

# Utah Health Status Update: Geographic Disparities

February 2009

Utah Department of Health

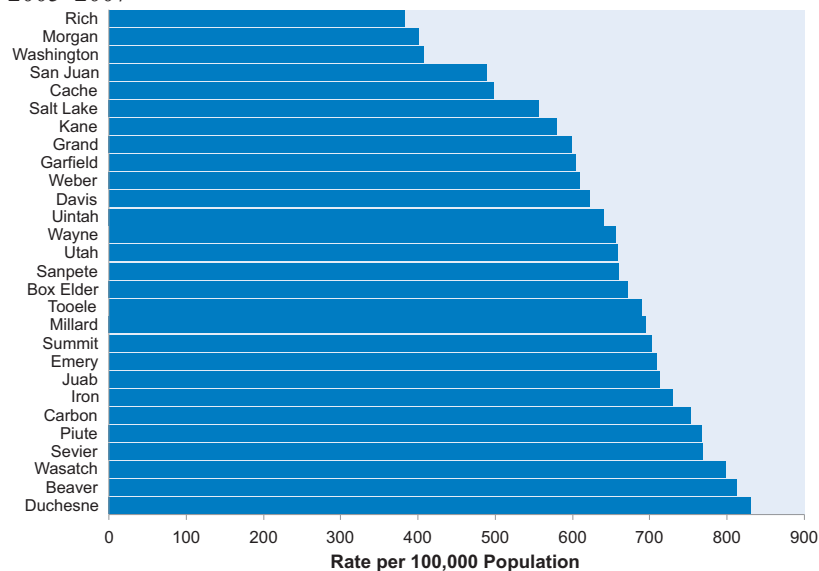
When states are compared on health indicators, Utah is consistently ranked as one of the healthiest states in the United States. Our low prevalence of smoking and drinking, youthful population, and high quality of health care result in good marks for Utah on most published composite measures of good health. It was somewhat surprising to find, then, in the 2008 *America's Health Rankings* published by the United Health Foundation (UHF), that Utah is one of the worst states (ranked 45th) when it comes to geographic disparities in health. Despite Utah's overall ranking as the 5th healthiest state on the UHF composite, the degree of variation across Utah counties in overall mortality was among the worst in the country.

Figure 1 shows Utah counties ranked from best to worst on age-adjusted mortality, the measure of geographic disparity used in the UHF rankings. The highest mortality counties tend to be rural and frontier counties, with all Wasatch front counties in the lower-mortality half of the distribution. Rich County had the lowest all-cause mortality rate (382.8 deaths per 100,000 population) during the period 2005-2007. Duchesne County had the highest rate (831.3), more than twice the rate in Rich, Morgan, and Washington. Beaver and Wasatch Counties also had rates of age-adjusted all-cause mortality nearly two times the rate of the three lowest mortality counties. These kinds of disparities are the source of Utah's overall poor performance on the UHF Geographic Disparities index.

The rank of a county on this measure of health is highly determined by the number of deaths due to the three leading causes of death in Utah and nationally: heart disease, cancer, and stroke (Figure 2). Mortality rates for these three causes are so much higher than any other cause of death, that they determine the overall pattern of mortality for the county. Intuitively, this means that at the individual level, risks for cardiovascular disease and cancer will likely correlate highly with this aggregate measure of health at the community, in this case, county level.

## All Cause Death Rates by County

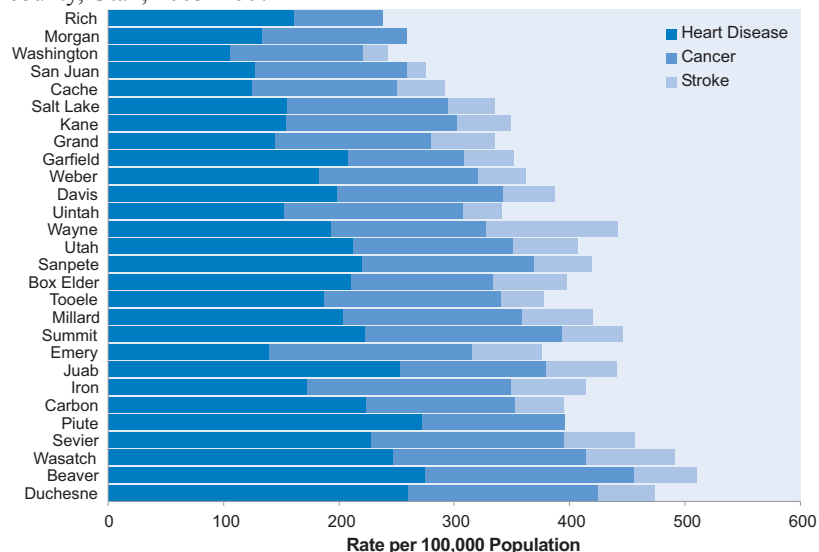
Figure 1. Age-adjusted mortality rates for all causes by county, Utah, 2005–2007



Note: Daggett County rates were suppressed due to small numbers.

## Top 3 Causes of Death by County

Figure 2. Age-adjusted mortality rates for three leading causes of death by county, Utah, 2005–2007



Note: Daggett County rates were suppressed due to small numbers.

## Premature Mortality Rates

Recently, some public health researchers are turning to the premature mortality rate (PMR) as a summary measure of the health of communities. Defined as deaths to persons 0–74 (age-adjusted), the PMR is considered an “excellent, single measure that reflects health status of

a population.”<sup>1</sup> In Utah, 55% of all deaths occur to persons aged 75 and over, most of these due to chronic conditions associated with aging. While the quality of life for older Utahns is important, assessing premature mortality shifts the focus a bit to conditions preventable through public health interventions.

Figure 3 shows geographic disparities in Utah with respect to premature mortality rates.<sup>2</sup> As in *America’s Health Rankings*, Utah exhibits significant disparities among counties on PMR, and counties with the highest PMR are in rural and frontier areas. The worst and best counties are not the same counties, however, and the pattern of preventable mortality is a bit different than simple all-cause mortality. Three of the largest counties with low PMR are Summit, Cache, and Utah Counties. Survey data from the Behavioral Risk Factor Surveillance System reveal all three of these counties to be among the lowest in current smoking, and average or better on other indicators of healthy lifestyle, like physical activity and fruit and vegetable consumption. Conversely, counties with higher rates of premature mortality, such as Weber County and some of the rural counties of central and eastern Utah have worse rates of cigarette smoking than the state as a whole (Figure 4).

Of course, it is important to be cautious in interpreting such geographic correlations of health indicators since they are only suggestive of relationships between behavior and health outcomes. Geographic areas associated with high premature mortality also tend to be areas of lower socioeconomic status, which contributes to poor health in complex ways.

**References:**

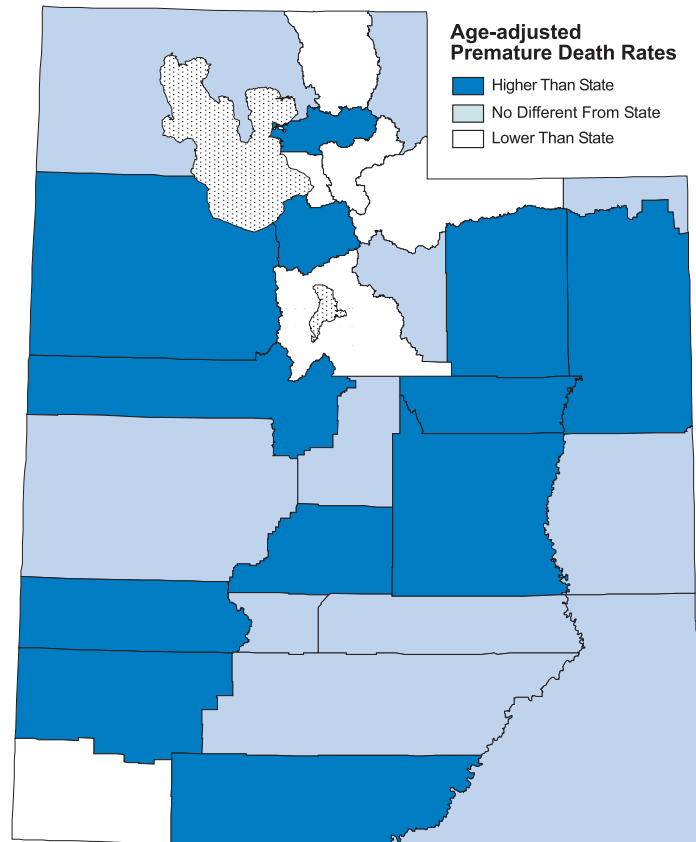
1. Cohen, Bruce, “Using Summary Measures of Mortality for Community Planning and Policy Development.” NAPHSIS Annual Meeting, Orlando, 2008.
2. For county and small area boundary definitions, refer to [http://ibis.health.utah.gov/query/SA\\_Maps.html](http://ibis.health.utah.gov/query/SA_Maps.html).

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For additional information about this topic, contact the Office of Public Health Assessment, Utah Department of Health, Box 142101, Salt Lake City, UT 84114-2101, (801) 538-6108, FAX (801) 538-9346, email: [chdata@utah.gov](mailto:chdata@utah.gov)

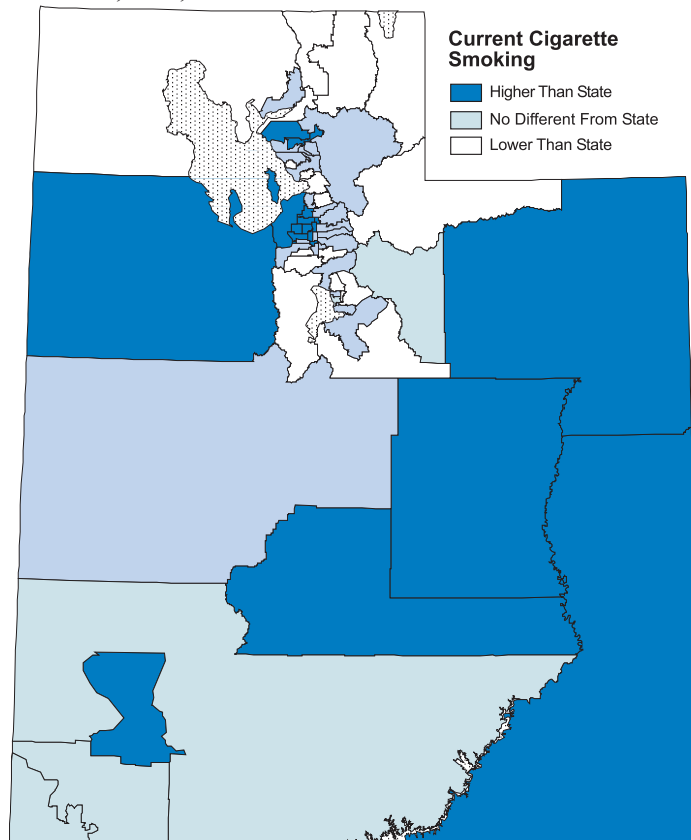
**Premature Death Rates by County**

Figure 3. Age-adjusted premature death rates by county, Utah, 2005–2007



**Current Smoking by Small Area**

Figure 4. Age-adjusted percentage of adults reporting current smoking by small area, Utah, 2003–2007



Source: Utah Behavioral Risk Factor Surveillance System

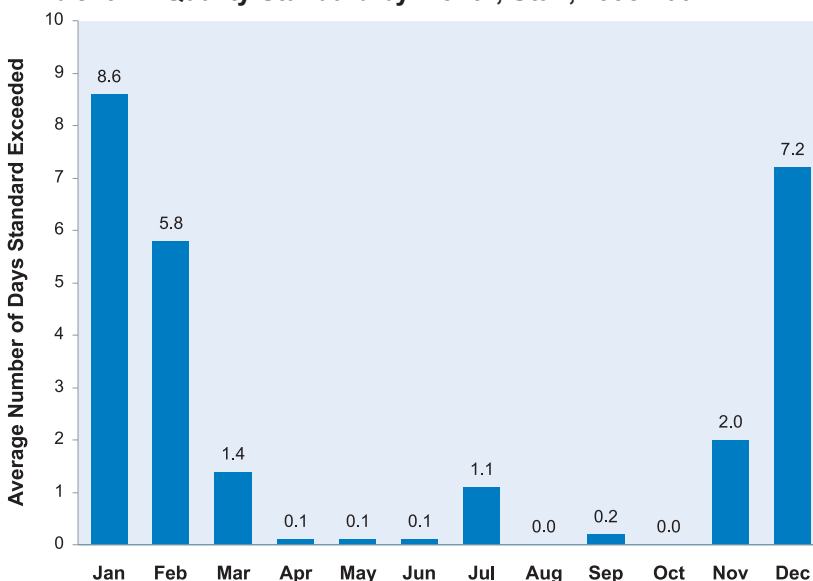
## Breaking News, January 2009

### Asthma and Air Quality

In 2007, 8.0% of Utah residents reported having current asthma, representing nearly 216,000 people statewide (2007 Behavioral Risk Factor Surveillance System). Poor air quality is one of many factors that can worsen asthma symptoms in an individual. High levels of PM<sub>2.5</sub> (particulate matter) have been associated with increased emergency room visits for asthma, increased incidence of symptoms and medication use for asthma, and increased school absenteeism. Some sources of PM<sub>2.5</sub> include fuel combustion from automobiles, power plants, and wood burning. PM<sub>2.5</sub> follows a cyclical pattern where high levels are seen mostly during winter months, often due to emissions, geographical variations, inversions, and weather.

Around the state of Utah, examples of efforts to reduce air pollution include programs such as anti-idling campaigns and bus retrofitting. Ultimately, improving Utah's air quality is up to each individual taking steps to reduce energy use and emissions.

**Average Number of Days With PM<sub>2.5</sub> Levels Over the National Ambient Air Quality Standard by Month, Utah, 1998-2007**



Source: U.S. Environmental Protection Agency, Air Quality System (AQS)

## Community Health Indicators Spotlight, January 2009

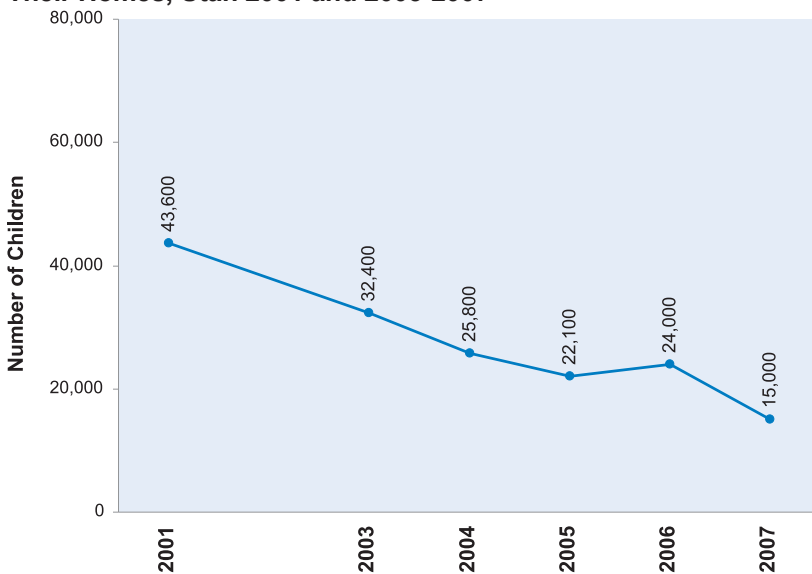
### Utah Children Exposed to Secondhand Smoke in Their Homes, 2001 and 2003-2007

Since 2001, the percentage of children who were exposed to cigarette smoke inside their homes declined by 70% (from 6.0% in 2001 to 1.8% in 2007). As a result, nearly 30,000 fewer Utah children are at risk for secondhand smoke-related health problems including sudden infant death syndrome, acute respiratory infections, ear problems, and more severe asthma.

Children from low-income families remain at higher risk for secondhand smoke exposure. In 2007, 9.1% of children from households with annual incomes under \$20,000 lived in homes with indoor smoking compared to 1.8% overall. Three percent of children who live in rented homes were exposed to cigarette smoke, compared to 1.4% for children whose families own their homes.

To increase the number of smoke-free homes, the UDOH Tobacco Prevention and Control Program (TPCP) and local health departments work with families, apartment and condominium owners and managers, as well as the Utah Apartment Association to provide education on smoke-free homes and reduce tobacco-related health risks, fire hazards, and maintenance costs. As a result of these efforts, the number of smoke-free multiple dwelling units reported to the TPCP more than doubled in FY2008 to include nearly 10,000 units in more than 900 buildings across the state.

**Number of Children Who Were Exposed to Secondhand Smoke in Their Homes, Utah 2001 and 2003-2007**



Source: Utah Healthcare Access Survey

Visit [www.tobaccofreeutah.org/aptcondoguide-dir.htm](http://www.tobaccofreeutah.org/aptcondoguide-dir.htm) for a list of these units.

# Monthly Health Indicators Report

(Data Through December 2008)

Monthly Report of Notifiable Diseases, December 2008	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)	23	17	373	298	1.3
Enterotoxigenic Escherichia coli (E. coli)	2	4	89	105	0.8
Hepatitis A (infectious hepatitis)	0	2	12	24	0.5
Hepatitis B (serum hepatitis)	0	5	30	36	0.8
Influenza†	Weekly updates at <a href="http://health.utah.gov/epi/diseases/flu">http://health.utah.gov/epi/diseases/flu</a>				
Measles (Rubeola, Hard Measles)	0	0	0	0	--
Meningococcal Diseases	0	1	9	8	1.1
Norovirus	1	1	10	13	0.8
Pertussis (Whooping Cough)	18	27	205	433	0.5
Salmonellosis (Salmonella)	38	18	375	288	1.3
Shigellosis (Shigella)	5	4	42	54	0.8
Varicella (Chickenpox)	71	97	790	702	1.1
Viral Meningitis	4	6	60	166	0.4
Notifiable Diseases Reported Quarterly, 4th Qtr 2008	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
HIV	34	24	106	84	1.3
AIDS	9	14	34	51	0.7
Chlamydia	1,459	1,306	5,910	4,633	1.3
Gonorrhea	83	199	473	690	0.7
Tuberculosis	9	8	27	35	0.8
Program Enrollment for the Month of December 2008	Current Month	Previous Month	% Change <sup>s</sup> From Previous Month	1 Year Ago	% Change <sup>s</sup> From 1 Year Ago
Medicaid	176,207	172,979	+1.9%	158,267	+11.3%
PCN (Primary Care Network)	16,494	17,508	-5.8%	19,116	-13.7%
CHIP (Children's Health Ins. Plan)	37,008	36,272	+2.0%	31,454	+17.7%

Medicaid Expenditures (in Millions) for the Month of November 2008	Current Month	Expected/Budgeted for Month	Fiscal YTD	Budgeted Fiscal YTD	Variance - over (under) budget
Capitated Mental Health	\$ 1.3	\$ 8.5	\$ 45.5	\$ 50.8	(\$ 5.3)
Inpatient Hospital	\$ 17.9	\$ 15.9	\$ 107.0	\$ 94.0	\$ 13.0
Outpatient Hospital	\$ 6.9	\$ 6.9	\$ 40.8	\$ 40.1	\$ 0.7
Long Term Care	\$ 14.9	\$ 15.4	\$ 86.3	\$ 91.1	(\$ 4.8)
Pharmacy	\$ 9.3	\$ 10.8	\$ 62.0	\$ 71.0	(\$ 9.0)
Physician/Osteo Services‡	\$ 6.5	\$ 5.5	\$ 34.3	\$ 31.7	\$ 2.7
TOTAL HCF MEDICAID	\$ 116.6	\$ 124.5	\$ 686.7	\$ 705.2	(\$ 18.5)
Health Care System Measures	Number of Events	Rate per 100 Population	% Change <sup>s</sup> From Previous Year	Total Charges in Millions	% Change <sup>s</sup> From Previous Year
Overall Hospitalizations (2007)	278,952	9.7%	-0.7%	\$ 4,265.9	+10.1%
Non-maternity Hospitalizations (2007)	164,659	5.6%	-0.9%	\$ 3,554.6	+9.9%
Emergency Department Encounters (2006)	670,168	24.4%	-1.9%	\$ 667.2	+20.6%
Outpatient Surgery (2006)	304,511	11.2%	-3.7%	\$ 1,020.9	+7.7%
Annual Community Health Measures	Current Data Year	Population at Risk	Number Affected	Percent/Rate	% Change <sup>s</sup> From Previous Year
Overweight and Obesity (Adults 18+)	2007	1,865,484	1,080,100	57.9%	+5.5%
Cigarette Smoking (Adults 18+)	2007	1,865,484	218,300	11.7%	+19.4%
Influenza Immunization (Adults 65+)	2007	227,890	173,700	76.2%	+5.7%
Health Insurance Coverage (Uninsured)	2007	2,699,554	287,200	10.6%	-10.4%
Motor Vehicle Crash Injury Deaths	2007	2,699,554	269	10.0 / 100,000	-12.0%
Suicide Deaths	2007	2,699,554	368	13.6 / 100,000	-0.1%
Diabetes Prevalence	2007	2,699,554	127,000	4.7%	+15.0%
Coronary Heart Disease Deaths	2007	2,699,554	1,531	56.7 / 100,000	-5.1%
All Cancer Deaths	2007	2,699,554	2,547	94.3 / 100,000	-5.1%
Births to Adolescents (Ages 15-17)	2007	61,060	1,133	18.6 / 1,000	+13.5%
Early Prenatal Care	2007	55,063	43,728	79.4%	+0.5%
Infant Mortality	2007	55,063	284	5.2 / 1,000	+2.5%
Childhood Immunization (4:3:1:3:3:1)	2007	51,449	40,200	78.1%	+14.7%

† Influenza activity remains sporadic in Utah. Influenza-like illness activity is below baseline statewide. As of January 21, 2009, 38 influenza-associated hospitalizations have been reported to the UDOH. More information can be found at <http://health.utah.gov/epi/diseases/flu>.

§ % Change could be due to random variation.

‡ Medicaid payments reported under Physician/Osteo Services do not include enhanced physician payments.

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 2009 season.