



4D.

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

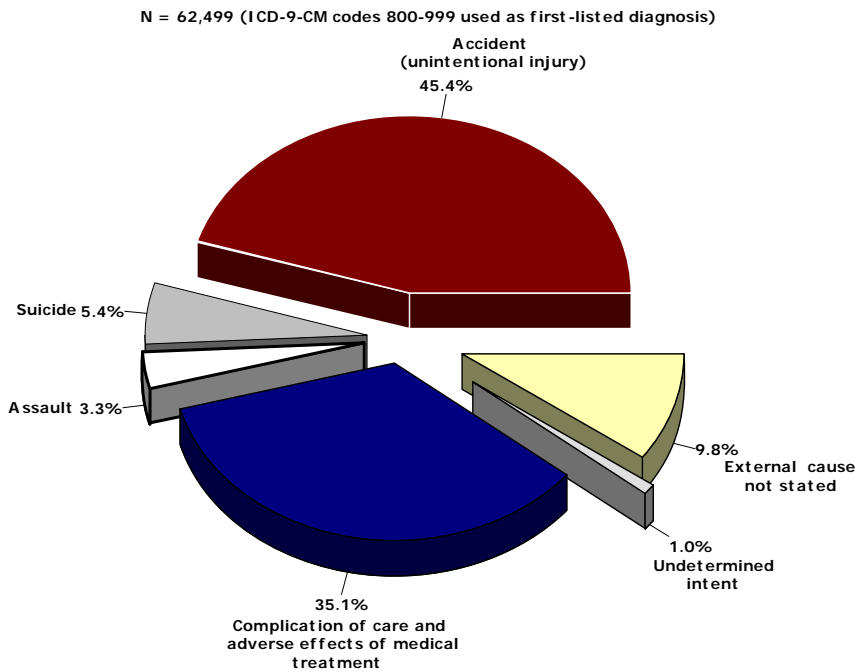
Injury hospitalizations and injury-related emergency room visits are defined here through the range of ICD-9-CM codes 800-999 used as the first-listed diagnosis. In addition, the supplementary classification of external causes of injury and poisoning (ICD-9-CM codes E800-E999) is used to permit the classification 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* of external cause of injury (e.g., motor vehicle traffic, fall, poisoning), but also the manner or *intent* of the injury (e.g., suicide, assault, accident).

In 2008, approximately one in ten inpatient hospitalizations for injury (and one in forty emergency room visits) did not have an external cause code listed in the first position on the discharge record (following the revised requirements up to 6 "E" codes can now be reported by hospitals). On the other hand, some of the non-injury first-listed diagnoses may also have an external cause of injury code. The reader is advised that the number of suicides, accidents, etc. shown **Table 4D-1** and **Table 4D-2** only reflects those where the principal diagnosis was injury-related.

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, 2008

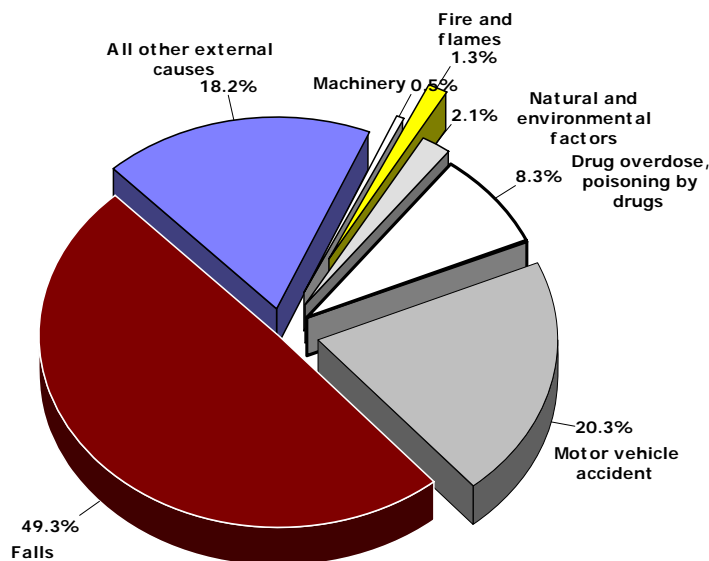


In 2008, there were 62,499 inpatient hospitalizations with injury as the principal diagnosis. *Unintentional injuries in accidents* accounted for 45.4 percent of all inpatient discharges with injury diagnosis (**Figure 4D-1, Table 4D-1**). Approximately 22,000 inpatient hospitalizations were for *complications of medical care and adverse effects of medical treatment* (including adverse drug reactions and complications from surgical and medical procedures) and represented 35.1 percent of all injury- or poisoning-related inpatient hospitalizations. *Self-inflicted injuries in suicide* resulted in 3,379 inpatient hospitalizations (5.4 percent). *Assault* accounted for 2,050 inpatient hospitalizations (3.3 percent of all hospital discharges for injury).

The first-listed external cause was not provided for 9.8 percent of inpatient discharges for injury.

Figure 4D-2
Percent Distribution of Inpatient Discharges by Mechanism of Unintentional Injury,
Arizona Residents, 2008

N = 28,338 (First-listed external cause codes E800-E869, E880 - E929)



Accidental falls (49.3 percent, **Figure 4D-2, Table 4D-1**), *motor vehicle accidents* (20.3 percent), and *drug overdoses* (8.3 percent) accounted for the largest proportions of inpatient hospitalizations for unintentional injury in 2008.

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* (318 inpatient discharges), *other injury causes by animals* (754 inpatient discharges), and *exposure to excessive natural heat* (272 inpatient discharges). *Exposure to excessive natural cold* accounted for 7.8 percent (46 out of 593) of inpatient hospitalizations for injuries due to natural and environmental factors.

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Figure 4D-3
Percent Distribution of Injury-related Emergency Room Visits by Intent of Injury, Arizona Residents, 2008

In 2008, there were 400,389 injury-related emergency room visits among Arizona residents, 6.4 times as many as inpatient hospitalizations for injury. *Unintentional injuries or accidents* accounted for nine out of ten (351,557 or 87.8 percent) of all injury-related emergency room visits (**Figure 4D-3, Table 4D-2**). The external cause of injury was classified as *assault* for 18,107 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 (3.1 percent vs. 1.5 percent, respectively, **Figure 4D-3, Table 4D-2**).

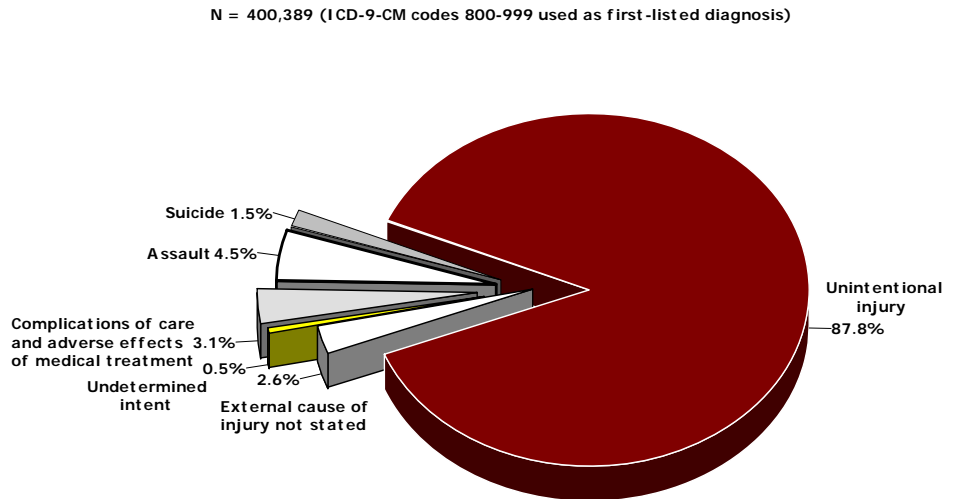
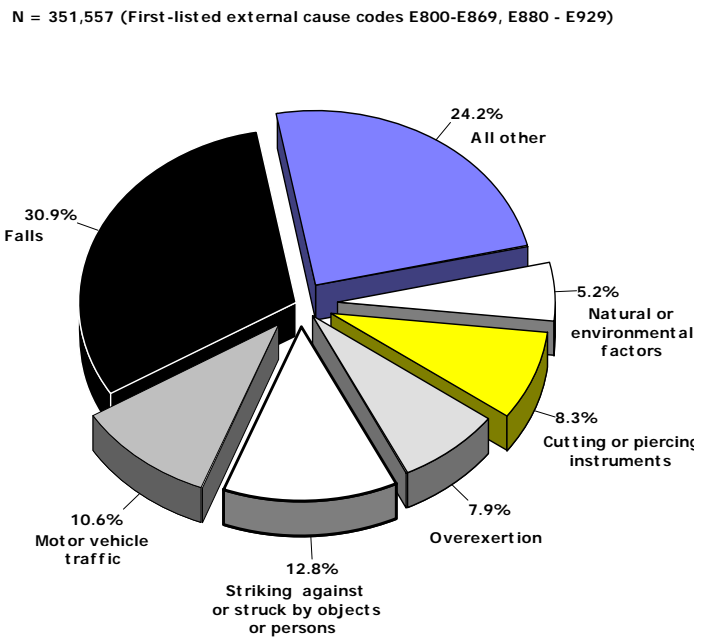


Figure 4D-4
Percent Distribution of Injury-related Emergency Room Visits by Mechanism of Unintentional Injury, Arizona Residents, 2008

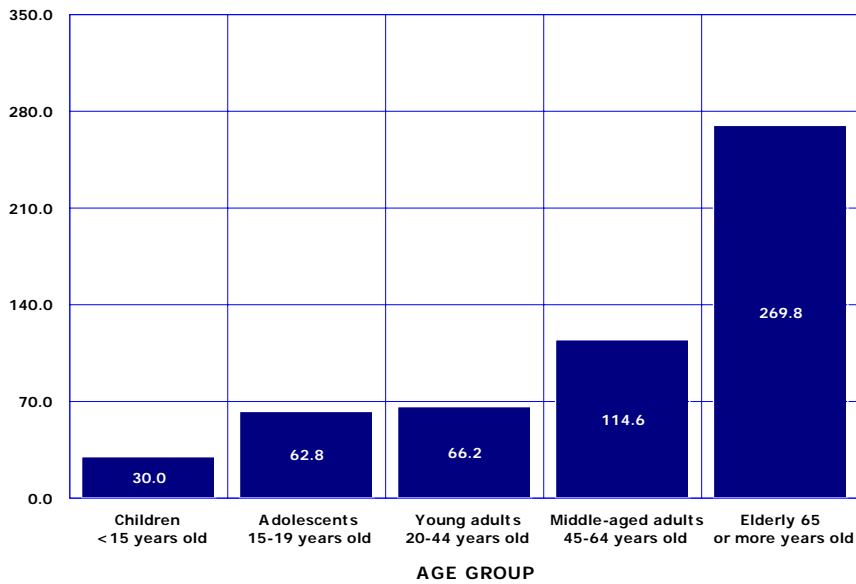
Accidental falls (108,645 ER visits, **Table 4D-2**), *striking against or struck by objects or persons* (44,807), and *motor vehicle traffic accidents* (37,365) were the three most frequent mechanisms of unintentional injuries treated in emergency rooms (**Figure 4D-4, Table 4D-2**).

Overexertion (27,899 visits) accounted for a greater number of emergency room visits than the following two categories of unintentional injury combined: *foreign body accidentally entering eye or other orifice* (8,739), and *natural and environmental factors* (18,332 **Table 4D-2**).



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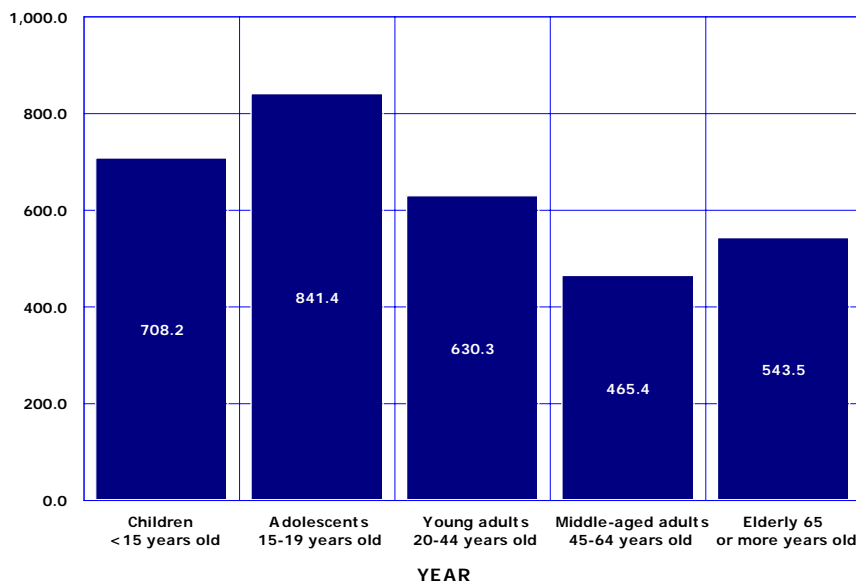
Figure 4D-5
Rates* for Injury-related Inpatient Discharges by Age Group,
Arizona Residents, 2008



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 269.8 per 10,000 elderly Arizonans 65+ was 9 times greater than the rate of 30.0/10,000 for children under the age of 15 years.

*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, 2008



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 841.4 ER visits per 10,000 adolescents 15-19 years old was 1.8 times greater than the rate of 465.4 /10,000 among middle-aged Arizonans 45-64 years old.

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

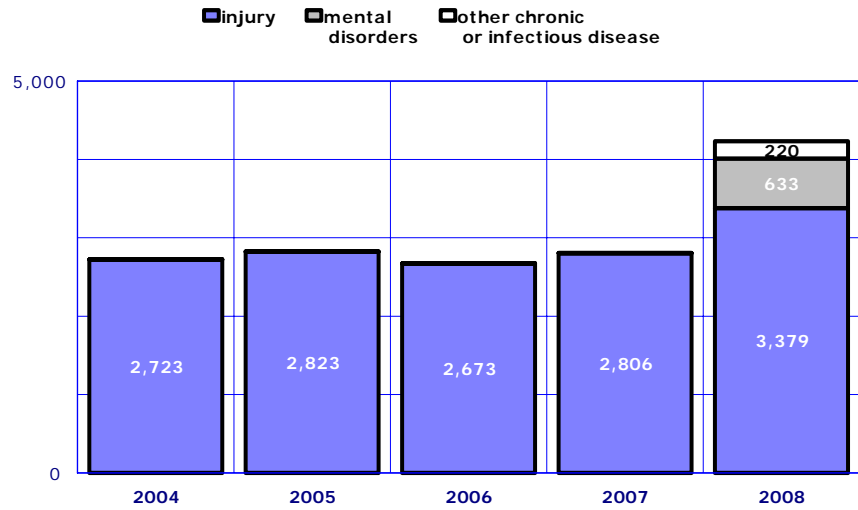
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In 2008, there was a substantial increase in the number of suicide-related inpatient discharges and emergency room visits (Figure 4D-7 and Figure 4D-8). It was only partly due to the change in the reporting requirements for hospitals. *Injury or poisoning* was the principal diagnosis on 3,379 inpatient discharge records, which also included the E codes for suicide (E950-E959). *Mental disorders* were identified as the principal diagnosis on the additional 633 suicide-related records. For the additional 220 inpatient discharges mentioning suicide attempt, the principal diagnosis was classified as either *chronic or infectious disease*.

From 2007 to 2008 there was a 20.4 percent increase in suicide-related inpatient discharges where the principal diagnosis was an injury.

From among the 4,232 inpatient discharges related to a suicide attempt in 2008, 1,639 or 38.7 percent were transferred to a psychiatric facility.

Figure 4D-7
Suicide-related Inpatient Discharges by Principal Diagnosis and Year, Arizona Residents, 2008



Injury or poisoning was the principal diagnosis on 6,014 ER discharge records, which also included the E codes for suicide (E950-E959). *Mental disorders* were identified as the principal diagnosis on the additional 1,131 suicide-related records. For the additional 298 ER discharges mentioning suicide attempt, the principal diagnosis was classified as either *chronic or infectious disease*.

From 2007 to 2008 there was a 29.2 percent increase in suicide-related emergency room visits where the principal diagnosis was an injury.

From among 7,444 suicide attempt-related ER visits in 2008, 1,854 or 24.9 percent of the patients were transferred to a psychiatric facility.

Figure 4D-8
Suicide-related Emergency Room Visits by Principal Diagnosis and Year, Arizona Residents, 2008

