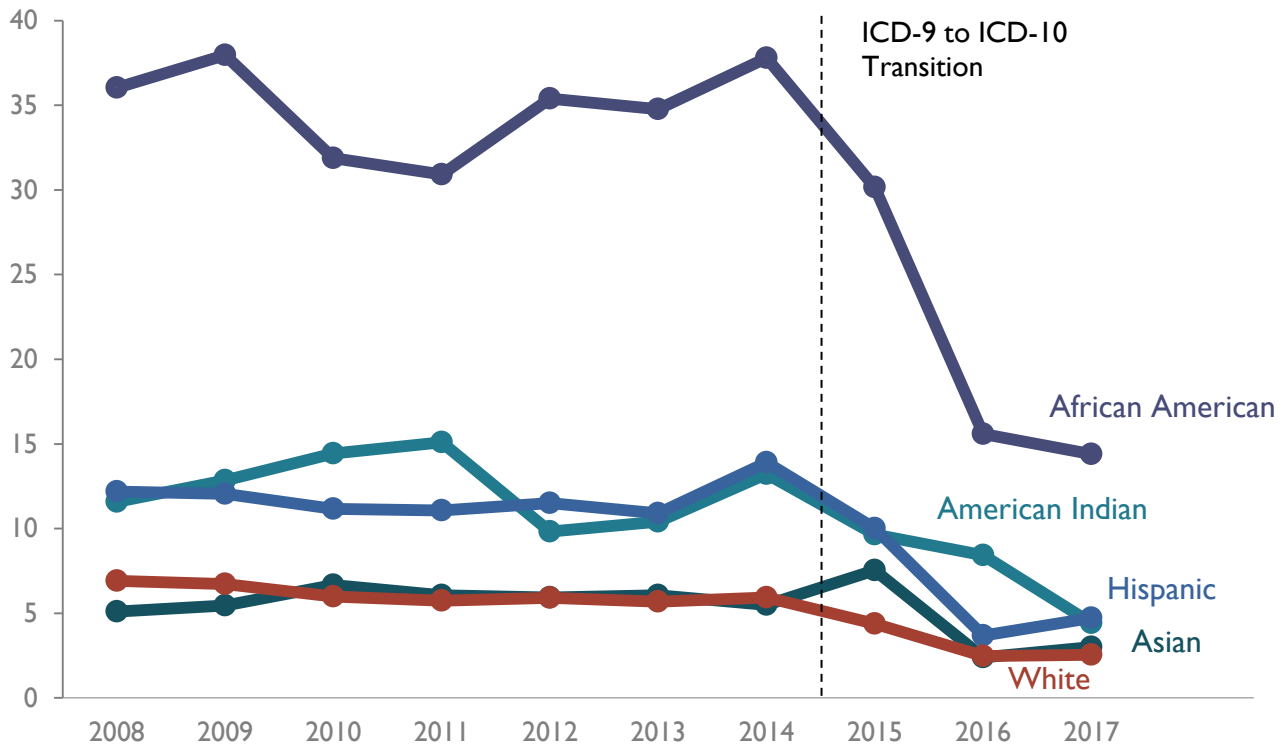
Males. Males (highlighted below) are more severely impacted by asthma during childhood.



Asthma Hospitalization Rates by Race and Ethnicity

In Wisconsin, we see the highest asthma hospitalization rates among non-Hispanic African Americans. **This is a disparity that only seems to be getting worse.**

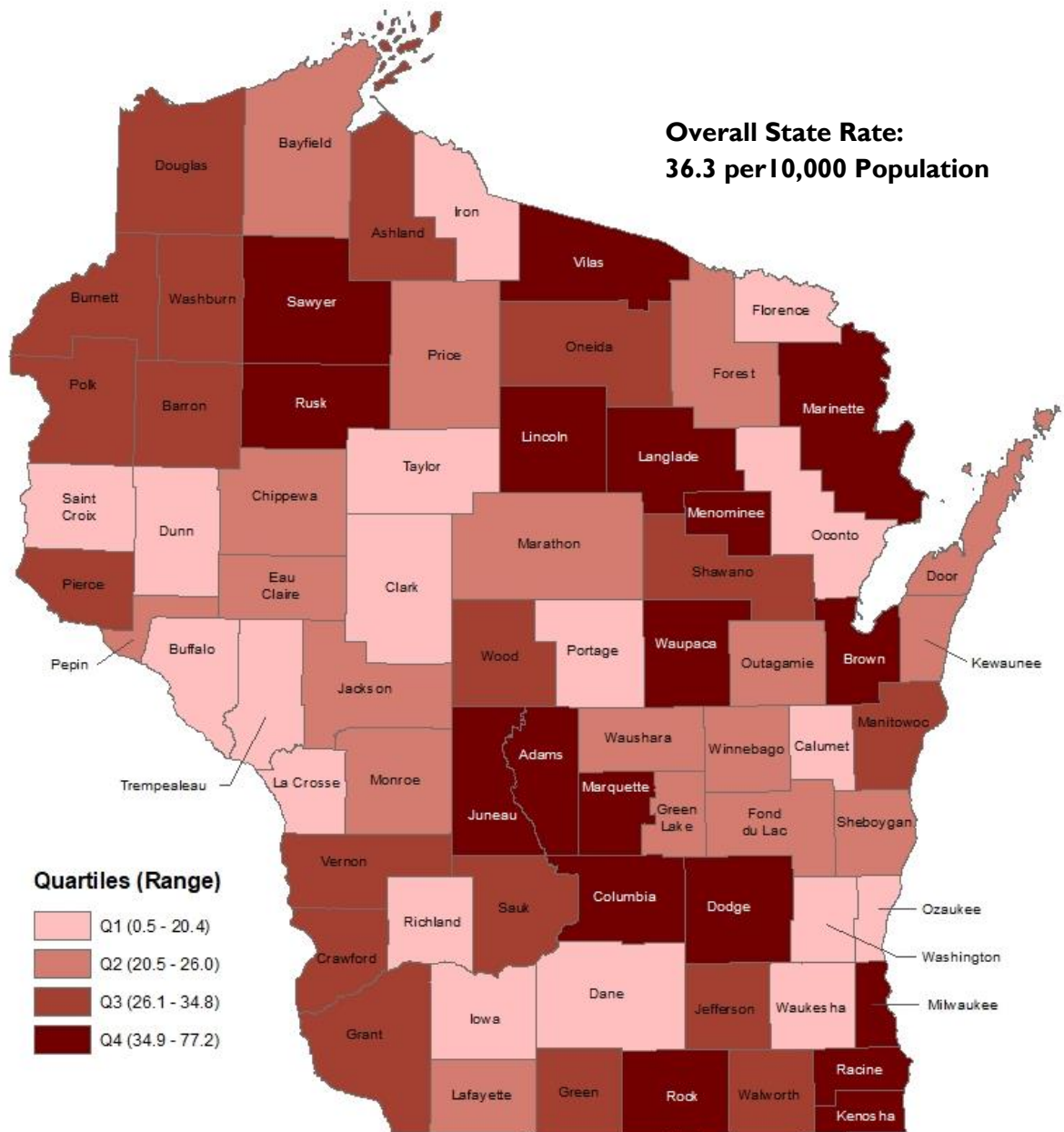
Rates per 10,000 people



Asthma ED Visit Rates by Wisconsin County, 2015–2017

Certain areas of the state are affected by higher asthma prevalence and rates of asthma health care utilization. This county-level map shows the rates of asthma ED visit rates during 2015–2017. The darkest shaded counties had rates that were among the highest in the state.

Milwaukee County and Menominee County, which is primarily composed of members of the Menominee Tribe, rank at the top for both asthma hospitalizations and ED visits. In addition, Kenosha, Racine, and Rock counties have had consistently high rates over the past decade.

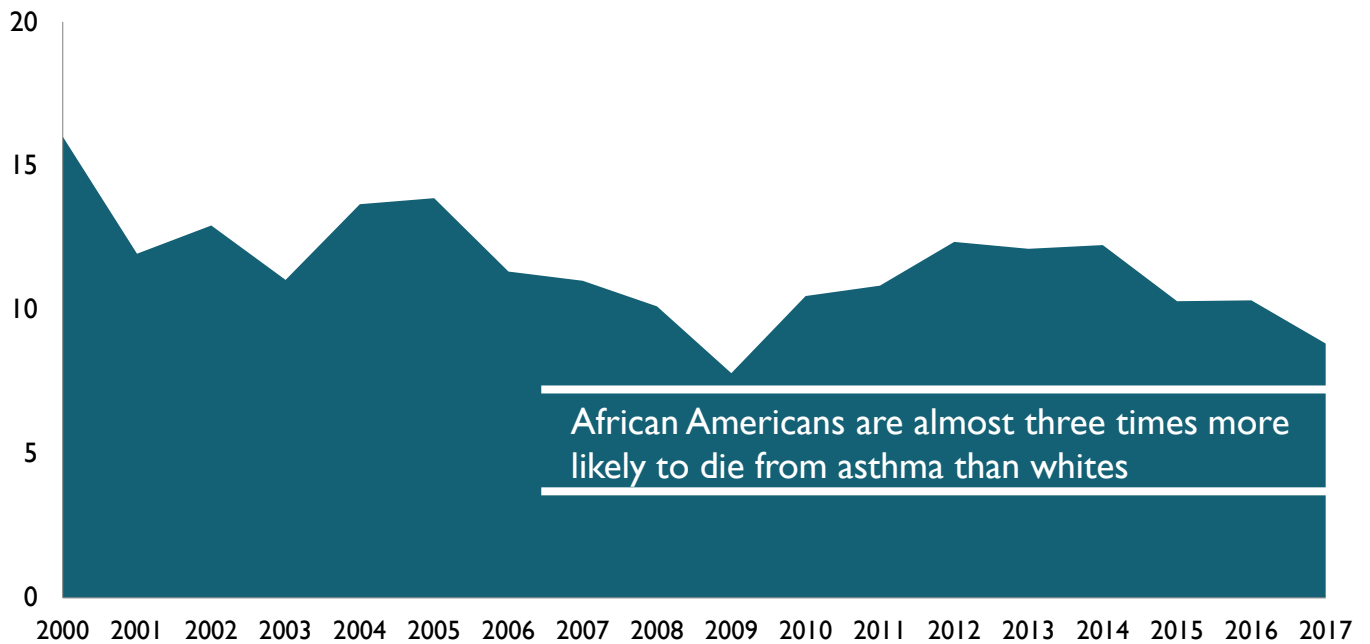


ASTHMA MORTALITY

Age-adjusted mortality rates have declined over the past two decades from 88 to 59 deaths. However, there are still approximately 70 deaths each year in Wisconsin for which asthma was the underlying cause. **African Americans are almost three times more likely to die from asthma than whites.**

Asthma Mortality Rates, Wisconsin, 2000–2017

Rates per 1,000,000 people



Data Sources: Wisconsin BRFSS Core and BRFSS Asthma Call-Back Surveys (prevalence); Wisconsin Inpatient and Emergency Department Visit files (health care utilization); Wisconsin Vital Records (mortality)

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WISCONSIN ASTHMA PROGRAM

Division of Public Health

Wisconsin Department of Health Services

dhs.wisconsin.gov/asthma | P-02412 (10/2018)

