

Injury among Residents of Pima County, Arizona 2012

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Injury is a public health problem that impacts the lives of thousands of Arizona residents each year. Chronic pain, disability, large medical bills, changes in quality of life, and premature death are just some of the possible effects of injuries. These effects can extend beyond injured individuals to their families and communities. With non-fatal injuries, family members are often required to provide care, which can result in time away from work, loss of income, and increases in stress within the family. At the community level, the financial burden of injuries can include medical expenses, rehabilitation, lost wages, and lost productivity. Most injuries are predictable and preventable. Understanding the causes of injury is an important step toward reducing injury-related morbidity and mortality.

The following report identifies the leading causes of injury among residents of Pima County in 2012. This report is intended to be used as a guide for strategy development, program implementation, and evaluation. The Arizona Department of Health Services, Office of Injury Prevention, operates under the vision of reducing injuries in Arizona using integrated surveillance and evidence-based interventions. This report was generated to increase awareness of county-specific injury issues and to facilitate opportunities for effective injury prevention activities.

Figure 1. Injury Pyramid for Pima County Residents, Arizona 2012

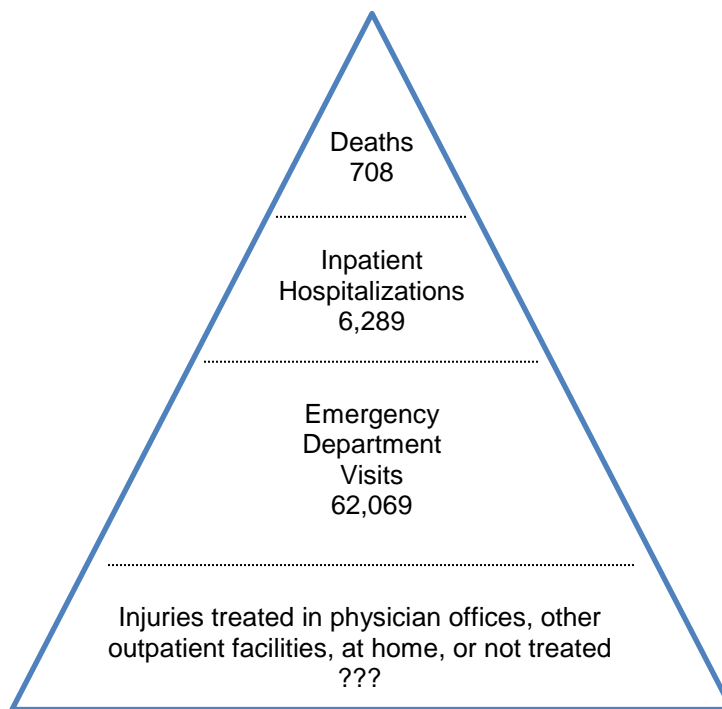
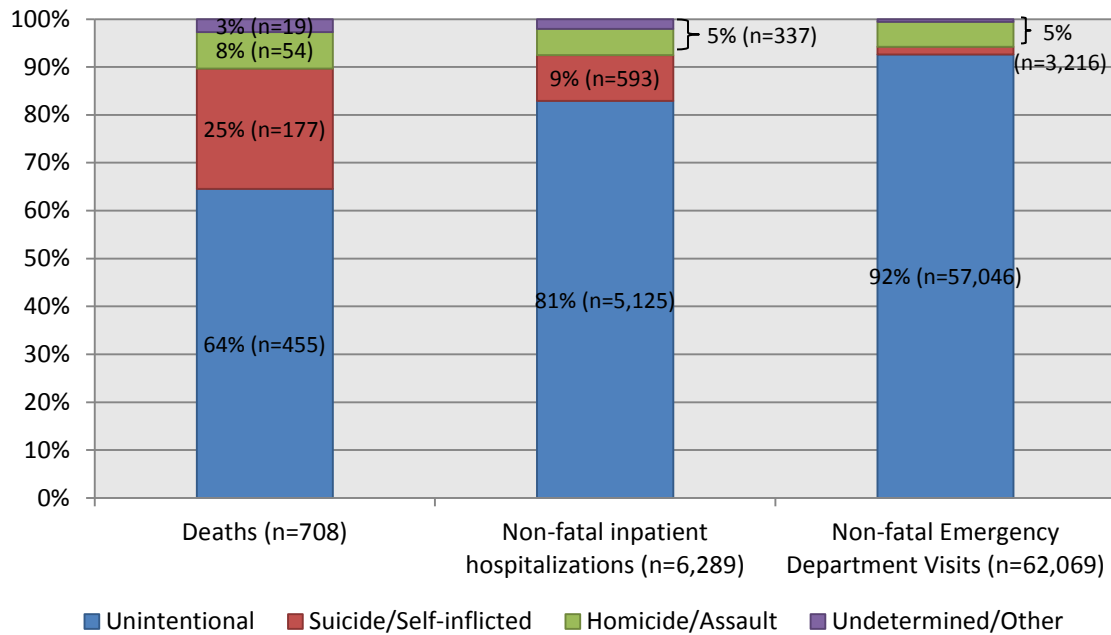


Figure 1 shows an injury pyramid for residents of Pima County during 2012. This pyramid shows that deaths represent the smallest proportion of injuries. The proportions increase

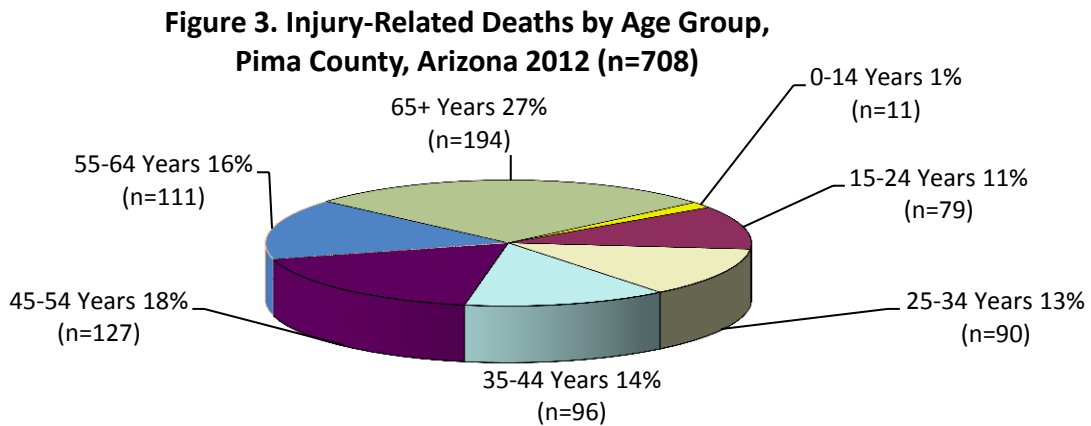
towards the foundation of the pyramid, which is comprised of hospital discharges, emergency department visits, and self-care. Although injuries that do not require medical treatment may be the most numerous, no existing datasets capture these types of injuries. Figure 2 below shows the distribution of injuries in Pima County by manner.

Figure 2. Injury-related Deaths, Hospitalizations, and Emergency Department Visits by Manner, Pima County, Arizona, 2012



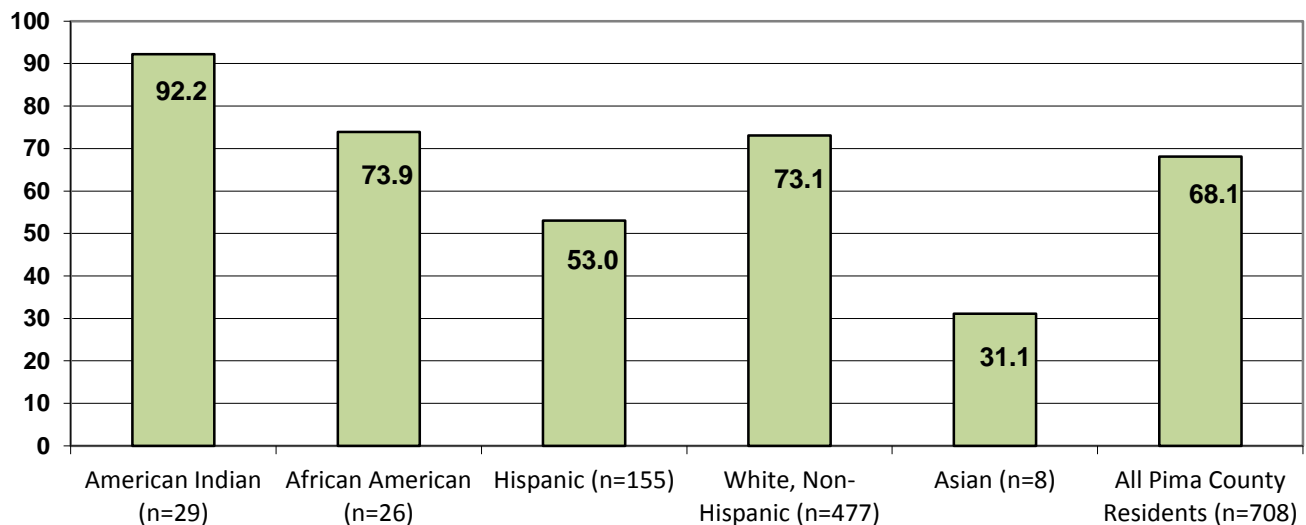
Deaths

In 2012, there were 708 injury-related deaths in Pima County. Most of these deaths were among males (66 percent, n=466), and females accounted for 34 percent (n=242). The largest percentage of deaths was among individuals ages 65 years and older (27 percent, n=194). Age distributions are shown in Figure 3.



The highest injury-related death rate was among American Indians, with a rate of 92.2 deaths per 100,000 Pima County residents. African Americans had the second highest injury-related death rate of 73.9 per 100,000 residents. Figure 4 shows the age-adjusted death rates per 100,000 residents by race/ethnicity.

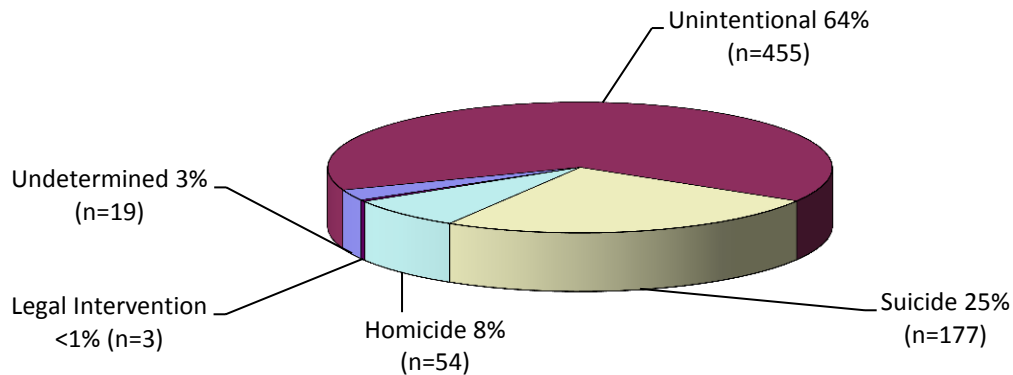
Figure 4. Age-Adjusted Injury-Related Death Rates per 100,000 Residents by Race/Ethnicity, Pima County, Arizona 2012 (n=708)



13 individuals of unknown/other race/ethnicity are included in the Pima County total

Unintentional injury is the leading cause of death among all residents in the state of Arizona, as well as in Pima County. Sixty-four percent of injury-related deaths in Pima County were due to unintentional injuries (n=455); 25 percent were suicides (n=177); 8 percent were homicides (n=54); 3 percent were of undetermined intent (n=19); and 3 deaths resulted from legal intervention. Figure 5 shows injury-related deaths by intent.

Figure 5. Injury-Related Deaths by Intent, Pima County, Arizona 2012 (n=708)



Pima County Injury-Related Deaths Compared to Other Arizona Counties

Table 1 shows the intent of injury-related deaths for residents of Pima County compared to residents of the rest of Arizona. The leading intent of injury-related deaths was unintentional for both Pima County and the remaining counties, accounting for the majority of injury-related deaths.

Table 1. Intent of Injury-Related Deaths, Pima County Compared to Other Arizona Counties, 2012			
Pima County (n=708)		Arizona, excluding Pima County (n=3,788)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	64	Unintentional	63
Suicide	25	Suicide	24
Homicide	8	Homicide	9
Undetermined	3	Undetermined	4

Suicide

Males accounted for the majority of suicides in Pima County (76 percent, n=134), while females accounted for 24 percent (n=43). Twelve percent of suicides were among individuals ages 15 to 24 years (n=22); 68 percent were among individuals ages 25 to 64 years (n=120); and 19

percent were among individuals 65 years and older (n=13). There were two suicides among children ages 5 to 14. The most common cause of suicide was firearms (54 percent, n=96).

Homicide

Males accounted for the majority of homicides in Pima County (72 percent, n=39), while females accounted for 28 percent (n=15). Seven percent of homicides were among individuals 14 years and younger (n=4); 26 percent were among individuals ages 15 to 24 years (n=14); 48 percent were among individuals ages 25 to 44 years (n=26); and 19 percent were among individuals 45 years and older (n=10). The most common cause of homicide was firearms (70 percent, n=38).

Unintentional Injury

The most common causes of unintentional injury-related deaths in Pima County were poisonings (35 percent, n=159) and falls (27 percent, n=121). The causes of unintentional injury-related deaths during 2012 in Pima County are shown in Table 2.

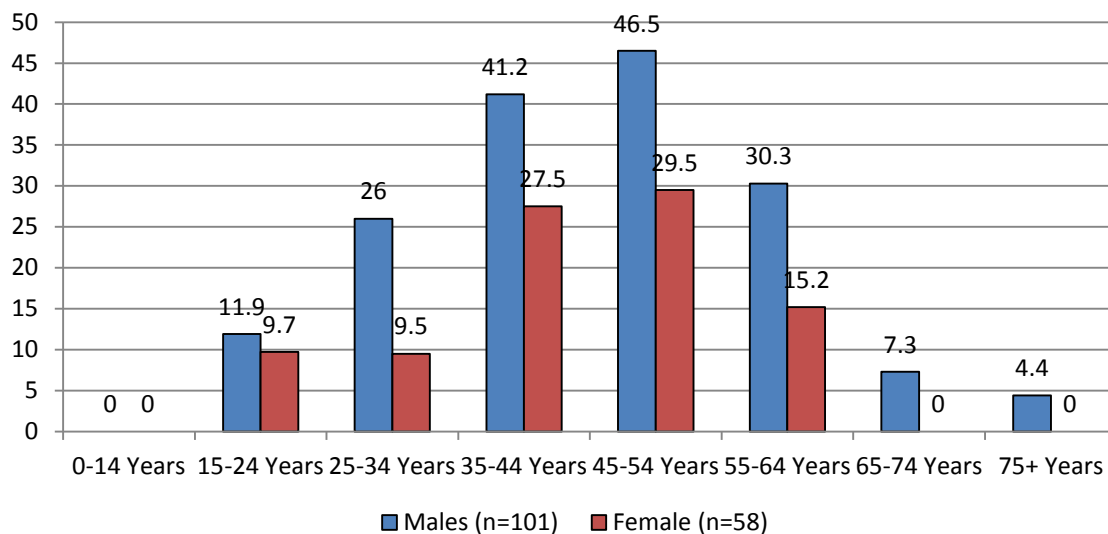
Table 2. Causes of Unintentional Injury-Related Deaths among Pima County Residents, Arizona 2008		
Cause	Number	Percent
Poisoning	159	35%
Falls	121	27%
Motor Vehicle Crashes	103	23%
Suffocation	23	5%
Drowning	7	2%
Fire/Flame	6	1%
Natural/Environmental	6	1%
Other land transport	6	1%
Other/Specified	6	1%
Unspecified	6	1%
Total	455	100%

Poisoning

Fatalities resulting from poisonings are a significant problem in Arizona. Beginning in 2007, poisoning-related deaths surpassed motor-vehicle crashes as the leading injury-related cause of death among Arizonans. Poisoning was the leading cause of injury-related mortality among Pima County residents in 2012. When looking at poisoning deaths by age group, males had higher mortality rates than females in each age group, though the ratio of deaths among males and females varied. Adults 45 through 54 years of age had the highest rate of fatalities among both males and females. Adults in the 25 to 34 age group

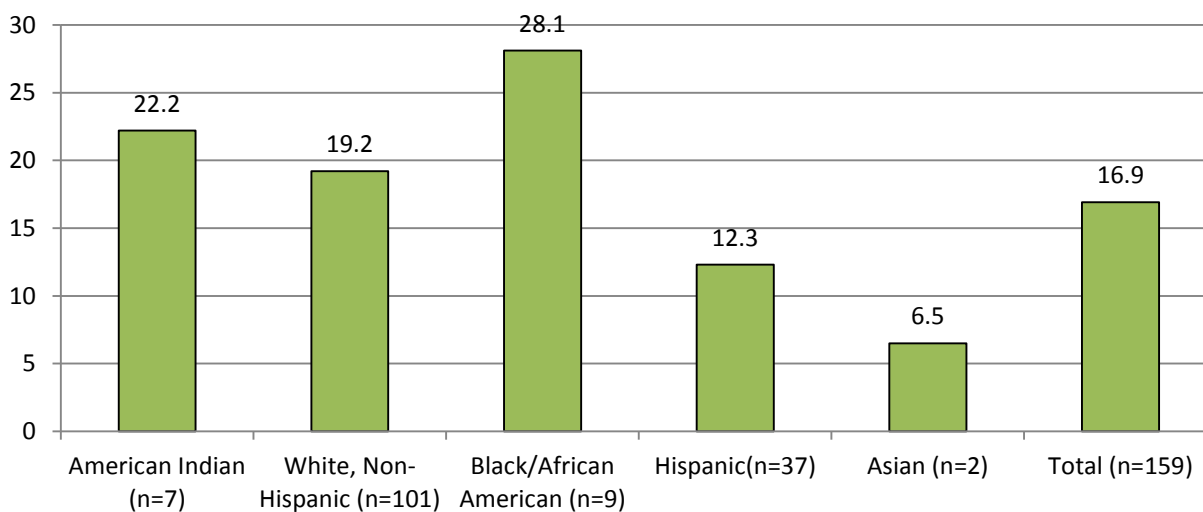
had the highest ratio of deaths among males versus females. Figure 6 shows the poisoning-related mortality rates per 100,000 Pima County residents by age group and sex.

Figure 6. Unintentional Poisoning Mortality Rates per 100,000 Residents by Age and Sex, Pima County, Arizona 2012



African American residents had the highest age-adjusted poisoning-related mortality rate in 2012 (28.1 deaths per 100,000 residents), followed American Indians (22.2 deaths per 100,000 residents). Hispanic residents had the lowest stable poisoning-related mortality rate in 2012 with 12.3 deaths per 100,000 residents. Though Asian residents had a very low mortality rate, the rate is not stable due to the low number of deaths. Figure 7 shows the age-adjusted poisoning-related mortality rates by race/ethnicity for Pima County residents in 2012.

Figure 7. Age-Adjusted Poisoning-Related Mortality Rate per 100,000 Residents by Race/Ethnicity, Pima County, Arizona 2012

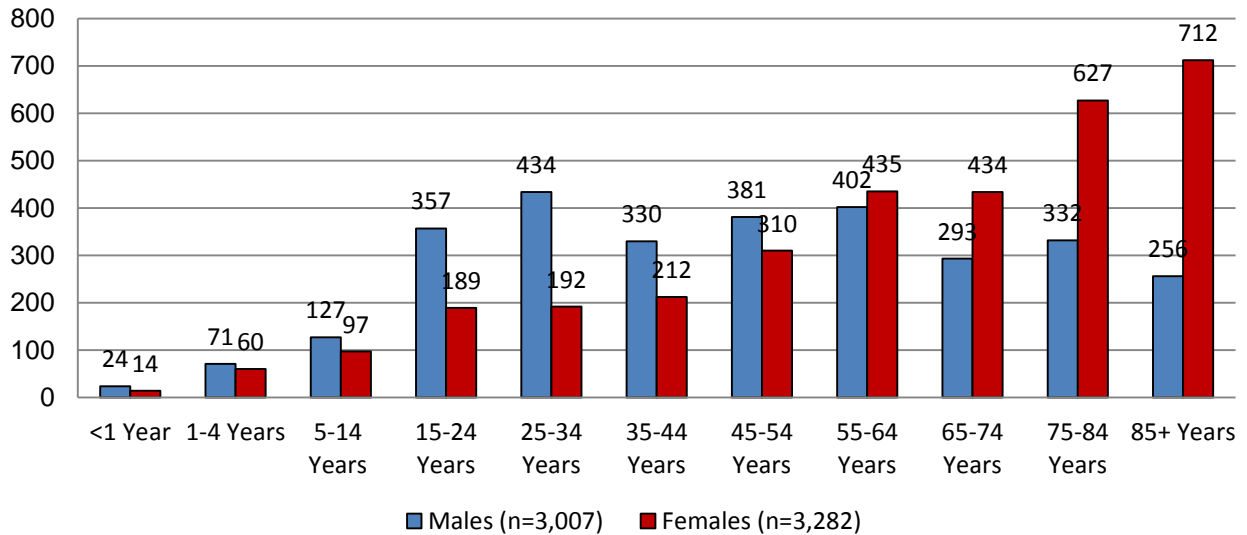


There were 3 deaths among individuals of other or unknown race/ethnicity.

Non-Fatal Inpatient Hospitalizations

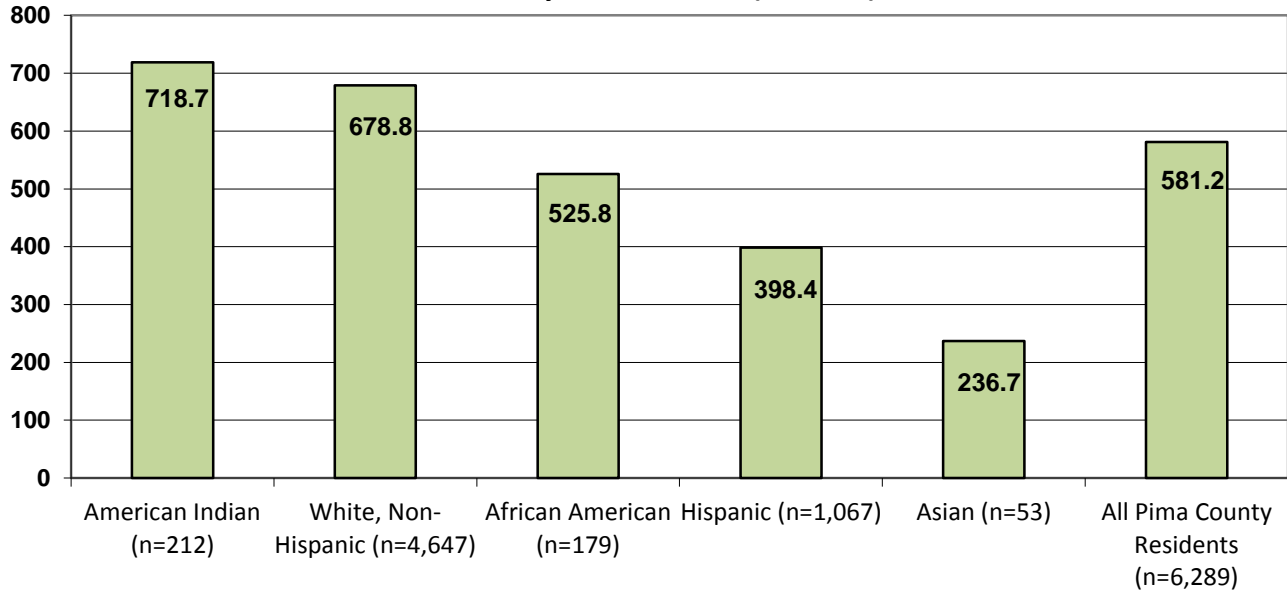
In 2012, there were 6,289 non-fatal inpatient hospitalizations due to injury among residents of Pima County. Forty-eight percent were male (n=3,007) and 52 percent were female (n=3,282). Figure 8 shows injury-related inpatient hospitalizations by age group and gender among residents of Pima County.

Figure 8. Injury-Related Inpatient Hospitalizations by Age Group and Gender, Pima County, Arizona 2012 (n=6,289)



American Indian residents of Pima County had an injury-related inpatient hospitalization rate of 718.7 hospitalizations per 100,000 residents. Non-Hispanic Whites had the second highest rate with 678.8 injury-related hospitalizations per 100,000 residents. Figure 9 shows age-adjusted injury-related inpatient hospitalization rates by race/ethnicity.

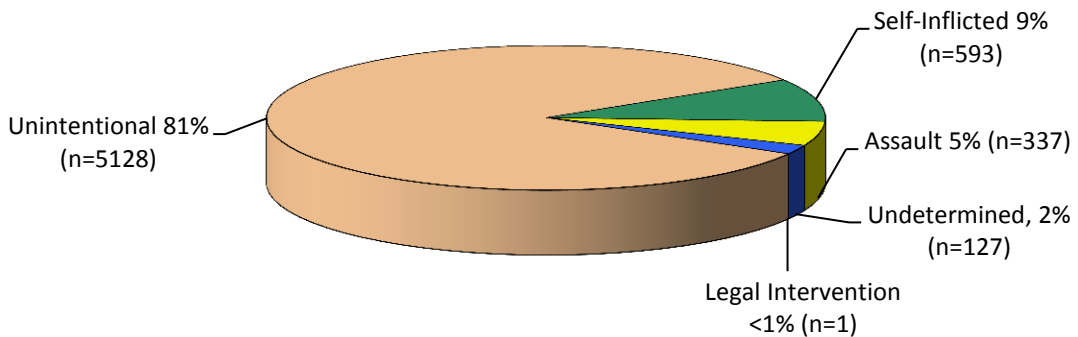
Figure 9. Age-Adjusted Injury-Related Inpatient Hospitalization Rates per 100,000 Residents by Race/Ethnicity, Pima County, Arizona 2012 (n=6,289)



131 individuals of unknown race/ethnicity are included in the Pima County total

Eighty-one percent of the inpatient hospitalizations were due to unintentional injuries (n=5,125); nine percent were due to self-inflicted injuries (n=593); 5 percent were due to assaults (n=337); and 2 percent were of undetermined intent (n=127). There was 1 hospitalizations due to legal intervention. Figure 10 shows injury-related hospitalizations by intent.

Figure 10. Injury-Related Inpatient Hospitalizations by Intent, Pima County, Arizona 2012 (n=6,289)



Pima County Injury-Related Hospitalizations Compared to Other Arizona Counties

Table 3 shows the intent of injury-related hospitalizations for residents of Pima County compared to residents of the rest of Arizona. **The leading intent of injury-related hospitalizations was unintentional for both Pima County and the remaining counties, accounting for the majority of injury-related hospitalizations.** Pima County and the rest of Arizona had similar percentages of hospitalizations due to self-inflicted injuries and assaults.

Table 3. Intent of Injury-Related Inpatient Hospitalizations, Pima County Compared to Other Arizona Counties, 2012			
Pima County (n=6,289)		Arizona, excluding Pima County (n=33,826)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	81	Unintentional	82
Self-Inflicted	9	Self-Inflicted	9
Assault	5	Assault	6
Undetermined	2	Undetermined	2

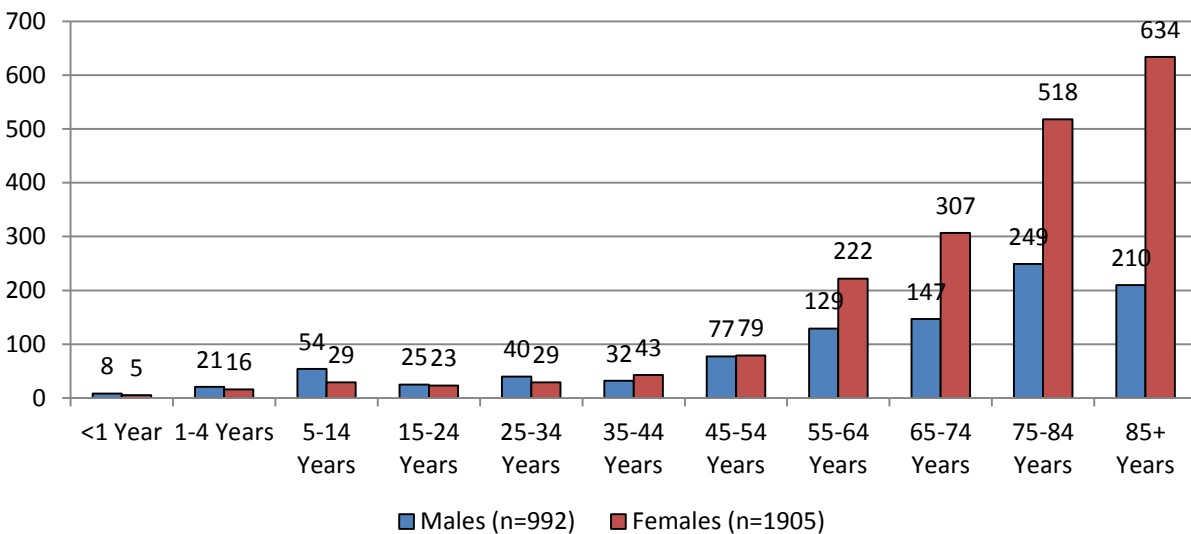
The most common causes of unintentional injury-related hospitalizations in Pima County were falls (57 percent, n=2,897) and motor vehicle traffic crashes (12 percent, n=602). Table 4 shows the causes of unintentional injury-related hospitalizations among residents of Pima County.

Table 4. Causes of Unintentional Injury-Related Inpatient Hospitalizations among Pima County Residents, Arizona 2008		
Cause	Number	Percent
Fall	2897	57%
Motor vehicle traffic	602	12%
Poisoning	568	11%
Transport	153	3%
Natural/Environmental	144	3%
Other Pedestrian	130	3%
Struck by/against	125	2%
Unspecified	119	2%
Other/Specified	92	1%
Fire/Flame	72	1%
Overexertion	62	1%
Total	5125	100%

Falls

Males accounted for 34 percent of unintentional fall-related hospitalizations (n=992) and females accounted for 66 percent (n=1,905). Five percent of fall-related hospitalizations were among children 14 years and younger (n=133); 2 percent were among individuals ages 15 to 24 years (n=48); 22 percent were among individuals ages 25 to 64 years (n=651); and 71 percent were among individuals 65 years and older (n=2,065). Figure 11 shows the inpatient hospitalizations due to unintentional falls by age for Pima County, Arizona.

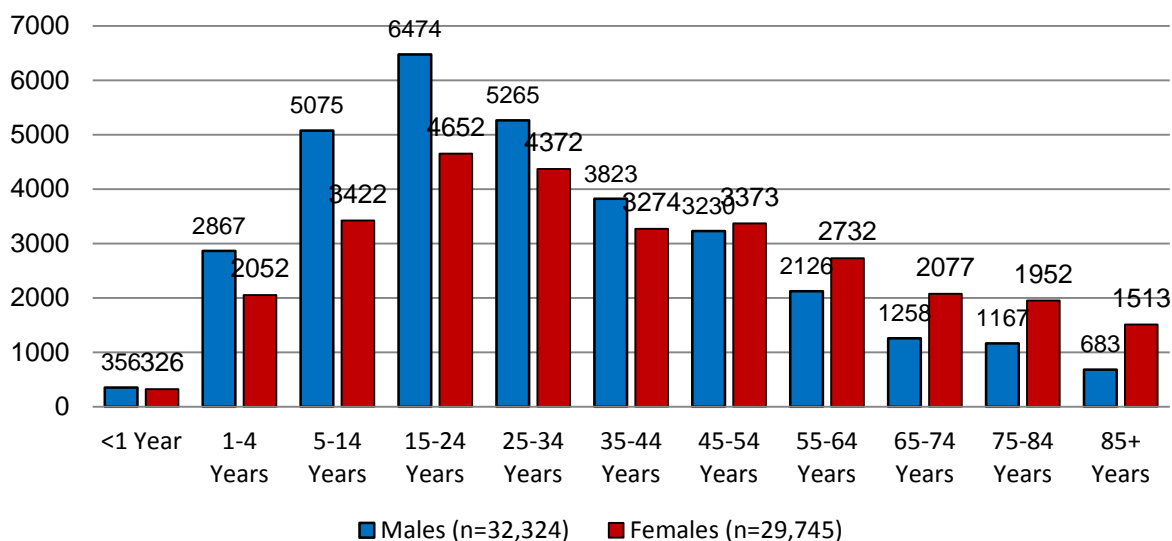
Figure 11. Inpatient Hospitalizations due to Unintentional Falls by Age, Pima County, Arizona 2012 (n=2,897)



Non-Fatal Emergency Department Visits

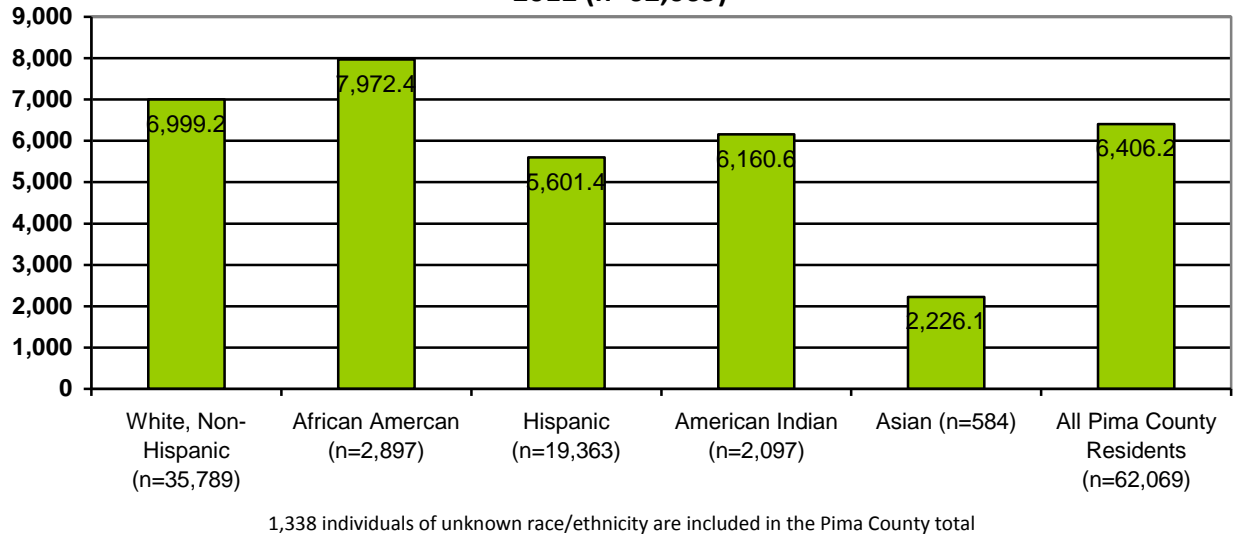
In 2012, there were 62,069 injury-related emergency department visits among residents of Pima County. Males accounted for 52 percent of these visits (n=32,324) and females accounted for 48 percent (n=29,745). Figure 10 shows injury-related emergency department visits by age group. Figure 12 shows the injury-related Emergency department visits distributed by age group and sex for Pima County.

Figure 12. Injury-Related Emergency Department Visits by Age Group and Sex, Pima County, Arizona 2012 (n=62,0269)



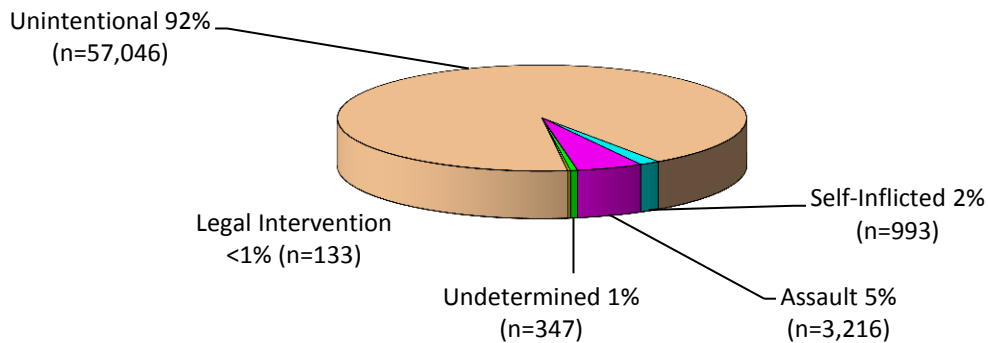
Non-Hispanic White residents of Pima County had an injury-related emergency department visit rate of 5,658.5 visits per 100,000 residents. African Americans had the second highest rate with 5,628.0 injury-related emergency department visits per 100,000 residents. Figure 13 shows age-adjusted injury-related emergency department visit rates by race/ethnicity.

Figure 13. Age-Adjusted Injury-Related Emergency Department Visit Rates per 100,000 Residents by Race/Ethnicity, Pima County, Arizona 2012 (n=62,069)



Ninety-two percent of the emergency department visits were due to unintentional injuries (n=57,046); 5 percent were due to assaults (n=3,216); and 2 percent were due to self-inflicted injuries (n=993). There were 347 injury-related emergency department visits of undetermined intent and 133 visits were due to legal intervention. Figure 14 shows emergency department visits by intent.

Figure 14. Injury-Related Emergency Department Visits by Intent, Pima County, Arizona 2012 (n=62,069)



Pima County Injury-Related Emergency Department Visits Compared to Other Arizona Counties

Table 5 shows the intent of injury-related emergency department visits in Pima County for residents of Pima County compared to residents of the rest of Arizona. The leading intent of

injury-related visits was unintentional for both Pima County and the remaining counties, accounting for the majority of injury-related visits. Pima County and the rest of Arizona had similar percentages of visits due to self-inflicted injuries and assaults.

Pima County (n=62,069)		Arizona, excluding Pima County (n=347,553)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	92	Unintentional	93
Self-Inflicted	2	Self-Inflicted	1
Assault	5	Assault	4
Undetermined	1	Undetermined	1

The most common causes of unintentional injury-related emergency department visits were falls (34 percent, n=19,229) and struck by/against injuries (13 percent, n=7,564). Table 6 shows the causes of unintentional injury-related emergency department visits for Pima County residents in 2012.

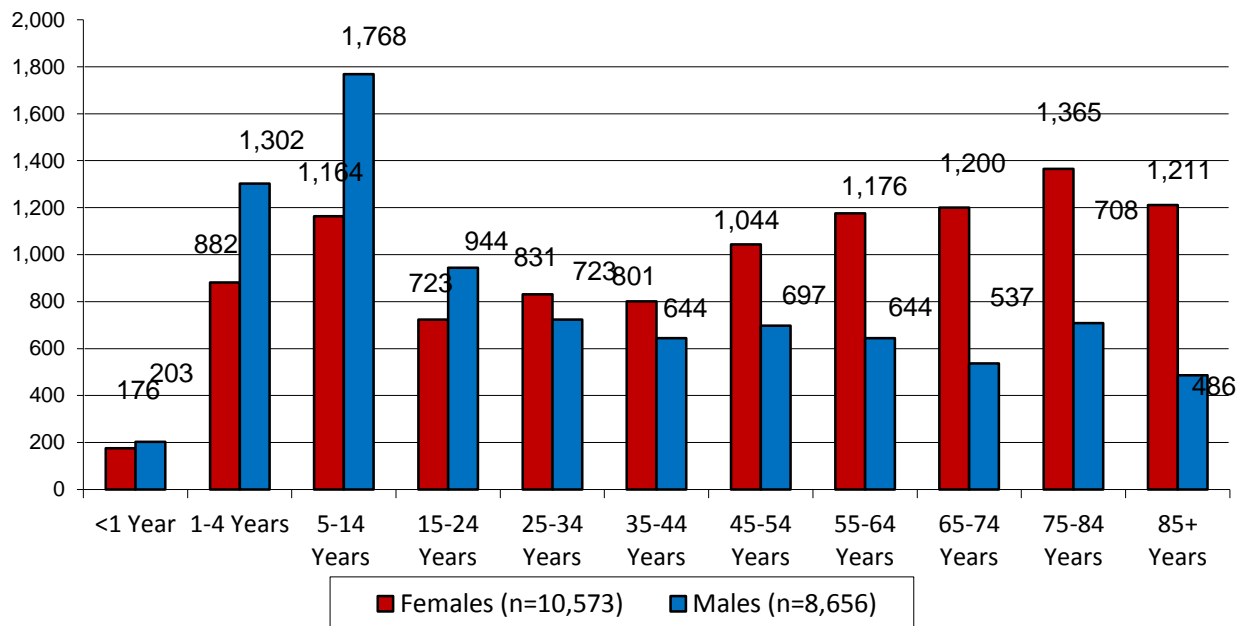
Cause	Number	Percent
Fall	19,229	34%
Struck by/against	7,564	13%
Motor vehicle traffic	6,613	12%
Overexertion	5,358	9%
Cut/pierce	4,140	7%
Nature/environment	3,218	6%
Unspecified	2,713	5%
Other/Specified	2,666	5%
Other Not specified	1,439	3%
Pedal/cyclist	1,122	2%
Poisoning	945	2%
Total	57,046	100%

Falls

There were 19,229 emergency department visits due to unintentional falls. Males accounted for 45 percent of these visits (n=8,656) and females accounted for 55 percent (n=10,573). Thirty percent of fall-related emergency department visits were among children 14 years and younger (n=4,550); 9 percent of visits were among individuals ages 15 to 24 years (n=1,402); 34 percent were among individuals ages 25 to 64 years (n=5,250); and 27 percent were among individuals 65 years and older (n=4,164).

The highest number of unintentional fall-related emergency department visits were among males ages 5 to 14 years. Females 75 to 84 years of age had the second highest number of emergency department visits due to unintentional falls (n=1,365). Figure 15 shows emergency department visits of unintentional falls by age group and sex.

Figure 15. Unintentional Fall-Related Emergency Department Visits by Age and Gender, Pima County, Arizona 2012 (n=19,229)



Summary

In 2012, there were 708 injury-related deaths in Pima County, and the largest percentage of deaths were among adults ages 65 years and older (27 percent, n=194). The majority of these deaths were due to unintentional injuries (64 percent, n=455). The most common cause of unintentional injury deaths were poisoning (35%, n=159) and falls (27%, n=121). Twenty-five percent of injury-related deaths in Pima County were suicides (n=177); 8 percent were homicides (n=54); and 3 percent were of undetermined intent (n=19). Three deaths resulted from legal intervention.

There were 6,289 non-fatal inpatient hospitalizations due to injury among residents of Pima County. Forty-eight percent of the hospitalizations were among males (n=3,007) and 52 percent were female (n=3,282). Eighty-one percent of the hospitalizations were due to unintentional injuries (n=5,128); 9 percent were due to self-inflicted injuries (n=593); 5 percent were assaults (n=337); and 2 percent were of undetermined intent (n=127). One hospitalization was due to legal intervention. The most common cause of unintentional injury-related hospitalizations was falls (57 percent, n=2,897).

There were 62,069 injury-related non-fatal emergency department visits among residents of Pima County in 2012. The largest percentage of visits was among males ages 5 to 34 years (27 percent, n=16,814). Ninety-two percent of the emergency department visits were due to unintentional injuries (n=57,046); 5 percent were due to assaults (n=3,216); and 2 percent were due to self-inflicted injuries (n=993). There were 347 injury-related emergency department visits of undetermined intent and 133 visits were due to legal intervention. The most common cause of unintentional injury-related emergency department visits was falls (34 percent, n=19,229).