

Top 5 Causes of Injury Death, Disability, and Hospital Charges

Purpose: As requested by the GETAC Injury Prevention Committee, the following tables describe the top 5 causes of injury death, disability, and hospital charges in Texas using the most recent data sets from the Bureau of Vital Statistics, EMS/Trauma Registry, and Texas Health Care Information Collection (THCIC) Hospital Discharge Data.

Date created: August 20, 2009

Top 5 Causes of Death Due to Injury- 2006 Vital Statistics Data

Considerations for the 2006 Vital Statistics Data

1. All data reported are the most recent available.
2. Death data are based on a subset of variables collected on the Texas Certificate of Death. Cases include all Texas residents who died during the 2006 calendar year, including those who died while traveling outside of Texas.
 - Deaths from non-Texas residents who died in Texas are not included.
3. 2006 data are preliminary and are subject to change.
4. "Underlying Cause of Death" is coded using the International Classification of Diseases 10th Revision classification schemes.
 - Causes of Injury are categorized using the CDC ICD-10 External Cause of Injury Mortality Matrix.
5. Age
 - Age is categorized into the following groups: Less than 1 year of age, 1-14 years, 15-24 years, 25-34 years, 35-44 years, 45-54 years, 55-64 years, 65-74 years, and 75+ years of age.
6. Any rate with a frequency less than 20 is considered unstable and should be interpreted with caution.
7. For more information regarding Texas Vital Statistics Death Data, visit:
<http://www.dshs.state.tx.us/CHS/VSTAT/>

Top 5 Causes of Death Due to Injury - 2006 Vital Statistics Data

Underlying Cause of Death	Deaths	Percent	Rate per 100,000
Unintentional - Motor Vehicle Traffic	3,781	29.6%	15.8
Suicide	2,332	18.2%	9.8
Unintentional - Poisoning	1,879	14.7%	7.9
Homicide	1,450	11.3%	6.1
Unintentional - Falls	1,303	10.2%	5.5
Total	12,788	100.0%	53.5

Unintentional - Motor Vehicle Traffic

Age Category	Deaths	Percent	Rate per 100,000
Less than 1	17	0.4%	4.3
1-14 Years	232	6.1%	4.7
15-24 Years	948	25.1%	25.9
25-34 Years	632	16.7%	17.7
35-44 Years	580	15.3%	16.7
45-54 Years	559	14.8%	17.2
55-64 Years	350	9.3%	15.5
65-74 Years	189	5.0%	14.7
75+ Years	273	7.2%	25.7
Unknown	1	0.0%	
Total	3,781	100.0%	15.8

Suicide

Age Category	Deaths	Percent	Rate per 100,000
Less than 1	0	0.0%	0.0
1-14 Years	23	1.0%	0.5
15-24 Years	344	14.8%	9.4
25-34 Years	401	17.2%	11.2
35-44 Years	459	19.7%	13.2
45-54 Years	470	20.2%	14.5
55-64 Years	317	13.6%	14.0
65-74 Years	142	6.1%	11.0
75+ Years	176	7.5%	16.6
Unknown	0	0.0%	
Total	2,332	100.0%	9.8

Unintentional - Poisoning

Age Category	Deaths	Percent	Rate per 100,000
Less than 1	1	0.1%	0.3
1-14 Years	9	0.5%	0.2
15-24 Years	248	13.2%	6.8
25-34 Years	342	18.2%	9.6
35-44 Years	503	26.8%	14.4
45-54 Years	540	28.7%	16.6
55-64 Years	170	9.0%	7.5
65-74 Years	32	1.7%	2.5
75+ Years	34	1.8%	3.2
Unknown	0	0.0%	
Total	1,879	100.0%	7.9

Homicide

Age Category	Deaths	Percent	Rate per 100,000
Less than 1	32	2.2%	8.1
1-14 Years	78	5.4%	1.6
15-24 Years	389	26.8%	10.6
25-34 Years	379	26.1%	10.6
35-44 Years	254	17.5%	7.3
45-54 Years	182	12.6%	5.6
55-64 Years	77	5.3%	3.4
65-74 Years	30	2.1%	2.3
75+ Years	29	2.0%	2.7
Unknown	0	0.0%	
Total	1,450	100.0%	6.1

Unintentional - Falls

Age Category	Deaths	Percent	Rate per 100,000
Less than 1	2	0.2%	0.5
1-14 Years	3	0.2%	0.1
15-24 Years	12	0.9%	0.3
25-34 Years	25	1.9%	0.7
35-44 Years	47	3.6%	1.3
45-54 Years	75	5.8%	2.3
55-64 Years	122	9.4%	5.4
65-74 Years	150	11.5%	11.7
75+ Years	867	66.5%	81.7
Unknown	0	0.0%	
Total	1,303	100.0%	5.5

Top 5 Causes of Disability Due to Injury- 2007 Hospital EMS/Trauma Registry Data

Considerations for the Hospital Admissions Data

1. All data reported are the most recent available.
2. Per the Texas Administrative Code (TAC), Rule §103.11 Definitions, hospitals are required¹ to submit patient records for traumas that meet the following criteria:
 - a. Patient was admitted for greater than 48 hrs OR
 - b. Patient was seen, received stabilization care, and then transferred to a higher-level acute care hospital (ACH) OR
 - c. Patient died after receiving any evaluation or treatment or was dead on arrival AND
 - d. Patient has sustained at least one injury between ICD-9-CM² diagnostic codes 800.0 and 959.9, excluding 905-909, 910-924, and 930-939.Please note that Emergency Department data are not collected by the state.
3. In these data, a patient is disabled if the field, Condition on Discharge, is recorded as 2="Alive, Expected Moderate Recovery" or 3="Alive, Expected Severe Disability".
4. The aggregate totals associated with each reporting year are in terms of submissions and not necessarily in terms of patients. A patient that sustains a traumatic injury may receive stabilizing care at one medical facility before being transferred to another facility. Each medical facility generates a record that contributes to the total number of trauma-related records.
5. "Underlying Cause of Injury" (Informally known as "E-Codes") is coded using International Classification of Diseases 9th Revision, Clinical Modification (ICD-9CM). Cause of injury was categorized using the recommended framework of E-Code groupings provided by the Centers for Disease Control and Prevention (CDC).
6. Age
 - a. Ages between 0 and 120 are generally considered valid. All other ages are listed as unknown.
 - b. Age is a calculated field based on the reported date of birth and date of hospital admission. If date of birth is not complete but year of birth is available, age is obtained by subtracting the year of birth from the year of admission.
 - c. Age is categorized into the following groups: Less than 1 year of age, 1-14 years, 15-24 years, 25-34 years, 35-44 years, 45-54 years, 55-64 years, 65-74 years, 75-84 years, and 85 + years of age.
7. Any rate with a frequency less than 20 is considered unstable and should be interpreted with caution.
8. For more information regarding Texas Hospital EMS/Trauma Registry Data, visit: <http://www.dshs.state.tx.us/injury/>.

¹ The registry will accept records where the patient's stay is less than 48 hours and he/she does not transfer to another ACH.

² International Classification of Diseases, 9th Revision, Clinical Modification.

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Top 5 Causes of Disability Due to Injury - 2007 Hospital EMS/Trauma Registry Data

Underlying Cause	Frequency	Percent	Rate per 100,000
Unintentional - Fall	9,565	42.3%	40.0
Unintentional - Motor Vehicle Traffic	6,196	27.4%	25.9
Assault/Homicide	2,600	11.5%	10.9
Unintentional - Struck by object	709	3.1%	3.0
Unintentional - Cut/ Pierce	373	1.7%	1.6
Total	19,443	100.0%	81.3

Unintentional - Fall

Age Category	Frequency	Percent	Rate per 100,000
Less than 1	61	0.6%	15.5
1-14 Years	654	6.8%	13.2
15-24 Years	383	4.0%	10.5
25-34 Years	468	4.9%	13.1
35-44 Years	596	6.2%	17.1
45-54 Years	815	8.5%	25.1
55-64 Years	930	9.7%	41.2
65-74 Years	1,224	12.8%	95.2
75-84 Years	2,339	24.5%	300.4
85+ Years	2,091	21.9%	740.2
Unknown	4	0.0%	
Total	9,565	100.0%	40.0

Unintentional - Motor Vehicle Traffic

Age Category	Frequency	Percent	Rate per 100,000
Less than 1	13	0.2%	3.3
1-14 Years	338	5.5%	6.8
15-24 Years	1,613	26.0%	44.1
25-34 Years	1,178	19.0%	33.0
35-44 Years	902	14.6%	25.9
45-54 Years	916	14.8%	28.2
55-64 Years	584	9.4%	25.8
65-74 Years	333	5.4%	25.9
75-84 Years	233	3.8%	29.9
85+ Years	84	1.4%	29.7
Unknown	2	0.0%	
Total	6,196	100.0%	25.9

Assault/ Homicide

Age Category	Frequency	Percent	Rate per 100,000
Less than 1	51	2.0%	12.9
1-14 Years	48	1.8%	1.0
15-24 Years	844	32.5%	23.1
25-34 Years	687	26.4%	19.2
35-44 Years	485	18.7%	13.9
45-54 Years	336	12.9%	10.3
55-64 Years	101	3.9%	4.5
65-74 Years	24	0.9%	1.9
75-84 Years	14	0.5%	1.8
85+ Years	10	0.4%	3.5
Total	2,600	100.0%	10.9

Unintentional - Struck by/ against

Age Category	Frequency	Percent	Rate per 100,000
Less than 1	5	0.7%	1.3
1-14 Years	161	22.7%	3.3
15-24 Years	159	22.4%	4.3
25-34 Years	115	16.2%	3.2
35-44 Years	85	12.0%	2.4
45-54 Years	91	12.8%	2.8
55-64 Years	37	5.2%	1.6
65-74 Years	24	3.4%	1.9
75-84 Years	24	3.4%	3.1
85+ Years	8	1.1%	2.8
Total	709	100.0%	3.0

Unintentional - Cut/ Pierce

Age Category	Frequency	Percent	Rate per 100,000
Less than 1	0	0.0%	
1-14 Years	27	7.2%	0.5
15-24 Years	113	30.3%	3.1
25-34 Years	78	20.9%	2.2
35-44 Years	61	16.4%	1.8
45-54 Years	58	15.5%	1.8
55-64 Years	16	4.3%	0.7
65-74 Years	11	2.9%	0.9
75-84 Years	6	1.6%	0.8
85+ Years	3	0.8%	1.1
Total	373	100.0%	1.6

Top 5 Causes of Injury by Hospital Charges – 2007 Hospital Discharge Data

Considerations for the Hospital Discharge Data

1. All data reported are the most recent available.
2. Trauma cases were identified according to *Consensus Recommendations for Using Hospital Discharge Data for Injury Surveillance* developed by the State and Territorial Injury Prevention Directors Association (STIPDA).
3. "Underlying Cause of Injury" (Informally known as "E-Codes") is coded using International Classification of Diseases 9th Revision, Clinical Modification (ICD-9-CM).
 - a) Cause of injury was categorized using the recommended framework of E-Code groupings for presenting injury mortality and morbidity data provided by the Centers for Disease Control and Prevention (CDC).
 - b) Underlying cause of injury was categorized using the first valid e-code listed in designated e-code fields per *Consensus Recommendations for Using Hospital Discharge Data for Injury Surveillance*.
4. Charges
 - Charges were obtained from the field Total_Charges, which is the sum of accommodation charges, non-covered accommodation charges, ancillary charges, and non-covered ancillary charges.
 - Charges are not equal to actual payments received by the hospital or hospital cost for performing the service. Typically, actual payments are much less than charges due to managed care-negotiated discounts and denial of payment by insurance companies. Charges also do not reflect the actual cost to deliver the care that each patient needs.
 - Charges were rounded for readability.
5. Age
 - Due to considerations regarding confidentiality, HIV & Drug/Alcohol Use patients were categorized using a broader age range scheme in the Hospital Discharge Data. In order to combine all patients, the broader age range scheme was utilized in each cause of injury group.
 - Age is categorized into the following groups: 0-17 years, 18-44 years, 45-64 years, 65-74 years, and 75+ years.
6. For more information regarding Texas Hospital Discharge Data, visit:
<http://www.dshs.state.tx.us/thcic/>

Top 5 Causes of Injury by Hospital Charges - 2007 Hospital Discharge Data

Underlying Cause of Injury	Frequency	Charges* (in millions)	Avg. Charge	Percent of total charges
Unintentional - Fall	42,777	\$1,542.1	\$36,049	41.4%
Unintentional - Motor Vehicle Traffic	15,931	\$976.1	\$61,268	26.2%
Assault/ Homicide	5,600	\$230.8	\$41,217	6.2%
Self-inflicted/ Suicide	8,488	\$169.5	\$19,969	4.6%
Unintentional - Poisoning	6,961	\$153.6	\$22,070	4.1%
Total	99,630	\$3,722.2	\$37,360	100.0%

* The sum of accomodation charges, non-covered ancillary charges, ancillary charges, and non-covered ancillary charges

Unintentional - Fall

Age category	Frequency	Charges* (in millions)	Avg. Charge	Percent of total charges
0-17 Years	3,071	\$55.0	\$17,895	3.6%
18-44 Years	4,080	\$143.4	\$35,150	9.3%
45-64 Years	7,851	\$301.2	\$38,364	19.5%
65-74 Years	6,052	\$231.7	\$38,288	15.0%
75+ Years	21,723	\$810.8	\$37,324	52.6%
Total	42,777	\$1,542.1	\$36,049	100.0%

Unintentional - Motor Vehicle Traffic

Age category	Frequency	Charges* (in millions)	Avg. Charge	Percent of total charges
0-17 Years	2,171	\$112.9	\$52,011	11.6%
18-44 Years	8,296	\$511.0	\$61,600	52.4%
45-64 Years	3,760	\$247.4	\$65,788	25.3%
65-74 Years	831	\$53.6	\$64,481	5.5%
75+ Years	873	\$51.2	\$58,607	5.2%
Total	15,931	\$976.1	\$61,268	100.0%

Assault/ Homicide

Age category	Frequency	Charges* (in millions)	Avg. Charge	Percent of total charges
0-17 Years	591	\$24.6	\$41,591	10.6%
18-44 Years	3,868	\$156.5	\$40,459	67.8%
45-64 Years	989	\$42.7	\$43,126	18.5%
65-74 Years	77	\$3.2	\$41,137	1.4%
75+ Years	75	\$3.9	\$52,288	1.7%
Total	5,600	\$230.8	\$41,217	100.0%

Self-inflicted/ Suicide

Age category	Frequency	Charges* (in millions)	Avg. Charge	Percent of total charges
0-17 Years	837	\$11.6	\$13,902	6.9%
18-44 Years	5,371	\$102.2	\$19,024	60.3%
45-64 Years	2,029	\$48.2	\$23,772	28.5%
65-74 Years	158	\$4.6	\$28,831	2.7%
75+ Years	93	\$2.9	\$31,054	1.7%
Total	8,488	\$169.5	\$19,969	100.0%

Unintentional - Poisoning

Age category	Frequency	Charges* (in millions)	Avg. Charge	Percent of total charges
0-17 Years	777	\$10.3	\$13,209	6.7%
18-44 Years	2,929	\$65.7	\$22,445	42.8%
45-64 Years	2,186	\$53.6	\$24,515	34.9%
65-74 Years	527	\$12.4	\$23,455	8.0%
75+ Years	542	\$11.7	\$21,537	7.6%
Total	6,961	\$153.6	\$22,070	100.0%