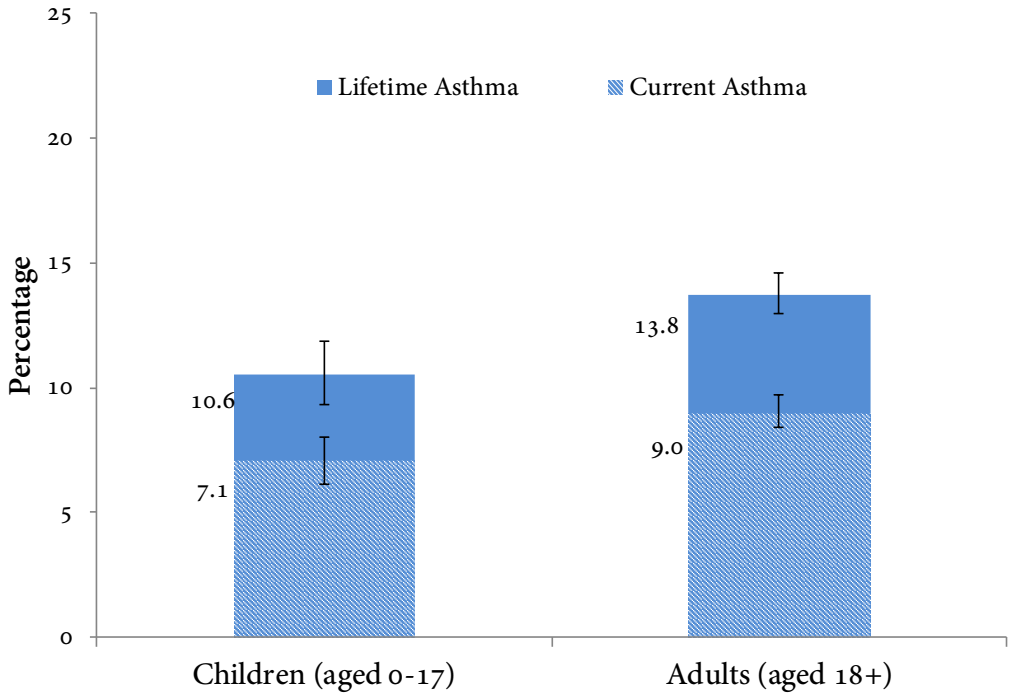
Asthma Prevalence

Asthma prevalence is an important measure for tracking the burden of disease among population groups. Tracking asthma prevalence across age groups, gender, geographic areas, income, education levels, and by racial and ethnic groups makes it possible to target the most vulnerable sections of the population.

Key Findings

- In 2015, 7.1% of children and 9.0% of adults had current asthma in Utah.
- In Utah, male children appeared to have a higher prevalence of current asthma when compared to female children, whereas adult females appeared to have a higher current asthma prevalence when compared to adult males.
- Asthma prevalence has been increasing during the past decade, both in Utah and nationally.
- Among adults of different ethnicities, the current asthma prevalence for Asians was the lowest (5.8%), while Blacks reported the highest prevalence (14.0%) when compared to the state and other ethnic populations.

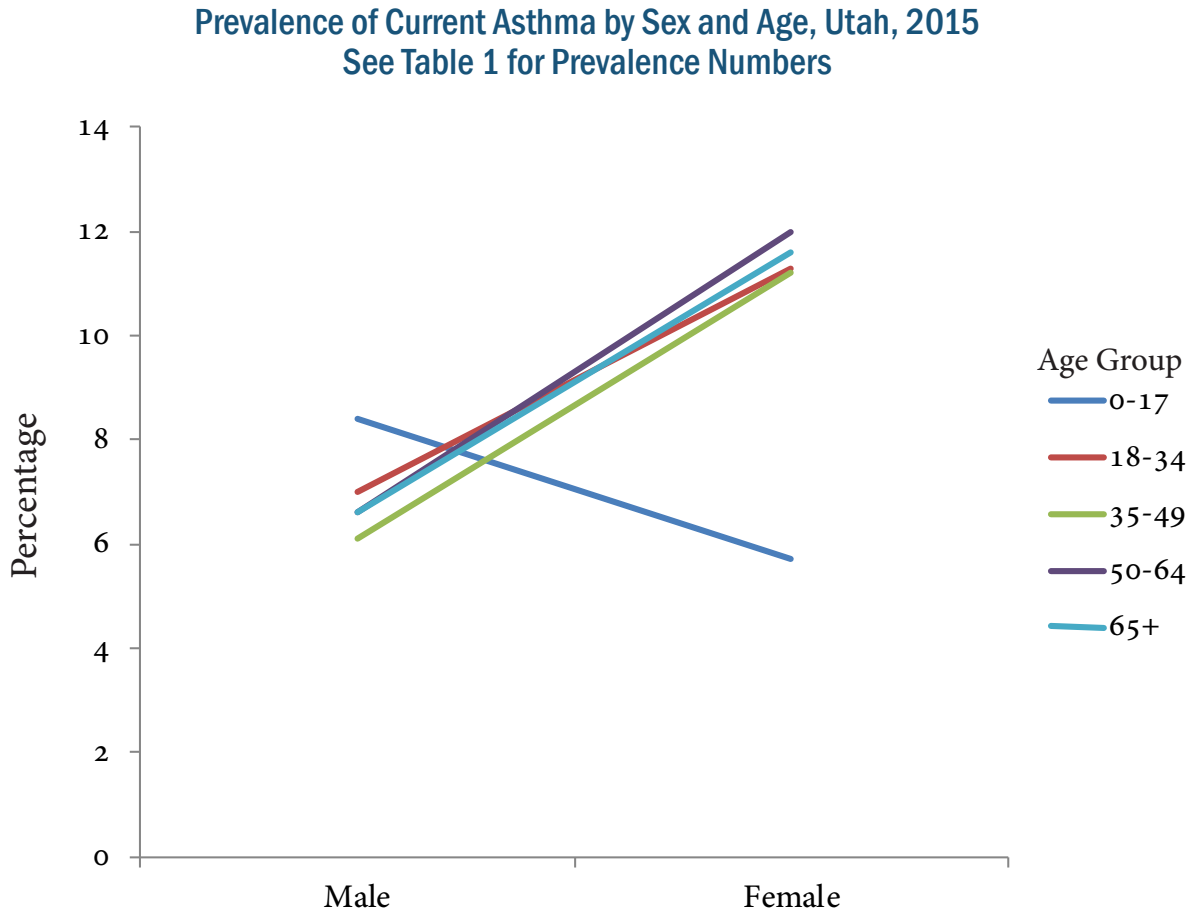
Figure 1. Most Utahns Who are Diagnosed with Asthma Still Have Asthma



Source: Utah BRFSS, 2015.

Lifetime asthma is defined as having ever been diagnosed with asthma by a doctor or other health professional, regardless of whether or not that individual still has asthma. Current asthma is defined as those who have ever been diagnosed with asthma by a doctor or other health professional and who report that they still have asthma. In 2015, 10.6% of children and 13.8% of adults in Utah reported having lifetime asthma; this difference is statistically significant. Of those with lifetime asthma, 7.1% of children and 9.0% of adults in Utah reported that they still had asthma.

Figure 2. Males Have a Higher Asthma Prevalence than Females Until Age 18 When Females Have a Higher Prevalence



Source: Utah BRFSS, 2015. Crude rates.

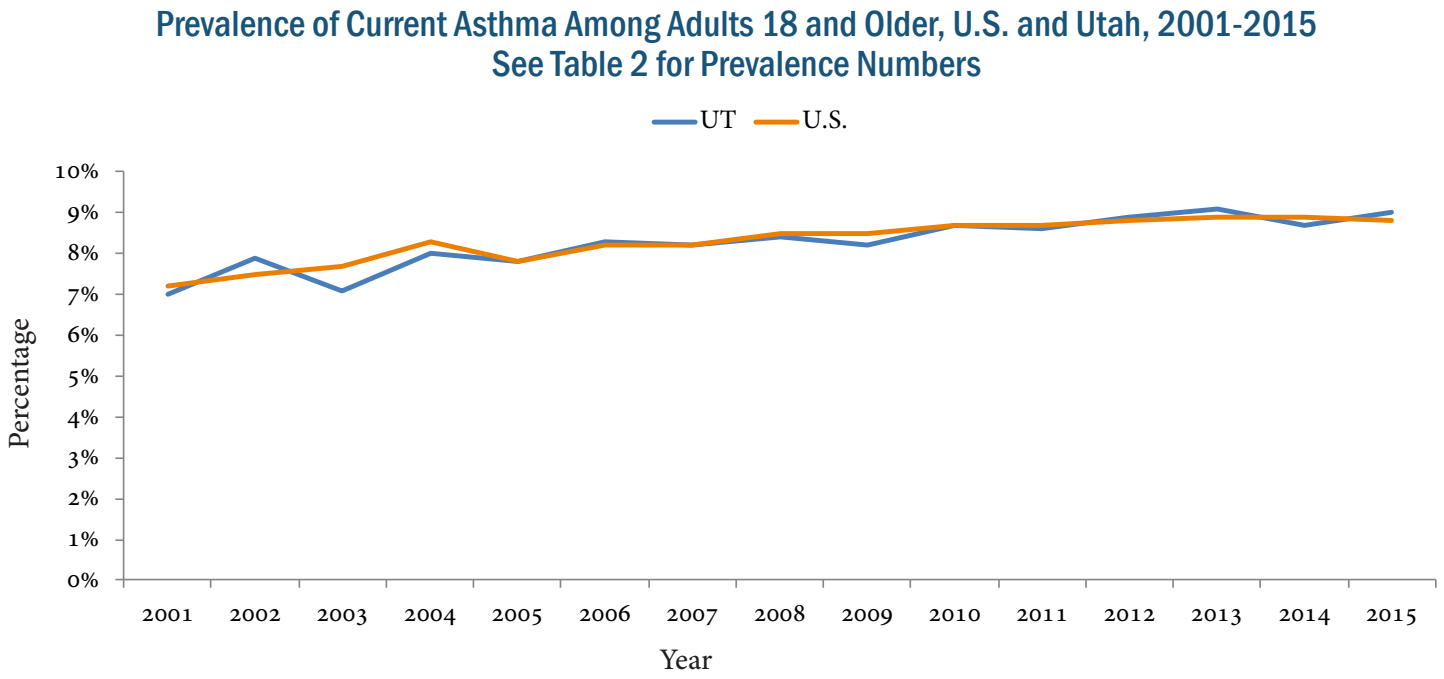
Table 1. Prevalence of Current Asthma by Age and Sex, Crude Prevalence and 95% Confidence Intervals, Utah, 2015

	Age				
	0-17	18-34	35-49	50-64	65+
Male	8.4 (7.02-10.0)	7.0 (5.5-8.8)	6.1 (4.8-7.6)	6.6 (5.1-8.6)	6.6 (5.0-8.6)
Female	5.7 (4.5-7.3)	11.3 (9.4-13.4)	11.2 (9.3-13.3)	12.0 (10.2-14.1)	11.6 (9.6-13.9)

Source: Utah BRFSS, 2015.

For Utah adults aged 18 and older, females had a higher prevalence of asthma for every age group. Female asthma prevalence increases from childhood to adulthood and male prevalence decreases, although not all differences are statistically significant. Adult females had almost double the asthma prevalence for every age group (11.3%, 11.2%, 12.0%, 11.6%, respectively) when compared to males (7.0%, 6.1%, 6.6%, 6.6%, respectively).

Figure 3. Current Asthma Prevalence Significantly Increased from 2001 to 2015 for Both Utah and the U.S.



Source: Utah and U.S. BRFSS, 2001-2015. Age-adjusted prevalence. See an interactive version at https://ibis.health.utah.gov/indicator/view/AsthAdltPrev.html.

There is no difference between Utah and U.S. current asthma prevalence. For both Utah and the U.S., asthma prevalence significantly increased from 2011 (7.0%, 7.2%) to 2015 (9.0%, 8.8%).

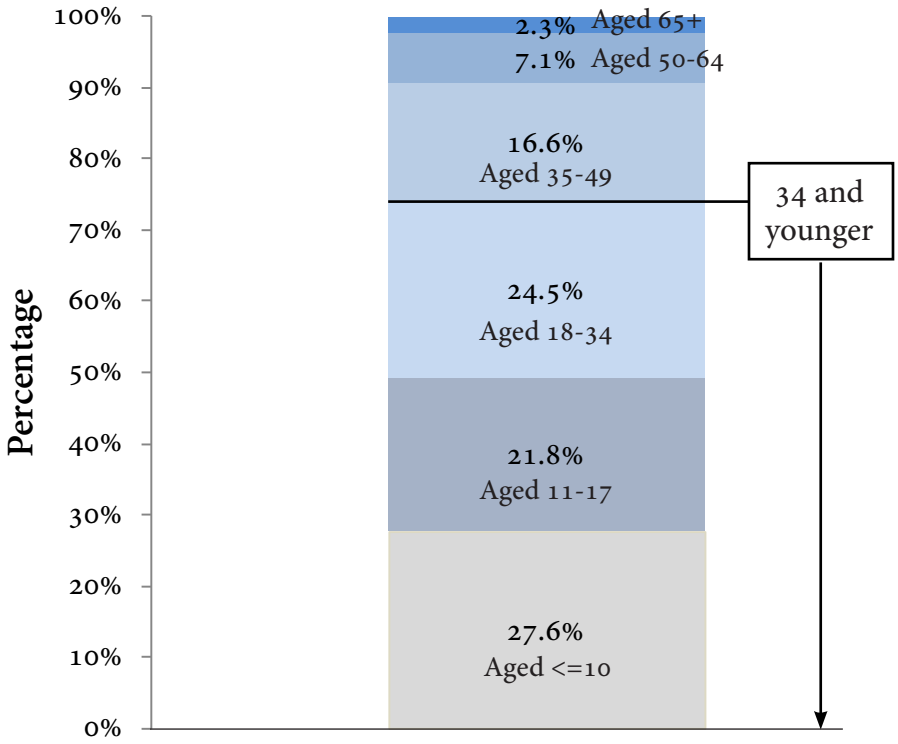
Table 2. Current Asthma Prevalence and 95% Confidence Intervals Among Adults 18 and Older, U.S. and Utah, 2001-2015

	Year	Rate		Year	Rate
Utah	2001	7.0 (5.9-8.0)	U.S.	2001	7.2 (7.0-7.4)
	2002	7.9 (6.8-9.0)		2002	7.5 (7.3-7.60)
	2003	7.1 (6.0-8.1)		2003	7.7 (7.5-7.9)
	2004	8.0 (7.1-8.9)		2004	8.3 (8.1-7.9)
	2005	7.8 (7.0-8.8)		2005	7.8 (7.7-8.0)
	2006	8.3 (7.4-9.3)		2006	8.2 (8.0-8.4)
	2007	8.2 (7.3-9.2)		2007	8.2 (8.1-8.4)
	2008	8.4 (7.5-9.5)		2008	8.5 (8.3-8.7)
	2009	8.2 (7.6-9.0)		2009	8.5 (8.3-8.7)
	2010	8.7 (8.1-9.4)		2010	8.7 (8.5-8.8)
	2011	8.6 (8.0-9.3)		2011	8.7 (8.6-8.9)
	2012	8.9 (8.3-9.6)		2012	8.8 (8.6-9.0)
	2013	9.1 (8.5-9.7)		2013	8.9 (8.7-9.1)
	2014	8.7 (8.2-9.2)		2014	8.9 (8.7-9.1)
	2015	9.0 (8.3-9.7)		2015	8.8 (8.6-9.0)

Source: Utah and U.S. BRFSS, 2001-2015. Data notes: In 2011, the BRFSS changed its methodology from a landline only sample and weighting based on post-stratification to a landline/cell phone sample and raking as the weighting methodology. Raking accounts for variables such as income, education, marital status, and home ownership during weighting and has the potential to more accurately reflect the population distribution.

Figure 4. The Majority of Adults are Diagnosed with Asthma Before the Age of 35

Age at First Diagnosis Among Adults Who Were Ever Diagnosed with Asthma, Utah, 2015

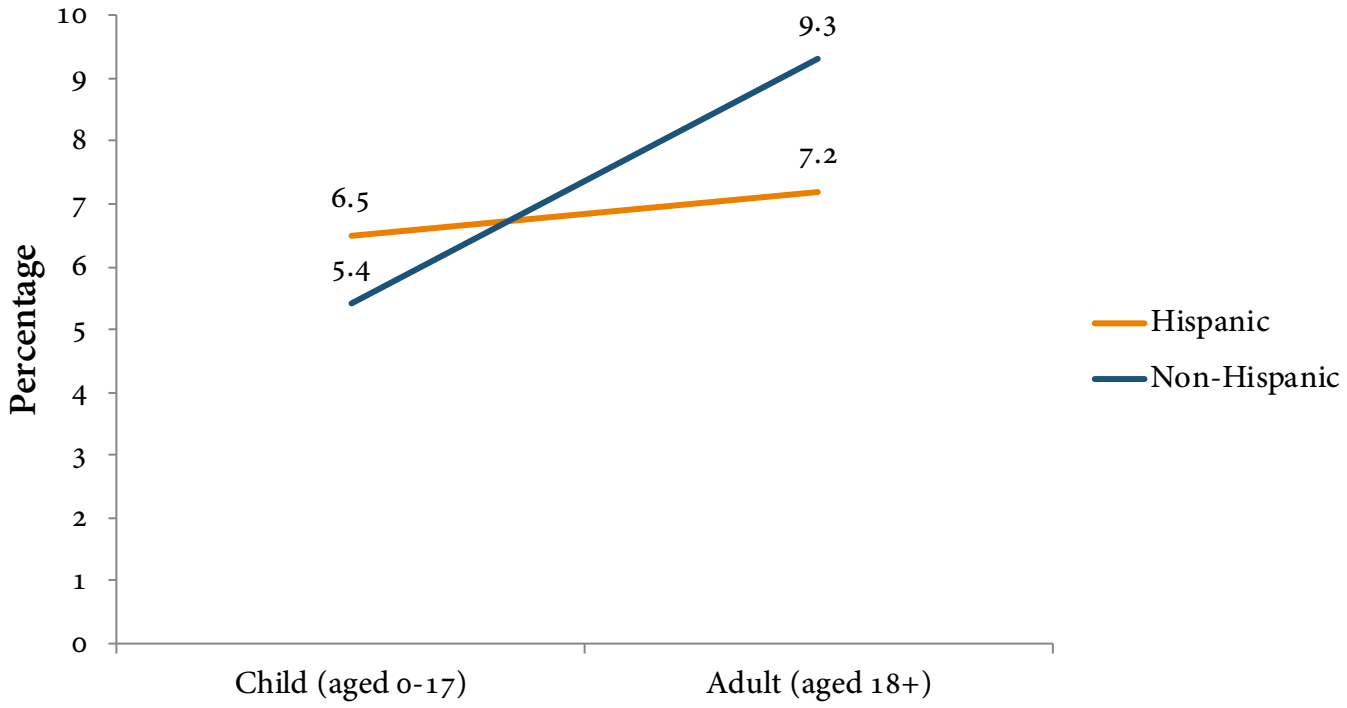


Source: Utah BRFSS, 2015. Crude Prevalence.

About 75% of Utah adults with current asthma were diagnosed with asthma before the age of 35. About 27.6% of Utah adults with current asthma were diagnosed before the age of 11 compared to 2.3% of adults who were diagnosed after the age of 65.

Figure 5. Hispanic Adults Appear to Have the Lowest Asthma Prevalence; In Contrast, Hispanic Children Appear to Have Highest Asthma Prevalence

Prevalence of Current Asthma by Ethnicity, Utah Adult (Aged 18+) and Children (Aged 0-17), 2015
See Table 3. for Prevalence Numbers



Source: Utah BRFSS, 2015. Crude Prevalence.

Table 3. Prevalence of Current Asthma by Ethnicity, Utah Adult (18+) and Children (0-17), 2015

	Prevalence (95% Confidence Interval)	
	Adult (aged 18+)	Child (aged 0-17)
Hispanic	7.2 (5.3-9.6)	6.5 (4.0-10.4)
Non-Hispanic	9.3 (8.6-10.0)	5.4* (2.7-10.6)
Utah Total	9.0 (8.3-9.7)	7.0 (6.1-8.1)

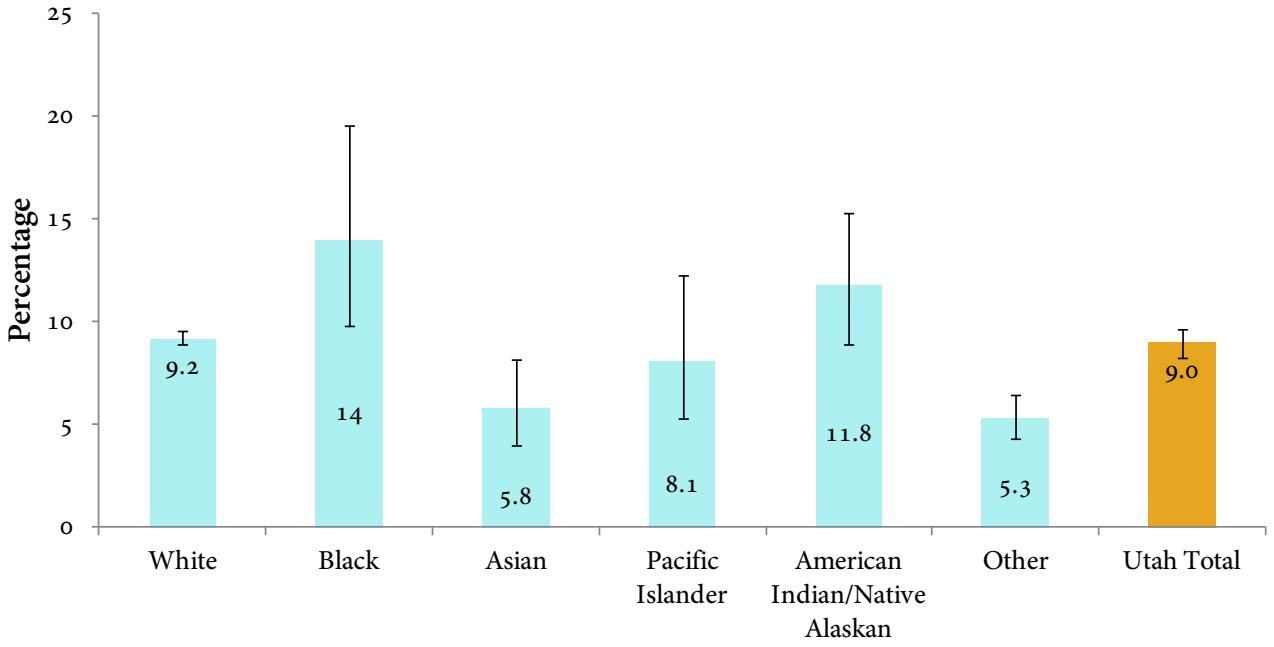
Source: Utah BRFSS, 2015. Crude prevalence.

*Use caution in interpreting. The estimate has a coefficient of variation > 30% and is therefore deemed unreliable by Utah Department of Health standards.

Hispanic adults in Utah appear to have a lower asthma prevalence than non-Hispanics (7.2% vs. 9.3%). However, this is opposite for children; Hispanic children appear to have a higher asthma prevalence than non-Hispanic children (6.5% vs. 5.4%*), although results were not statistically significant.

Figure 6. Some Minority Groups Appear to Have a Higher Asthma Prevalence When Compared to Whites

Prevalence of Current Asthma by Race, Utah Adults (Aged 18+), 2012-2015

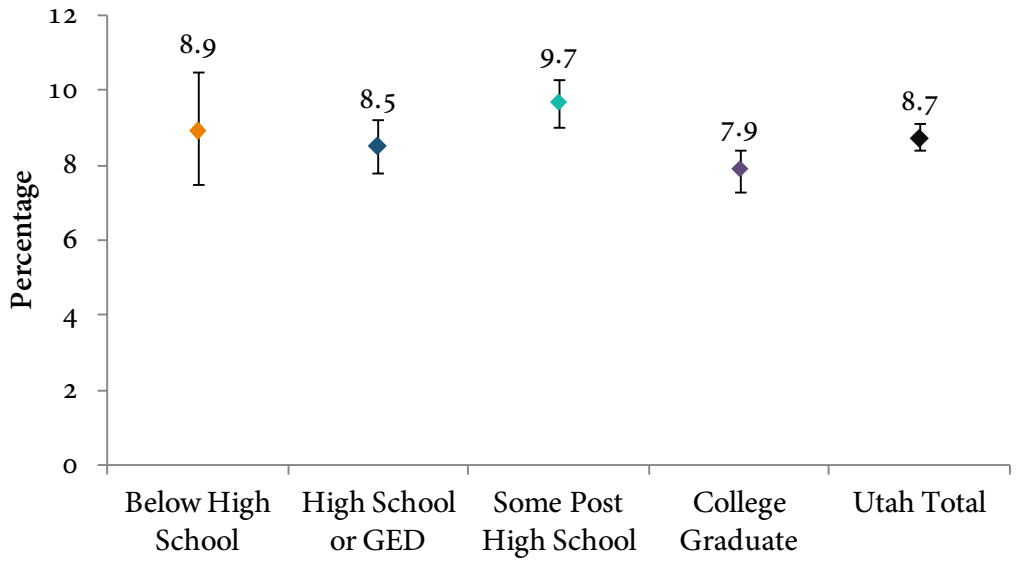


Source: Utah BRFSS, 2012-2015 combined. Age-adjusted rates are presented.

Adult asthma prevalence appears to vary among populations differing by race. In Utah, Asians reported the lowest asthma prevalence (5.8%), while Blacks reported the highest prevalence (14.0%). However, the only differences that were statistically different were between Whites and Blacks, with Blacks (14.0%) having a higher prevalence when compared to Whites (9.2%). Additionally, Whites (9.2%) and Blacks (14.0%) had a higher prevalence than Asians (5.8%) and the "Other" group (5.3%). True differences may exist between other racial groups but may be masked by large confidence intervals due to small sample sizes.

Figure 7. More Education Means Less Asthma

Prevalence of Current Asthma by Education Level, Utah Adults (Aged 18+), 2013-2015

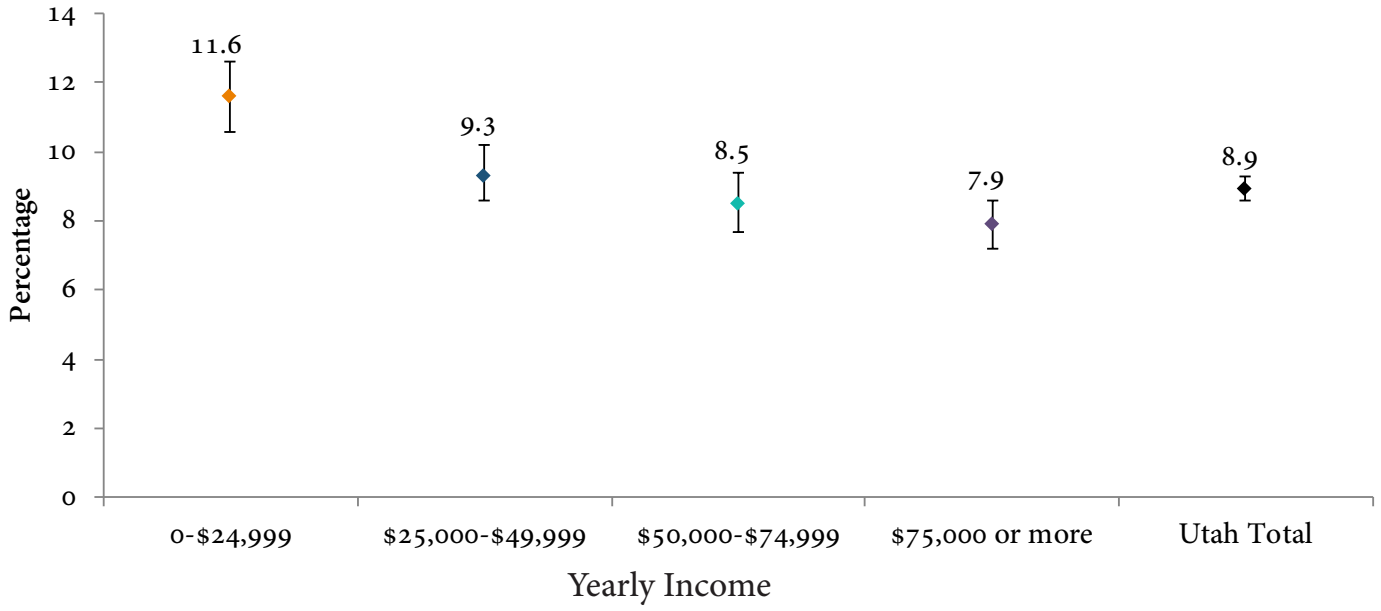


Source: Utah BRFSS, 2013-2015 combined. Age-adjusted rates.

College graduates had a statistically lower asthma prevalence (7.9%) than those with some post high school education (9.7%) and what appears to be a lower prevalence than those with less than high school education (8.9%) and high school or GED education (8.5%).

Figure 8. More Money Means Less Asthma

Prevalence of Current Asthma by Income Level, Utah Adults (Aged 18+), 2013-2015



Source: Utah BRFSS, 2013-2015 combined. Age-adjusted rates.

Utahns who make $75,000 or more a year reported the lowest asthma prevalence (7.9%). This was statistically lower than those who made 0-$24,999 (11.6%) or $25,000-$49,000 (9.3%) a year. Generally, asthma prevalence decreases with increasing income, although not all differences were statistically different.