

# Asthma

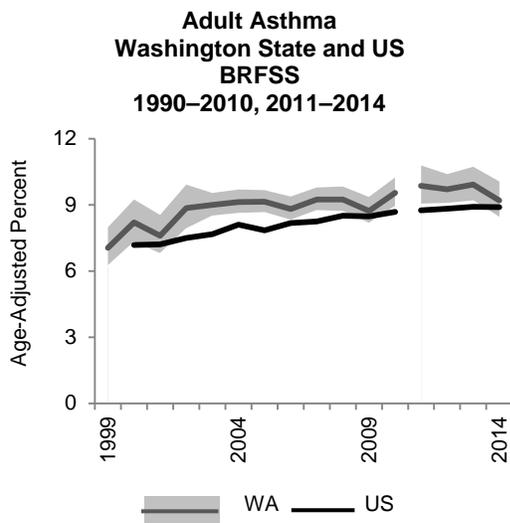
**Definition:** Asthma is a chronic inflammatory disease of the airways characterized by airflow obstruction and airway hyper-responsiveness. Clinical symptoms include wheezing and shortness of breath. This chapter defines “current asthma” as adults who report on the Behavioral Risk Factor Surveillance System (BRFSS) that a doctor or other health professional told them that they had asthma and that they still have asthma. Children with asthma are children whose parents or guardians report on BRFSS that a doctor or other health professional told them that their child had asthma and that the child still has asthma.

This is a data update of the *Health of Washington State* chapter on [Asthma](#) published in 2012.

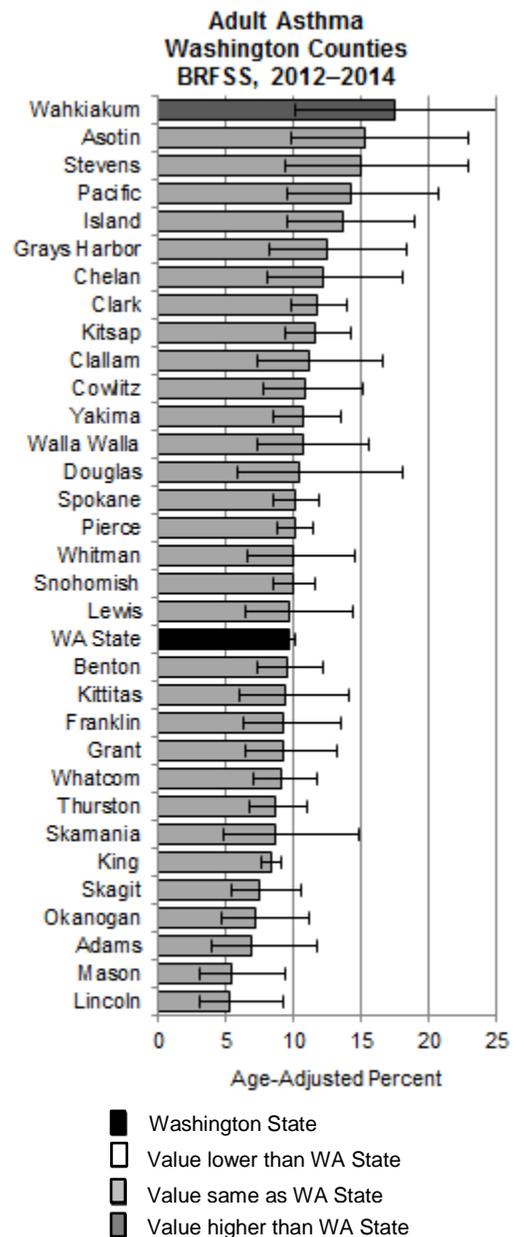
## Time Trends

In 2014, the [age-adjusted](#) rate of Washington adults with asthma was 9% ( $\pm 1\%$ ). Washington’s adult asthma rate is similar to the U.S. rate. Asthma rates increased nearly 40% from 7% ( $\pm 1\%$ ) in 1999 to 10% ( $\pm 1\%$ ) in 2010. The U.S. adult asthma rates also increased steadily, from 7% in 2000 to 9% in 2010. Due to changes in BRFSS methodology in 2011, we cannot compare recent data to past trends.

Parental reports in 2012–2014 [Behavioral Risk Factor Surveillance System](#) (BRFSS) data combined showed 7% ( $\pm 1\%$ ) of children younger than 18 in Washington with current asthma. There are not enough data to look at trends for children in Washington.

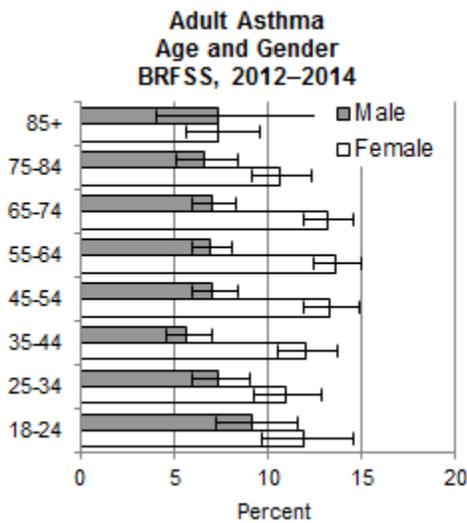


## Geographic Variation

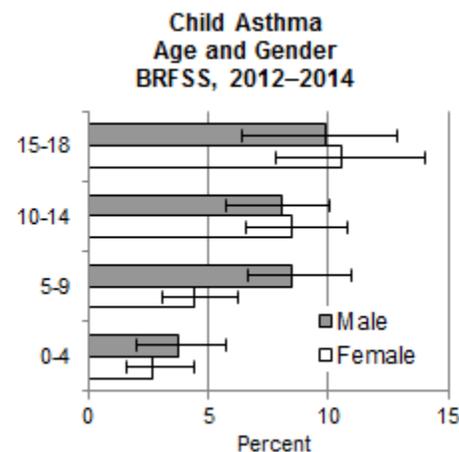


In 2012–2014 combined BRFSS data, the age-adjusted county-level rates for current asthma ranged from about 5% to 18%. Wahkiakum County had higher asthma rates than the state average, and there were no counties with lower asthma rates. Rates are not available for some counties due to small sample size.

### Age and Gender



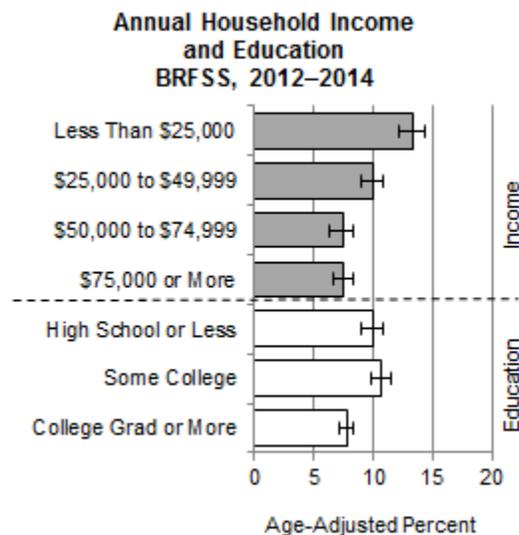
Consistent with national patterns, in Washington asthma is more common in women than men across age groups from 18 to 84 years. Washington data on children are also consistent with national patterns. Washington BRFSS data from 2012–2014 combined showed that boys ages 5 to 12 (8% ± 2%) were more likely to have asthma than girls (6% ± 1%). The gender reversal from childhood to adults is not well understood, despite having been widely noted.<sup>1,2,3</sup>



### Economic Factors and Education

Washington 2012–2014 BRFSS data combined showed a strong association between household income and reporting current asthma. As income increased, the percentage of adults reporting current asthma decreased. People with incomes less than \$25,000 per year were nearly twice as likely to report asthma as people with incomes of \$75,000 per year or more. This association persisted after accounting for gender, education, race and Hispanic origin.

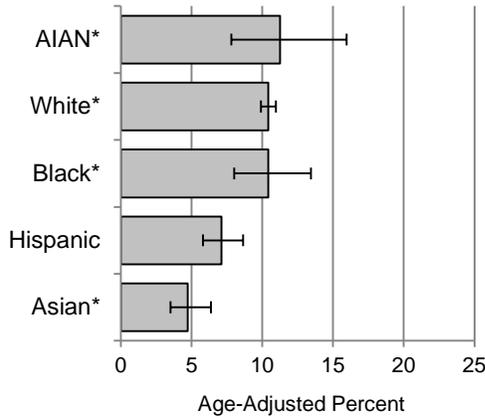
People who had completed four years of college were less likely to report current asthma than people with less education. The relationship between asthma and education level did not persist after accounting for gender, income, race and Hispanic origin.



### Race and Hispanic Origin

Washington BRFSS data for 2012–2014 combined showed rates of current asthma as lowest for Asians. Washington adults of Hispanic origin also had relatively low asthma rates. These differences persisted even when gender, education and income were taken into account. These patterns are consistent with national data.<sup>2</sup> Although some reports characterize asthma rates among Hispanics as being high, these reports focus on Hispanics of Puerto Rican origin.<sup>2,3</sup> Most Hispanics in Washington are of Mexican or Central American heritage. Small BRFSS sample sizes in recent years limit our ability to make meaningful statements about asthma among other racial groups.

**Adult Asthma  
Race and Hispanic Origin  
BRFSS, 2012–2014**



\* Non-Hispanic  
AIAN: American Indian/Alaska Native

**Data Sources** (For additional detail, see [Appendix B](#))

Washington State Behavioral Risk Factor Surveillance System (BRFSS): 1987-2010. Olympia, Washington: Washington State Department of Health, under federal cooperative agreement numbers: U58/CCU002118 (1987-2003), U58/CCU022819 (2004-2008), U58/DP001996 (2009-2010), and U58/SO000047 (2011–2014); data prepared by Office of Healthy Communities.

**For More Information**

<http://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/Asthma.aspx>

**Acknowledgments**

Author:  
Dennis McDermot, PhD  
Washington State Department of Health

**Endnotes**

<sup>1</sup> Akinbami L, Moorman J, Garbe P, Sondik E. Status of Childhood Asthma in the United States, 1980-2007. *Pediatrics*. 2009;123(3):S131-S145.

<sup>2</sup> Akinbami L, Moorman J, Liu X, et al. *Asthma prevalence, health care use, and mortality: United States, 2005-2009*. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics; 2011.

<sup>3</sup> Centers for Disease Control and Prevention. CDC Health Disparities and Inequalities Report – United States, 2011. *MMWR Surveill Summ*. 2011;60(Suppl):84-86.