



4D.

INJURY-RELATED INPATIENT DISCHARGES AND EMERGENCY ROOM VISITS BY INTENT AND MECHANISM OF INJURY

Injury hospitalizations and injury-related emergency room visits are defined here through the range of ICD-9-CM codes 800-999 used as the first-listed diagnosis. In addition, the supplementary classification of external causes of injury and poisoning (ICD-9-CM codes E800–E999) is used to permit the classification of environmental events, circumstances and conditions as the cause of injury, poisoning and other adverse effects. The “E” code classification is used to describe both the *mechanism* or external cause of injury (e.g., motor vehicle traffic, fall, poisoning), but also the manner or *intent* of the injury (e.g., self-inflicted, assault, accident).

In 2006, approximately one in six inpatient hospitalizations for injury (and one in five emergency room visits) did not have an external cause code. On the other hand, some of the non-injury first-listed diagnoses may also have an external cause of injury code.

Note: comparative U.S. data can be found in the publications of the National Center for Health Statistics, such as National Trends in Injury Hospitalizations 1979 – 2001:

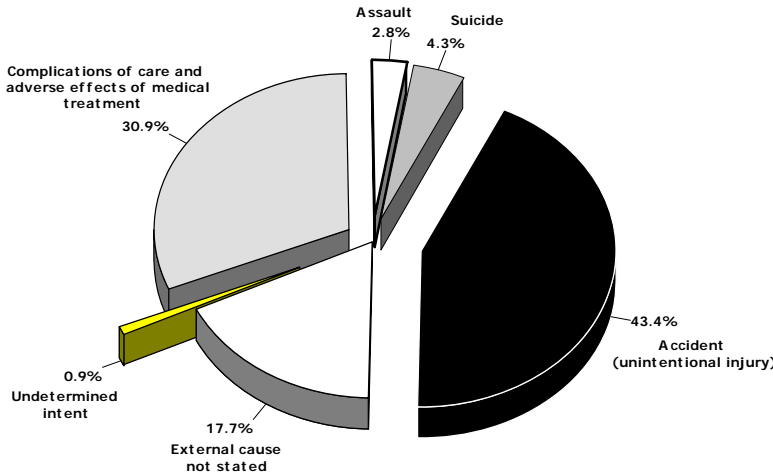
<http://www.cdc.gov/nchs/products/pubs/pubd/other/miscpub/miscpub.htm#Injury> or

Emergency Department Visit Injury Data: http://www.cdc.gov/nchs/about/otheract/injury/injury_emergency.htm

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Figure 4D-1
Percent Distribution of Inpatient Discharges by Intent of Injury, Arizona Residents, 2006

N = 61,526 (ICD-9-CM codes 800-999 used as first-listed diagnosis)

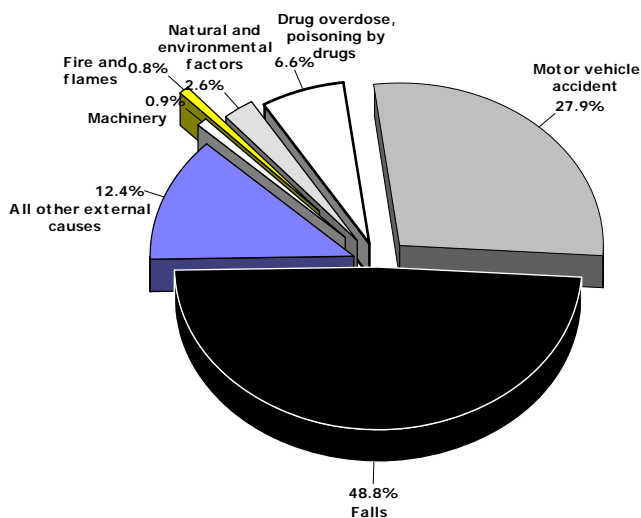


In 2006, there were 61,526 inpatient hospitalizations for injury and poisoning. *Unintentional injuries in accidents* accounted for 43.4 percent of all inpatient discharges for injury (Figure 4D-1, Table 4D-1). Approximately 19,018 inpatient hospitalizations were for *complications of medical care and adverse effects of medical treatment* (including adverse drug reactions and complications from surgical and medical procedures) and represented 30.9 percent of all injury- or poisoning-related inpatient hospitalizations. *Self-inflicted injuries in suicide* resulted in 2,672 inpatient hospitalizations (4.3 percent). *Assault* accounted for 1,745 inpatient hospitalizations (2.8 percent of all hospital discharges for injury).

The external cause was not provided for 17.7 percent of inpatient discharges for injury.

Figure 4D-2
Percent Distribution of Inpatient Discharges by Mechanism of Unintentional Injury, Arizona Residents, 2006

N = 26,679 (First-listed external cause codes E800-E869, E880 - E929)



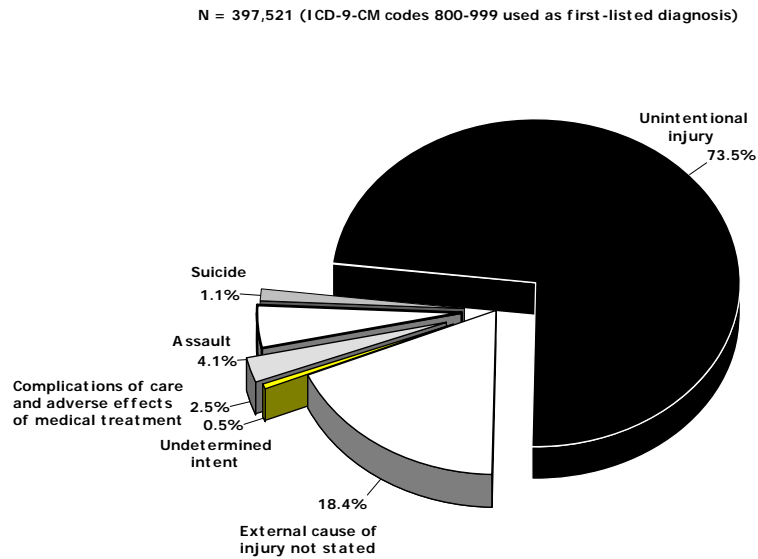
Accidental falls (48.8 percent, Figure 4D-2, Table 4D-2), *motor vehicle accidents* (27.9 percent), and *drug overdoses* (6.6 percent) accounted for the largest proportions of inpatient hospitalizations for unintentional injury in 2006.

Among the natural and environmental factors as external causes of inpatient hospitalization for unintentional injury, the three most frequent were *poisoning and toxic reaction caused by venomous animals* (242 inpatient discharges), *other injury causes by animals* (148 inpatient discharges), and *exposure to excessive natural heat* (136 inpatient discharges). *Exposure to excessive natural cold* accounted for 1.8 percent (12 out of 681) of inpatient hospitalizations for injuries due to natural and environmental factors.

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In 2006, there were 397,521 injury-related emergency room visits among Arizona residents, 6.5 times as many as inpatient hospitalizations for injury. *Unintentional injuries or accidents* accounted for three out of four (291,995 or 73.5 percent) of all injury-related emergency room visits (Figure 4D-3, Table 4D-2). The external cause of injury was classified as *assault* for 16,210 emergency room visits: these were the injuries purposely inflicted by another person. Complications of care and adverse effects of medical treatment accounted for a greater number of emergency room visits than self-inflicted injuries in suicide (2.5 percent vs. 1.1 percent, respectively, Figure 4D-3, Table 4D-2).

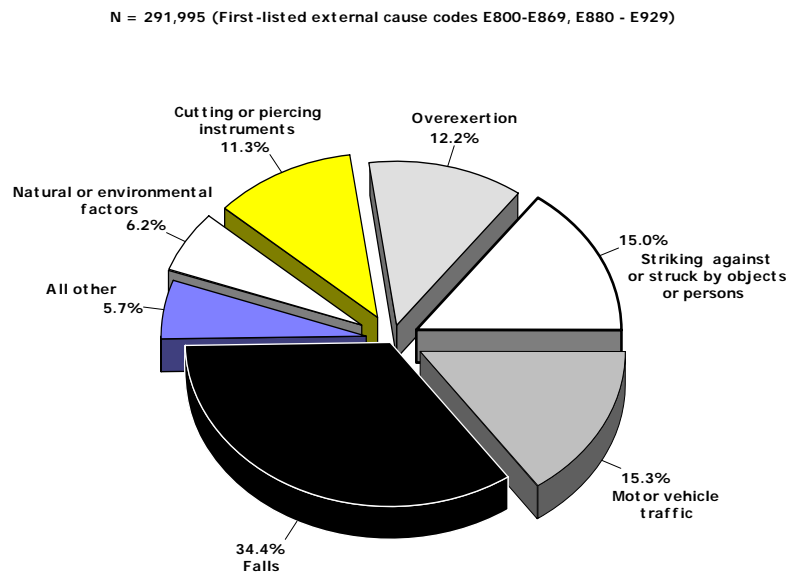
Figure 4D-3
Percent Distribution of Injury-Related Emergency Room Visits by Intent of Injury, Arizona Residents, 2006



Accidental falls (100,415 ER visits, Table 4D-2), *motor vehicle traffic accidents* (44,705) and *striking against or struck by objects or persons* (43,739) were the three most frequent mechanisms of unintentional injuries treated in emergency rooms (Figure 4D-4, Table 4D-2).

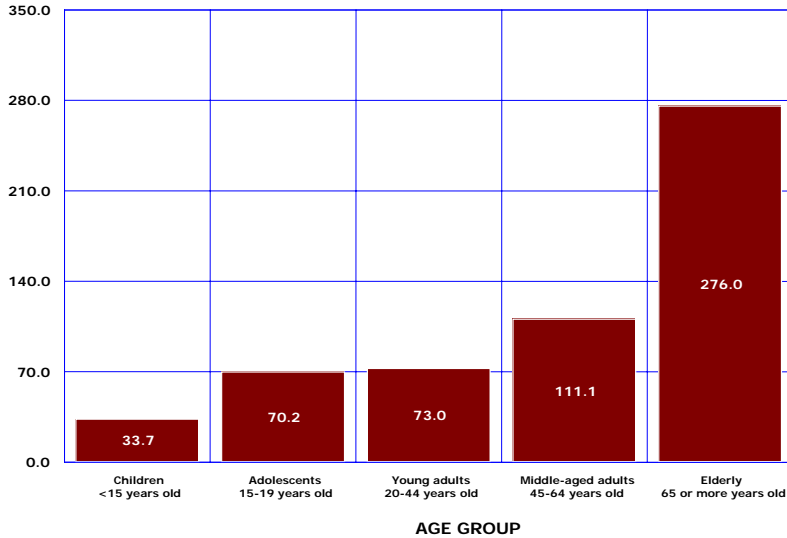
Overexertion (35,482 visits) accounted for a greater number of emergency room visits than the following three categories of unintentional injury combined: *foreign body accidentally entering eye or other orifice* (9,228), *pedal cycle accident* (6,394) and *natural and environmental factors* (17,987 Table 4D-2).

Figure 4D-4
Percent Distribution of Injury-Related Emergency Room Visits by Mechanism of Unintentional Injury, Arizona Residents, 2006



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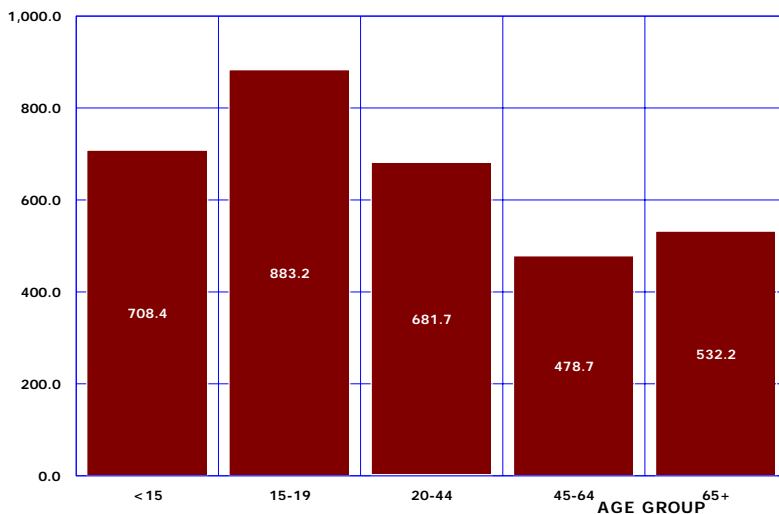
Figure 4D-5
Rates*for Injury-Related Inpatient Discharges by Age Group,
Arizona Residents, 2006



The rates (i.e., the number of inpatient hospitalizations per 10,000 persons) for injury-related inpatient discharges clearly are associated with the age of the injured patient (**Figure 4D-5**). The older the injured person, the more likely it is to be admitted as inpatient. The rate of 276.0 per 10,000 elderly Arizonans 65+ was 8.2 times greater than the rate of 33.7/10,000 for children under the age of 15 years.

*Number of inpatient discharges per 10,000 resident population in specified age group.

Figure 4D-6
Rates*for Injury-Related Emergency Room Visits by
Age Group, Arizona Residents, 2006



The rates for injury-related emergency room visits (i.e., the number of ER visits per 10,000 persons; **Figure 4D-6**) reveal a different age-specific pattern. The rates are the highest among the younger patients, who are more likely to be released home rather than admitted as inpatients. The rate of 883.2 ER visits per 10,000 adolescents 15-19 years old was 1.7 times greater than the rate of 532.2/10,000 among Arizonans aged 65 years or older.

*Number of emergency department visits per 10,000 resident population in specified age group.