

ARKANSAS INJURY FACTS

February 1, 2006

The Arkansas Injury Coalition, sponsored by the Injury Prevention Program of the Arkansas Department of Health and funded by the Centers for Disease Control, is pleased to provide this update documenting the enormous problem of injury in the state. This summary of 1999-2001 data reflects an analysis of the incidence of injury and fatality in Arkansas. The analysis update is presented across causal factors through Arkansas' mortality, hospital discharge and emergency services vehicle run databases. The analysis also provides an overview of Intentional and Unintentional injuries and deaths.

A more comprehensive document detailing the occurrence of injury, "Injury in Arkansas: A State Profile" is available online at www.HealthyArkansas.com/Data or by contacting the Injury Prevention Program at the Arkansas Department of Health, 501-280-4780.

The Arkansas Injury Prevention Coalition, sponsored by the Injury Prevention Program, is made up of a representation of many agencies and organizations interested in the prevention of injuries from their various perspectives. The coalition meets regularly to facilitate collaboration, share data, and to design a strategic plan for the prevention of injury. If you are interested in participating in its activities, please contact the program.

Injuries are classified by intentionality as well as by the mechanism. Injuries classified as purposefully self-inflicted (suicide and suicide attempts) or inflicted by another (homicide and assaults) are considered intentional injuries. Those traditionally labeled "accidents" are considered unintentional injuries. In Arkansas, unintentional injuries were the leading cause of death for those under 35 years of age, and the fifth leading cause of death for all ages. The Arkansas data relative to injury revealed that during 1999-2001:

- 5,718 persons died, 45,865 were hospitalized, and 128,036 were treated in Emergency Departments as the result of injuries.
- Motor vehicle (MV) traffic is the leading cause of injury deaths and EMS (Emergency Medical Services) runs; falls are the primary reason for injury-related hospitalization.
- The injury rates leading to death, hospitalization, or EMS runs are higher for seniors (85 years of age and older) than any other age group.

Table 1. Data Highlights of Injuries to Arkansas Residents: 1999-2001

	Deaths	Hospitalizations	Estimated EMS Runs
Total Counts	5,718	45,865	128,036
Rate per 100,000 Residents	72	584	1,584
Leading Cause	MV Traffic	Falls	MV Traffic
Highest Rate: age	85+	85+	85+

INJURY MORTALITY

Among the 5,718 injury deaths, 67 percent (3,831) were classified as unintentional, 29 percent (1,655) were intentional. MV traffic (33.5%) was the leading cause of injury death and claimed the lives of 1,915 Arkansas residents, followed by suicide (18.7%) and homicide (9.9%) (Table 2).

Table 2. All Injury Deaths: 1999-2001

<u>Intentionality</u>	<u>Deaths</u>	<u>Percent</u>
Unintentional	3,831	67.0%
MV Traffic	1,915	33.5%
Intentional	1,655	28.9%
Suicide	1,067	18.7%
Homicide	566	9.9%
Legal Intervention	22	0.4%
Undetermined Intent	<u>232</u>	<u>4.1%</u>
	5,718	100%

Table 3. Leading Mechanisms of Unintentional Injury Death

<u>Mechanism</u>	<u>Deaths</u>	<u>Percent</u>
MV Traffic	1,915	50.0%
Fall	358	9.3%
Unspecified	272	7.1%
Suffocation	218	5.7%
Fire/Burn	214	5.6%
Drowning	153	4.0%
Poisoning	148	3.9%
Other Causes	<u>553</u>	<u>14.4%</u>
	3,831	100%

Data Sources: Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS) (2003).

Unintentional injury is the leading cause of death for people ages 1-34 years and the fifth leading cause of death for all ages in Arkansas. Among the 3,831 Arkansans who died of unintentional injuries, 50 percent were due to MV traffic-related injuries. Falls, suffocation, fire/burns, and drowning are also major causes (Table 3). The annual average age-adjusted death rate for unintentional injuries in Arkansas was 46.8 deaths per 100,000 residents, 33% higher than the national level (35.3). In Arkansas, unintentional injury death rates are higher among African-American (50.2) than White (46.9).

There are more males than females dying of injury in every age group, most notably between the ages of 15 and 64 years (Figure 1). The injury death rates for males peaks in the early-adult years and again increases sharply for those over 75 years; rates generally increase for females as they grow older and peak for those over 75 years. MV traffic injury death rates are nearly twice as high for males (33.2) as for females (15.2).

Figure 1. Unintentional Injury Death Rates by Age & Gender, Arkansas 1999-2001

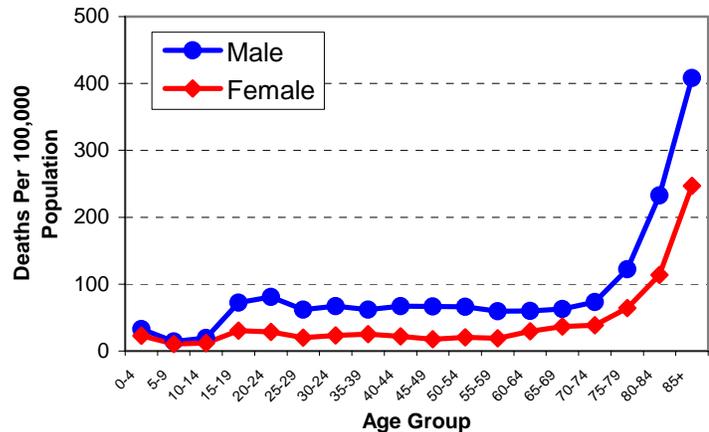


Table 4. Mechanisms of Homicide

<u>Mechanism</u>	<u>Deaths</u>	<u>Percent</u>
Firearm	383	65.1%
Cut/Pierce	69	11.7%
Suffocation	19	3.2%
Other Causes	<u>117</u>	<u>19.9%</u>
	588	100%

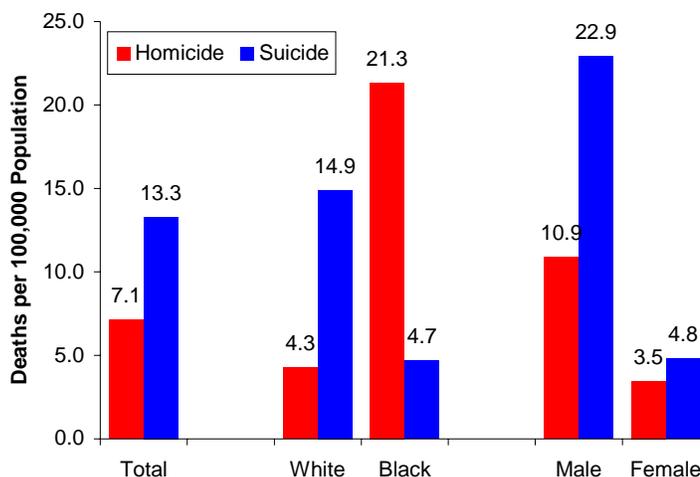
Table 5. Mechanisms of Suicide

<u>Mechanism</u>	<u>Deaths</u>	<u>Percent</u>
Firearm	752	70.5%
Suffocation	144	13.5%
Poisoning	135	12.7%
Other Causes	<u>36</u>	<u>3.4%</u>
	1,067	100%

Data Sources: Centers for Disease Control and Prevention. WISQARS, 2003.

Intentional injuries are also a major problem in Arkansas. During 1999-2001, 1,067 suicide and 566 homicide deaths were reported. The overall suicide death rate of 13.3 per 100,000 residents is nearly two times the rate of homicide (7.1). The crude rate of violence-related deaths in Arkansas was 20.7 per 100,000 compared to a national rate of 17.0. Homicide death rate is five times higher among Blacks (21.3) than Whites (4.3); while suicide death rate is three times higher for Whites (14.9) than for Blacks (4.7). Arkansas males are more likely to commit homicide and suicide than females. Suicide death rates are nearly four times higher among males (22.9) than females (4.8) (Figure 2).

Figure 2. Age-adjusted Death Rates
by Race & Gender, Arkansas 1999-2001



The most common methods of homicide include: firearms (65.1%), cut/pierce (11.7%), and suffocation (3.2%) (Table 4).

The most common methods for suicide are: firearms (70.5%), suffocation (13.5%) and poisoning (12.7%) (Table 5).

INJURY MORBIDITY

Injury Morbidity - the burden of nonfatal injury vs. injury mortality can be much harder to estimate using existing data. Arkansas, like many states, has no current surveillance system designed specifically for injuries. This report cites hospital discharge data collected by the Arkansas Center for Health Statistics of the Arkansas Department of Health. It also contains injury-related EMS runs for estimates of injury morbidity.

Table 6. Nonfatal Injury, by Care Level and Age, Arkansas: 1999-2001

Age Group	Hospitalizations			EMS Ambulance Runs		
	Number	Rate Per 100,000	Leading Cause	Number	Rate Per 100,000	Leading Cause
0-4	1,071	197	Fall	1,993	363	MV Traffic
5-9	777	141	Fall	3,336	601	MV Traffic
10-14	1,169	196	MV Traffic	5,076	871	MV Traffic
15-19	2,718	493	MV Traffic	14,140	2,396	MV Traffic
20-24	2,410	458	MV Traffic	12,565	2,223	MV Traffic
25-34	4,528	449	Poisoning	17,954	1,697	MV Traffic
35-44	5,465	466	Poisoning	16,999	1,437	MV Traffic
45-54	4,475	420	Poisoning	12,394	1,151	MV Traffic
55-64	3,640	466	Fall	8,096	1,015	MV Traffic
65+	19,612	1,858	Fall	35,483	3,150	Fall
All Ages	45,865	584	Fall	128,036	1,584	MV Traffic

Data Sources: Arkansas Centers for Health Statistics

Hospitalizations

A total of 45,865 hospital discharges for injury were reported in Arkansas during 1999-2001, resulting in an annual average rate of 584 hospitalizations per 100,000 Arkansans. Seniors (65 years of age and older) accounted for 43% (19,612) of all injury-related hospitalizations. As Table 6 indicates, injury hospitalization rates increase sharply from 466 for the 55-64 year olds to 1,858 for seniors. Overall, falls were the leading mechanism of injuries, and accounted for 46% of all injury hospitalizations, especially for

seniors and children. MV traffic is the primary mechanism of injuries among teenagers and young adults. Drugs and poisoning were the leading mechanism of injury-related hospitalization among the 25-54 year-olds (Table 6).

Table 7. Injury-related Hospitalizations by Intentionality and Mechanism, Arkansas: 1999-2001

Unintentional			Intentional		
Mechanism	Hospitalizations	Percent	Mechanism	Hospitalizations	Percent
Total	38,968	100%	Self-Inflicted	4,790	100%
Fall	21,027	54.0	Poisoning	4,177	87.2
MV Traffic	6,045	15.5	Cut/Pierce	351	7.3
Poisoning	2,039	5.2	Firearm	78	1.6
Natural	1,544	4.0	Other	184	3.9
/Environmental					
Transport	1,215	3.1	Assault	1,242	100%
Other	7,098	18.2	Struck by or Against	421	33.9
			Cut/Pierce	221	17.8
			Firearm	214	17.2
			Other	386	31.1

Unintentional injuries accounted for 85 percent (38,968) of all injuries requiring hospitalizations. The leading mechanisms of unintentional injuries were: falls (54.0%), MV traffic (15.5%), and Poisonings (5.2%). Self-inflicted injuries accounted for 10 percent (4,790). Drugs and other poisonings was the most common agent of non-fatal self-inflicted injuries. Assault injuries resulted in 1,242 hospitalizations. The most common types of assaults are: struck by an object (33.9%), cut/piece (17.8%), and firearm-related injuries (17.2%) (Table 7).

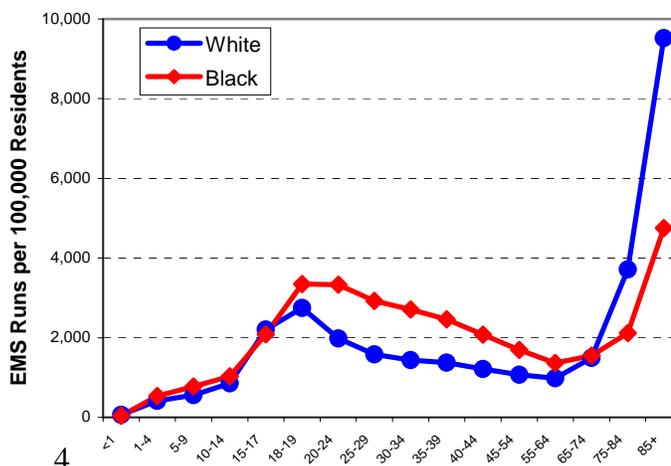
Emergency Medical Service Use

While no emergency level injury surveillance system currently exists in Arkansas, detailed information on EMS runs are tabulated and presented as a proxy for emergency department usage due to injury. A total of 128,036 EMS runs for injury were tallied during 1999-2001, almost three times more than injury-related hospitalizations. Most of these injuries were due to MV traffic (42.6%) and falls (34.9%). A variety of other injury types including assault, other trauma, motorcycle, shooting and pedestrian, make up the remaining 22.5% (Table 8).

Marked differences were demonstrated by age for EMS runs. Injury rate peaked in adolescents and early adults (15-24), decreased until age 64, and then rose again in people 65 years of age and older. For people age 65 and under, MV traffic was by far the most common injury type. In older adults, however, falls were the primary reason for injuries; a total of 28,580 falls, constituting 80 percent of all EMS runs, were reported during 1999-2001.

EMS runs also differ according to race. The overall EMS rate for Blacks was 1,918 per 100,000 people, 24 percent higher than that for Whites (1,552). As seen in Figure 3, Black and White children have similar EMS rates. The rates were significantly higher for Black adults aged 18-64 years than for Whites. However, the rates were greater for White seniors (75 years or older) than for Black seniors. The proportion of EMS runs due to assault was three times higher among Blacks (15%) than among Whites (5%). Blacks have a higher proportion of

**Figure 3. Injury-related EMS Rate by Race
Arkansas 1999-2001**



motor vehicle injuries (48.8%) than Whites (40.5%). Falls account for 40% injury-related EMS runs in Whites, but only constitute 17% among Blacks.

CONCLUSIONS

Traditionally, homicide has been considered a criminal justice problem, suicide a mental health problem, and "accidents" a safety problem. Today, however, all injuries are considered a public health problem, and their prevention requires collaboration among professionals in public health, medicine, education, business, social service, law enforcement, fire and rescue, public works, parks and recreation, and city planning.

The injury data indicate that motor vehicle injury is a serious health concern in Arkansas. The data from the National Highway Traffic Safety Administration suggest that Arkansas' rate of safety belts usage is among the nation's lowest - 52 percent in 2000. The 2001 Youth Risk Behavior Survey shows that 23 percent of Arkansas' high school students report never or rarely wearing a seat belt when riding in a car driven by someone else. Therefore, to prevent motor vehicle injuries, Arkansas should increase the use of seatbelts and airbags. The importance of injuries in older adults emerges from this analysis as an important area for prevention activities, as well.

To prevent falls by older adults it is recommended that public awareness programs focusing on physical activity be increased. It is also suggested that preventive modifications be made to the home environments of older adults in the form of grab bar installations and adequate lighting. It is noted that medication and alcohol use monitoring is effective preventive strategy in numerous cases.

Finally, the inadequacies of E-coding in the hospital discharge data highlight the need for the state to improve its data collection tools. At least some of the lack of E-codes is due to inadequate documentation of the cause of injury by health care providers. Arkansas clinicians can help expand the understanding of the patterns and risk groups for injuries by helping ensure complete documentation.

Data Sources

Injury mortality data are readily available for both Arkansas and the United States from state vital statistics and in summary form from the WISQARS interactive injury database of Centers for Health Statistics (CDC). Injury-related hospital discharge data are located at Arkansas Center for Health Statistics. Arkansas Emergency Medical Services (EMS) maintains a centralized database of information characterizing all ambulance runs in the state.

Contact information

Additional data on injuries can be obtained by contacting the Arkansas Injury Program of the Arkansas Department of Health.