Asthma in Utah Burden Report 2018

UTAH DEPARTMENT OF HEALTH

Utah Asthma Program

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Table of Contents

Introduction

The Utah Department of Health Asthma Program (UAP) strives to provide the most current information and data on asthma in Utah. The data in this report were selected using a web service that identified the most downloaded sections of the previous asthma burden report, found here http://health.utah.gov/asthma/data/reports/index.html. This report utilizes data from various sources to provide a clear and comprehensive picture of the burden of asthma in the state. Other asthma burden data can be requested from the UAP at asthma@utah.gov.

Background

To ensure that people with asthma receive all the services they need, the UAP in conjunction with the Utah Asthma Task Force and other partners strive to maximize the reach, impact, efficiency, and sustainability of comprehensive asthma control services. The UAP focuses on three types of strategies to create and support a comprehensive asthma control program, these include: building infrastructure strategies to support leadership, strategic partnerships, strategic communications, surveillance, and evaluation; linking services to expand school- and home-based services; and creating health systems strategies to improve coverage, delivery, quality, and use of clinical services.

These strategies are expected to increase asthma control and quality of life by increasing access to health care and by increasing coordination and coverage for comprehensive asthma control services both in the public health and health care sectors. Specifically, these strategies include identifying people with poorly controlled asthma, linking them to health care providers and NAEPP EPR-3 guidelines-based care, educating them on self-management, providing a supportive school environment, and referring to or providing home trigger reduction services for those who need them. This burden report plays a key role in helping to achieve the UAP strategies by providing baseline data for decision-making processes, identifying high burden areas and groups to target resources, and demonstrating a need for asthma services throughout the state.

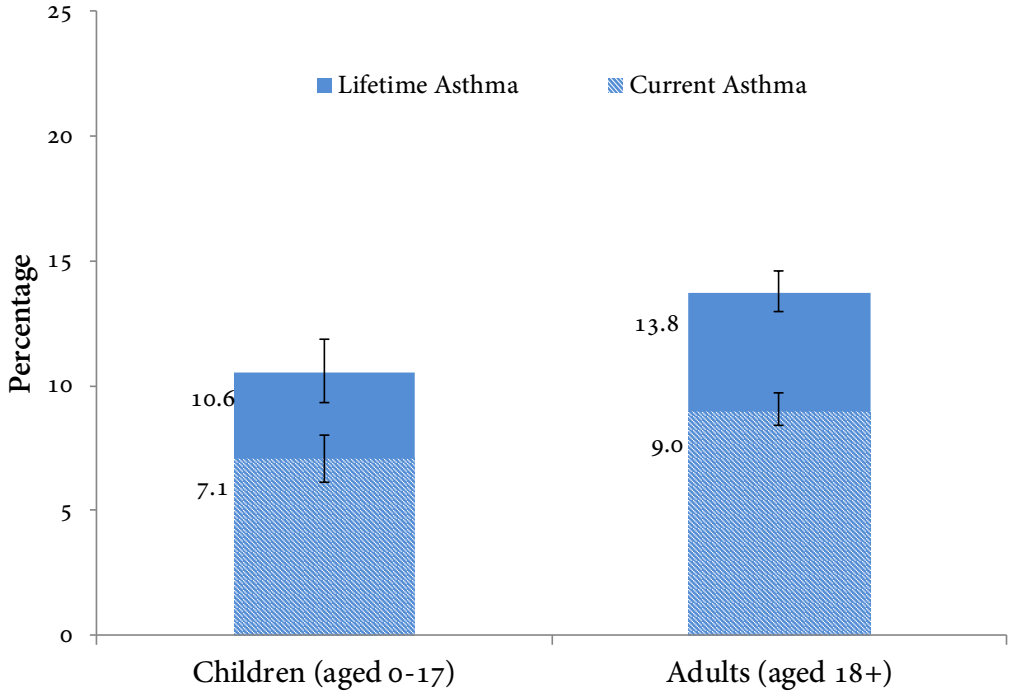
Asthma Prevalence

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.

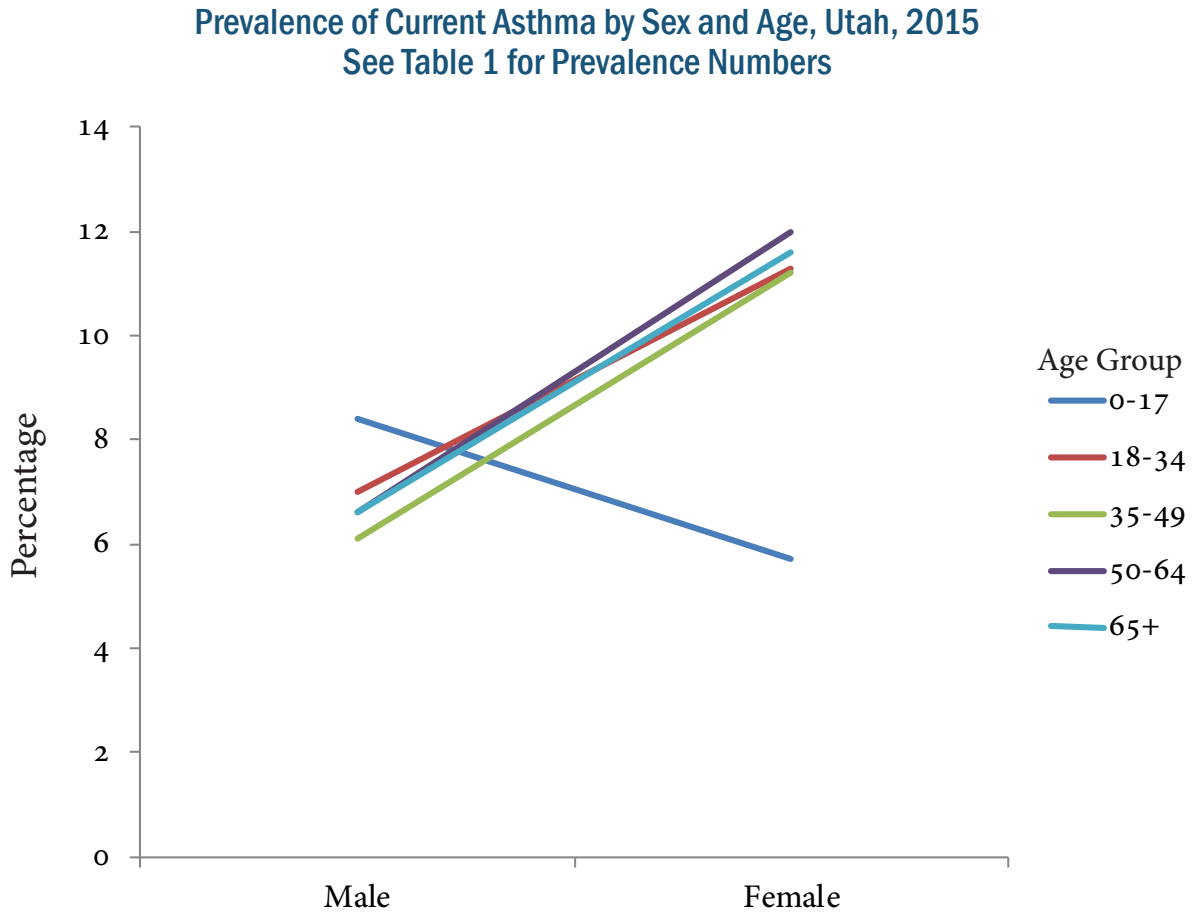
Figure 1. Most Utahns Who are Diagnosed with Asthma Still Have Asthma



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

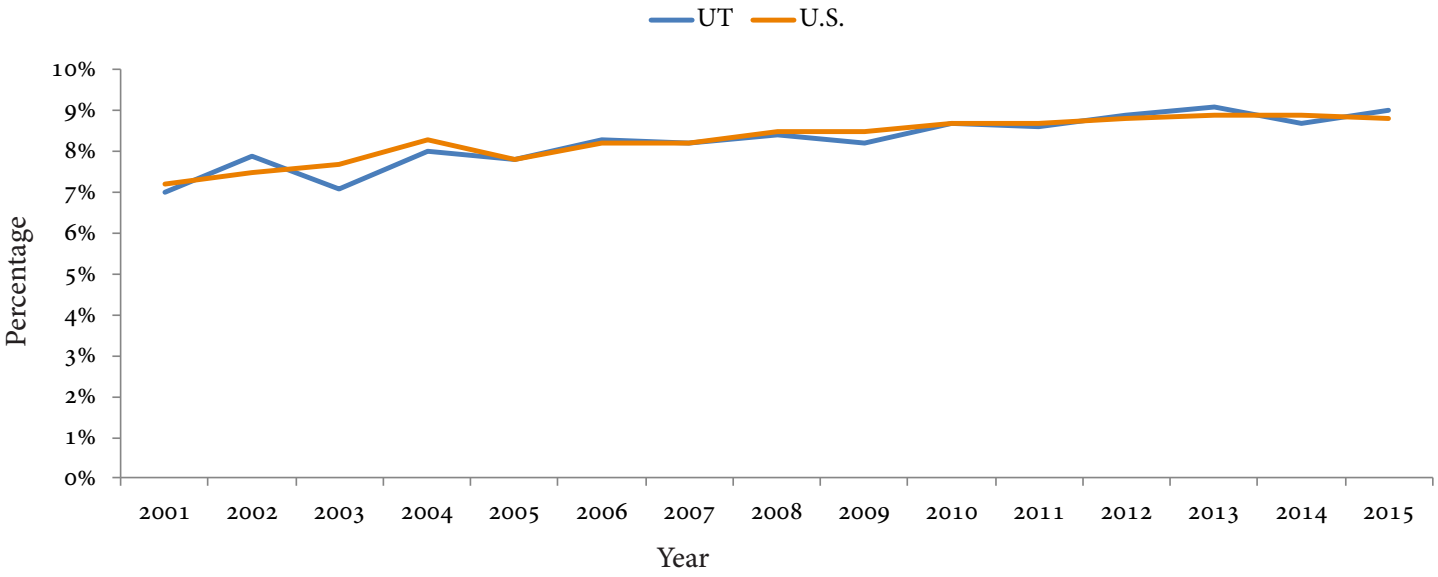
	Age				
	0-17	18-34	35-49	50-64	65+
Male	8.4 (7.02-10.0)	7.0 (5.5-8.8)	6.1 (4.8-7.6)	6.6 (5.1-8.6)	6.6 (5.0-8.6)
Female	5.7 (4.5-7.3)	11.3 (9.4-13.4)	11.2 (9.3-13.3)	12.0 (10.2-14.1)	11.6 (9.6-13.9)

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.

Prevalence of Current Asthma Among Adults 18 and Older, U.S. and Utah, 2001-2015
See Table 2 for Prevalence Numbers



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%).

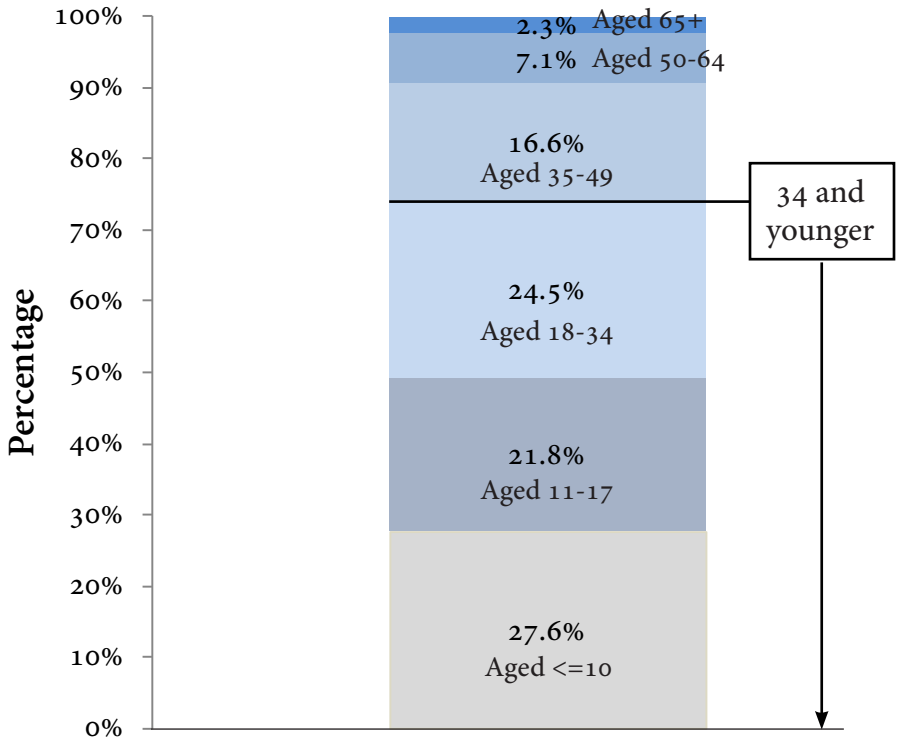
Table 2. Current Asthma Prevalence and 95% Confidence Intervals Among Adults 18 and Older, U.S. and Utah, 2001-2015

	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

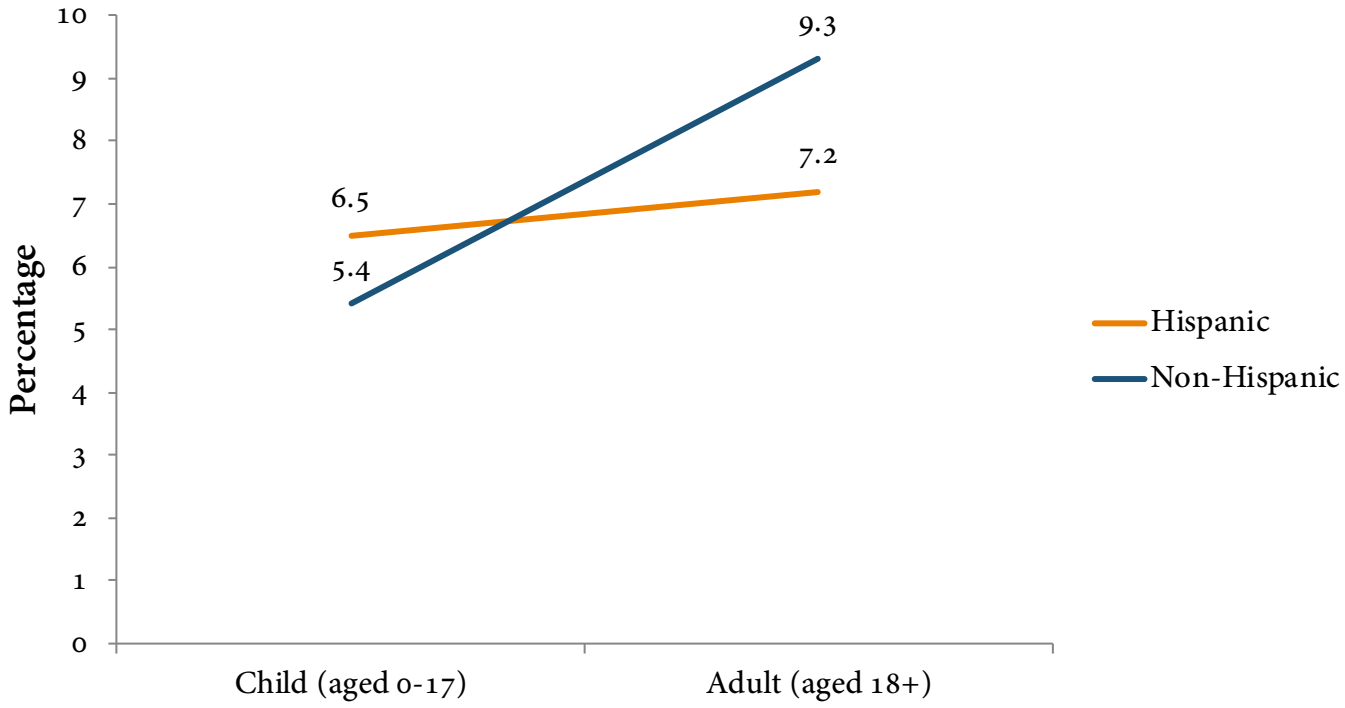


Source: Utah BRFSS, 2015. Crude Prevalence.

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)

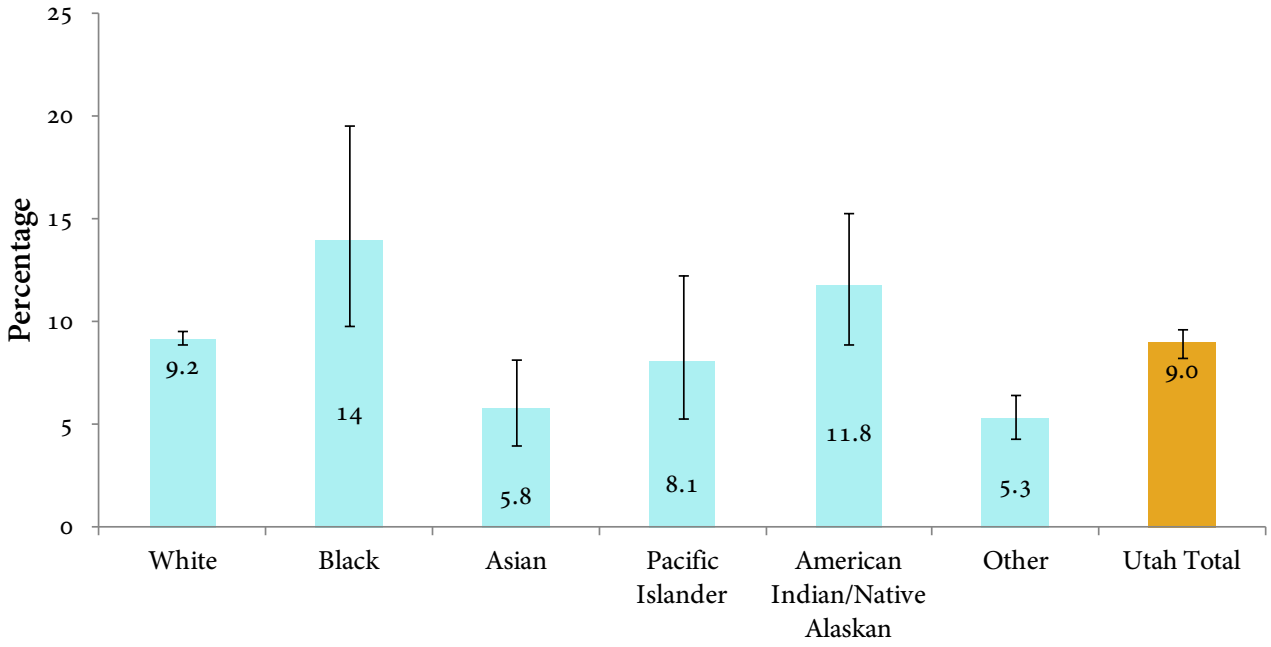
Source: Utah BRFSS, 2015. Crude prevalence.

*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

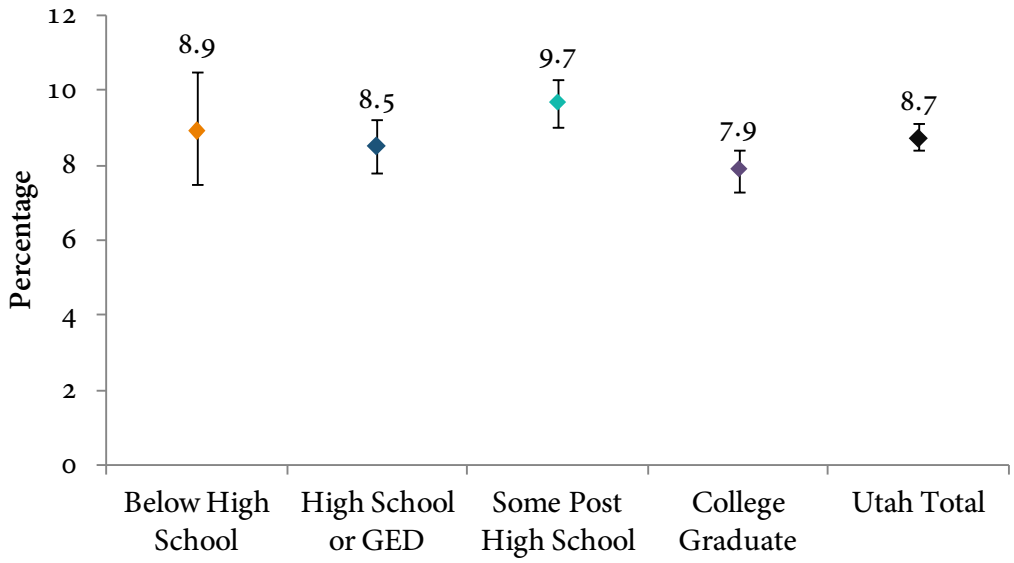


Source: Utah BRFSS, 2012-2015 combined. Age-adjusted rates are presented.

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

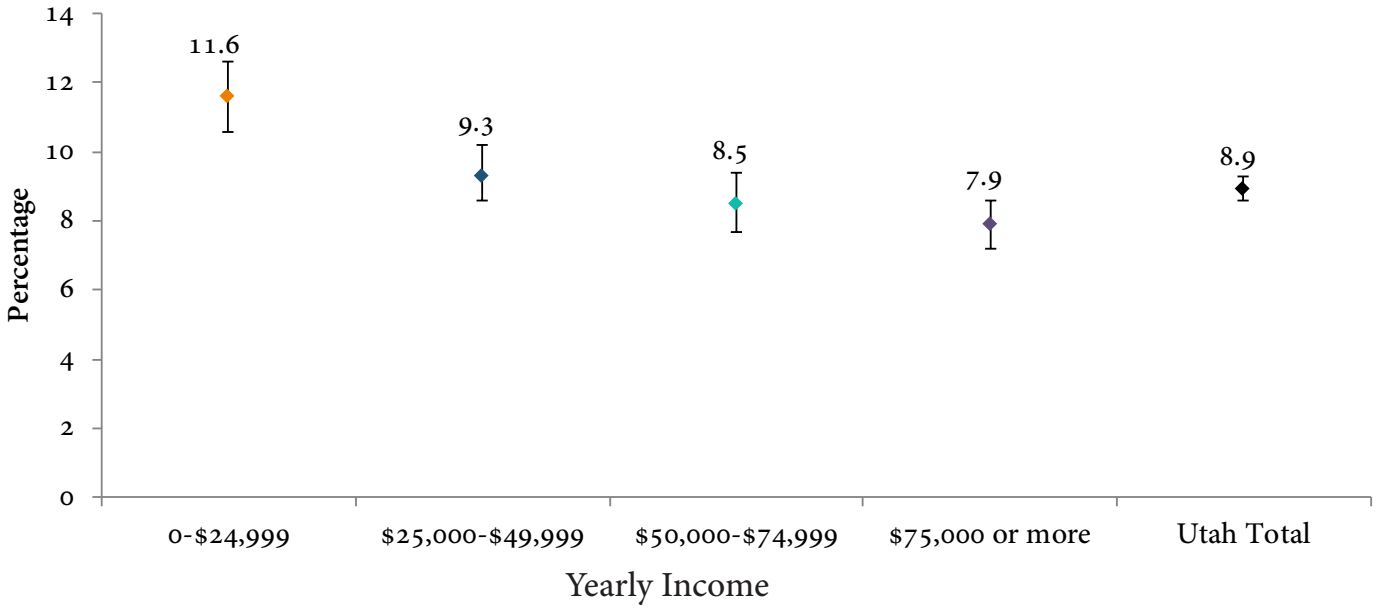


Source: Utah BRFSS, 2013-2015 combined. Age-adjusted rates.

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.

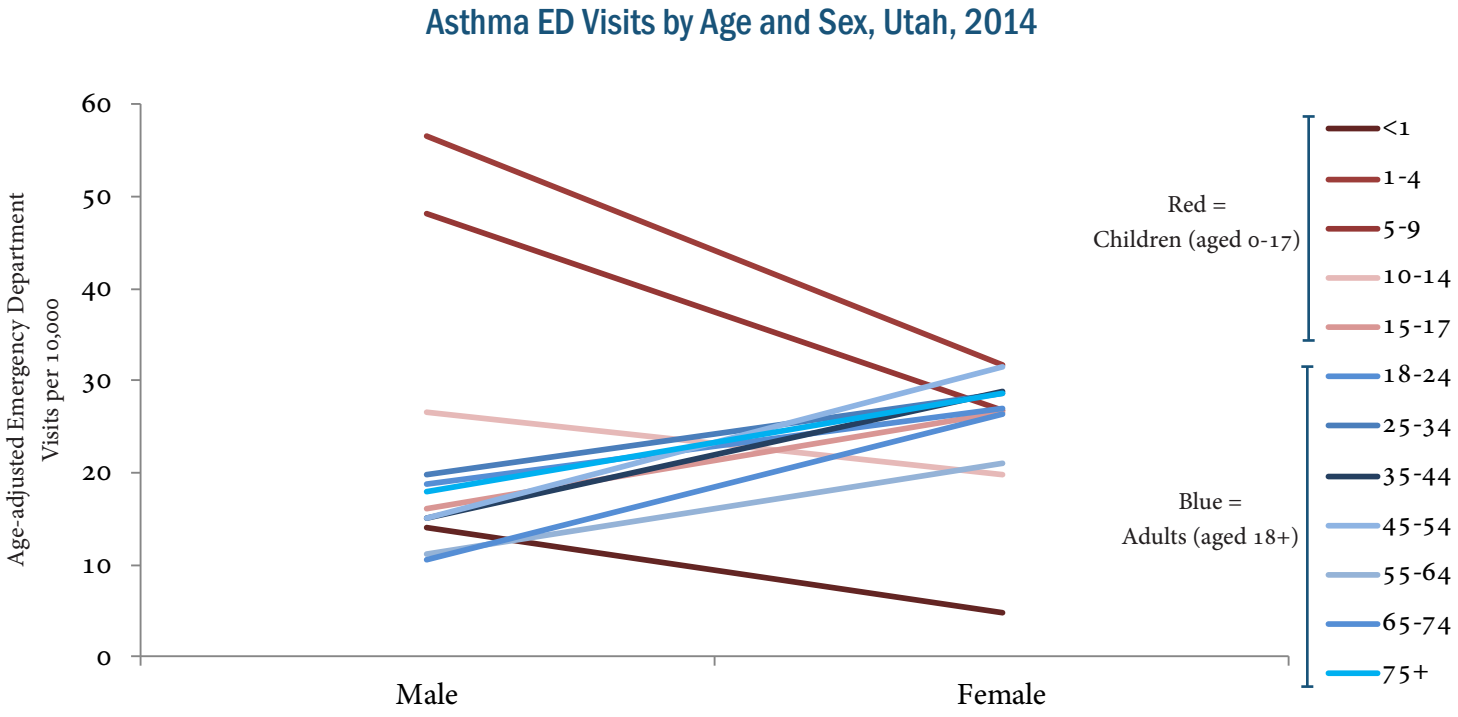
Asthma Emergency Department Visits

Asthma morbidity can be measured by the numbers of visits asthma sufferers make to the emergency department (ED) because ED visits are an indicator of uncontrolled asthma. By tracking emergency department visits, the Utah Asthma Program is able to assess changes in asthma morbidity over time and compare outcomes among various populations. These data are used to identify populations with most need and to target interventions specific to those populations.

Key Findings

- Male children in Utah had significantly higher ED visit rates for asthma compared to female children for every age group younger than 15-17.
- Females in Utah had significantly higher ED visit rates for asthma when compared to males for every adult (18+) age group.
- In Utah, ED visit rates for asthma met the Healthy People 2020 targets for every age group except for those aged 65+.

Figure 9. Females Experience a Higher Rate of Poor Asthma Outcomes in Adulthood But Less In Childhood When Compared to Males



Source: Utah Emergency Department Encounter Database, 2014. Note: The primary diagnosis code ICD 493 was used to identify emergency department visits due to asthma. Data include patients who were treated and released and those who were admitted as inpatients.

See Table 4 on the following page for a list of ED rates by age and sex.

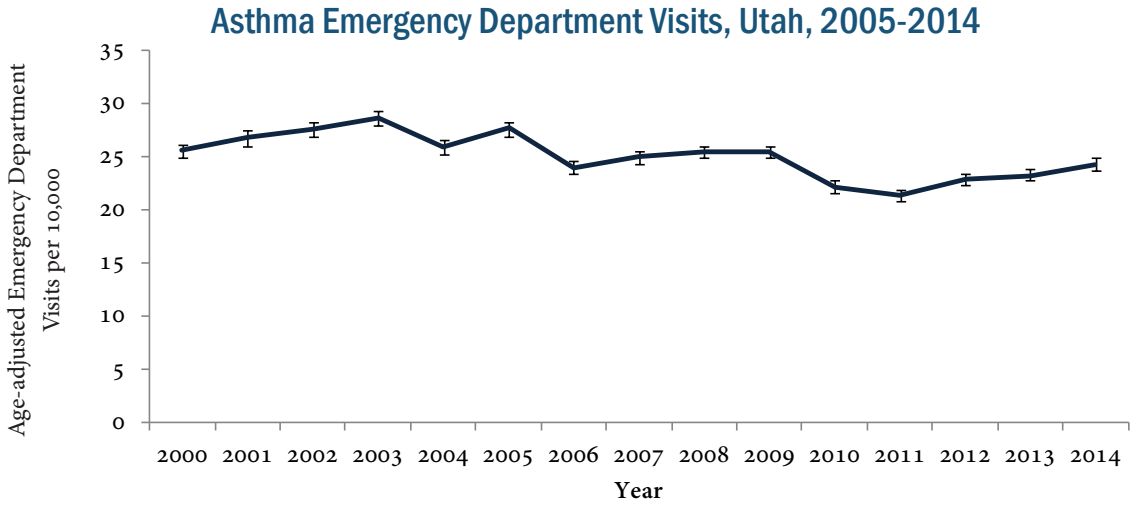
Table 4. Rate per 10,000 and 95% Confidence Intervals of Current Asthma by Age and Sex, Utah, 2014

Age	Male	Female
<1	14.0 (9.8-19.4)	4.9 (2.5-8.6)
1-4	56.6 (52.1-61.3)	31.7 (28.2-35.4)
5-9	48.1 (44.5-51.9)	26.8 (24.0-29.8)
10-14	26.7 (23.9-29.7)	19.9 (17.5-22.6)
15-17	16.0 (13.3-19.2)	26.7 (22.9-30.8)
18-24	18.9 (16.9-24.5)	27.0 (24.5-29.6)
25-34	19.9 (18.1-21.8)	28.7 (26.5-31.1)
35-44	15.0 (13.4-16.8)	28.8 (26.4-31.3)
45-54	15.0 (13.1-17.1)	31.4 (28.7-34.4)
55-64	11.2 (9.5-13.1)	21.0 (18.7-23.6)
65-74	10.7 (8.6-13.1)	26.4 (23.1-29.9)
75+	17.9 (14.5-21.8)	28.7 (24.9-29.9)

Source: Utah Emergency Department Encounter Database, 2014. Crude rates are presented with 95% confidence intervals. Note: The primary diagnosis code ICD 493 was used to identify emergency department visits due to asthma. Data include patients who were treated and released and those who were admitted as inpatients.

In Utah, females (aged 0-14) had a lower rate of asthma-related ED visits when compared to males (aged 0-14). However, females (aged 15+) had a higher asthma-related ED rate for all age groups when compared to males (aged 15+). Males aged 1-4 had the highest asthma-related ED rate (56.6 per 10,000) and females less than one year of age had the lowest asthma-related ED rate (4.9 per 10,000). Starting at age 35, females in Utah had double the asthma-related ED rates (28.8, 31.4, 21.0, 26.4, 28.7 per 10,000) when compared to males (aged 35+) (15.0, 15.0, 11.2, 10.7, 17.9 per 10,000) for every age group over 35; 35-44, 45-54, 55-64, 65-74, and 75+.

Figure 10. Asthma-Related ED Visits Have Remained About the Same in Utah Over Time

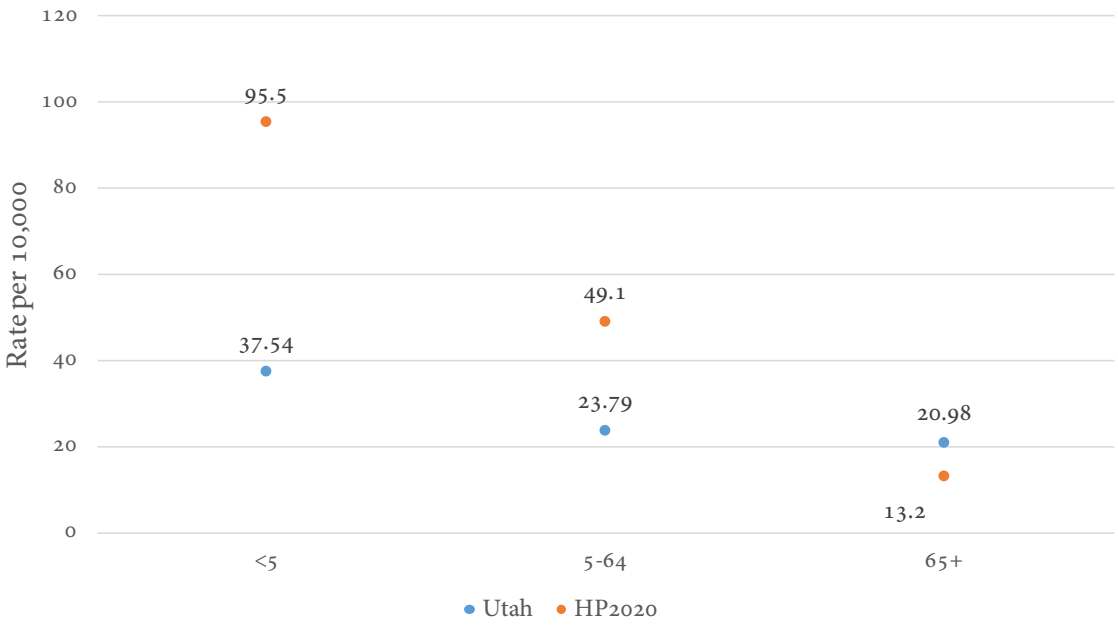


Source: Utah Emergency Department Encounter Database, 2014. Note: The primary diagnosis code ICD 493 was used to identify emergency department visits due to asthma. Data include patients who were treated and released and those who were admitted as inpatients.

In recent years (2011-2014), the ED visit rate for asthma in Utah increased slightly each year, but has remained lower than in some previous years shown.

Figure 11. Utah Met HP2020 Asthma-Related ED Goals for All Age Groups Except Those Aged 65+

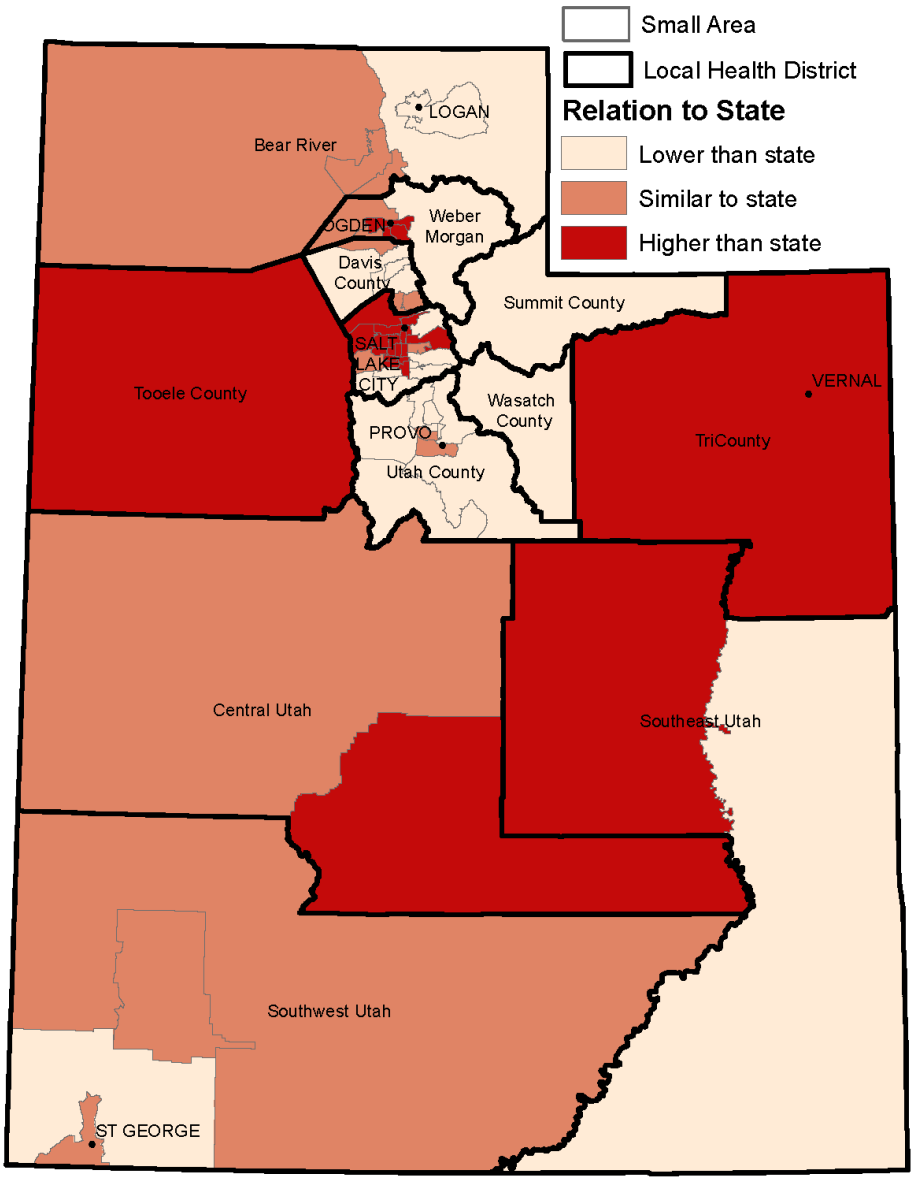
Utah Emergency Department Visits for Asthma Compared to Healthy People 2020 Targets, 2014



Source: Utah Emergency Department Encounter Database, 2014. Note: The primary diagnosis code ICD 493 was used to identify emergency department visits due to asthma. Data include patients who were treated and released and those who were admitted as inpatients.

Utah ED visit rates for asthma are well below national Healthy People 2020 targets for all age groups except for those aged 65+. Among Utah adults aged 65 and older, ED visit rates would need to fall by approximately 37% to meet the national target.

Figure 12. Age-Adjusted Utah Asthma-Related ED Visit Rate by Utah Small Area, 2013-2014



Source: Utah ED Encounter Database, 2014-2015 combined. Age-adjusted rates are presented. Note: The primary diagnosis code ICD 493 was used to identify emergency department visits due to asthma. Data include patients who were treated and released and those who were admitted as inpatients.

See Table 5 on the following page for a list of ED rates by Utah Small Area. There are several areas that had statistically higher rates of asthma ED visits when compared to the state. The area with the highest ED rate is South Salt Lake (57.1 per 10,000), which had almost six times the ED visit rate when compared to the area with the lowest ED rate, Syracuse/Kaysville (9.3 per 10,000). Most areas with an asthma-related ED rate higher than the state are areas that seem to be low income, low education, or are rural.

Table 5. Utah Small Areas with Significantly Different Asthma ED Rates compared to State, Utah, 2013-2014

Lower than State	
Area Name	Age-adjusted Rate per 10,000 with 95% CI*
Syracuse/Kaysville	9.3 (7.6-11.2)
Provo (North)/BYU	10.1 (7.6-13.1)
Morgan Co (All)/Weber Co (East)	10.9 (8.8-13.3)
Summit County	11.6 (9.2-14.3)
Lehi/Cedar Valley	12.2 (10.5-14.1)
Logan	12.5 (10.7-14.7)
SLC (Foothill/U of U)	13.0 (10.-16.6)
Springville/Spanish Fork	13.0 (11.3-16.1)
Cache Co (Oth)/Rich Co (All)	13.1 (10.8-15.7)
Pleasant Grove/Lindon	13.6 (11.4-16.1)
Sandy (SE)	14.1 (11.0-17.8)
South Jordan	14.5 (12.2-16.9)
Riverton/Draper	14.6 (13.0-16.5)
American Fork/Alpine	14.9 (12.6-17.5)
Wasatch County	16.1 (12.8-20.0)
Cottonwood	16.2 (13.4-19.3)
Orem (East)	16.4 (12.8-20.6)
Washington Co (Other)	17.3 (15.1-19.7)
Sandy (NE)	17.5 (13.7*22.0)
Layton	18.0 (15.9-20.3)
Farmington/Centerville	18.3 (15.3-21.7)
Utah Co (South)	18.6 (15.4-22.3)
Grand/San Juan Counties	19.2 (15.4-23.6)
Orem (North)	19.2 (16.0-22.9)

Higher than State	
Area Name	Age-adjusted Rate per 10,000 with 95% CI*
SLC (Downtown)	27.2 (23.8-30.8)
Sandy (Center)	27.6 (24.5-30.9)
Taylorsville (West)	27.9 (24.3-31.9)
Millcreek	28.8 (25.7-32.1)
West Jordan (SE)	29.2 (25.2-33.6)
Sevier/Piute/Wayne Counties	30.1 (25.4-35.4)
SLC (Avenues)	30.4 (24.9-36.8)
Riverdale	31.6 (26.9-36.9)
South Ogden	32.7 (28.5-37.3)
Magna	35.1 (30.0-40.8)
Carbon/Emery Counties	35.6 (31.0-40.8)
West Jordan (NE) V2	35.7 (30.8-41.1)
Tooele Co	37.5 (34.1-41.2)
Ogden (Downtown)	37.6 (33.4-42.3)
Taylorsville (East)/Murray (West)	39.6 (35.1-44.6)
West Valley (West)	42.2 (39.1-45.7)
Murray	44.4 (39.3-50.1)
TriCounty LHD	44.7 (40.9-48.8)
SLC (Rose Park)	45.1 (40.1-50.5)
Kearns V2	48.9 (43.6-54.6)
Midvale	51.5 (45.9-57.5)
West Valley (East) V2	51.8 (47.5-56.4)
SLC (Glendale)	52.0 (46.4-58.2)
South Salt Lake	57.1 (50.6-64.2)

Source: Utah ED Encounter Database, 2014-2015 combined. Age-adjusted rates are presented. Note: The primary diagnosis code ICD 493 was used to identify emergency department visits due to asthma. Data include patients who were treated and released and those who were admitted as inpatients.

Asthma Risk Factors

Several studies have shown an association between asthma prevalence and risk factors like obesity and depression. For example, poor asthma outcomes have been found to be higher among obese individuals compared to those of normal weight (Kent, 2012; Krystovfova, 2011) and among those with poor mental health (Zielinski, 2000). However, it is unclear which disease comes first, whether obesity and poor mental health cause or result in an asthma diagnosis. Additionally, studies have shown that among people with asthma, obesity and poor mental health can be a risk factor for poorer asthma outcomes like lower quality of life, poorer asthma control, and a history of asthma-related hospitalizations (Krystofova, 2011; Nauert, 2007, Sims, 2011).

Other risk factors for poor asthma outcomes include asthma triggers. An asthma attack can occur when someone with asthma is exposed to certain things in the environment that affect his or her asthma. Asthma triggers vary from person to person. Some common asthma triggers include tobacco smoke, dust mites, cockroach allergens, pets, mold, and wood smoke (CDC,2011). People with asthma should seek to reduce exposure to these triggers and thus reduce the risk of an asthma attack.

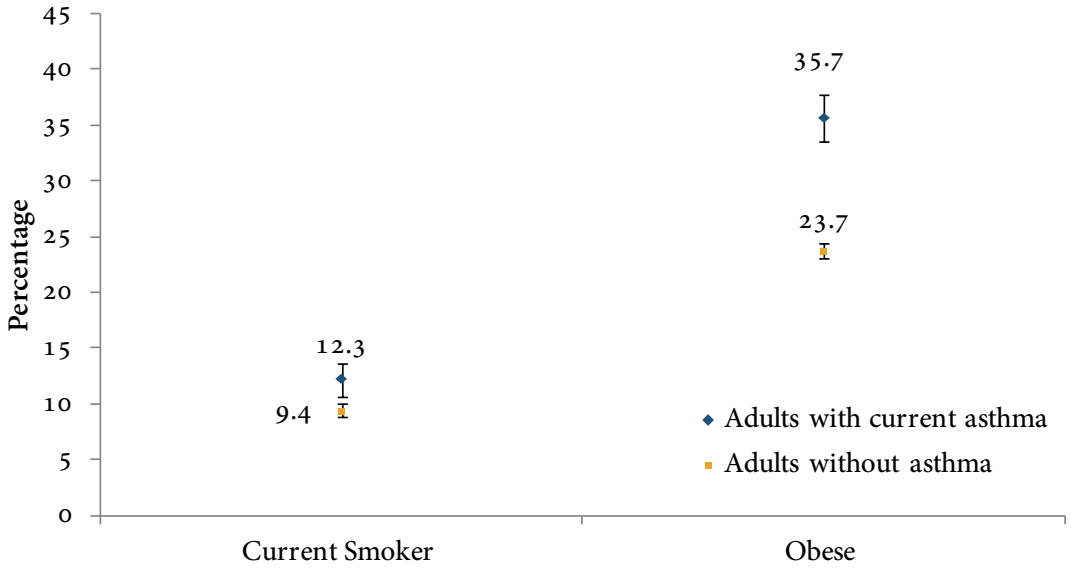
Utah data were analyzed to assess exposure to smoking, indoor environmental factors, poor mental health, and obesity as risk factors for asthma.

Key Findings

- Among Utah adults with current asthma, 12.3% reported being a current smoker.
- Significantly higher percentages of Utah adults who were obese reported having current asthma (13.0%), compared to normal weight and overweight adults (7.6% and 7.8%, respectively).
- About two-thirds of children and adults in Utah with current asthma said they allowed pets in their bedroom (66.1% and 79.3%, respectively).
- Significantly higher percentages of Utah adults who reported having a depressive disorder reported having current asthma (16.1%), compared to those without a depressive disorder (7.0%).

Figure 13. Adults with Asthma Report Being Exposed to More Asthma Risk Factors Than Those Without Asthma

Percentage of Utah Adults Who are Current Smokers or Obese by Current Asthma Diagnosis, 2013-2015

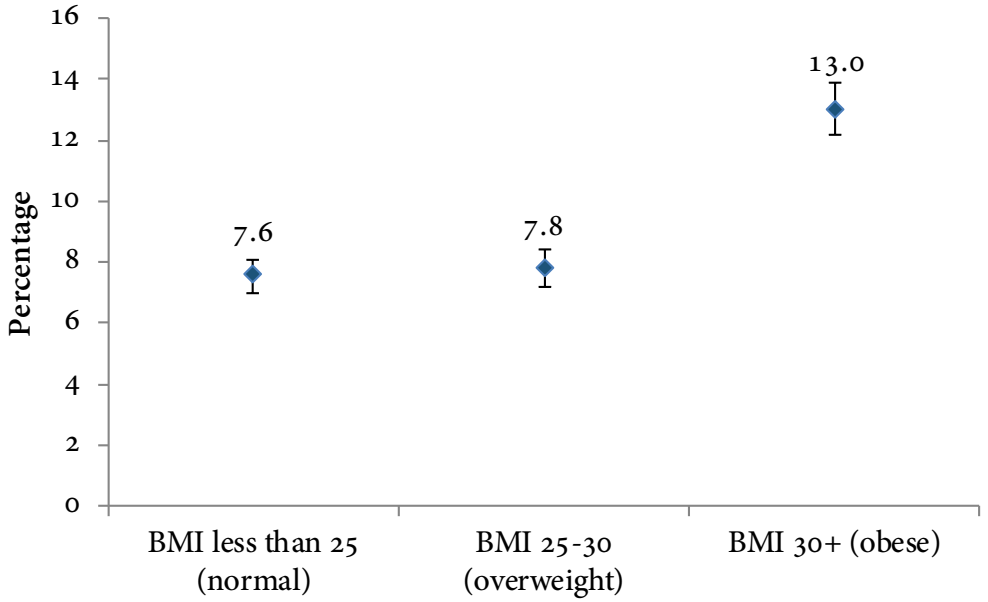


Source: Utah BRFSS, 2013-2015 combined. Crude prevalence.

Though exposure to tobacco smoke is a common asthma trigger, higher percentages of adults with current asthma reported being current smokers, compared to the Utah adult population without asthma (12.3% vs. 9.4%). Additionally, significantly higher percentages of Utah adults with current asthma reported being obese compared to adults without asthma (35.7% vs. 23.7%).

Figure 14. More Weight Means More Asthma

Current Asthma Prevalence by Weight Status, Utah Adults (Aged 18+), 2013-2015

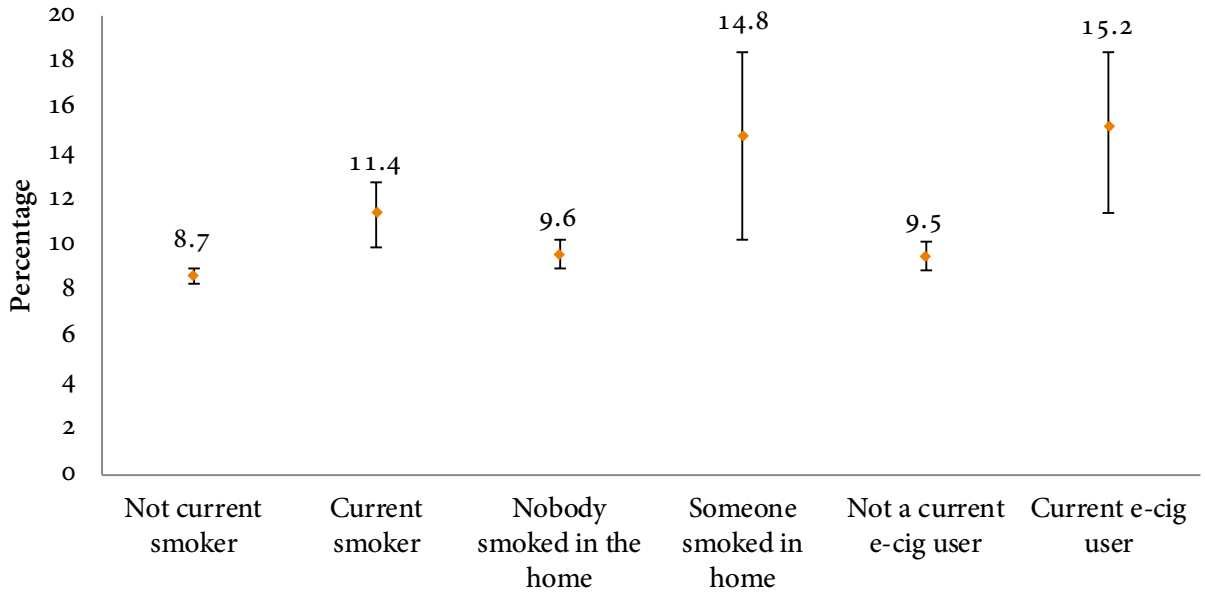


Source: Utah BRFSS, 2013-2015 combined. Crude prevalence.

Among Utah adults who were obese, significantly higher percentages reported having current asthma (13.0%), compared to normal and overweight adults (7.6% and 7.8%, respectively).

Figure 15. Every Group Exposed to Tobacco Smoke Had a Higher Asthma Prevalence

Current Asthma Prevalence by Tobacco Smoke Exposure, Utah Adults, 2013-2015

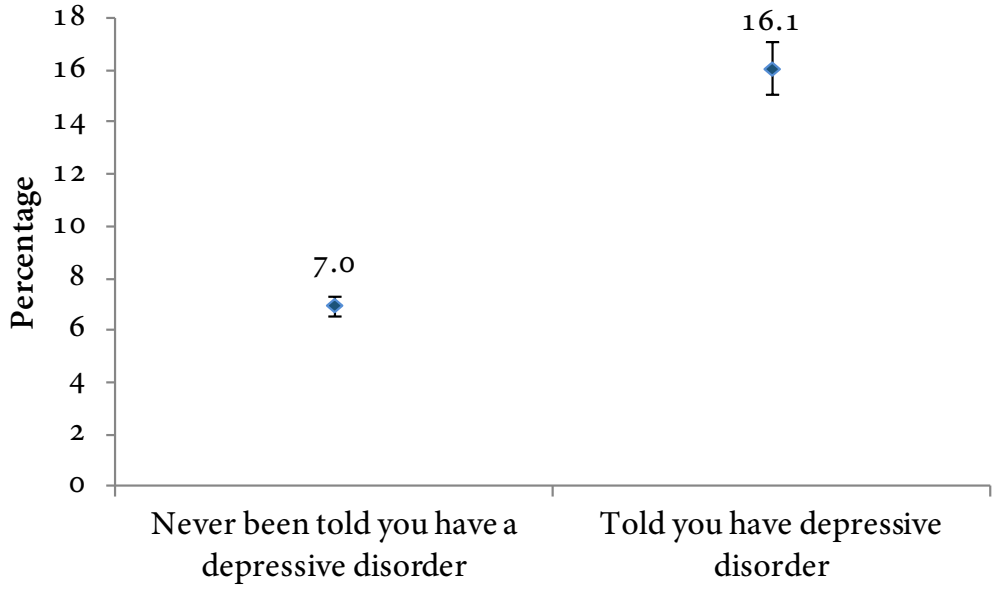


Source: Utah BRFSS, 2013-2015 combined. Crude prevalence.

Utah adults who were exposed to any type of tobacco smoke had a significantly higher prevalence of current asthma (11.4% current smoker, 14.8% someone smoked in the home in the past 30 days, 15.2% current e-cigarette user), when compared to those who were not exposed (8.7%, 9.6%, and 9.5% respectively).

Figure 16. Those Who Are Depressed Report More Than Twice as Much Asthma

Current Asthma Prevalence by Depression Status, Utah Adults, 2013-2015

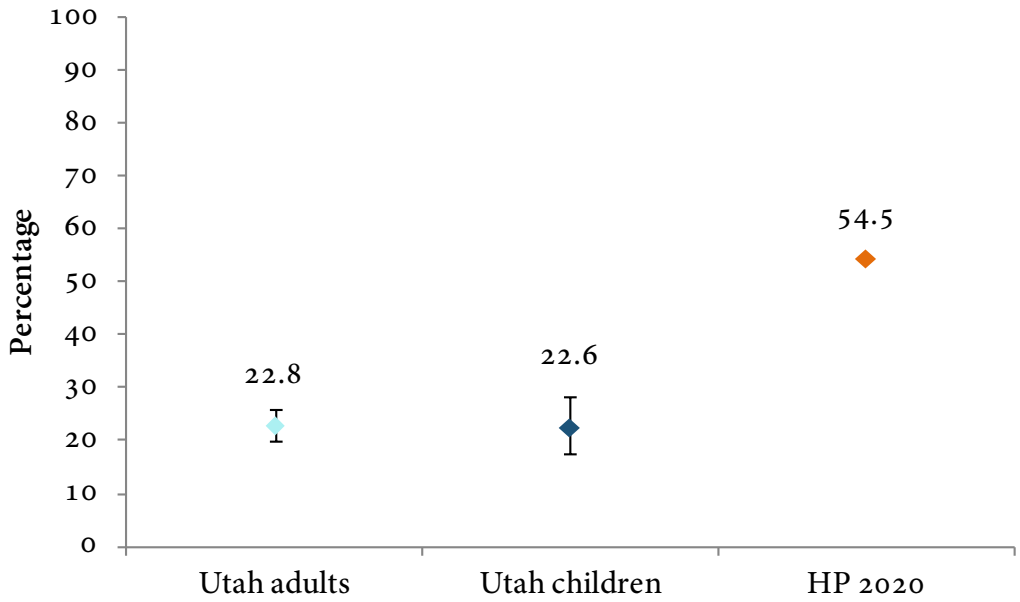


Source: Utah BRFSS, 2013-2015 combined. Age-adjusted prevalence.

Among Utah adults who reported being told by a health care professional that they had a depressive disorder, there was a significantly higher percentage reporting current asthma (16.1%), compared to those who had never been told by a health care professional that they had a depressive disorder (7.0%).

Figure 17. Health Professionals Need to Talk to Their Patients About How to Reduce Exposure to Asthma Triggers

Adults and Children with Current Asthma Who Have Been Advised by a Health Professional to Make Changes to Their Environment, Utah Compared to Healthy People 2020 Target, 2013-2015

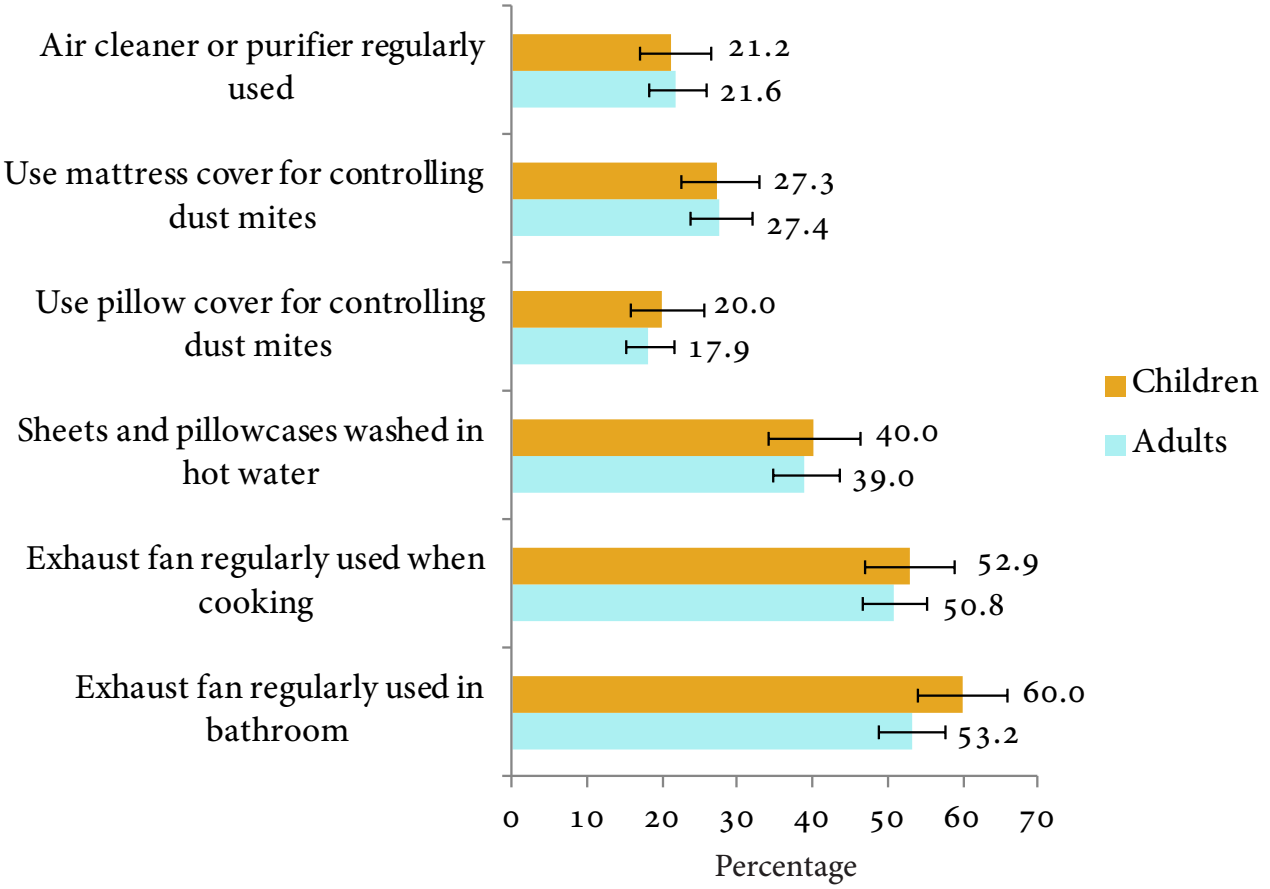


Source: Utah ACBS, 2013-2015 combined. Crude prevalence.

During 2013-2015, the percentage of Utah adults and children who reported that they had been advised to make changes to their home, school, or work environments to reduce exposure to asthma triggers were lower than the national Healthy People 2020 (28.8%, 22.6% vs. 54.5%).

Figure 18. Less Than One-Third of Adults and Children Reported Using Two of the Most Cost Efficient and Effective Trigger Reduction Methods: Mattress and Pillowcase Covers

Environmental Modifications in the Homes of Children and Adults with Current Asthma, Utah, 2013-2015

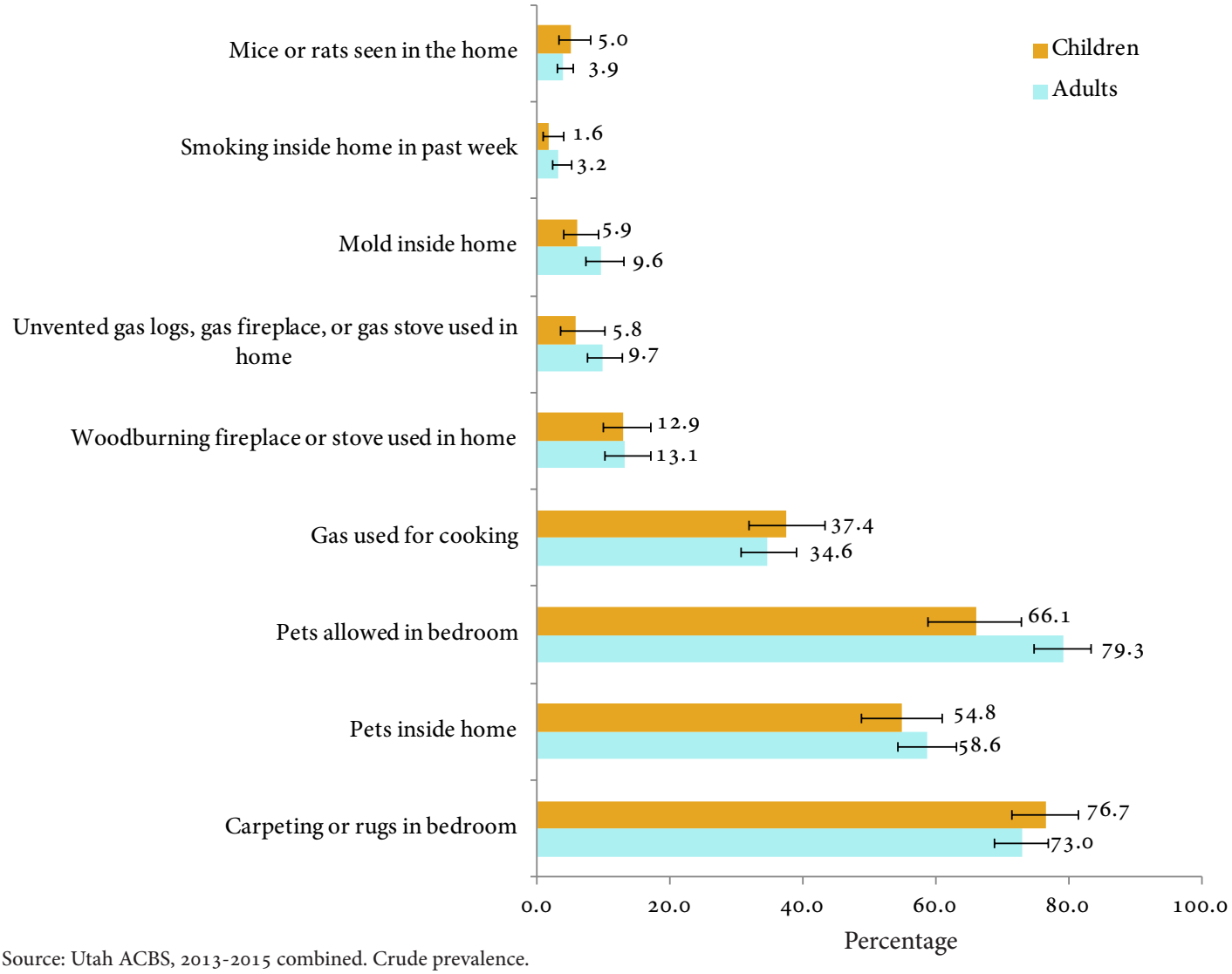


Source: Utah ACBS, 2013-2015 combined. Crude prevalence.

Indoor environmental modifications are actions taken in an indoor environment to control asthma triggers. The most prevalent indoor modifications reported among Utah adults and children with current asthma included using an exhaust fan regularly in the bathroom or when cooking, and washing sheets and pillowcases in hot water. Other actions to control indoor triggers were implemented in one-third or fewer homes.

Figure 19. More Than Two-Thirds of Adults and Children Reported Being Exposed to a Significant Asthma Trigger: Pets In the Bedroom

Environmental Triggers in the Homes of Children and Adults with Current Asthma, Utah, 2013-2015



Source: Utah ACBS, 2013-2015 combined. Crude prevalence.

Utah adults and children with current asthma were asked several questions regarding exposure to potential indoor triggers. The majority reported exposure to carpeting/ rugs or pets inside the home. Fewer than 10% reported exposure to mold, smoking, or rodents. Reported exposure to indoor asthma triggers was similar for adults and children.

Conclusion

Using data from this report, the UAP and partners will be able to better understand populations of high need and target resources to them. Not only is this a cost effective approach to population asthma care but it ensures that the most vulnerable people with asthma receive treatment and care to help them control their asthma and reduce poor asthma outcomes. Additionally, this report will help the UAP and partners track asthma over time, identify trends, and set benchmarks for improvement.

Appendix 1 - Utah Small Areas and Zip Codes

Salt Lake County Small Areas and Zip Codes

Local Health District	County	#	Utah Small Area	Boundary Designation
Salt Lake County LHD (04)		17	Salt Lake City (Rose Park)	ZIP Codes 84116, 84122
		18	Salt Lake City (Avenues)	ZIP Codes 84103, 84114, 84150
		19	Salt Lake City (Foothill/ University of Utah)	ZIP Codes 84108, 84112, 84113
		20	Magna	ZIP Code 84044
		21	Salt Lake City (Glendale)	ZIP Codes 84101, 84104, 84110, 84180
		22	West Valley (West)	ZIP Codes 84120, 84128, 84170
		23	West Valley (East) [2011 AND BEFORE]	ZIP Codes 84119, 84199 [EFFECTIVE 2011 AND BEFORE]
Salt Lake County LHD (04)—continued		23.1	West Valley (East) V2 [2012 AND AFTER]	Revised ZIP Code 84119; 84199 [EFFECTIVE 2012 AND AFTER]
		24	Salt Lake City (Downtown)	ZIP Codes 84102, 84105, 84111, 84145, 84152
		25	South Salt Lake	ZIP Codes 84115, 84165
		26	Millcreek	ZIP Codes 84106, 84109, 84151
		27	Holladay	ZIP Codes 84117, 84124, 84127
		28	Cottonwood	ZIP Code 84121
		29	Kearns [2011 AND BEFORE]	ZIP Code 84118 [EFFECTIVE 2011 AND BEFORE]
		29.1	Kearns V2 [2012 AND AFTER]	Revised ZIP Code 84118 [EFFECTIVE 2012 AND AFTER]
		30	Taylorsville (East)/Murray (West) [RENAMED FROM TAYLORSVILLE IN 2012]	ZIP Code 84123
		30.1	Taylorsville (West) [2012 AND AFTER]	ZIP Code 84129 (new ZIP Code introduced in 2011) [EFFECTIVE 2012 AND AFTER]
		31	Murray	ZIP Codes 84107, 84157
		32	Midvale	ZIP Code 84047
		33	West Jordan (North) [2008 AND BEFORE]	ZIP Code 84084 [EFFECTIVE 2008 AND BEFORE]
		33.1	West Jordan (Northeast) [2009 THROUGH 2011]	Revised ZIP Code 84084 [EFFECTIVE 2009 THROUGH 2011]
		33.2	West Jordan (Northeast) V2 [2012 AND AFTER]	Revised ZIP Code 84084 [EFFECTIVE 2012 AND AFTER]
		34	West Jordan/Copperton [2008 AND BEFORE]	ZIP Codes 84006, 84088 [EFFECTIVE 2008 AND BEFORE]
		34.1	West Jordan (Southeast) [2009 AND AFTER]	Revised ZIP Code 84088 [EFFECTIVE 2009 AND AFTER]
		34.2	West Jordan (West)/ Copperton [2009 AND AFTER]	ZIP Codes 84006, 84081 (new ZIP Code introduced in 2008) [EFFECTIVE 2009 AND AFTER]
		35	South Jordan	ZIP Code 84095
		36	Sandy (Center)	ZIP Codes 84070, 84091, 84094
		37	Sandy (Northeast)	ZIP Codes 84090, 84093
		38	Sandy (Southeast)	ZIP Code 84092
		39	Riverton/Draper	ZIP Codes 84020, 84065, 84096 (new ZIP Code introduced in 2006)

Utah County Small Areas and Zip Codes

Local Health District / County	#	Utah Small Area	Boundary Designation
Utah County LHD (10)	41	Lehi/Cedar Valley	ZIP Codes 84005 (new ZIP Code introduced in 2006), 84013, 84043, 84045 (new ZIP Code introduced in 2006)
	42	American Fork/Alpine	ZIP Codes 84003, 84004
	43	Pleasant Grove/Lindon	ZIP Codes 84042, 84062
	44	Orem (North)	ZIP Codes 84057, 84059
	45	Orem (West)	ZIP Code 84058
	46	Orem (East)	ZIP Code 84097
Utah County LHD (10) — continued	47	Provo (North)/Brigham Young University	ZIP Codes 84602, 84604
	48	Provo (South)	ZIP Codes 84601, 84603, 84605, 84606
	49	Springville/Spanish Fork	ZIP Codes 84653, 84660, 84663, 84664
	50	Utah County (South)	ZIP Codes 84626, 84633, 84651, 84655

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