Utah Health Status Update:

Utah Patient Safety Initative

March 2007 Utah Department of Health

Introduction

The Patient Safety Initiative was officially begun on October 15, 2001 with a set of administrative rules to govern the reporting of Sentinel Events and Adverse Drug Events to the Utah Department of Health by Utah hospitals and ambulatory surgical centers. This effort was accomplished without legislation and additional funding, with the cooperation of the Utah hospital and ambulatory surgical center industry, and under the leadership and administrative support of Health Insight, Utah Hospital Association, Utah Medical Association, and the Utah Department of Health.

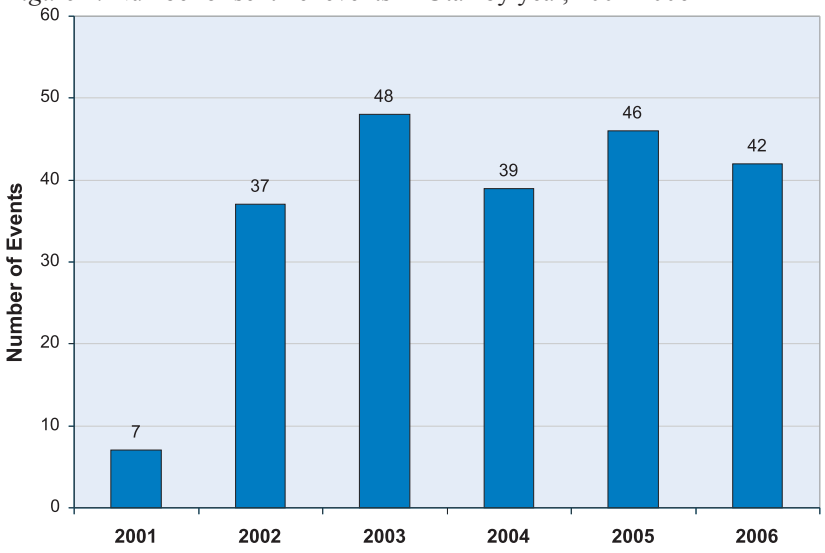
Sentinel Events

Since the initiation of the sentinel event reporting rule, 219 sentinel events have been reported to the Utah Department of Health from Utah hospitals and ambulatory surgical centers (see Figures 1 and 2).

The reporting over the last five years has identified on average approximately 44 events per year, a ten fold under-reporting as would be predicted by the Institute of Medicine methodology published in "To Err is Human." As a result, the sentinel event user group (chaired by Marilyn Mariani, RN, from Mountain Star Health System) has met over the past year to redefine the list of reportable event types. The user group has recognized that some of the under-reporting is due to the type of surveillance system in place, the types of events required to be reported, and the fact that certain parts of the hospital system had been previously exempted from reporting. The goals of the revisions are to make reportable event types more specific, in compliance with the National Quality Forum standards, consistent with the Joint Commission on Accreditation of Hospital Organizations (JCAHO) and Centers for Medicare/Medicaid Services (CMS) requirements, and to make reporting more quantifiable (a web-based reporting site is under development). Additionally, a cooperative agreement between the UDOH Perinatal review committee and the Patient Safety Initiative has been developed to include certain perinatal deaths as also reportable. The Sentinel Event rule changes and reporting form are the results of over a year's worth of meetings. The administrative rule changes was submitted in February 2007 for publication with an anticipated effective date in April 2007.

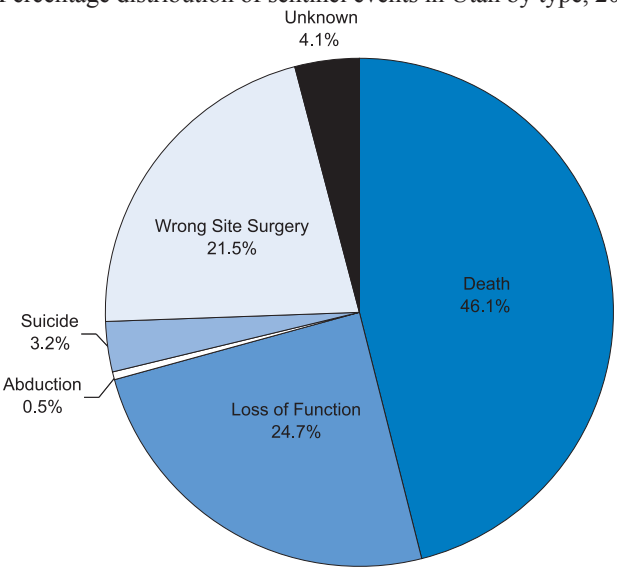
Sentinel Events by Year

Figure 1. Number of sentinel events in Utah by year, 2001-2006



Sentinel Events by Type

Figure 2. Percentage distribution of sentinel events in Utah by type, 2001–2006



Adverse Drug Events

The adverse drug events (ADE) user group (chaired by Linda Tyler, PharmD, of the University of Utah Medical Center) continues to meet regularly on a project basis. Over the past couple of years they have conducted a Failure Mode Effect Analysis (FMEA) on two of the high risk drugs associated with adverse events (anticoagulants

and insulin) that are frequently used in the state of Utah. The users group is comprised mostly of pharmacy representatives from various hospital facilities. The adverse drug event rate remains relatively stable as indicated by Figure 3. There has been one ADE program audit cycle of all hospitals and ambulatory surgical centers conducted with a second cycle commencing in 2007. Improvement in medication reconciliation is the intended agenda for 2007.

Prescription Medication Overdoses

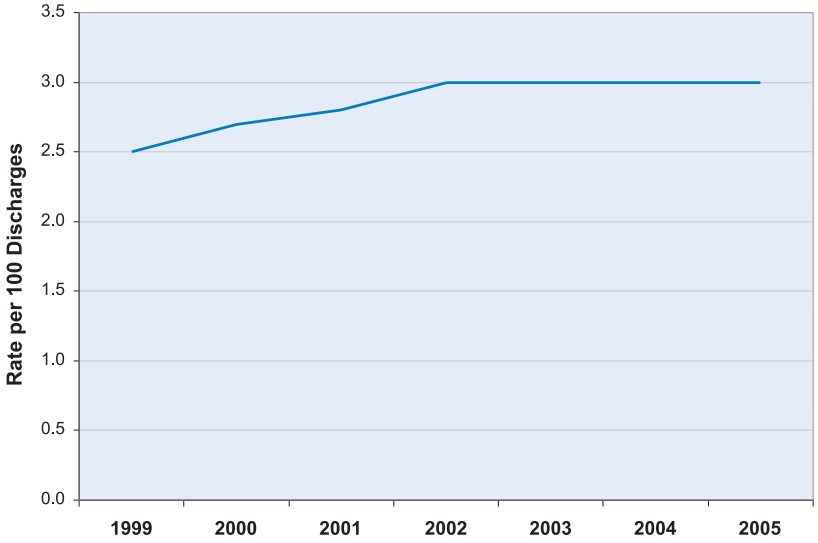
Over the past couple of years there has been a growing concern for the increase in prescription medication overdoses within the Utah Department of Health Medical Examiner's office. This concern has recently been documented and analyzed by Christy Porucznik, PhD, (see Figure 4) and has resulted in an effort to generate professional and community awareness. Several briefing sessions have been held with key players in the community resulting in the creation of a set of action strategies. These strategies are under discussion and revision with an anticipated publication date at the end of March 2007. This effort is led by Todd Grey, MD, from the Medical Examiners office and Robert Rolfs, MD, State Epidemiologist. There is additional legislative activity underway that could result in new resources to develop interventions at a statewide level.

Healthcare Acquired Infections

The Bureau of Epidemiology, Utah Department of Health has taken leadership in the establishment of a set of rules requiring that health care acquired infections be reported to the Department. Robert Rolfs, MD, presented to the Patient Safety Steering committee about the need to incorporate the surveillance and prevention of health care acquired infections into the patient safety agenda. The committee approved this request and a user group was established to develop a set of rules. This group has been meeting for the past year to define the data elements to be reported and under what circumstances. The final rule set will be published for public comment in the near future. The initial foci of that rule are on Central Line Associated Blood Stream Infections (CLA-BSI) and on influenza vaccination rates of health care workers. There will be an ongoing users group and an audit requirement similar to the ADE rule.

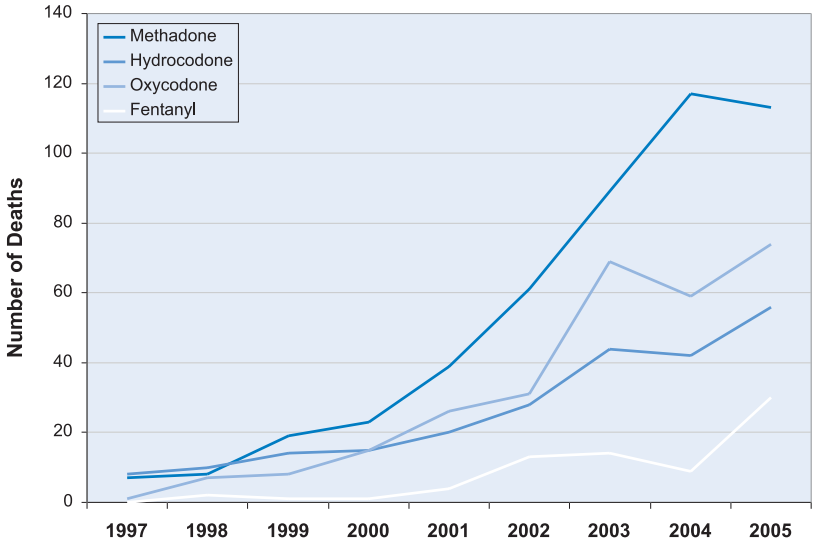
Adverse Drug Events

Figure 3. Rate of adverse drug events per 100 inpatient discharges in Utah acute care hospitals, 1999-2005



Prescription Medication Overdose Deaths*

Figure 4. Number of prescription medication overdose deaths by implicated medication, Utah, 1997-2005



* Includes deaths that were classified as accidental or intent not determined.
Note: Because more than one drug could be involved in a death, numbers cannot be summed.
Source: Office of the Medical Examiner

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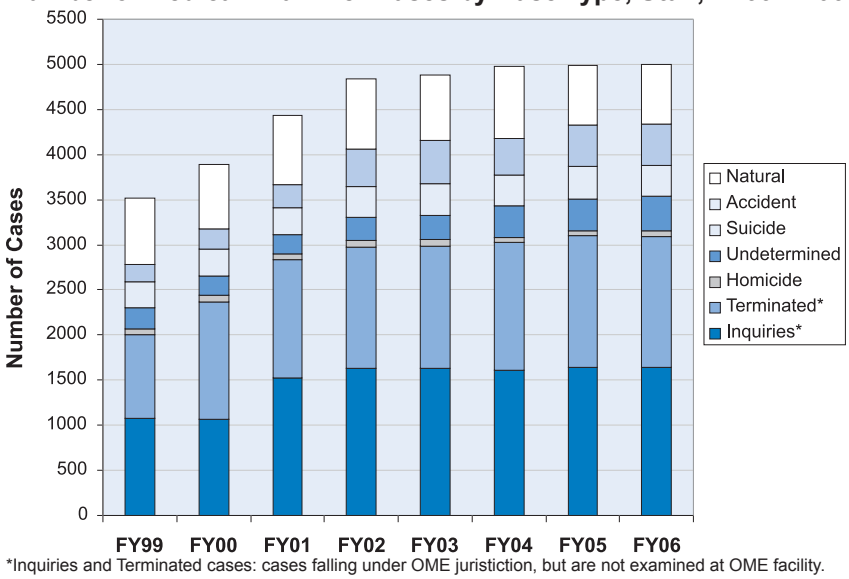
Breaking News, February 2007

Office of the Medical Examiner Performs Well in Difficult Circumstances

The work load of the Office of the Medical Examiner (OME) is on the rise. Over the past seven years the total number of cases handled by the OME has grown from 3,515 in 1999 to 4,995 in 2006. Recent events such as the shootings at Trolley Square, serve as examples of how the office struggles with surge capacity issues under the stress of limited finding and insufficient staff.

"Todd Grey, Chief Medical Examiner, works daily with his staff to keep up with the work load even though their funding is significantly lower than other states," said Dr. Sundwall, Executive Director, Utah Department of Health. "Somehow they always manage to rise to the occasion when a number of deaths occur under circumstances that require an autopsy, as happened recently with the murder of 5 innocent people at Trolley Square."

Number of Medical Examiner Cases by Case Type, Utah, FY99-FY06



*Inquiries and Terminated cases: cases falling under OME juristiction, but are not examined at OME facility. These cases are processed and investigated.

The OME investigates any sudden or unexpected death occurring in Utah which equates to involvement in approximately 25% of Utah deaths each year. The OME collects data on every case under its jurisdiction that can be used to understand the health hazards that cause or contribute to deaths in the state. The OME also provides information and expertise to health care providers, EMT's law enforcement officials, the courts, and attorneys concerning issues relating to death and injury within Utah.

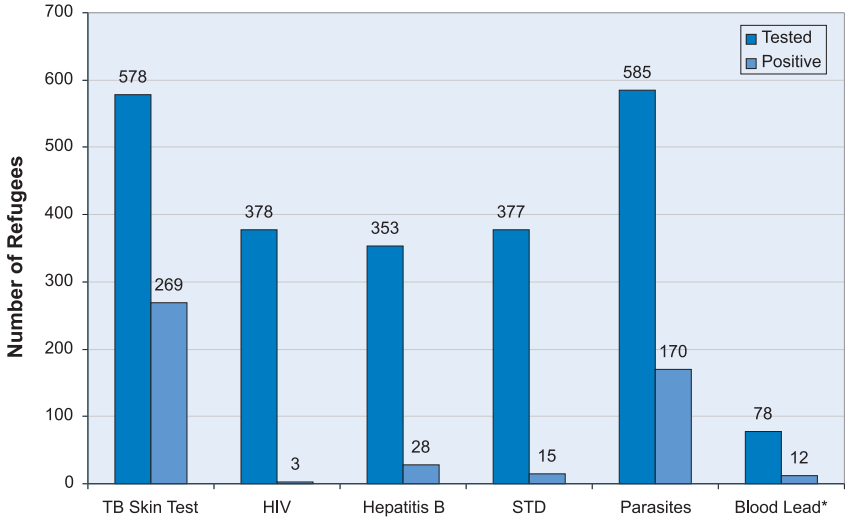
Community Health Indicators Spotlight, February 2007

Refugee Health

More than 2 million refugees, driven from their homelands by war, political change, and social, religious, and ethnic oppression, have arrived in the U.S. since the Refugee Act of 1980 was established. Once an individual is determined to be a refugee, U.S. voluntary agencies and the Office of Refugee Resettlement assist with their resettlement. Utah has resettled over 10,000 refugees since 1995 including 621 arrivals in 2006. Part of the resettlement process in Utah is ensuring refugees receive an Initial Refugee Health Screening Assessment within 30 days of arrival, to eliminate health related barriers to successful resettlement while protecting the health of Utah residents and the U.S. population.

The Initial Health Screening Assessment includes an evaluation for the following communicable diseases of public health significance: tuberculosis, HIV, hepatitis B and C, STDs, *Giardia* and other parasites, and elevated blood lead levels in children. The assessment also includes a physical examination that includes, at a minimum, examination of the eyes, ears, nose and throat, extremities, heart, lungs, abdomen, lymph nodes, skin and external genitalia, and other symptoms that suggest cardiovascular, pulmonary, musculoskeletal, and psychiatric disorders. The Utah Refugee Health Program monitors closely that each and every refugee with a positive tuberculin skin test (TST) must have a Chest X-Ray and be evaluated for active TB. The local health department follows up all reportable conditions.

Number of Refugee Arrivals Tested and Reported Positive for Selected Health Conditions, Utah, 2006



Monthly Health Indicators Report

(Data Through January 2007)

Monthly Report of Notifiable Diseases, January 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)	17	19	17	19	0.9
Enterotoxigenic Escherichia coli (E. coli)	5	2	5	2	2.3
Hepatitis A (infectious hepatitis)	0	2	0	2	0.0
Hepatitis B (serum hepatitis)	0	3	0	3	0.0
Influenza†	Weekly updates at http://health.utah.gov/epi/diseases/flu				
Measles (Rubeola, Hard Measles)	0	0	0	0	--
Meningococcal Diseases	0	0	0	0	--
Norovirus	6	0*	6	0*	--
Pertussis (Whooping Cough)	49	15	49	15	3.4
Salmonellosis (Salmonella)	19	12	19	12	1.6
Shigellosis (Shigella)	1	3	1	3	0.3
Varicella (Chickenpox)	138	78*	138	78*	1.8
Viral Meningitis	6	7	6	7	0.8

Notifiable Diseases Reported Quarterly, 4th Qtr 2006	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
HIV	32	19	162	72	2.3
AIDS	7	13	57	51	1.1
Chlamydia	1,322	1,201	5,057	3,777	1.3
Gonorrhea	243	151	871	467	1.9
Tuberculosis	9	7	34	34	1.0

Program Enrollment for the Month of January 2007	Current Month	Previous Month	% Change§ From Previous Month	1 Year Ago	% Change§ From 1 Year Ago
Medicaid	163,867	163,472	+0.2%	177,408	-7.6%
PCN (Primary Care Network)	16,237	17,074	-4.9%	17,344	-6.4%
CHIP (Children's Health Ins. Plan)	31,821	32,834	-3.1%	35,286	-9.8%

Medicaid Expenditures (in Millions) for the Month of January 2007	Current Month	Expected/ Budgeted for Month	Fiscal YTD	Budgeted Fiscal YTD	Variance - over (under) budget
Capitated Mental Health	$ 6.7	$ 8.0	$ 57.2	$ 62.4	($ 5.2)
Inpatient Hospital	$ 11.6	$ 15.7	$ 94.0	$ 101.4	($ 7.4)
Outpatient Hospital	$ 6.7	$ 6.0	$ 40.6	$ 41.0	($ 0.3)
Long Term Care	$ 13.9	$ 14.5	$ 100.5	$ 100.4	$ 0.0
Pharmacy	$ 9.7	$ 10.7	$ 71.9	$ 77.9	($ 6.0)
Physician/Osteo Services	$ 4.5	$ 5.0	$ 40.7	$ 37.8	$ 2.9
TOTAL HCF MEDICAID	$ 97.0	$ 118.4	$ 767.9	$ 812.5	($ 44.6)

Health Care System Measures	Number of Events	Rate per 100 Population	% Change§ From Previous Year	Total Charges in Millions	% Change§ 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§ From Previous Year
Overweight and Obesity (Adults 18+)	2005	1,740,474	942,900	54.2%	-3.9%
Cigarette Smoking (Adults 18+)	2005	1,740,474	200,600	11.5%	+9.7%
Influenza Immunization (Adults 65+)	2005	212,582	148,300	69.7%	-7.6%
Health Insurance Coverage (Uninsured)	2005	2,528,926	292,800	11.6%	+13.5%
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	2005	2,528,926	104,200	4.1%	+8.7%
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, but increasing. As of □
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.