

# Utah Health Status Update:

## *The Utah Stroke and STEMI Systems: An Update on Time Critical Systems of Care*

May 2013

Time critical diseases are those where minutes count. Over the last several years, the Utah Bureau of Emergency Medical Services and Preparedness, in partnership with the American Heart and Stroke Association, the Utah Hospital and Health Systems Association, and EMS agencies statewide, have developed systems to speed these critical patients directly to hospitals specially prepared to rapidly assess and care for them. Since the inception of the Utah STEMI (ST-Elevation Myocardial Infarction) and the Stroke Receiving Facility Programs, hospitals and EMS providers have worked together to improve care delivered to patients suffering from these time critical conditions.

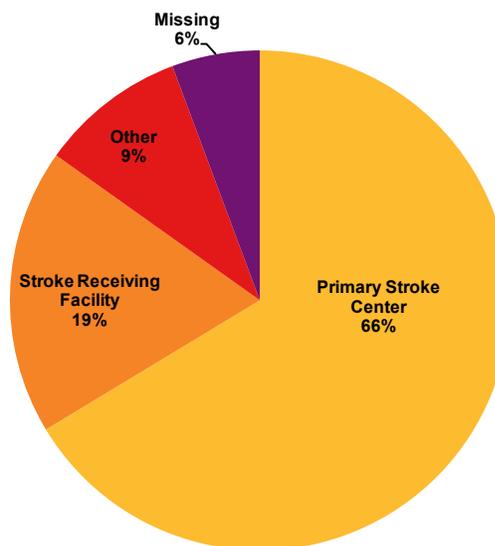
### Stroke System

When Stroke Receiving Facility (SRF) designation was first offered to hospitals in January 2010, 11 hospitals became 'stroke ready' by developing programs which followed the 'best practice' guidelines suggested by the Utah Stroke Task Force and by national stroke experts. During the ensuing two years, two of the original Stroke Receiving Facilities have become Primary Stroke Centers (PSC) and nine additional hospitals have joined the ranks as Stroke Receiving Facilities. There are presently eight Primary Stroke Centers and 20 Stroke

- **Well over 90% of Utah's population lives within 30 minutes of either a Primary Stroke Center or a Stroke Receiving Facility.**
- **At the International Stroke Symposium held in Hawaii in February 2013, Utah was recognized as having the highest percentage of patients receiving thrombolytic therapy in less than 60 minutes in the nation.**
- **STEMI, a type of heart attack, continues to be one of the leading causes of death in Utah and nationally. The Utah STEMI system involves a multi-faceted approach to treatment which saves, on average, over 20 minutes during the life-threatening heart attack.**

### EMS Transport Destinations for Strokes

Figure 1. Ambulance destination percentages for stroke patients, Utah, 2012



Source: Utah Bureau of Emergency Medical Services, Prehospital OnLine Active Reporting Information System (POLARIS), 2012

Receiving Facilities in Utah. This means a total of 65% of all hospitals in Utah have committed to follow these strict treatment standards. These facilities are ready to administer thrombolytic (clot dissolving) therapy to qualifying stroke patients arriving at Emergency Departments (ED) within three hours of the onset of stroke symptoms.

These efforts of the hospitals and EMS agencies have led to some impressive results. In 2011-2012, Stroke Receiving Facilities treated more than 2,000 patients who presented to the ED with the primary diagnosis of ischemic stroke. Of those 2,000 patients fewer than 500 sought care within the three hour window for thrombolytic therapy. Of those who sought care within the three hour window, 55% qualified for administration of thrombolytic drugs and over 65% of those who qualified received the drug.

Well over 90% of Utah's population lives within 30 minutes of either a Primary Stroke Center or a Stroke Receiving Facility. Educating stroke patients to seek care immediately at the onset of any stroke symptoms is the most important task at hand. As noted above, when qualifying stroke patients seek care at a Stroke Receiving Facility within that three hour window, they have better than a 65% chance of receiving therapy that can rapidly improve stroke symptoms and minimize the long term effects of the disease. EMS agencies are encouraged to bring suspected stroke patients directly to an SRF or PSC, if possible, to ensure that stroke patients are given every opportunity for appropriate intervention.

As illustrated in the chart above, the system is working. Statewide, 66% of stroke patients are transported by EMS to a Primary Stroke Center. Stroke Receiving Facilities receive 19% of stroke patients. With 85% of stroke

patients being transported to hospitals treating stroke in a systematically consistent manner, the chance for decreased morbidity due to ischemic stroke is enhanced.

In fact, at the International Stroke Symposium held in Hawaii in February 2013, Utah was recognized as having the highest percentage of patients receiving thrombolytic therapy in less than 60 minutes in the nation. This recognition validates the efforts of the Primary Stroke Centers, Stroke Receiving Facilities, and EMS providers in Utah who have seen the benefit of treating stroke patients in a systematic, practiced manner.

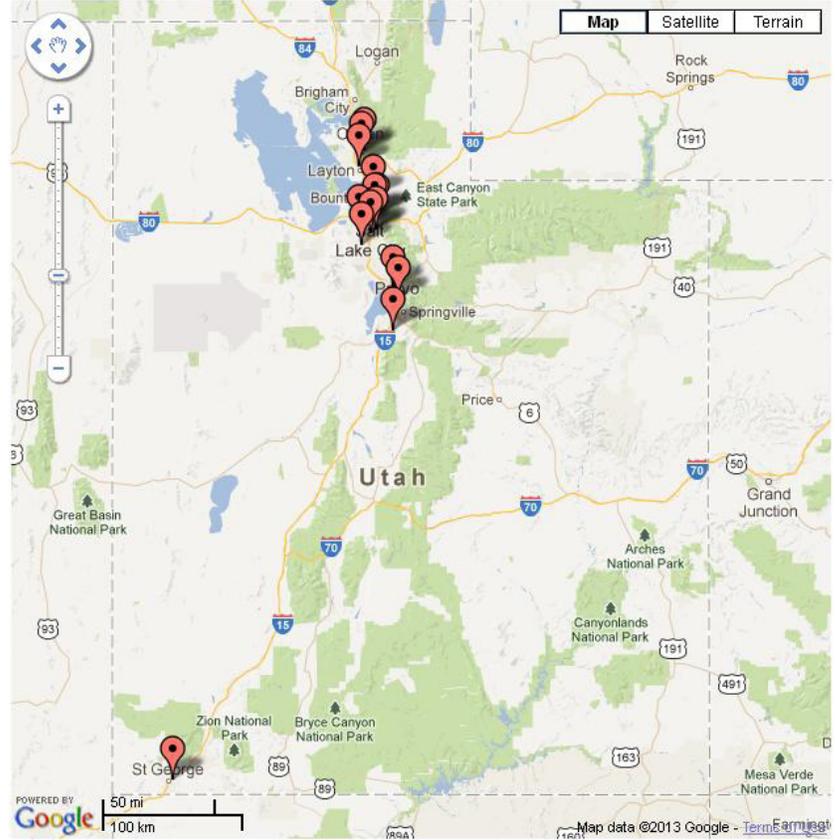
### STEMI System

STEMI, a type of heart attack, continues to be one of the leading causes of death in Utah and nationally. Recognizing that rapid intervention to open the blocked coronary vessel is vital to reducing morbidity and mortality from heart attack, the Utah STEMI system involves a multi-faceted approach to treatment. EMS agencies, utilizing field ECGs, identify STEMI patients and alert hospital emergency departments of the patient's condition and time of arrival. The field ECG is transmitted to the STEMI receiving hospital directly from the patient's location, allowing immediate review by hospital physicians. This allows them to assist in the field care of the patient, as well as to activate their hospital STEMI team to ready the cardiac catheterization lab, where the procedures to open the blocked vessels are performed. While the patient is still being transported, the STEMI team is preparing to receive him or her. As a result of this coordinated response, precious minutes are saved. On average, this approach saves over 20 minutes during the life-threatening heart attack. The Utah Hospital and Health Systems Association and its member hospitals have contributed funds to purchase many of these field ECG machines for EMS agencies statewide. Through these efforts, over 90% of the population in Utah has access to EMS agencies with field ECG capabilities.

As well as having EMS capabilities for 12-Lead ECG transmissions, the same population has access to STEMI/ percutaneous coronary intervention (PCI) within 30 minutes of their home or place of business. Rural hospitals in Utah, many of which do not have specialized

## Utah STEMI/PCI Centers

Figure 2. STEMI/PCI centers in Utah as of May 2013



Source: Utah Department of Health, Bureau of EMS and Preparedness, [http://health.utah.gov/ems/stemi/stemi\\_centers.html](http://health.utah.gov/ems/stemi/stemi_centers.html).

cardiac catheterization labs, are encouraged to coordinate with STEMI/PCI centers and transfer STEMI patients as rapidly as possible.

Presently there are 15 designated STEMI/PCI centers in Utah which have committed to receive the field ECGs from EMS and to provide critical emergency cardiac catheterization services 24 hours/day 365 days/year for heart attack patients.

## May 2013 Utah Health Status Update

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## Breaking News, May 2013

### Utah Medicaid Electronic Health Record Incentive Program

The Utah Medicaid Electronic Health Record Incentive Program, which began in 2011, provides incentive payments to eligible professionals, hospitals, and critical access hospitals as they adopt, implement, upgrade, or meaningfully use certified Electronic Health Record (EHR) technology. The goal for these providers in using EHR technology in ‘meaningful’ ways is to lead to higher quality care, improved patient safety, and shared decision making by patients and physicians.

Citizens who visit providers who have adopted certified EHR technology can expect:

- Prevention of treatment and medication errors
- Prevention of costs incurred for duplicate testing
- Reduced confusion about medicine/prescriptions
- Accurate record keeping of changes to medicines
- Ability to remember exact medical terms for conditions by requesting a patient summary of the visit
- Prevention of lost or incomplete information

Since October 2011, with resources provided through the State of Utah and the Centers for Medicare and Medicaid Services (CMS), program accomplishments include:

- More than 600 providers and hospitals have successfully attested to Utah Medicaid that they have successfully adopted, implemented, or upgraded to certified EHR technology.
- Less than 10 percent who applied have been deemed ineligible for payment because they do not have enough patients enrolled in Medicaid to qualify for an incentive.
- As of March 31, 2013, incentive payments totaling \$25,796,384 have been awarded.
- 429 eligible providers and hospitals have been paid as of March 31, 2013.
- More than 60 providers have attested to Stage 1 Meaningful Use.

More information about the program can be found at: <http://health.utah.gov/medicaid/provhtml/HIT.htm>.

## Community Health Indicators Spotlight, May 2013

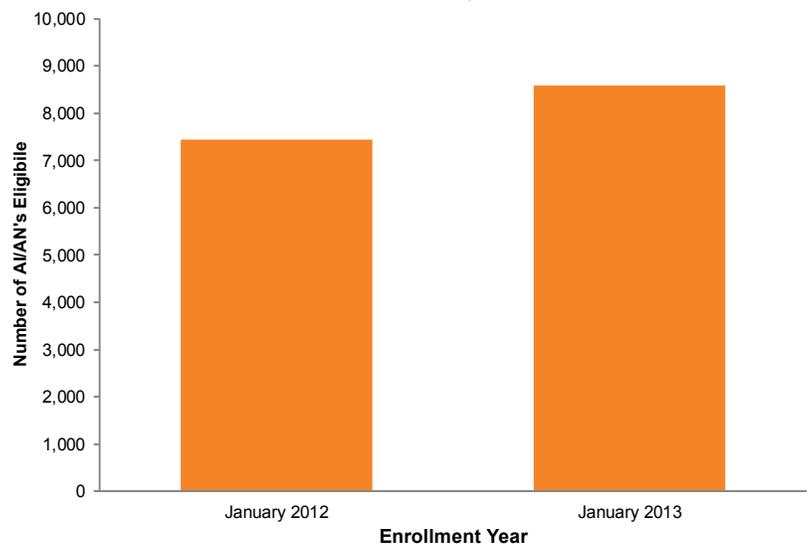
### The American Indian/Alaska Native population in Utah

There are approximately 45,000 American Indian/Alaska Natives (AI/AN) living in Utah.<sup>1</sup> Utah is home to eight sovereign, federally recognized tribes, and a large urban American Indian population. With passage of the Affordable Care Act (ACA) and reauthorization of the Indian Health Care Improvement Act (ICIA), working to improve the health status of AI/ANs is a priority. The Utah Department of Health developed and implemented a formal consultation policy and process to engage in identifying and improving identified health indicators among the AI/AN population.

Working through the consultation process (directly with tribal and urban Indian health programs), Utah has been able to improve access to health care through enrollment and eligibility status in Medicaid. Between January 2012 and January 2013 eligibility status among AI/ANs living in Utah increased by 15%.

Other health indicators currently being addressed include gestational diabetes, mental health, and emergency preparedness.

Utah Medicaid Enrollment for AI/AN's, 2012-2013



1. *Health Status by Race and Ethnicity: 2010*. Center for Multicultural Health, Utah Department of Health. <http://health.utah.gov/disparities/>

# Monthly Health Indicators Report

(Data Through March 2013)

Monthly Report of Notifiable Diseases, March 2013	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)	7	27	69	66	1.1
Shiga toxin-producing Escherichia coli (E. coli)	6	3	12	8	1.4
Hepatitis A (infectious hepatitis)	0	1	0	2	0.0
Hepatitis B, acute infections (serum hepatitis)	0	0	0	3	0.0
Influenza*	Weekly updates at <a href="http://health.utah.gov/epi/diseases/flu">http://health.utah.gov/epi/diseases/flu</a>				
Meningococcal Disease	0	1	0	2	0.0
Pertussis (Whooping Cough)	12	39	135	125	1.1
Salmonellosis (Salmonella)	15	22	40	59	0.7
Shigellosis (Shigella)	0	3	3	7	0.4
Varicella (Chickenpox)	9	64	60	184	0.3
Quarterly Report of Notifiable Diseases, 1st Qtr 2013	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†	10	28	10	28	0.4
Chlamydia	1,828	1,740	1,828	1,740	1.1
Gonorrhea	149	93	149	93	1.6
Syphilis	16	7	16	7	2.2
Tuberculosis	8	9	8	9	0.9
Medicaid Expenditures (in Millions) for the Month of March 2013	Current Month	Expected/Budgeted‡ for Month	Fiscal YTD	Budgeted‡ Fiscal YTD	Variance - over (under) budget
Capitated Mental Health	\$ 15.1	\$ 14.0	\$ 107.1	\$ 103.7	\$ 3.4
Inpatient Hospital	\$ 17.2	\$ 34.4	\$ 207.6	\$ 254.5	\$ (46.9)
Outpatient Hospital	\$ 7.7	\$ 4.3	\$ 52.0	\$ 65.2	\$ (13.2)
Long Term Care	\$ 16.2	\$ 13.4	\$ 121.2	\$ 120.9	\$ 0.3
Pharmacy§	\$ 10.0	\$ 13.2	\$ 110.0	\$ 97.7	\$ 12.3
Physician/Osteo Services	\$ 5.9	\$ 8.9	\$ 61.1	\$ 65.5	\$ (4.5)
TOTAL HCF MEDICAID	\$200.2	\$ 199.2	\$1,516.5	\$1,528.8	\$ (12.3)

Program Enrollment for the Month of March 2013	Current Month	Previous Month	% Change¶ From Previous Month	1 Year Ago	% Change¶ From 1 Year Ago
Medicaid	261,894	259,786	+0.8%	254,102	+3.1%
PCN (Primary Care Network)	9,123	11,627	-21.5%	13,570	-32.8%
CHIP (Children's Health Ins. Plan)	35,173	35,216	-0.1%	36,995	-4.9%
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 (2011)	280,830	9.3%	+0.8%	\$ 5,818.8	+7.4%
Non-maternity Hospitalizations (2011)	175,847	5.7%	+3.8%	\$ 4,909.9	+7.9%
ED Encounters - Not Admitted (2010)	645,962	22.1%	-7.8%	\$ 1,160.9	+7.4%
Outpatient Surgery (2010)	362,106	12.4%	+13.2%	\$ 1,764.0	+20.4%
Annual Community Health Measures	Current Data Year	Number Affected	Percent/Rate	% Change¶ From Previous Year	State Rank# (1 is best)
Obesity (Adults 18+)	2011	472,400	24.4%	+1.3%	12 (2011)
Cigarette Smoking (Adults 18+)	2011	229,300	11.8%	+2.7%	1 (2011)
Influenza Immunization (Adults 65+)	2011	147,400	56.9%	-15.5%	41 (2011)
Health Insurance Coverage (Uninsured)	2011	377,700	13.4%	+26.4%	n/a
Motor Vehicle Traffic Crash Injury Deaths	2010	231	8.1 / 100,000	+0.1%	19 (2009)
Poisoning Deaths	2010	342	12.0 / 100,000	-38.1%	47 (2009)
Suicide Deaths	2010	479	16.8 / 100,000	+5.8%	n/a
Diabetes Prevalence (Adults 18+)	2011	129,600	6.7%	-1.8%	6 (2011)
Poor Mental Health (Adults 18+)	2011	315,300	16.3%	-0.4%	17 (2011)
Coronary Heart Disease Deaths	2010	1,488	52.2 / 100,000	-0.4%	2 (2008)
All Cancer Deaths	2010	2,791	98.0 / 100,000	+7.9%	1 (2008)
Stroke Deaths	2010	736	25.8 / 100,000	-1.4%	13 (2008)
Births to Adolescents (Ages 15-17)	2010	876	14.3 / 1,000	-13.2%	17 (2009)
Early Prenatal Care	2010	38,124	73.1%	+2.1%	n/a
Infant Mortality	2010	251	4.8 / 1,000	-9.0%	3 (2008)
Childhood Immunization (4:3:1:3:3:1)	2010	38,900	70.6%	-7.8%	12 (2010)

† Diagnosed HIV infections, regardless of AIDS diagnosis.

‡ Budget has been revised to include supplemental funding from 2011 General Session.

§ Includes only the gross pharmacy costs. 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 2013 season.