

# Utah Health Status Update:

## Utah Trauma Registry Update

May 2007

Utah Department of Health

This month's Health Status Update is serving as the 2007 update to the Utah Statewide Trauma registry fact sheet. This update addresses similar topics to those presented in the first fact sheet published in 2004. The registry formally began collecting information in 2001 from every hospital in the state of Utah and now contains records of more than 38,000 serious injuries from 2001 through 2005.

The purpose of the registry is to inform health professionals about injury trends and to identify aspects of medical treatment that can be improved. To qualify for inclusion in the Utah Trauma Registry, an injury must be serious enough to require air transport from the scene of injury, or warrant hospital admission lasting at least 48 hours, or require transfer to another hospital, or result in death during hospitalization. The registry does exclude simple fractures to the hip or spinal column among the elderly suffering a same-level fall.

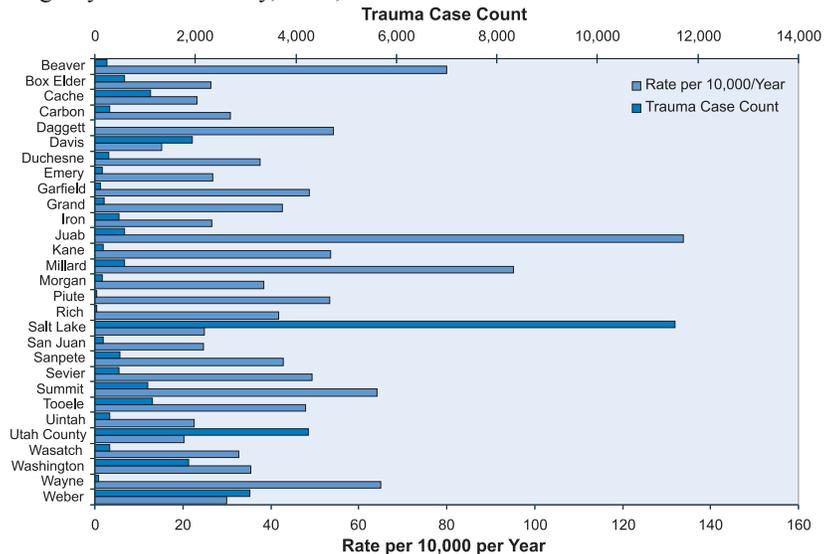
Figure 1 portrays information from records of 38,253 injuries from 2001–2005. The figure indicates in which counties these serious injuries occurred. Most injuries requiring intensive medical care occur along the Wasatch Front. However, when you consider the rate of injury to residents and visitors (lighter bars), a significant risk of serious injury exists in more rural regions including Beaver, Juab, Millard, Summit, and Wayne counties. These counties all demonstrate higher injury rates with more than 60 serious injuries per 10,000 residents per year.

### What Are the Deadliest Mechanisms of Injury?

Figure 2 demonstrates two important points. First, most serious injuries are associated with a handful of mechanisms. Injuries associated with falls have the largest number of events and hanging injuries have the highest percentage of mortality. The second important point addressed in Figure 2 is the lethal nature of injuries. Intentional injuries appear to be the most lethal. However, injuries among pedestrians demonstrate a 8% mortality rate,

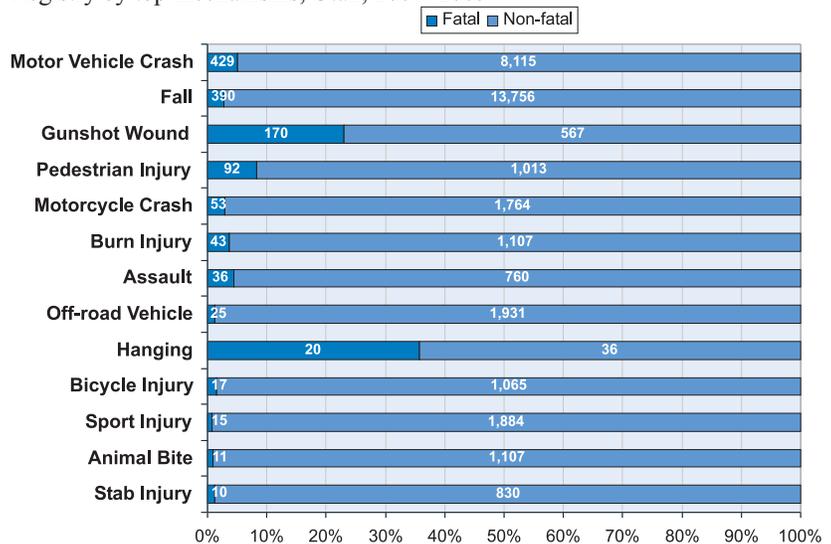
### Trauma Registry Injuries by County

Figure 1. Rate (and number) of injuries recorded in the Utah Trauma Registry for each county, Utah, 2001–2005



### Deadliest Mechanisms of Injury

Figure 2. Percentage distribution of injuries reported in the Utah Trauma Registry by top mechanisms, Utah, 2001–2005



much higher than the rate associated with bicycles, motorcycles, or motor vehicles.

### Are Patients Receiving Appropriate Trauma Care?

A component of the Utah Trauma System includes the designation of hospitals (based on capability) to ensure that seriously injured patients are transported quickly to hospitals with the appropriate resources

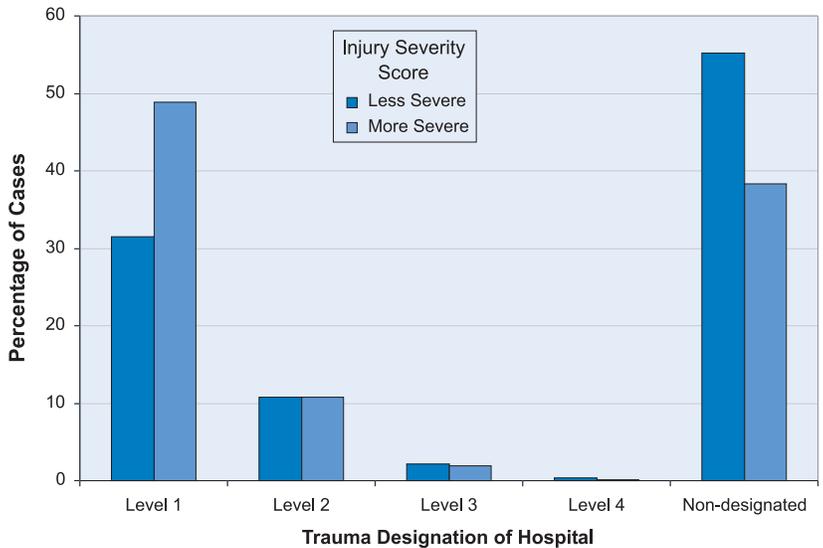
and expertise necessary to treat a patient's specific injuries. Hospitals designated as Level-1 can provide the highest level of care, often including areas of specialized care (e.g., burn care). Hospitals designated as Level-2 can also provide appropriate care for most severe trauma. Level-3 or -4 centers often treat minor to moderate injuries and transfer severe injuries to a Level-1 or Level-2 center. Currently, many hospitals are seeking designation as a trauma center. Figure 3 illustrates the number of patients treated at hospitals with differing levels of trauma designation, based on severity of injury. An injury severity score (ISS) provides an indication of the need for sophisticated trauma care. In general, a patient with an ISS score of 15 and higher indicates a more serious injury that should be treated at a designated Level-1 or Level-2 trauma center. However, transfer of seriously injured patients to a designated Level-1 or Level-2 trauma center does not always occur. As indicated by Figure 3, during 2001–2005, 2,644 patients (or 38% of all severe injuries) warranting care at a Level-1 or Level-2 center were treated in a non-designated hospital.

#### Who Pays for Severe Trauma in Utah?

The Utah Department of Health maintains statewide databases listing hospital charges associated with admissions for injury. Linking these data to patients contained within the Utah Trauma Registry indicates that approximately \$18 million is spent per year to treat patients suffering severe trauma in Utah. These charges do not include physician fees, charges for laboratory testing, or rehabilitation costs. Figure 4 illustrates the primary reported payers for patients included in the registry. In total, governmental sources provide partial funding for approximately 15,000 trauma incidents, while commercial sources are listed as the primary payer for another 15,000 trauma incidents. More than 5,000 patients suffering severe trauma are not listed with a primary source of payment other than themselves, and probably represent completely uncompensated care.

### Trauma Center Level and Injury Severity Score

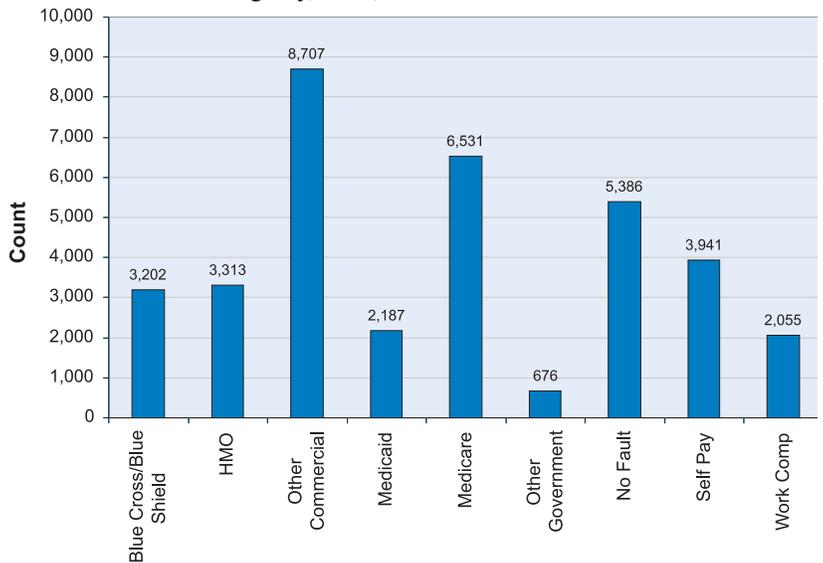
Figure 3. Percentage distribution of injuries by injury severity and trauma center level, Utah, 2001–2005



Note: Less severe was defined as an injury severity score (ISS) of <15. More severe was defined as an ISS of  $\geq 15$ .

### Injuries by Primary Reported Payer

Figure 4. Numbers of injuries by major categories of primary reported payer in the Utah Trauma Registry, Utah, 2001–2005



## May 2007 Utah Health Status Update

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## Breaking News, April 2007

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### Tuberculosis in Utah

The number of reported tuberculosis (TB) cases was higher than expected in the first quarter of 2007: 14 cases as compared to an average of 6 cases reported in the first quarter of the previous five years. All but one of the cases reported in 2007 were born outside the 50 states. The rest of the TB cases were in persons who were born in the following countries: Chad, China, El Salvador, Marshall Islands, Mexico, Pakistan, Peru, Phillipines, Somalia, and Sudan. True to the theme of this year's World TB Day, "TB Anywhere is TB Everywhere."

**Reported TB Cases by Quarter, Utah, 2002-2007**

	2002	2003	2004	2005	2006	2007
Qtr 1	5	6	12	3	6	14
Qtr 2	9	9	8	10	11	
Qtr 3	7	14	9	12	8	
Qtr 4	10	10	7	4	9	
Total	31	39	36	29	34	

The risk for TB approximates the country of origin in the early years of residence in the U.S.; and it declines and approaches that of the host country over time. Sixty-two percent (8 of 13) of the foreign-born cases reported this year had resided in the U.S. for less than five years.

Symptoms of pulmonary TB may include a productive, prolonged cough (duration of  $\geq 3$  weeks); chest pain; and hemoptysis. Systemic symptoms of TB include fever, chills, night sweats, appetite loss, weight loss, and easy fatigability. A diagnosis of TB should be considered in persons who have these symptoms. Persons suspected of having TB should be reported to the Tuberculosis Control Program at (801) 538-6096.

## Community Health Indicators Spotlight, April 2007

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### Utah's Healthcare Safety Net

The Healthcare Safety Net initiative is the result of Dr. Sundwall's insight as a medical doctor and his concern for Utah's uninsured and under-insured populations. The Utah Department of Health (UDOH) has always promoted healthy living. The Healthcare Safety Net initiative is an example of UDOH partnering with private healthcare providers to do our part to improve access to healthcare services and improve the health of our residents. Safety Net members include medical, dental, and mental health providers. The Safety Net members meet at least twice a year to improve communication among providers, discuss barriers and obstacles, share resources, and collect data.

Some of the data findings include: nearly 200,000 "medical" (as opposed to dental and mental health) safety net visits for the first six months of 2006; 71% of all these patient visit to safety net sites were by "self-pay, uninsured, or other charity care" clients (i.e. no insurance of any kind); 29% of all these visits to safety net sites were by patients who are considered "under-insured" because they cannot gain access to "mainstream" health care providers because of their insurance program (these are primarily patients with Medicaid, PCN, or sometimes Medicare insurance); 67% of these visits to safety net sites were by individuals who are living with incomes that are equal to, or less than, 100% of the federal poverty level; and 38% of these visits to safety net sites were by individuals who are between the ages of 27 and 49.

Please feel free to browse our new site at: <http://health.utah.gov/safetynet>.

# Monthly Health Indicators Report

(Data Through March 2007)

Monthly Report of Notifiable Diseases, March 2007	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)	40	17	65	46	1.4
Enterotoxigenic Escherichia coli (E. coli)	2	3	12	7	1.8
Hepatitis A (infectious hepatitis)	0	5	0	10	0.0
Hepatitis B (serum hepatitis)	4	3	6	8	0.8
Influenza <sup>†</sup>	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	0	6	2	3.8
Norovirus	0	6*	7	6*	1.2
Pertussis (Whooping Cough)	51	35	150	73	2.0
Salmonellosis (Salmonella)	13	17	47	43	1.1
Shigellosis (Shigella)	2	3	6	11	0.5
Varicella (Chickenpox)	144	100*	399	251*	1.6
Viral Meningitis	4	5	13	17	0.8

Notifiable Diseases Reported Quarterly, 1st Qtr 2007	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
HIV	19	16	19	16	1.2
AIDS	12	11	12	11	1.1
Chlamydia	1,125	801	1,125	801	1.4
Gonorrhea	172	111	172	111	1.5
Tuberculosis	14	6	14	6	2.2

Program Enrollment for the Month of March 2007	Current Month	Previous Month	% Change <sup>s</sup> From Previous Month	1 Year Ago	% Change <sup>s</sup> From 1 Year Ago
Medicaid	162,217	162,456	-0.1%	178,723	-9.2%
PCN (Primary Care Network)	16,000	15,602	+2.6%	16,046	-0.3%
CHIP (Children's Health Ins. Plan)	28,271	29,312	-3.6%	34,957	-19.1%

Medicaid Expenditures (in Millions) for the Month of March 2007	Current Month	Expected/Budgeted for Month	Fiscal YTD	Budgeted Fiscal YTD	Variance - over (under) budget
Capitated Mental Health	\$ 7.4	\$ 8.1	\$ 71.9	\$ 80.4	(\$ 8.6)
Inpatient Hospital	\$ 12.9	\$ 16.3	\$ 132.1	\$ 133.7	(\$ 1.5)
Outpatient Hospital	\$ 8.3	\$ 6.3	\$ 55.1	\$ 53.3	\$ 1.8
Long Term Care	\$ 20.9	\$ 14.5	\$ 134.2	\$ 129.5	\$ 4.7
Pharmacy	\$ 13.1	\$ 10.7	\$ 95.2	\$ 99.4	(\$ 4.2)
Physician/Osteo Services	\$ 7.0	\$ 5.6	\$ 44.1	\$ 46.5	(\$ 2.4)
TOTAL HCF MEDICAID	\$ 147.1	\$ 119.8	\$ 1,054.1	\$ 1,061.6	(\$ 7.5)

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 (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 (2005)	664,523	25.0%	+3.5%	\$ 553.2	+21.2%
Outpatient Surgery (2005)	308,300	11.7%	-0.5%	\$ 947.7	+12.1%

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+)	2006	1,777,802	976,000	54.9%	+1.3%
Cigarette Smoking (Adults 18+)	2006	1,777,802	174,200	9.8%	-15.0%
Influenza Immunization (Adults 65+)	2006	217,313	156,700	72.1%	+3.4%
Health Insurance Coverage (Uninsured)	2006	2,582,371	306,500	11.9%	+2.5%
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	2006	2,582,371	105,600	4.1%	-0.7%
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.

† Influenza activity continues to be mild in Utah. Influenza-like illness measures are below baseline. As of April 20, 2007, 265 influenza-associated hospitalizations have been reported to the UDOH. Eight of these hospitalizations were reported during the last week. More information can be found at <http://health.utah.gov/epi/diseases/flu>

§ % Change could be due to random variation.

Note: Active surveillance has ended for West Nile Virus until the 2007 season.