

# Utah Health Status Update:

## Ambulance Data

November 2009

Utah Department of Health

The Bureau of Emergency Medical Services and Preparedness in the Utah Department of Health regulates 140 EMS agencies employing approximately 10,000 emergency medical technicians (EMTs) and paramedics. The emergency medical services (EMS) system ensures emergency medical coverage for 100 percent of Utah. EMS providers report their emergency medical responses to Utah's ambulance data collection system as required by state law.

In 2004, Utah joined nearly all states and territories in committing to upgrade its ambulance data collection system to implement the newly published National Emergency Medical Services Information System (NEMSIS) data standard. The state began receiving NEMSIS-compliant EMS data in September 2006 with the launch of the Prehospital On-line Active Reporting Information System (POLARIS).

Prior to implementing the NEMSIS standard, Utah had a state-developed data standard that required the reporting of 40 data elements. The NEMSIS standard defines 424 elements to describe EMS agencies and document EMS incident responses. Utah has adopted a set of 267 data elements to be collected statewide, including response times, delays, patient information, incident and destination locations, medical situation, injury descriptors, vital signs, physical exams, treatments performed, and response to treatments.

Prior to the launch of POLARIS, only one-third of EMS agencies were submitting data. Compliance has steadily increased to 104 (75 percent) of Utah's 140 ground and air EMS agencies as of September 2009. (See Figures 1 and 2.)

By providing a web-based data entry interface for direct data entry as well as a web services interface for processing data from agencies using commercial data entry products, POLARIS has reduced the median time lag from incident occurrence to receiving the report in the state database. As of September 2009, the median

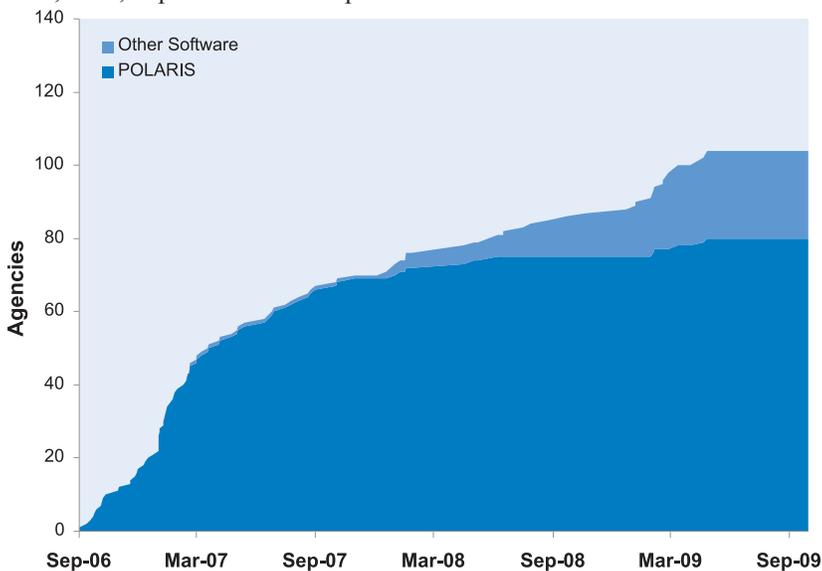
### Old System vs. New System

Table 1. Comparison of Utah's old and new ambulance data collection systems

	Old System	New System
Compliant EMS agencies	33% (2006)	75% (2009)
Data elements collected statewide	40 elements	267 elements
Median time from incident to report	87 days (2006)	2 days (2009)

### NEMSIS-compliant EMS Agencies Over Time

Figure 1. NEMSIS-compliant EMS agencies submitting data in Utah, over time, Utah, September 2006–September 2009



lag time is two days, with many reports being submitted within one to two hours of incident occurrence.

The improvement in timeliness has allowed EMS data to be useful for public health surveillance activities. For example, the Department of Health is tracking the prevalence of fever and respiratory problems in the EMS data during the current H1N1 influenza response to monitor H1N1's impact on the EMS system.

The Bureau of EMS recognizes the potential value of EMS data for epidemiological surveillance and research activities in other Department of Health programs and in academia. An article titled "Monitoring Prehospital Stroke Care in Utah to Assess the Feasibility of Using EMS Data for Surveillance," a cooperative effort by the Bureau of EMS and the Bureau of Health Promotion, was published in the October 2009 edition of CDC's *Preventing Chronic Disease* (available at [http://www.cdc.gov/pcd/issues/2009/oct/08\\_0244.htm](http://www.cdc.gov/pcd/issues/2009/oct/08_0244.htm)). Additional examples of collaboration using EMS data are as follows:

- Review of EMS reports in cases of exposure to hazardous substances (UDOH Hazardous Substance Emergency Event Surveillance program, HSEES), fatal crashes (Utah Department of Public Safety), and child deaths (UDOH Child Fatality Review Committee, CFRC)
- Use of pain medications by EMS on injured children (UDOH EMS for Children program)
- Evaluation of the recognition of hypotension (low blood pressure) and hypoxia (lack of oxygen) in EMS responses to children (University of Utah and Primary Children's Medical Center)
- Evaluation of whether EMS response time affects patient outcomes and whether ambulances are underprovided in Utah (Princeton University, Columbia University)
- Analysis of the impact of fuel price fluctuations on EMS preparedness (Emory University)

The NEMSIS standard identifies a set of 83 “national elements,” which are designed to be collected by all states and submitted to the National EMS Database, which was established in 2007. Utah was one of the first dozen states to begin submitting data to the National EMS Database. The National EMS Database provides publicly-accessible summary data on EMS activity.

Utah’s ambulance data can be requested through the Bureau of EMS. Additional information is available at <http://health.utah.gov/ems/data/polaris/>.

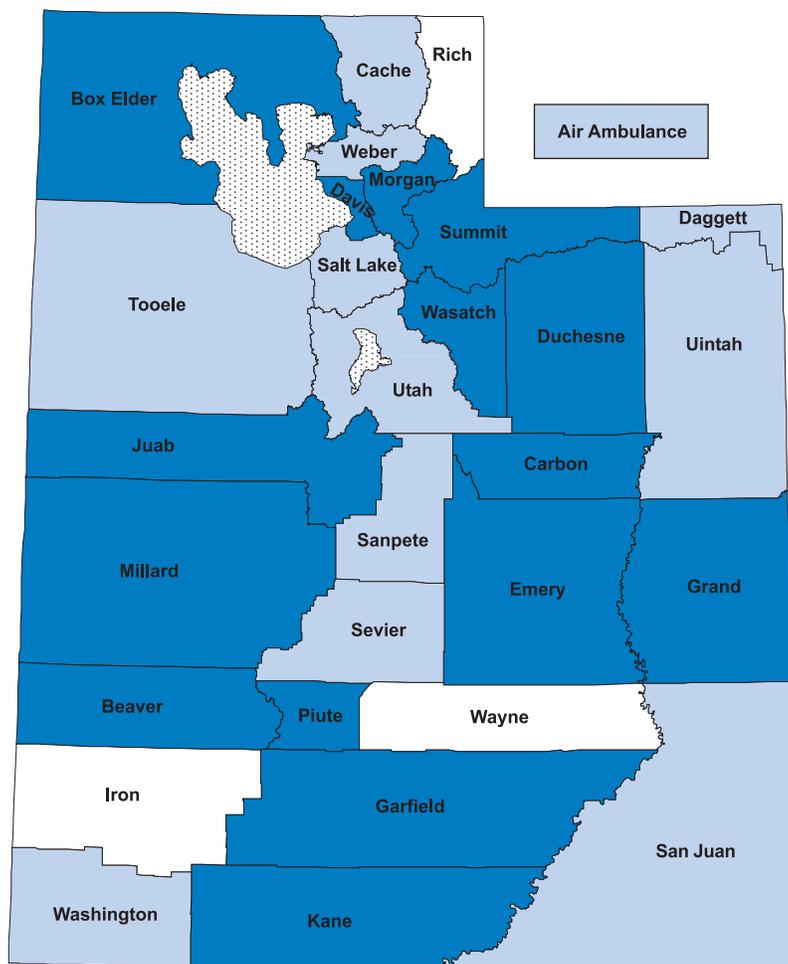
The National EMS Database can be accessed by visiting <http://www.nemsis.org/> and clicking on “Data Center.”

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## NEMSIS Compliance by County

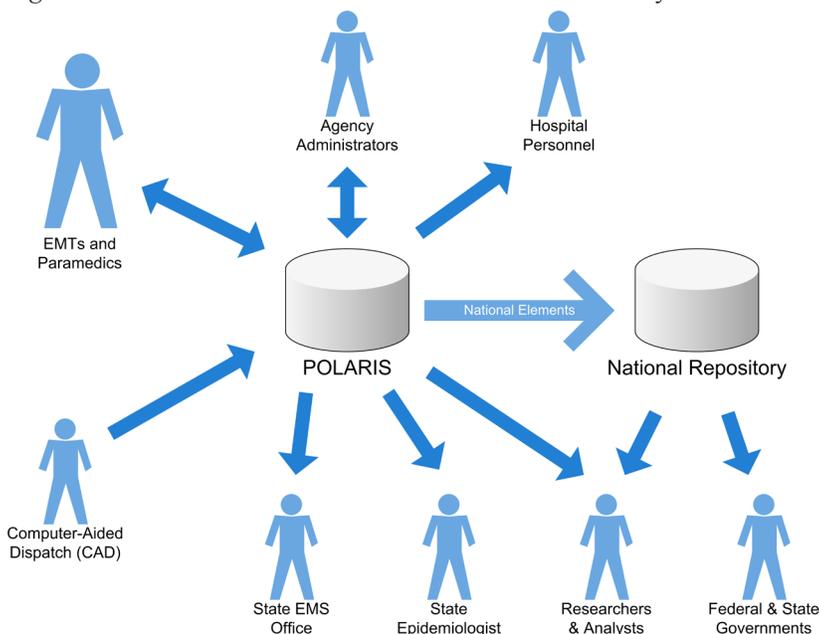
Figure 2. NEMSIS compliance status by county in Utah, September 2009



Dark Blue: All EMS agencies in the county submit NEMSIS-compliant data to the state.  
 Light Blue: Some EMS agencies in the county submit NEMSIS-compliant data to the state.  
 White: No EMS agencies in the county submit NEMSIS-compliant data to the state.

## EMS Data Collection System

Figure 4. Current and future uses of the EMS data collection system



## Breaking News, October 2009

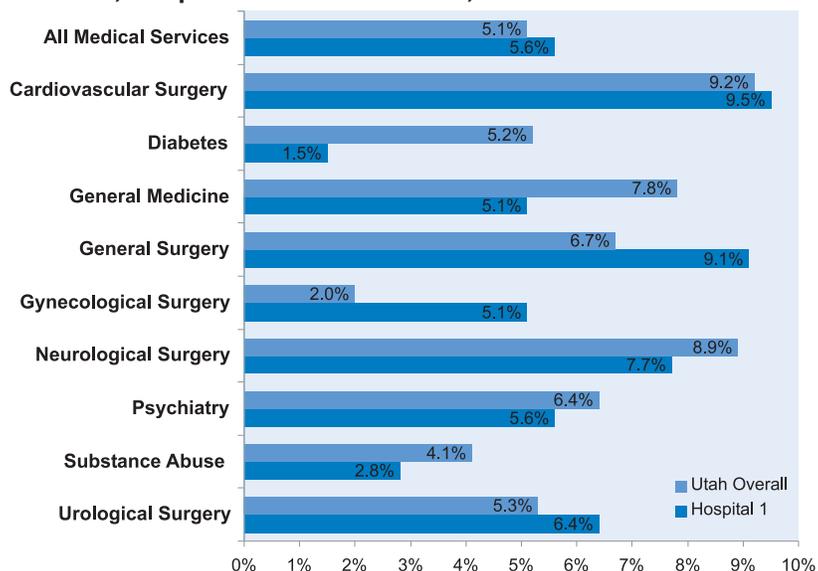
### Preventable Hospital Readmissions in Utah

Preventable hospital readmissions are receiving increased attention in state and national government. Preventable readmissions are readmissions that occur due to problems during a previous hospitalization or with outpatient care. In 2005, 1 in 20 Utahns who were hospitalized returned to the same or a different Utah hospital within 15 days for potentially preventable reasons.

Currently, the Office of Health Care Statistics, staff for the Health Data Committee, is developing confidential reports for short-term, acute-care hospitals in Utah. Figure 1 shows an example of the type of reports that will be released. This Utah hospital (Hospital 1) has a potentially preventable readmission rate that is higher than the Utah overall rate. The readmission rate varies within Hospital 1 and for Utah depending on the kind of medical service the patient received during hospitalization. Among the eight medical services shown, the rate for Hospital 1 is higher than for Utah for four kinds of medical service and lower for the others.

This information can help hospitals target areas of medical service for quality review. These readmission findings will become a part of the existing online hospital comparison reports in 2010.

**Potentially Preventable Readmissions by Selected Medical Services, Hospital 1 and Utah Overall, 2005**



## Community Health Indicators Spotlight, October 2009

### Stroke Awareness

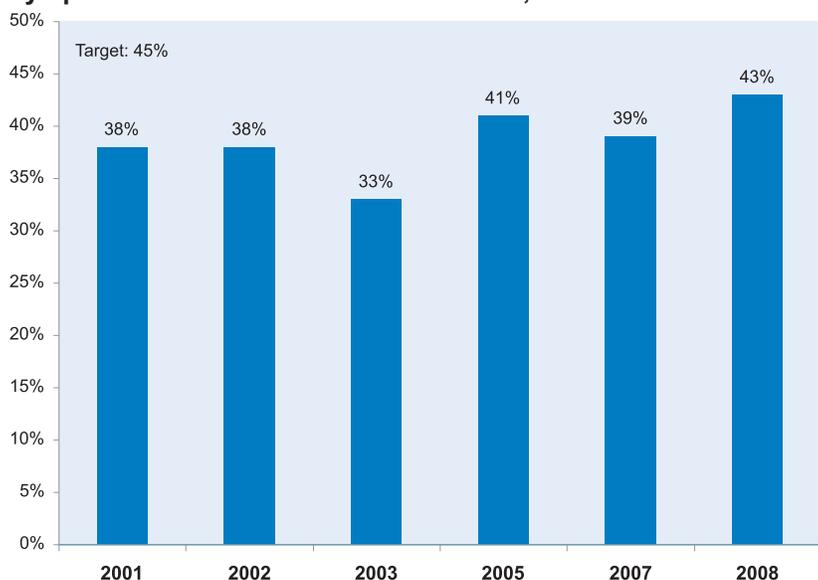
In Utah, stroke is the third leading cause of death and a major cause of disability. According to the Centers for Disease Control and Prevention (CDC), stroke death and disability rates could be reduced if stroke signs and symptoms are recognized and the Emergency Medical Services (EMS) system is activated as quickly as possible. Findings from the 2008 BRFSS suggest that about 43 percent of Utah adults recognize all 5 signs and symptoms of stroke and would call 911 if they thought someone was having a stroke.

The signs and symptoms of stroke are:

- Sudden numbness or weakness of the face, arm or leg—especially on one side of the body
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance, or coordination
- Sudden severe headache with no known cause
- Sudden confusion or trouble speaking

The Heart Disease and Stroke Prevention Program (HDSPP) uses English- and Spanish-language media to broadcast messages about the signs and symptoms of stroke and the importance of calling 911. HDSPP also supports the establishment of protocols for Emergency Medical Services (EMS) to transport stroke patients to hospitals that are best prepared to deal with stroke. More information about stroke can be found on the HDSPP website, [www.hearhighway.org](http://www.hearhighway.org).

**Percent of Utah Adults Who Could Identify All 5 Major Signs and Symptoms of Stroke and Would Call 9-1-1, 2001-2008**



Source: Utah Behavioral Risk Factor Surveillance System

# Monthly Health Indicators Report

(Data Through September 2009)

<b>Monthly Report of Notifiable Diseases, September 2009</b>	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)	25	31	238	257	0.9
Enterotoxigenic Escherichia coli (E. coli)	24	17	92	82	1.1
Hepatitis A (infectious hepatitis)	0	1	4	16	0.3
Hepatitis B (serum hepatitis)	0	2	5	19	0.3
Measles (Rubeola, Hard Measles)	0	0	0	0	--
Meningococcal Diseases	0	1	1	8	0.1
Norovirus	0	1	8	13	0.6
Pertussis (Whooping Cough)	7	39	174	324	0.5
Salmonellosis (Salmonella)	25	27	264	246	1.1
Shigellosis (Shigella)	0	5	16	33	0.5
Varicella (Chickenpox)	13	26	408	497	0.8
Viral Meningitis	9	28	44	105	0.4
West Nile (human cases)	1	34	2	61	0.0
<b>Notifiable Diseases Reported Quarterly, 3rd Qtr 2009</b>	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
HIV	28	22	67	64	1.0
AIDS	10	12	33	33	1.0
Chlamydia	1,449	1,300	4,638	3,788	1.2
Gonorrhea	70	177	224	530	0.4
Tuberculosis	7	8	27	25	1.1
<b>Program Enrollment for the Month of September 2009</b>	Current Month	Previous Month	% Change <sup>s</sup> From Previous Month	1 Year Ago	% Change <sup>s</sup> From 1 Year Ago
Medicaid	201,392	198,188	+1.6%	169,227	+19.0%
PCN (Primary Care Network)	20,782	21,673	-4.1%	19,842	+4.7%
CHIP (Children's Health Ins. Plan)	41,025	40,219	+2.0%	35,639	+15.1%

<b>Medicaid Expenditures (in Millions) for the Month of September 2009<sup>†</sup></b>	Current Month	Expected/Budgeted for Month <sup>‡</sup>	Fiscal YTD	Budgeted Fiscal YTD <sup>‡</sup>	Variance -over (under) budget <sup>‡</sup>
Capitated Mental Health	\$ 9.7	N/A	\$ 23.8	N/A	N/A
Inpatient Hospital	\$ 17.3	N/A	\$ 42.2	N/A	N/A
Outpatient Hospital	\$ 9.1	N/A	\$ 23.1	N/A	N/A
Long Term Care	\$ 15.4	N/A	\$ 38.0	N/A	N/A
Pharmacy	\$ 10.5	N/A	\$ 32.7	N/A	N/A
Physician/Osteo Services <sup>‡</sup>	\$ 6.4	N/A	\$ 16.3	N/A	N/A
<b>TOTAL HCF MEDICAID</b>	<b>\$ 137.8</b>	<b>N/A</b>	<b>\$ 311.3</b>	<b>N/A</b>	<b>N/A</b>
<b>Health Care System Measures</b>	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 (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 (2007)	682,122	24.0%	-1.3%	\$ 781.0	+17.1%
Outpatient Surgery (2007)	296,596	10.5%	-5.7%	\$ 1,109.0	+8.6%
<b>Annual Community Health Measures</b>	Current Data Year	Population at Risk	Number Affected	Percent/Rate	% Change <sup>s</sup> From Previous Year
Overweight and Obesity (Adults 18+)	2008	1,924,274	1,119,500	58.2%	+0.5%
Cigarette Smoking (Adults 18+)	2008	1,924,274	179,200	9.3%	-20.4%
Influenza Immunization (Adults 65+)	2008	237,275	173,900	73.3%	-3.8%
Health Insurance Coverage (Uninsured)	2008	2,781,954	298,200	10.7%	+0.7%
Motor Vehicle Crash Injury Deaths	2008	2,781,954	268	9.6 / 100,000	-3.3%
Suicide Deaths	2008	2,781,954	384	13.8 / 100,000	+1.3%
Diabetes Prevalence	2008	2,781,954	129,500	4.7%	-1.0%
Coronary Heart Disease Deaths	2008	2,781,954	1,514	54.4 / 100,000	-4.0%
All Cancer Deaths	2008	2,781,954	2,478	89.1 / 100,000	-5.6%
Births to Adolescents (Ages 15-17)	2008	61,727	1,122	18.2 / 1,000	-2.0%
Early Prenatal Care	2008	55,605	43,997	79.1%	-0.4%
Infant Mortality	2008	55,605	264	4.7 / 1,000	-7.9%
Childhood Immunization (4:3:1:3:3:1)	2008	53,525	39,400	73.6%	-5.8%

§ % Change could be due to random variation.

† The final Medicaid July old adjustment expenditures have not been posted and are not included in this report. The Medicaid service expenditures reported here are the most current as of the release date of this report.

‡ Determination on tier 1 and tier 2 unemployment enhancements and the ARRA rate differentials for the the school districts are still being decided. For these two reasons the total Medicaid Budget amounts are not ready to be released.

‡ 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 influenza has ended until the 2009 season.