

# **Injury among Residents of Yavapai County, Arizona 2008**

Resources for the development of this report were provided through funding to the Arizona Department of Health Services from the Centers for Disease and Control and Prevention, Cooperative Agreement 5U17CE924770-04, Integrated Core Injury Prevention and Control Program

Permission to quote from or reproduce materials from this publication is granted when acknowledgment is made.



Prepared by: Alana Shacter, MPH  
150 North 18<sup>th</sup> Avenue, Suite 320  
Phoenix, AZ 85007  
Injury Prevention Program  
Bureau of Women's and Children's Health  
Arizona Department of Health Services  
September 2009

**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 Yavapai County in 2008. This report is intended to be used as a guide for strategy development, program implementation, and evaluation. The Arizona Department of Health Services Injury Prevention Program 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 Yavapai County Residents, Arizona 2008**

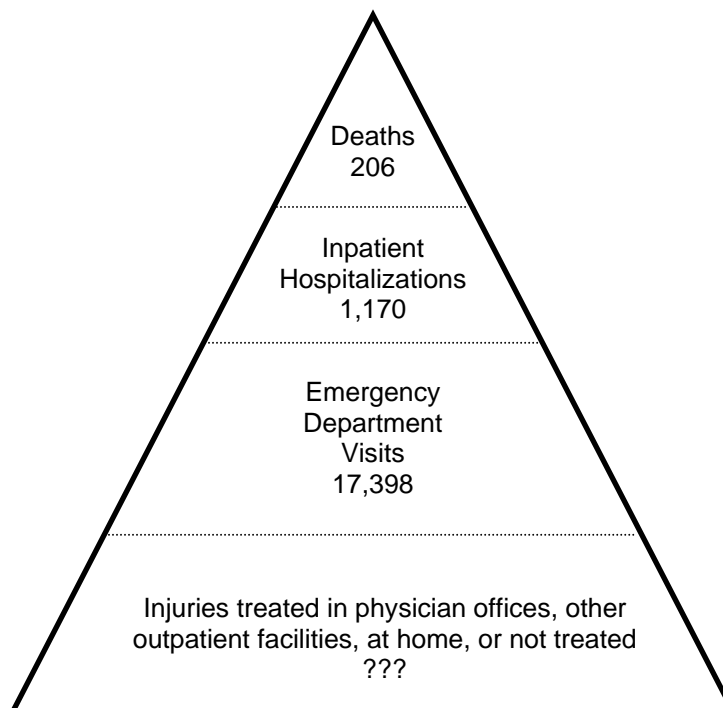
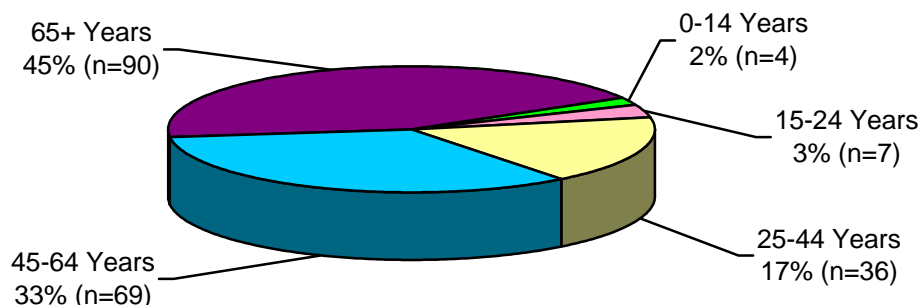


Figure 1 shows an injury pyramid for residents of Yavapai County during 2008. This pyramid shows that deaths represent the smallest proportion of injuries. The proportions increase towards the foundation of the pyramid, which is comprised of hospital discharges, emergency department visits, and self care. Although injuries that do not require medical treatment may be the most numerous, no existing datasets capture these types of injuries.

## Deaths

In 2008, there were 206 injury-related deaths in Yavapai County. Most of these deaths were among males (62 percent, n=127), and females accounted for 38 percent (n=79). The largest percentage of deaths was among individuals 65 years and older (45 percent, n=90). Age distributions are shown in Figure 2.

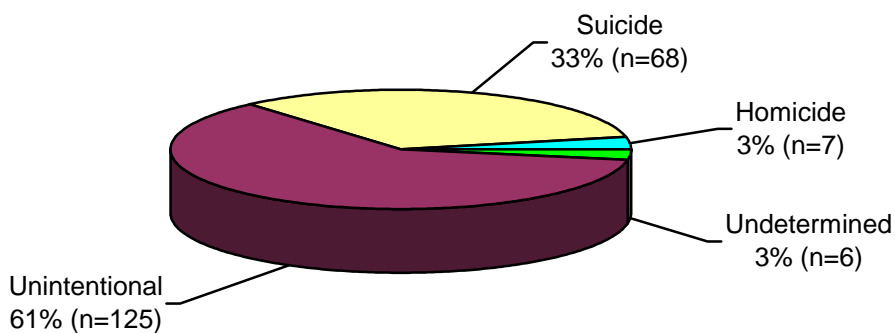
**Figure 2. Injury-Related Deaths by Age Group, Yavapai County, Arizona 2008 (n=206)**



Non-Hispanic Whites accounted for the majority of injury-related deaths in Yavapai County (92 percent, n=190), followed by Hispanics (5 percent, n=10). Rates by racial/ethnic groups could not be calculated due to small sample sizes.

**For the state of Arizona, unintentional injury is the leading cause of death among all residents ages 1 to 44 years. However, for residents of Yavapai County, unintentional injury is the leading cause of death for individuals ages 1 to 14 years and 20 to 44 years.**<sup>1</sup> Sixty-one percent of injury-related deaths in Yavapai County were due to unintentional injuries (n=125); 33 percent were suicides (n=68); 3 percent were homicides (n=7); and 3 percent were of undetermined intent (n=6). Figure 3 shows injury-related deaths by intent.

**Figure 3. Injury-Related Deaths by Intent, Yavapai County, Arizona 2008 (n=206)**



1. Arizona Health Status and Vital Statistics 2008.

## Yavapai County Injury-Related Deaths Compared to Other Arizona Counties

Table 1 shows the intent of injury-related deaths for residents of Yavapai County compared to residents of the rest of Arizona. The leading intent of injury-related deaths was unintentional for both Yavapai County and the remaining counties, accounting for the majority of injury-related deaths. Yavapai County had a larger percentage of suicides (33 percent) than the remaining counties (22 percent). Yavapai County had a smaller percentage of homicides (3 percent) than the rest of Arizona (12 percent).

Yavapai County (n=206)		Arizona, excluding Yavapai County (n=3,747)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	61	Unintentional	64
Suicide	33	Suicide	22
Homicide	3	Homicide	12
Undetermined	3	Undetermined	2

### *Suicide*

Males accounted for the majority of suicides in Yavapai County (65 percent, n=44), while females accounted for 35 percent (n=24). Four percent of suicides were among individuals ages 15 to 24 years (n=3); 21 percent were among individuals ages 25 to 44 years (n=14); 46 percent were among individuals ages 45 to 64 years (n=31); and 29 percent were among adults 65 years and older (n=20). The most common cause of suicide was firearms (65 percent, n=44).

### *Unintentional Injury*

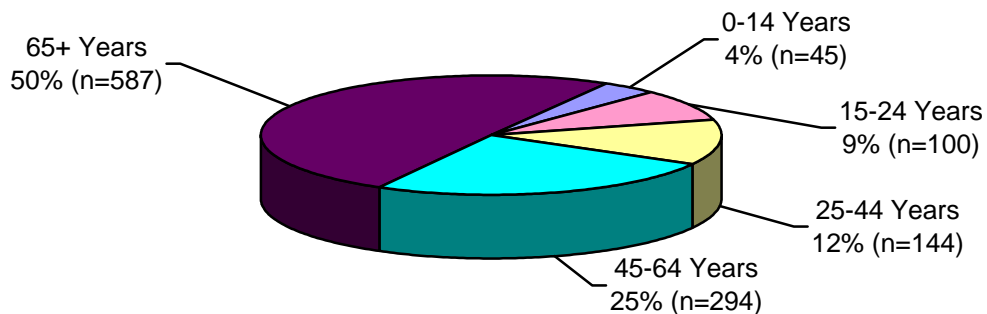
The most common causes of unintentional injury-related deaths in Yavapai County were falls (39 percent, n=49) and motor vehicle traffic crashes (26 percent, n=33). The causes of unintentional injury-related deaths during 2008 in Yavapai County are shown in Table 2.

<b>Cause</b>	<b>Number</b>	<b>Percent</b>
Fall	49	39%
Motor vehicle traffic	33	26%
Poisoning	19	15%
Other/unspecified	8	6%
Suffocation	6	5%
Other land transport	4	3%
Fire/hot objects	3	2%
Nature/environment	3	2%
<b>Total</b>	<b>125</b>	<b>100%</b>

## Non-Fatal Inpatient Hospitalizations

In 2008, there were 1,170 non-fatal inpatient hospitalizations due to injury among residents of Yavapai County. Forty-two percent were male (n=486) and 58 percent were female (n=684). Fifty percent of the hospitalizations were among individuals 65 years and older (n=587). Figure 4 shows injury-related inpatient hospitalizations by age group among residents of Yavapai County.

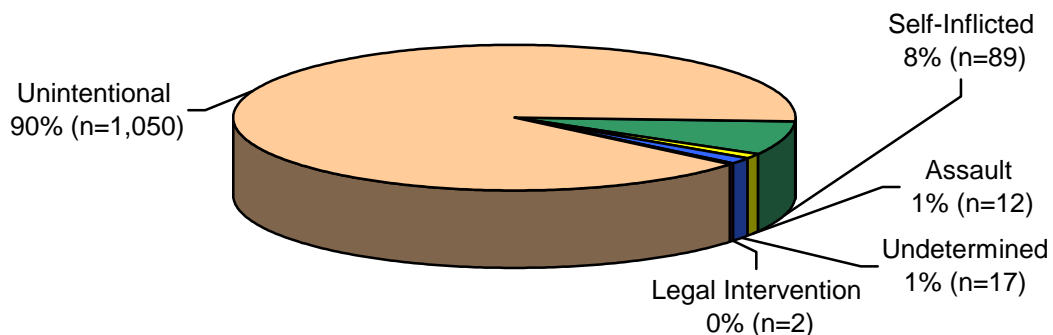
**Figure 4. Injury-Related Inpatient Hospitalizations by Age Group, Yavapai County, Arizona 2008 (n=1,170)**



There were 1,083 injury-related hospitalizations among White, Non-Hispanic residents of Yavapai County (93 percent). The second highest number was among Hispanics (5 percent, n=61). Rates by racial/ethnic groups could not be calculated due to small sample sizes.

**Ninety percent of the inpatient hospitalizations were due to unintentional injuries (n=1,050); 8 percent were due to self-inflicted injuries (n=89); 1 percent were due to assaults (n=12); and 1 percent were of undetermined intent (n=17).** There were two hospitalizations due to legal intervention. Figure 5 shows injury-related hospitalizations by intent.

**Figure 5. Injury-Related Inpatient Hospitalizations by Intent, Yavapai County, Arizona 2008 (n=1,170)**



## Yavapai County Injury-Related Hospitalizations Compared to Other Arizona Counties

Table 3 shows the intent of injury-related hospitalizations for residents of Yavapai County compared to residents of the rest of Arizona. **The leading intent of injury-related hospitalizations was unintentional for both Yavapai County and the remaining counties, accounting for the majority of injury-related hospitalizations.** Yavapai County had a smaller percentage of hospitalizations due to assaults (1 percent) than the remainder of Arizona (6 percent).

Yavapai County (n=1,170)		Arizona, excluding Yavapai County (n=31,939)	
Intent	Percent of Total	Intent	Percent of Total
Unintentional	90	Unintentional	82
Self-Inflicted	8	Self-Inflicted	10
Assault	1	Assault	6
Undetermined	1	Undetermined	2

**The most common causes of unintentional injury-related hospitalizations in Yavapai County were falls (59 percent, n=616) and motor vehicle traffic crashes (15 percent, n=155).** Table 4 shows the causes of unintentional injury-related hospitalizations among residents of Yavapai County.

Cause	Number	Percent
Fall	616	59%
Motor vehicle traffic	155	15%
Poisoning	79	8%
Transport	63	6%
Other/unspecified	57	5%
Overexertion	26	2%
Fire/hot objects	16	2%
Struck by/against	16	2%
Other pedal cyclist	12	1%
Nature/environment	10	1%
<b>Total</b>	<b>1,050</b>	<b>100%</b>

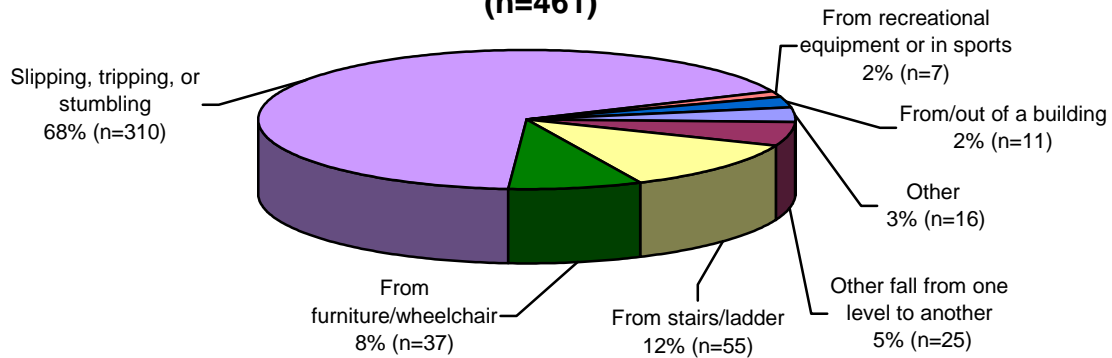
### Falls

Males accounted for 31 percent of unintentional fall-related hospitalizations (n=190) and females accounted for 69 percent (n=426). Two percent of fall-related hospitalizations were among children 14 years and younger (n=11); 2 percent were among individuals ages 15 to 24 years (n=12); 21 percent were among individuals ages 25 to 64 years (n=129); and 75 percent were among individuals 65 years and older (n=464).

For 25 percent of unintentional fall-related inpatient hospitalizations, information regarding contributing event was not specified in the hospital discharge database (n=155). Among the hospitalizations for which contributing event was specified, 68

percent were due to slipping, tripping, or stumbling (n=310). Figure 6 shows unintentional fall-related hospitalizations by contributing event.

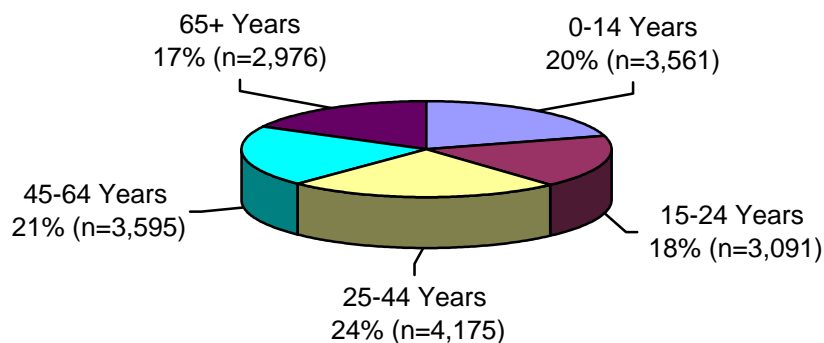
**Figure 6. Inpatient Hospitalizations due to Unintentional Falls by Contributing Event, Yavapai County, Arizona 2008 (n=461)**



### Non-Fatal Emergency Department Visits

In 2008, there were 17,398 injury-related emergency department visits among residents of Yavapai County. Males accounted for 52 percent of these visits (n=8,991) and females accounted for 48 percent (n=8,407). The largest percentage of visits was among individuals ages 25 to 44 years (24 percent, n=4,175). Figure 7 shows injury-related emergency department visits by age group.

**Figure 7. Injury-Related Emergency Department Visits by Age Group, Yavapai County, Arizona 2008 (n=17,398)**

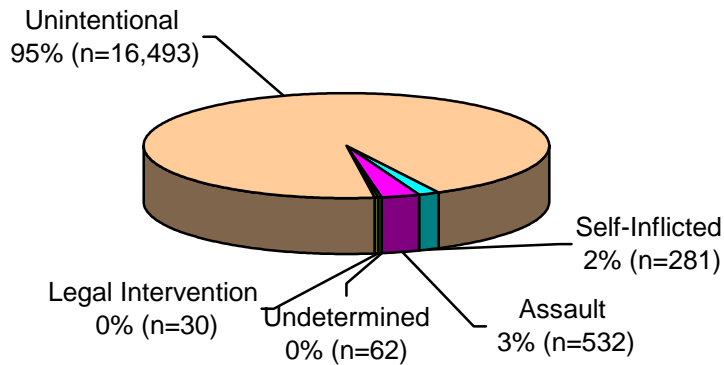


There were 15,461 injury-related hospitalizations among White, Non-Hispanic residents of Yavapai County (89 percent). The second highest number was among Hispanics (9 percent, n=1,483). Rates by racial/ethnic groups could not be calculated due to small sample sizes.

Ninety-five percent of the emergency department visits were due to unintentional injuries (n=16,493); 3 percent were due to assaults (n=532); and 2 percent were

**due to self-inflicted injuries (n=281).** Sixty-two emergency department visits were of undetermined intent and 30 visits were due to legal intervention. Figure 8 shows emergency department visits by intent.

**Figure 8. Injury-Related Emergency Department Visits by Intent, Yavapai County, Arizona 2008 (n=17,398)**



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

Table 5 shows the intent of injury-related emergency department visits for residents of Yavapai County compared to residents of the rest of Arizona. The leading intent of injury-related visits was unintentional for both Yavapai County and the remaining counties, accounting for the majority of injury-related visits. Yavapai County and the rest of Arizona had similar percentages of visits due to self-inflicted injuries and assaults.

Yavapai County (n=17,398)		Arizona, excluding Yavapai County (n=357,305)	
Intent	Percent of Total	Intent	Percent of Total
Unintentional	95	Unintentional	93
Self-Inflicted	2	Self-Inflicted	2
Assault	3	Assault	5
Undetermined	0	Undetermined	1

The most common cause of unintentional injury-related emergency department visits in Yavapai County was falls (34 percent, n=5,574). Table 6 shows the causes of unintentional injury-related emergency department visits for Yavapai County residents in 2008.

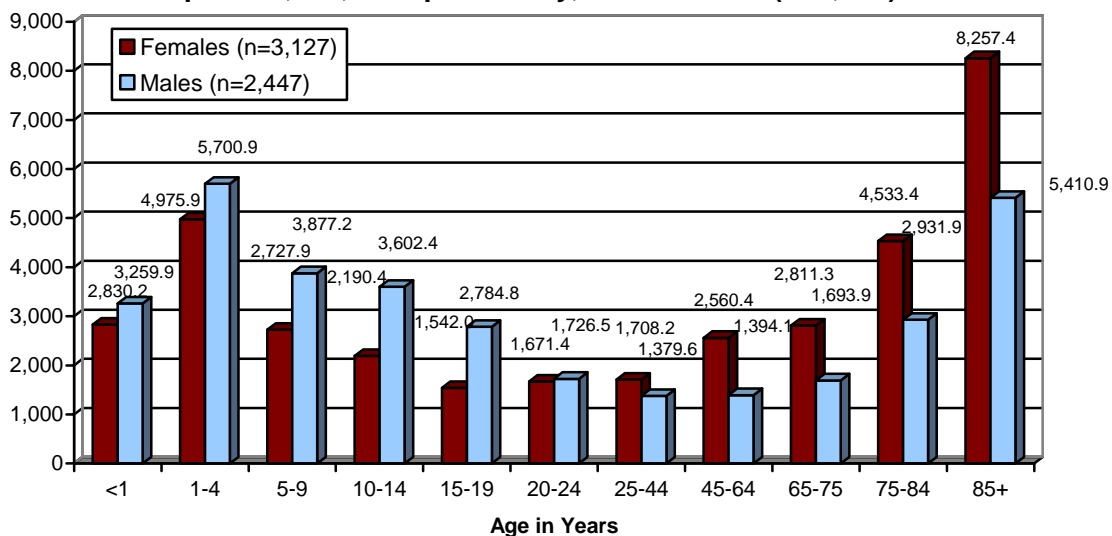
<b>Cause</b>	<b>Number</b>	<b>Percent</b>
Fall	5,574	34%
Struck by/against	2,286	14%
Overexertion	1,913	12%
Other/unspecified	1,811	11%
Cut/pierce	1,468	9%
Motor vehicle traffic	1,412	9%
Nature/environment	734	4%
Transport	478	3%
Other pedal cycle	317	2%
Fire/hot object	253	2%
Poisoning	247	2%
<b>Total</b>	<b>16,493</b>	<b>100%</b>

## Falls

There were 5,574 emergency department visits due to unintentional falls. Males accounted for 44 percent of these visits (n=2,447) and females accounted for 56 percent (n=3,127). Twenty-four percent of fall-related emergency department visits were among children 14 years and younger (n=1,325); 10 percent of visits were among individuals ages 15 to 24 years (n=537); 36 percent were among individuals ages 25 to 64 years (n=2,015); and 30 percent were among individuals 65 years and older (n=1,697).

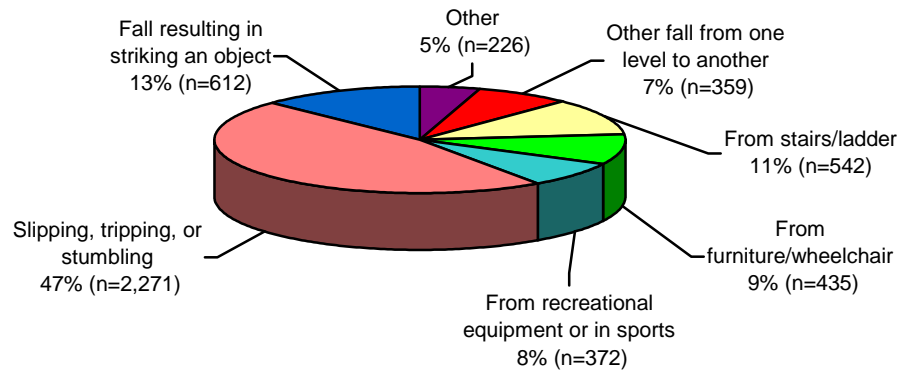
The highest rate of unintentional fall-related emergency department visits was among older adult females. Females 85 years and older had a rate of 8,257.4 fall-related emergency department visits per 100,000 residents. Figure 9 shows emergency department visit rates of unintentional falls by age group and sex.

**Figure 9. Unintentional Fall-Related Emergency Department Visit Rates per 100,000, Yavapai County, Arizona 2008 (n=5,574)**



For 14 percent of the unintentional fall-related emergency department visits, information regarding contributing event was not specified in the emergency department database (n=757). Among the emergency department visits for which contributing event was specified, 47 percent of unintentional falls were due to slipping, tripping, or stumbling (n=2,271). Figure 10 shows emergency department visits due to unintentional falls by contributing event.

**Figure 10. Emergency Department Visits due to Unintentional Falls by Contributing Event, Yavapai County, Arizona 2008 (n=4,817)**



## Summary

In 2008, there were 206 injury-related deaths in Yavapai County, and the largest percentage of deaths was among adults 65 years and older (45 percent, n=90). The majority of these deaths were due to unintentional injuries (61 percent, n=125). The most common cause of unintentional injury deaths was falls (39 percent, n=49). For residents of Yavapai County, unintentional injury is the leading cause of death for individuals ages 1 to 14 years and 20 to 44 years.<sup>1</sup> Thirty-three percent of injury-related deaths in Yavapai County were suicides (n=68); 3 percent were homicides (n=7); and 3 percent were of undetermined intent (n=6).

There were 1,170 non-fatal inpatient hospitalizations due to injury among residents of Yavapai County. Fifty percent of the hospitalizations were among adults 65 years and older (n=587). Ninety percent of the hospitalizations were due to unintentional injuries (n=1,050); 8 percent were due to self-inflicted injuries (n=89); 1 percent were assaults (n=12); and 1 percent were of undetermined intent (n=17). There were two injury-related hospitalizations due to legal intervention. The most common cause of unintentional injury-related hospitalizations was falls (59 percent, n=616).

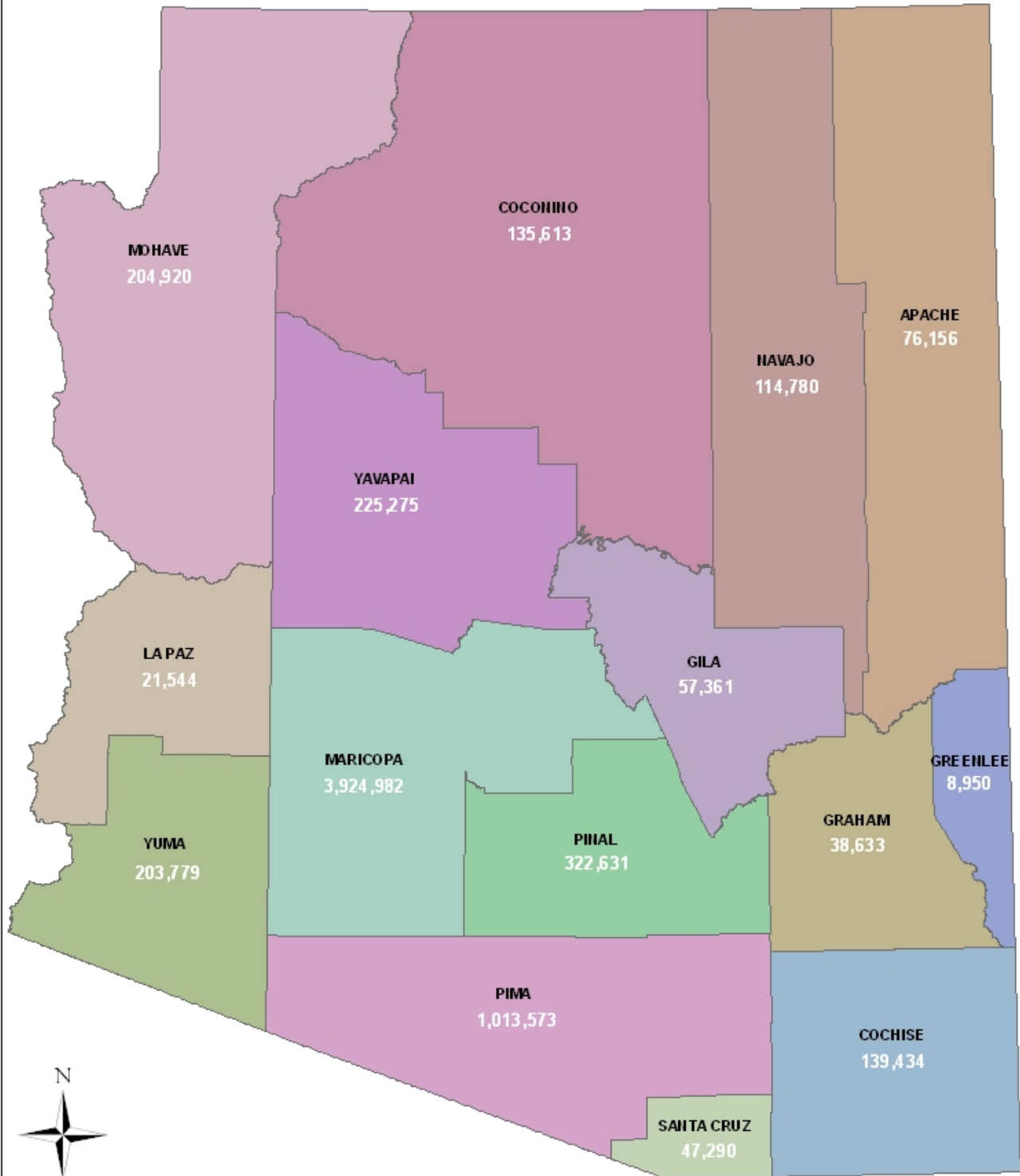
There were 17,398 injury-related non-fatal emergency department visits among residents of Yavapai County in 2008. The largest percentage of visits was among individuals ages 25 to 44 years (24 percent, n=4,175). Ninety-five percent of the emergency department visits were due to unintentional injuries (n=16,493); 3 percent were due to assaults (n=532); and 2 percent were due to self-inflicted injuries (n=281). Sixty-two injury-related emergency department visits were of undetermined intent and 30 visits were due to legal intervention. The most common cause of unintentional injury-related emergency department visits was falls (34 percent, n=5,574).

Source for deaths: 2008 Death Certificate Database

Source for hospitalizations: 2008 Inpatient Hospital Discharge Database

Source for emergency department visits: 2008 Outpatient Emergency Department Database

## Arizona Counties with Population, 2008



1 in = 44 miles

Source: Arizona Health Status and Vital Statistics 2008