Utah Health Status Update:

The Burden of Asthma for Utah Adults

October 2006 — Utah Department of Health

Asthma is a chronic respiratory condition that is characterized by difficulty in breathing due to airway inflammation and constriction caused by sensitivity to a variety of environmental triggers. Triggers include cold or dry air, dust, pollen, pollution, cigarette smoke, stress, or physical activity. Exposure to a trigger causes the airway to produce excessive mucus, and the muscles around the airways to tighten. Triggers are not the same for all people with asthma.

In order to estimate adult asthma prevalence, two questions have been included on the Utah Behavioral Risk Factor Surveillance System (BRFSS) since 2001: "Have you ever been told by a doctor, nurse, or other health professional that you had asthma?" and "Do you still have asthma?" Respondents are considered to have current asthma if they answer 'yes' to both questions.

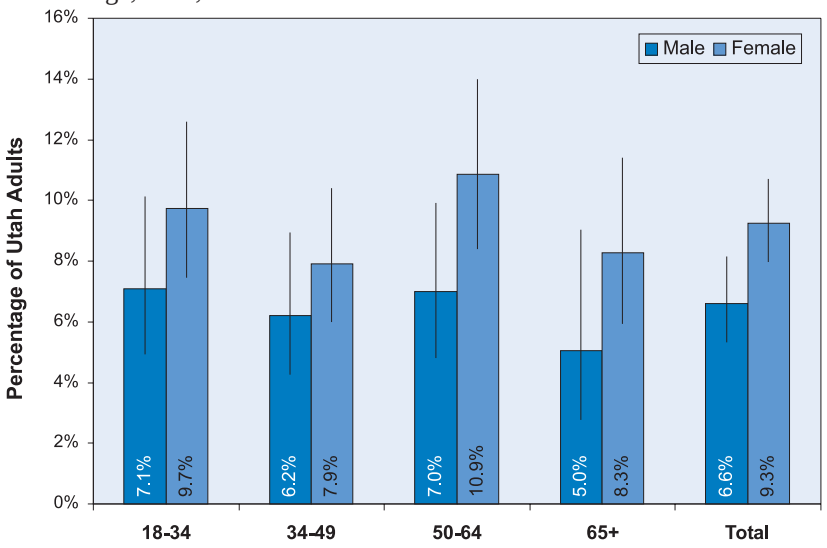
According to the 2005 BRFSS, 8.0% of Utah adults aged 18 and older had current asthma. The rate for U.S. adults was similar at 7.9%. Female adults had significantly higher rates of asthma than males across all age groups (Figure 1). This was true both in Utah and most other states in the U.S. Utah women aged 50–64 years had the highest prevalence of asthma at almost 11%.

To further understand the impact of asthma, the BRFSS has included a set of questions that are asked only of respondents who have asthma. Data from these questions show that a higher percentage of males are diagnosed with asthma in childhood, with 70% diagnosed before age 18, opposed to only 48% of females being diagnosed before age 18 (Figure 2). Asthma is often considered a childhood disease; however, the burden to adults with asthma is considerable. Almost half (44.1%) of adults with asthma have had it for more than 10 years (Figure 2).

The burden of asthma for adults can be financial, physical, and/or emotional. The annual direct and indirect health care cost of asthma in the U.S. was approximately $16 billion in 2004.[1]

Current Doctor-diagnosed Asthma

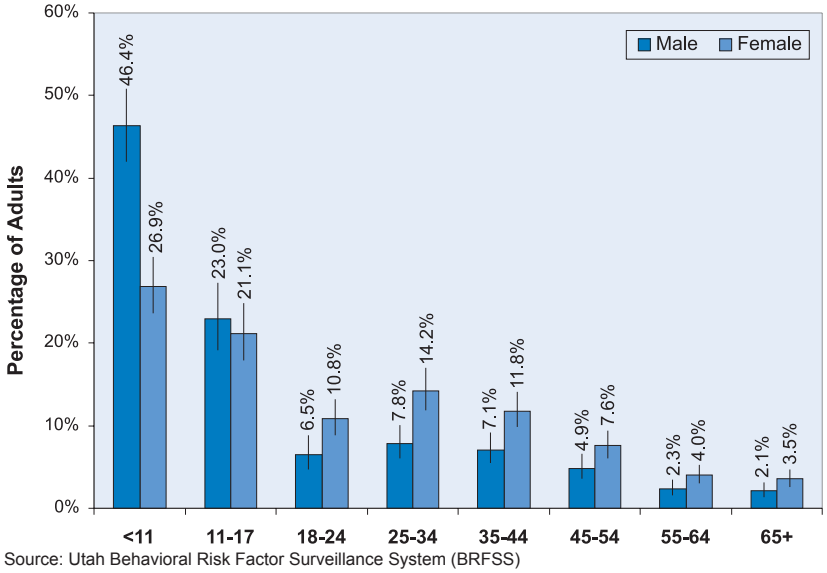
Figure 1. Percentage of adults who reported doctor-diagnosed asthma by sex and age, Utah, 2005



Source: Utah Behavioral Risk Factor Surveillance System (BRFSS)

Age First Diagnosed With Asthma

Figure 2. Percentage of Utah adults with asthma by age at which first diagnosis was made and by sex, Utah, 2002–2005



Source: Utah Behavioral Risk Factor Surveillance System (BRFSS)

Direct health care costs may include visits to the doctor, cost of medications, emergency room visits, hospitalizations, and more. Approximately 20.0% of males and 25.7% of females with current asthma visited the doctor at least once in the preceding 12 months because of worsening asthma symptoms. And 7.6% of males and 10.0% of

females with current asthma reported visiting the emergency department because of asthma in the past 12 months (Figure 3). In 2004, the charges for emergency department encounters in Utah, both treat and release and treat and admit, for adults 18 and older was over $7 million ($7,293,314).

Indirect costs of asthma include missed work, decreased productivity, transportation costs, and more. Almost half of Utah adults with current asthma indicated asthma symptoms made it difficult to sleep at least once in the past 30 days (Figure 3). This lack of sleep may also contribute to lost productivity.

Adults with asthma are more likely to be limited in activities (31.4% vs. 16.0%), probably because asthma causes difficulty in breathing. However, adults with asthma are also more likely to report fair or poor health (19.4% vs. 11.2%), report poor physical health (42.2% vs. 34.4%), be obese (24.9% vs. 19.5%), and report doctor-diagnosed arthritis (34.2% vs. 21.4%). All of which take a toll on a person's physical and mental well being (Figure 4).

Utah adults with asthma are more likely to report poor mental health as well (49.0% vs. 37.1%) (Figure 4). The emotional burden of asthma can be intensified when not treated because an asthma attack can come on at any time. Family members and those close to those with asthma may also be affected emotionally because of added stress or worry.

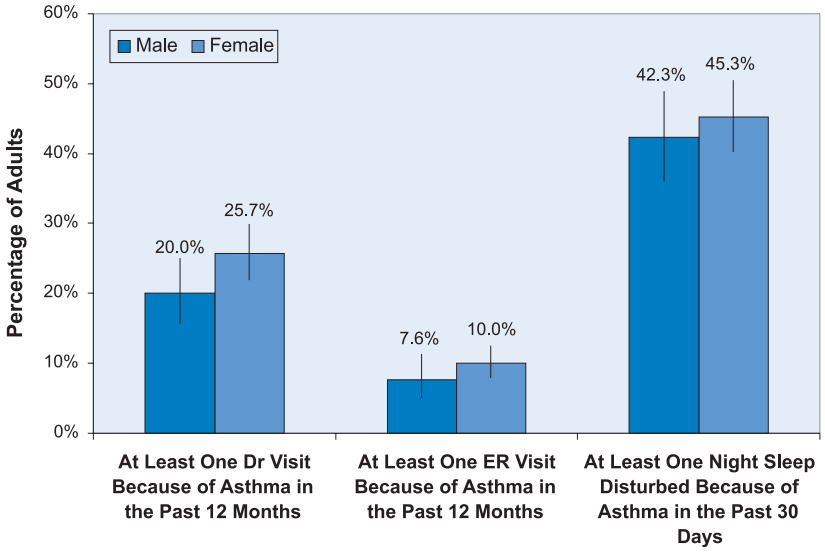
While asthma can be a great burden to Utah adults, it is possible to reduce the burden with treatment and managed care.

Reference

1 National Heart, Lung and Blood Institute Chartbook, U.S. Department of Health and Human Services, National Institute of Health, 2004.

Time Lost to Asthma

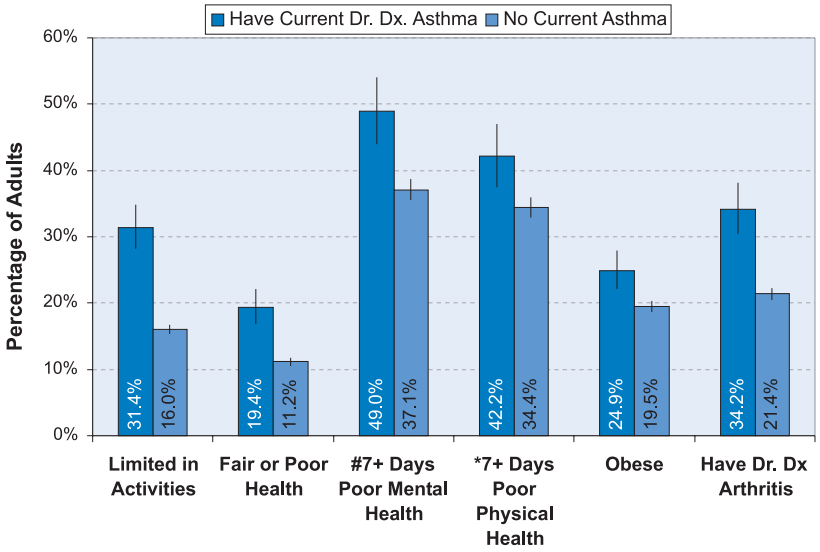
Figure 3. Percentage of adults with current asthma who reported each reason as time lost due to asthma, Utah, 2002–2005



Source: Utah Behavioral Risk Factor Surveillance System (BRFSS)

Other Conditions Affecting Adults With Asthma

Figure 4. Percentage of adults who reported each condition by asthma diagnosis, Utah, 2002–2005



*Taken from the BRFSS question "Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?"
#Taken from the BRFSS question "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?"
Source: Utah Behavioral Risk Factor Surveillance System (BRFSS)

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Monthly Health Indicators Report

(Data Through August 2006)

Monthly Report of Notifiable Diseases, August 2006	Current Month # Cases	Current Month # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
Campylobacteriosis (Campylobacter)	32	32	182	186	1.0
Enterotoxigenic Escherichia coli (E. coli)	34	14	84	50	1.7
Hepatitis A (infectious hepatitis)	0	5	11	32	0.3
Hepatitis B (serum hepatitis)	4	4	22	28	0.8
Measles (Rubeola, Hard Measles)	0	0	0	0	--
Meningococcal Diseases	1	1	5	6	0.9
Norovirus	0	0*	5	2*	2.2
Pertussis (Whooping Cough)	62	39	632	132	4.8
Salmonellosis (Salmonella)	36	33	204	176	1.2
Shigellosis (Shigella)	8	7	41	33	1.3
Varicella (Chickenpox)	25	10*	555	229*	2.4
Viral Meningitis	15	32	120	77	1.6
West Nile (Human cases/Equine cases)†	73 / 18	5 / 10*	75 / 20	6 / 10	12.5 / 1.9
Notifiable Diseases Reported Quarterly, 2nd Qtr 2006	**Current Quarter # Cases**	**Current Quarter # Expected Cases (5-yr average)**	**# Cases YTD**	**# Expected YTD (5-yr average)**	**YTD Standard Morbidity Ratio (obs/exp)**
HIV	33	26	56	32	1.7
AIDS	8	13	18	26	0.7
Chlamydia	1,149	917	2,364	1,534	1.5
Gonorrhea	208	116	435	188	2.3
Tuberculosis	11	8	17	15	1.2
Program Enrollment for the Month of August 2006	**Current Month**	**Previous Month**	**% Change§ From Previous Month**	**1 Year Ago**	**% Change§ From 1 Year Ago**
Medicaid	170,393	171,042	-0.4%	178,529	-4.6%
PCN (Primary Care Network)	16,799	16,525	+1.7%	16,810	-0.1%
CHIP (Children's Health Ins. Plan)	34,538	35,395	-2.4%	30,484	+13.3%

Medicaid Expenditures (in Millions) for the Month of August 2006‡	Current Month	Expected/ Budgeted for Month	Fiscal YTD	Budgeted Fiscal YTD	Variance - over (under) budget
Capitated Mental Health	N/A	N/A	N/A	N/A	N/A
Inpatient Hospital	N/A	N/A	N/A	N/A	N/A
Outpatient Hospital	N/A	N/A	N/A	N/A	N/A
Long Term Care	N/A	N/A	N/A	N/A	N/A
Pharmacy	N/A	N/A	N/A	N/A	N/A
Physician/Osteo Services	N/A	N/A	N/A	N/A	N/A
TOTAL HCF MEDICAID	N/A	N/A	N/A	N/A	N/A
Health Care System Measures	**Number of Events**	**Rate per 100 Population**	**% Change§ From Previous Year**	**Total Charges in Millions**	**% Change§ From Previous Year**
Overall Hospitalizations (2005)	268,652	10.0%	-1.3%	$ 3,501.7	+8.6%
Non-maternity Hospitalizations (2005)	161,474	5.8%	-1.6%	$ 2,914.5	+8.2%
Emergency Department Encounters (2004)	627,078	24.2%	-4.2%	$ 456.6	+14.7%
Outpatient Surgery (2004)	303,123	11.7%	+6.0%	$ 845.3	+15.6%
Annual Community Health Measures	**Current Data Year**	**Population at Risk**	**Number Affected**	**Percent/ Rate**	**% Change§ From Previous Year**
Overweight and Obesity (Adults 18+)	2005	1,740,474	942,900	54.2%	-3.9%
Cigarette Smoking (Adults 18+)	2005	1,740,474	200,600	11.5%	+9.7%
Influenza Immunization (Adults 65+)	2005	212,582	148,300	69.7%	-7.6%
Health Insurance Coverage (Uninsured)	2005	2,528,926	292,800	11.6%	+13.5%
Motor Vehicle Crash Injury Deaths	2005	2,528,926	292	11.6 / 100,000	-4.5%
Suicide Deaths	2005	2,528,926	344	13.6 / 100,000	-11.1%
Diabetes Prevalence	2005	2,528,926	104,200	4.1%	+8.7%
Coronary Heart Disease Deaths	2005	2,528,926	1,567	62.0 / 100,000	-4.6%
All Cancer Deaths	2005	2,528,926	2,512	99.3 / 100,000	+0.4%
Births to Adolescents (Ages 15-17)	2005	58,374	917	15.7 / 1,000	+5.8%
Early Prenatal Care	2005	51,517	40,587	78.8%	+1.0%
Infant Mortality	2005	51,517	231	4.5 / 1,000	-13.3%
Childhood Immunization (4:3:1:3:3)	2005	50,043	37,100	74.1%	+3.9%

* Due to limited historical data, the average is based upon 3 years of data for norovirus, varicella, and West Nile virus infections.
† West Nile virus was detected first in wild birds in early June for the 2006 season. This is the earliest WNV has ever been detected in Utah for a given season.
§ % Change could be due to random variation.
‡ Final Medicaid expenditure information for the month of August 2006 will not be available until 2006 year-end reversals are in place.
Note: Active surveillance has ended for influenza until the 2006 season.