

Utah Health Status Update:

Utah Emergency Medical Services Data

November 1998

Utah Department of Health

Emergency Medical Services (EMS) are a continuum of services available to people who seek care either by calling 911 or by going directly to an emergency department. Those services include 911 dispatch assistance, EMT first response, paramedic care, ambulance transport, emergency department care, inpatient hospitalization (including surgery and intensive care), and patient rehabilitation. Emergency Medical Services is an intersection between health and public safety that provides a safety net for Utahns.

The Utah Emergency Medical Services Systems Act (Title 26, Chapter 8, Utah Code Annotated) authorizes the Bureau of Emergency Medical Services to "establish an emergency medical services data system which shall provide for the collection of data, as defined by the committee, relating to the treatment and care of patients who use or have used, the emergency medical services system." The EMS data system includes the prehospital incident reporting system, the emergency department encounter data (inpatient and outpatient), and the trauma registry. This year data are available for the first time from both the 1996 prehospital incident reporting system and the 1996 emergency department encounters. **Utah is the first state to publish these population based data for use by the public and researchers.** This Health Status Update provides highlights from those data describing care provided by the EMS system in Utah during 1996.

These data were based on the first complete year of reporting for these important new data systems. Future reports will contain more detailed analyses. These new data systems will guide improvements in the EMS system, provide important data on injuries, and can be a resource for health services utilization research.

Utah's Prehospital Emergency Medical Services

- In 1996, the state's 246 prehospital emergency medical services agencies responded 99,250 times to requests for EMS services. This represented fewer than 99,250 individual requests for assistance, because more than one EMS response can occur for each request.
- The average response times from dispatch to arrival at the scene were shortest in more densely populated areas: 6.8 minutes in urban counties, 8.3 minutes in rural counties, 11.0 minutes in frontier counties, and 13.1 minutes in sub-frontier counties.
- Traffic injuries were the leading reason for a prehospital EMS response (18.5%), followed by breathing problems (8.7%), falls (8.7%), chest pain (8.3%) and specific traumatic injuries (6.3%).
- 9,115 patients who were transported by EMS required inpatient hospitalization. The average length of stay for those patients was 5.0 days; the average charge was \$11,822, and the total inpatient charge for hospitalization of patients transported by EMS was \$108 million.

Prehospital EMS Encounters

Distribution of pre-hospital EMS encounters according to population density, Utah 1996.

	Definition people per square mile	% of Utah population	# of counties included	% of pre-hospital cases reported
Urban	>100	78%	4	81%
Rural	>6 and <100	15%	10	12%
Frontier	>2 and <6	4%	4	4%
Sub-Frontier	<2	3%	11	3%

Prehospital EMS Treatment and Medications

Most commonly administered treatments at prehospital EMS encounters, Utah 1996.

Prehospital Treatments Given (May be more than 1 per patient)

Treatment	Number
Oxygen delivered	43,201
Spinal/cervical immobilization	39,344
Intravenous line	25,559
Blood samples obtained	8,571
Bleeding controlled	5,111
Splinted	3,799
Assisted ventilation	1,774
CPR	1,100
Endotracheal intubation	867
Defibrillation	758

Medications Administered

Medication	Number
Tri-nitroglycerine	2,532
Dextrose 50%	1,217
Naloxone (Narcan)	984
Epinephrine 1:10,000	725
Morphine	716

Emergency Department Encounters

In 1996, a total of 502,818 patient visits were managed in Utah emergency departments. Of those, 453,331 were treated and released and 49,487 were admitted as inpatients through an emergency department. That total represents 25.1 ED visits per 100 people or 1 visit for every 4 people in Utah. Those encounters resulted in charges of \$568.6 million (\$126.1 million for those treated in the ED and \$442.5 million for those admitted as inpatients).

- Emergency room encounters were about evenly distributed between males and females (51.8% of inpatient and 50.6% of outpatient visits were by females.)
- 9.6% of ED patients treated as outpatients, compared to 42.4% of those treated as inpatients, were covered by Medicare.
- About eight percent of ED patients were classified as self-insured.
- Total charges for ED visits resulting from injuries and poisonings were \$229.7 million (\$49.5 million from persons treated as outpatients and \$180.2 million from those treated as inpatients).
- Ten percent of all patients seen in Utah emergency departments during 1996 were admitted to the hospital. Of patients who were treated and released from the ED, 98.5% were discharged home, whereas only 73.3% of the ED patients treated as inpatients were discharged directly home from the hospital. 14.4% of persons treated as inpatients were discharged to a nursing home of some type, and 4.5% were discharged to a home health agency.

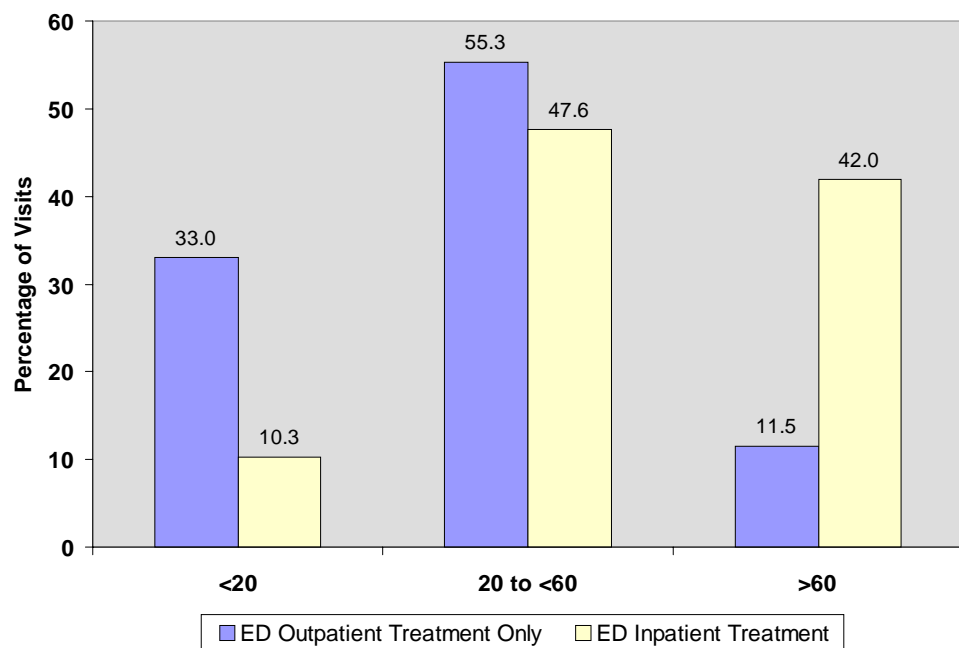
Emergency Department Visits for Injuries

Emergency department visits for injuries according to type of injury for patients treated as outpatients and as inpatients, Utah 1996.

Outpatient	Numbers of Visits	Inpatient	Numbers of Visits
Falls	44,048	Falls	3,269
Struck by Object or Person	29,046	Motor Vehicle Crashes	1,750
Motor Vehicle Crashes	21,739	Self-Inflicted Poisoning	664
Cutting or Piercing	19,103	Unintentional Poisoning	344

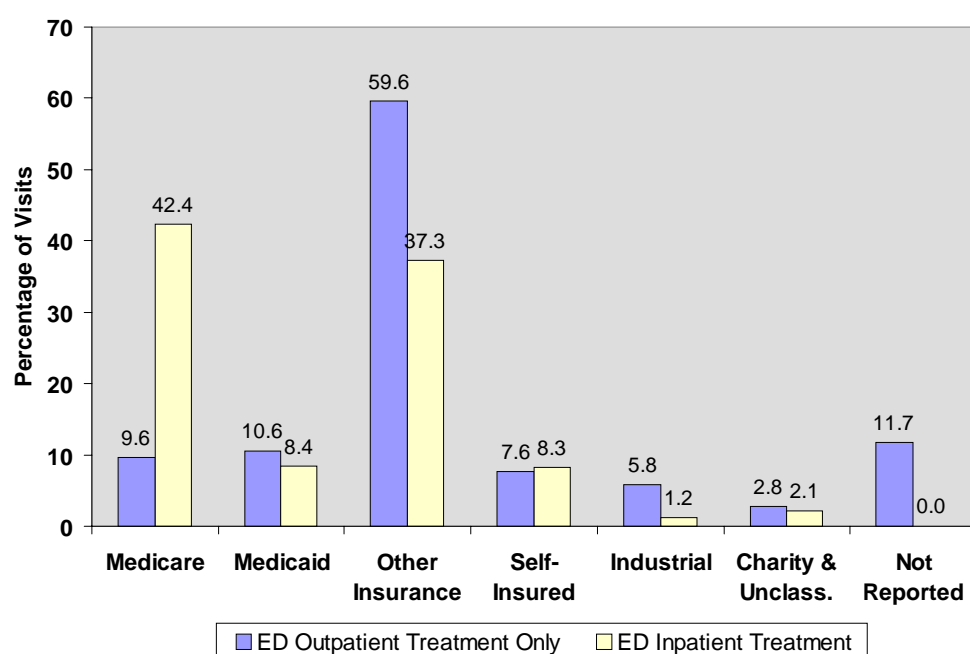
Emergency Department Visits by Age

Emergency department visits according to age of patient and whether treated as outpatient only or as inpatient, Utah 1996.



Emergency Department Visits by Payor

Emergency department visits according to primary payor and whether treated as outpatient only or as inpatient, Utah 1996.



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Additional information about this topic is available from the Bureau of Emergency Medical Services, Utah Department of Health, Helal Mobasher, Information Analyst, P O Box 142004, Salt Lake City, Utah 84114-2004, (801) 538-6011, or email: hmobasher@doh.state.ut.us; or from the Office of Health Data Analysis, Utah Department of Health, Luis Paita, Acting Director, P O Box 144004, Salt Lake City, Utah 84114-4004, (801) 538-6386, or email: lpaita@doh.state.ut.us; or from the Office of Public Health Data, Utah Department of Health, P O Box 142101, Salt Lake City, Utah 84114-2101, (801) 538-6108, FAX (801) 536-0947, or email: phdata@doh.state.ut.us. Please send any comments on this report to the Office of Public Health Data.



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