

Utah Health Status Update:

Cost of Asthma Care in Utah

February 2011

Asthma, a chronic inflammatory disease of the lungs, has been reported as one of the most commonly diagnosed chronic conditions with about 7.7 percent of Americans having current asthma.¹ It is also one of the leading diseases driving health care costs in the United States. Estimates for the cost of asthma in the United States range from \$3.6 billion to \$30 billion annually.² In Utah, about eight percent of the population has current asthma³ and asthma is one of the top five diseases driving health care costs in this state.⁴

Data on disease cost has been made available through the All Payer Claims Database (APCD). The APCD currently represents a collection of about 70 percent of statewide health care claims data. An initial combined payer dataset of approximately 150 million medical and pharmacy claim records for 2007, 2008, and 2009 was submitted to the Utah Office of Health Care Statistics by commercial insurance companies and third party administrators licensed in the state of Utah. Currently, Medicaid and Medicare data are not included in this database. The Utah APCD uses ICD-9 code 493 to identify those with a clinical diagnosis of asthma.

- In Utah, about 8% of the population has current asthma and asthma is one of the top five diseases driving health care costs in this state.
- Asthma ranks third in disease cost with 4.61% of total health care costs.
- The billed claims for asthma were 1.9 to 2.9 times the actual amount paid in 2009 by age group.
- The two childhood age groups accounted for 66% of the hospital discharge claims in 2009, though the average claim cost was significantly less than the adult age groups.
- The total amount paid by commercial health care plans in 2009 for asthma prescriptions was about \$15,790,000.

Top 5 Chronic Disease Cost Drivers

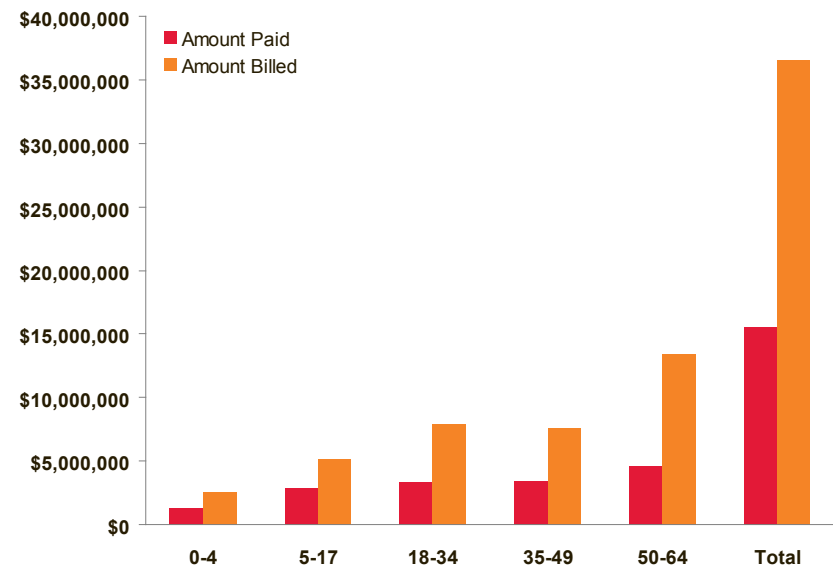
Table 1. Percentage of total health care costs of the top five chronic diseases driving health care costs, Utah, 2009

	Disease	Percentage of Total Utah Health Care Costs
1	Diabetes	11.08%
2	Hypertension	5.94%
3	Asthma	4.61%
4	Coronary Heart Disease	3.31%
5	Breast Cancer	1.88%

Source: Gaskill, M. Utah All Payer Claims Database, Utah Department of Health, Office of Health Care Statistics. December 2010.

Asthma Charges and Costs

Figure 1. Asthma billed medical costs and amounts paid in Utah by age, 2009



Source: Gaskill, M. Utah All Payer Claims Database, Utah Department of Health, Office of Health Care Statistics. December 2010.

Using the APCD, analyses were completed to identify the top five chronic diseases driving health care costs in Utah. These are listed in Table 1.

Asthma ranks third in disease cost with 4.61% of total health care costs.

The Utah APCD provides data on billed medical claims along with the actual amount paid. The amount paid may provide a better picture of the actual burden of disease cost. Figure 1 shows the billed medical claim costs and the amounts paid by insurance companies.

In 2009, the billed claims for asthma were 1.9 to 2.9 times the actual amount paid by age group. The total amount paid for asthma related medical care was about \$15,500,000 and the total claims charge was about \$36,600,000.

Hospitalizations are a leading cost-driver for asthma. According to Utah's Indicator-Based Information System for Public Health, in 2009

among people under the age of 65 years old, there were about 770 hospital discharge claims for asthma that were billed to commercial insurance companies.⁵

Charges between the adult age groups were similar. It is interesting to note that the two childhood age groups account for 510 (66%) of the hospital discharge claims, though the average claim cost is significantly less than the adult age groups (Figure 2).

Most children who have asthma develop symptoms before four years of age, though it can be difficult to identify whether a child has asthma or another childhood condition. Costs and charges for children ages 0–4 should be interpreted with caution since asthma is not necessarily a doctor diagnosed condition in this age group.

Another large cost associated with asthma is prescription costs. Prescriptions for asthma range from daily-use controller medications which assist in preventing asthma attacks to quick-relief inhalers which are taken during an asthma attack.

The average total cost for prescription claims increases with age. Using APCD data, the total amount paid by commercial health care plans in 2009 for asthma prescriptions was about \$15,790,000 (Figure 3).

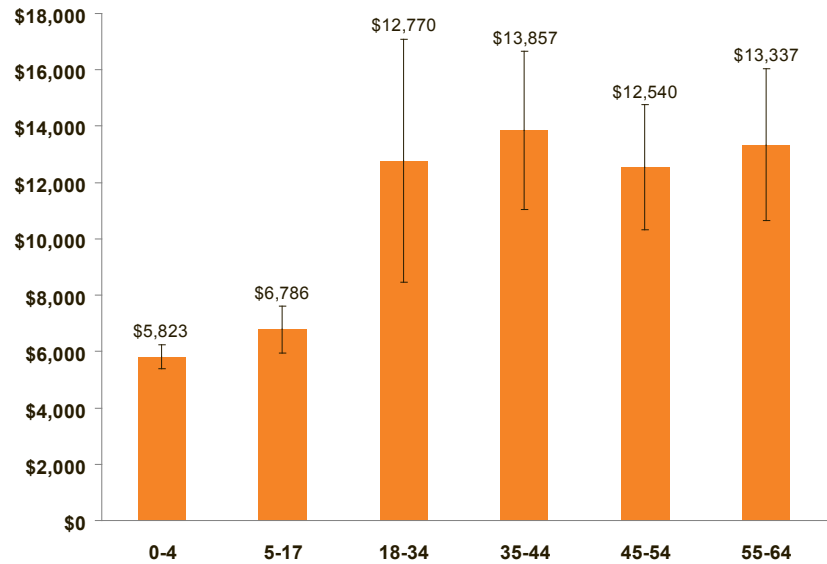
The Utah Asthma Program works to reduce the burden of asthma by implementing a statewide plan created by the Utah Asthma Task Force. This plan aims at increasing asthma awareness and self-management through education, access to resources, and prevention.

References

- Centers for Disease Control and Prevention. 2007 National Health Interview Survey Data. Table 4-1 Current Asthma Prevalence percents by age, United States. Atlanta, GA: U.S. Department of Health and Human Services, CDC, 2010.
- Kamble, S & Bharmal, M. (2009). Incremental direct expenditure of treating asthma in the United States. *Journal of Asthma*, 46, 73-80.
- 2009 Utah Behavioral Risk Factor Surveillance System.
- Gaskill, M. Utah All Payer Claims Database, Utah Department of Health, Office of Health Care Statistics. December 2010.
- Utah Inpatient Hospital Discharge Data, Office of Health Care Statistics, Utah Department of Health.

Asthma Hospitalization Charges

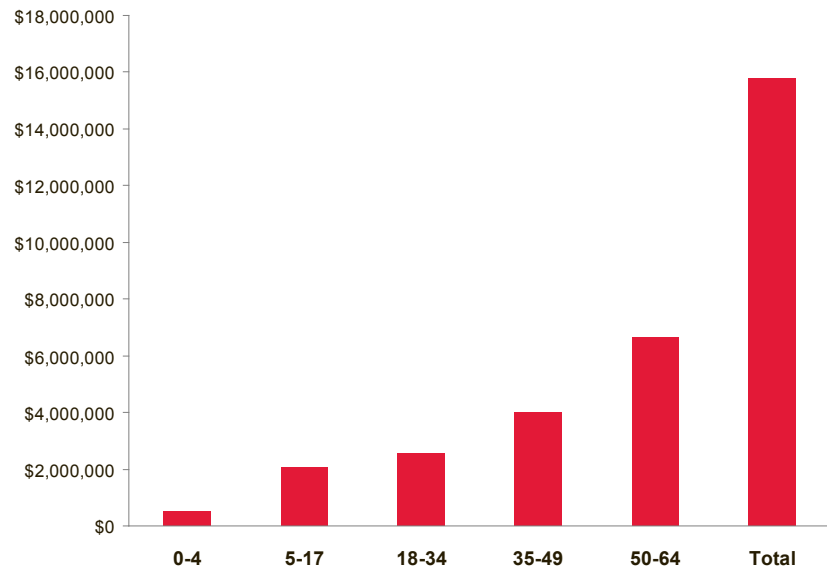
Figure 2. Average commercial claims charge for asthma hospitalization by age group, Utah, 2009



Source: Utah Inpatient Hospital Discharge Data, Office of Health Care Statistics, Utah Department of Health

Asthma Prescription Costs

Figure 3. Asthma prescription amounts paid by age group, Utah, 2009



Source: Gaskill, M. Utah All Payer Claims Database, Utah Department of Health, Office of Health Care Statistics. December 2010.

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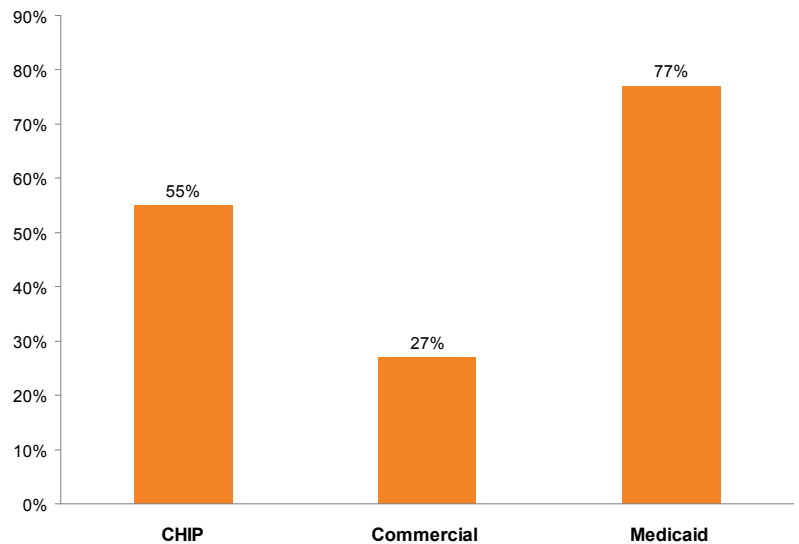
Breaking News, January 2011

Healthcare Effectiveness Data and Information Set (HEDIS)

The Utah Health Data Committee has collected data on a variety of HMO (Health Maintenance Organization) performance measures since 1996. The Healthcare Effectiveness Data and Information Set (HEDIS) measures the performance of HMOs on a variety of dimensions. HEDIS can be used to make comparisons between an HMO and other HMOs, state averages, and national averages. Utah has three different types of HMOs, including commercial, Medicaid, and CHIP.

Utah's averages are compared with national averages; in this case, the Medicaid HMOs performed the best. Medicaid HMOs scored above the national average on over 77% of the measures reported. While Medicaid HMOs did excel in some areas, including Adult's Access to Preventive Services, they also have areas that need improvement, such as chlamydia screening in women. CHIP did reasonably well when compared to the national averages, exceeding the national average on 55% of the measures reported. CHIP excelled in many areas, but has room for improvement in childhood immunizations and children's access to primary care providers. Commercial HMOs had the most room for improvement, scoring above the national average on only 27% of the measures reported. Commercial HMOs can improve in cancer screenings (colorectal, breast, and cervical) and childhood immunizations.

Percentage of Utah HEDIS HMO Performance Measure Averages Exceeding the National Averages by Type of HMO, 2010

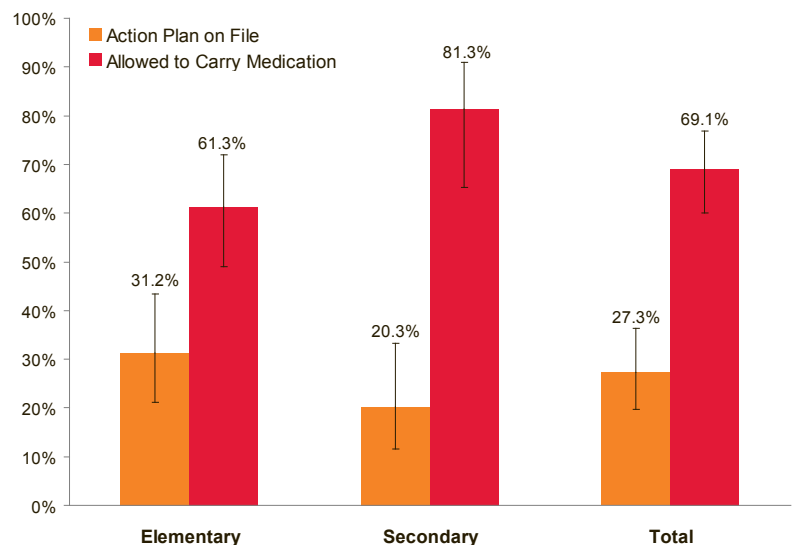


Community Health Indicators Spotlight, January 2011

Asthma Management

Children spend a large portion of each day at school so it is important to focus efforts on asthma management in schools. The National Asthma Education and Prevention Program, written by the National Heart, Lung, and Blood Institute, recommends that physicians provide all patients who have asthma a written asthma action plan.¹ This plan should be used by parents and schools to monitor a child's asthma and manage symptoms. In addition to the asthma action plan, Senate Bill 32 was passed in 2004 that allows students to carry and self-administer asthma medication during the school day as long as written statements are on file from the parents and health care provider. About 27% of parents of school aged children with current asthma reported having a written asthma action plan on file at school. A higher percentage of parents (69.1%) reported that their child was allowed to carry their asthma medication with them while at school. A 2010 survey of Utah principals found that 45.3% of schools have asthma carry and self-administration policies in their schools. These policies specify communication to students, parents, and families and designate an individual responsible for implementation. Asthma action plans and the capacity to self-administer medication are two critical components of childhood asthma management in schools.

School-level Asthma Management, Children With Current Asthma, Utah, 2007-2009



Data Sources: Utah Behavioral Risk Factor Surveillance System Call-back Survey, 2007-2009; Utah School Health Profiles, 2010.

1. Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma, Clinical Practice Guidelines. National Asthma Education and Prevention Program of the National Heart, Lung and Blood Institute, National Institutes of Health (2007).

Monthly Health Indicators Report

(Data Through December 2010)

Monthly Report of Notifiable Diseases, December 2010	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)	16	16	398	316	1.3
Shiga toxin-producing Escherichia coli (E. coli)	2	3	91	111	0.8
Hepatitis A (infectious hepatitis)	0	1	10	13	0.8
Hepatitis B, acute infections (serum hepatitis)	0	2	9	19	0.5
Influenza*	Weekly updates at http://health.utah.gov/epi/diseases/flu				
Meningococcal Disease	0	1	1	10	0.1
Pertussis (Whooping Cough)	6	34	278	438	0.6
Salmonellosis (Salmonella)	11	20	346	332	1.0
Shigellosis (Shigella)	2	4	49	47	1.0
Varicella (Chickenpox)	14	73	329	742	0.4
Quarterly Report of Notifiable Diseases, 4th Qtr 2010	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
HIV/AIDS†	4	33	75	128	0.6
Chlamydia	1,665	1,465	6,630	5,517	1.2
Gonorrhea	50	178	311	651	0.5
Tuberculosis	6	9	20	33	0.6
Medicaid Expenditures (in Millions) for the Month of December 2010	Current Month	Expected/Budgeted for Month	Fiscal YTD	Budgeted Fiscal YTD	Variance - over (under) budget
Capitated Mental Health	\$ 4.9	\$ 12.5	\$ 61.7	\$ 57.3	\$ 4.5
Inpatient Hospital	\$ 18.8	\$ 23.3	\$ 107.8	\$ 121.6	\$ (13.8)
Outpatient Hospital	\$ 5.4	\$ 10.9	\$ 38.1	\$ 62.9	\$ (24.7)
Long Term Care	\$ 14.6	\$ 14.4	\$ 82.0	\$ 85.1	\$ (3.0)
Pharmacy‡	\$ 12.9	\$ 11.5	\$ 75.4	\$ 75.9	\$ (0.4)
Physician/Osteo Services	\$ 6.4	\$ 6.9	\$ 36.3	\$ 43.6	\$ (7.3)
TOTAL HCF MEDICAID	\$ 112.1	\$ 139.2	\$ 766.5	\$ 809.1	\$ (42.5)

Program Enrollment for the Month of December 2010	Current Month	Previous Month	% Change\$ From Previous Month	1 Year Ago	% Change\$ From 1 Year Ago
Medicaid	230,812	227,325	+1.5%	206,351	+11.9%
PCN (Primary Care Network)	18,456	14,402	+28.1%	18,494	-0.2%
CHIP (Children's Health Ins. Plan)	36,559	37,224	-1.8%	41,748	-12.4%
Health Care System Measures	Annual Visits			Annual Charges	
	Number of Events	Rate per 100 Population	% Change\$ From Previous Year	Total Charges in Millions	% Change\$ From Previous Year
Overall Hospitalizations (2008)	279,504	9.4%	-2.7%	\$ 4,703.3	+10.3%
Non-maternity Hospitalizations (2008)	164,602	5.4%	-3.0%	\$ 3,924.7	+10.4%
Emergency Department Encounters (2008)	681,958	23.4%	-2.9%	\$ 879.5	+12.6%
Outpatient Surgery (2008)	299,958	10.3%	-1.9%	\$ 1,277.7	+15.2%
Annual Community Health Measures	Current Data Year	Number Affected	Percent/Rate	% Change\$ From Previous Year	State Rank¶ (1 is best)
Obesity (Adults 18+)	2009	465,600	24.0%	+3.9%	11 (2009)
Cigarette Smoking (Adults 18+)	2009	190,300	9.8%	+5.4%	1 (2009)
Influenza Immunization (Adults 65+)	2009	174,400	68.8%	-6.2%	33 (2009)
Health Insurance Coverage (Uninsured)	2009	314,300	11.2%	+4.7%	n/a
Motor Vehicle Traffic Crash Injury Deaths	2009	227	8.1 / 100,000	-16.6%	15 (2007)
Poisoning Deaths	2009	543	19.4 / 100,000	+7.0%	49 (2007)
Suicide Deaths	2009	445	15.9 / 100,000	+15.3%	n/a
Diabetes Prevalence (Adults 18+)	2009	118,500	6.1%	+0.2%	11 (2009)
Poor Mental Health (Adults 18+)	2009	291,600	15.0%	+7.0%	19 (2009)
Coronary Heart Disease Deaths	2009	1,469	52.5 / 100,000	-4.4%	2 (2006)
All Cancer Deaths	2009	2,543	90.8 / 100,000	+1.1%	1 (2006)
Stroke Deaths	2009	734	26.2 / 100,000	-2.2%	7 (2006)
Births to Adolescents (Ages 15-17)	2008	1,122	18.5 / 1,000	-0.6%	22 (2007)
Early Prenatal Care	2008	43,997	79.1%	-0.4%	n/a
Infant Mortality	2008	264	4.7 / 1,000	-7.9%	4 (2007)
Childhood Immunization (4:3:1:3:3:1)	2009	41,500	76.6%	+4.1%	16 (2009)

* Influenza activity remains minimal in Utah. Influenza-like illness activity is below baseline statewide. As of January 8, 2011, 183 influenza-associated hospitalizations have been reported to the UDOH. More information can be found at <http://health.utah.gov/epi/diseases/flu>.

† Diagnosed HIV infections, regardless of AIDS diagnosis.

‡ The Pharmacy Expenditure and Budget amount only includes the gross pharmacy costs. The Pharmacy Rebate and Pharmacy Part-D amounts are excluded from this line item.

§ % Change could be due to random variation.

¶ State rank based on age-adjusted rates.

Notes: Data for notifiable diseases are preliminary and subject to change upon the completion of ongoing disease investigations. Active surveillance for West Nile virus has ended until the 2011 season.