

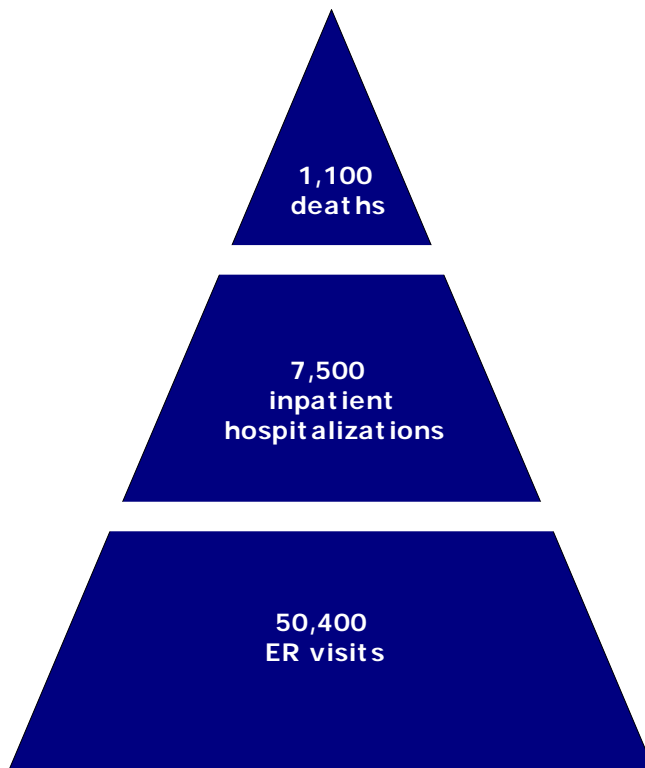
**4.
EMERGENCY ROOM VISITS AND INPATIENT
DISCHARGES WITH MOTOR VEHICLE-
RELATED INJURY DIAGNOSIS BY
TYPE OF INJURED PERSON,
ARIZONA RESIDENTS,
2005-2007**

From January 1, 2005 to December 31, 2007, 151,196 Arizona residents were treated in the emergency rooms (ER) because of motor vehicle-related injuries (**Table 4-2**); additionally, 22,608 persons were admitted as inpatients to non-federal, short-stay hospitals (**Table 4-1**). The fact that not all hospitals are included in the Hospital Discharge Database (HDD) has a distorting effect on the reliability of these counts. It particularly affects the American Indian victims of motor vehicle accidents who may be utilizing the facilities of the Indian Health Service. American Indian residents of Arizona account for approximately 5.3 percent of the State's population. In 1993-2007 they disproportionately comprised 16.9 percent of vehicular fatalities but only 5.6 percent of inpatient hospitalizations with the vehicular-related injury diagnosis in non-federal hospitals (based on HDD data for 2005-2007).

In addition, and unlike the data on resident deaths, the Hospital Discharge database only includes information about the encounters occurring in Arizona. There is no inter-state exchange of HDD records, therefore, there is no available information about Arizonans who were injured in motor vehicle accidents outside the State and who were treated in out-of-State emergency rooms or hospitalized as inpatients in out-of-State facilities. In contrast, the database of resident deaths captures both in-State and out-of-State events.

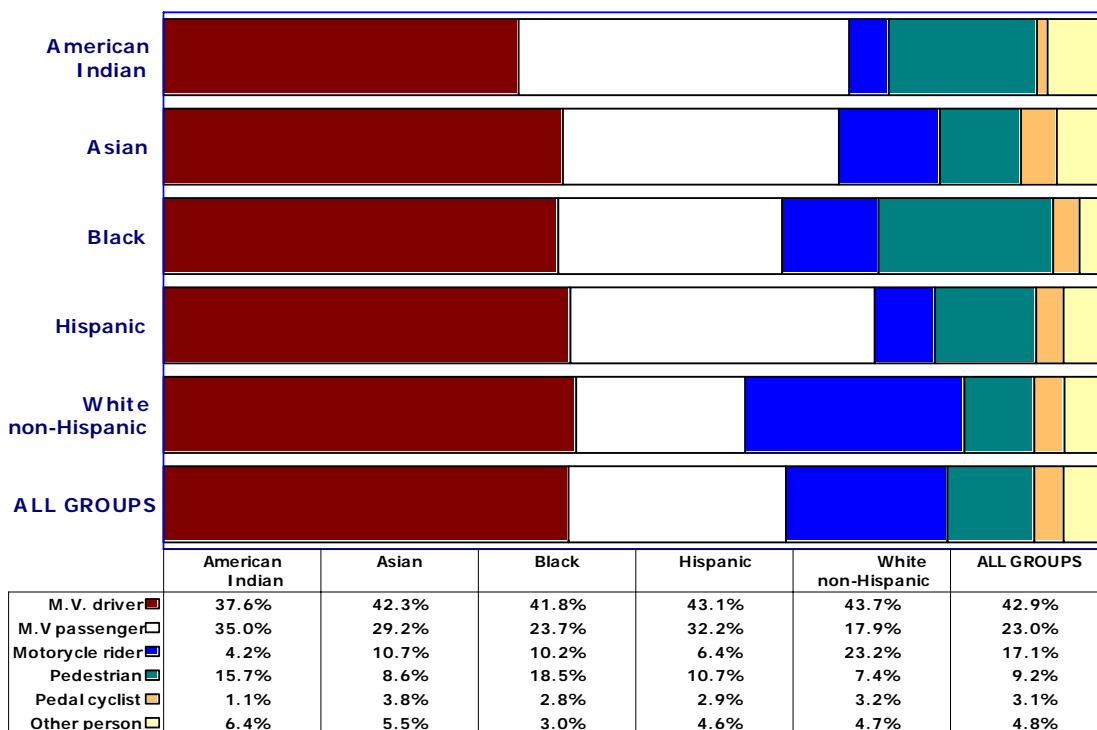
In 2005-2007 on average, there were 1,100 deaths in motor vehicle accidents per year (**Figure 4-1**). For every fatality there were almost 7 times as many inpatient hospitalizations with motor vehicle-related injury diagnosis (7,500/year). The average annual number of 50,400 Arizonans who were admitted to emergency rooms because of motor vehicle-related injuries was, interestingly, almost 7 times greater than the number of inpatient admissions.

Figure 4-1
Average Annual Number of Deaths, Inpatient Hospitalizations and Emergency Room Visits with Motor Vehicle-Related Injury Diagnosis, Arizona Residents, 2005-2007



Among the 22,608 Arizonans who were admitted in 2005-2007 as inpatients because of motor vehicle-related injuries, drivers were most prevalent at 42.9 percent, followed by occupants at 23.0 percent, riders of motorcycles at 17.1 percent, pedestrians at 9.2 percent, and pedal cyclists at 3.1 percent (**Table 4-1**). Pedestrian admissions clearly were overrepresented among Blacks or African Americans (18.5 percent or 2 times the average for all groups), and American Indians (15.7 percent, **Figure 4-2**). Inpatient admissions of motorcycle riders were overwhelmingly a White non-Hispanic phenomenon: 84.7 percent of all hospitalized riders of motorcycles were White non-Hispanic, while this race/ethnic group accounted for 62.4 percent of all inpatient hospitalizations with motor vehicle-related injury diagnosis. In contrast, American Indians comprising 5.6 percent of the inpatient admissions accounted for only 1.4 percent hospitalized motorcycle riders, while pedestrian and occupant inpatient admissions were underrepresented among White non-Hispanics.

Figure 4-2
Percent Distribution of Inpatient Discharges with Motor Vehicle-Related Injury Diagnosis by Type of Injured Person and Race/Ethnicity, Arizona Residents, 2005-2007



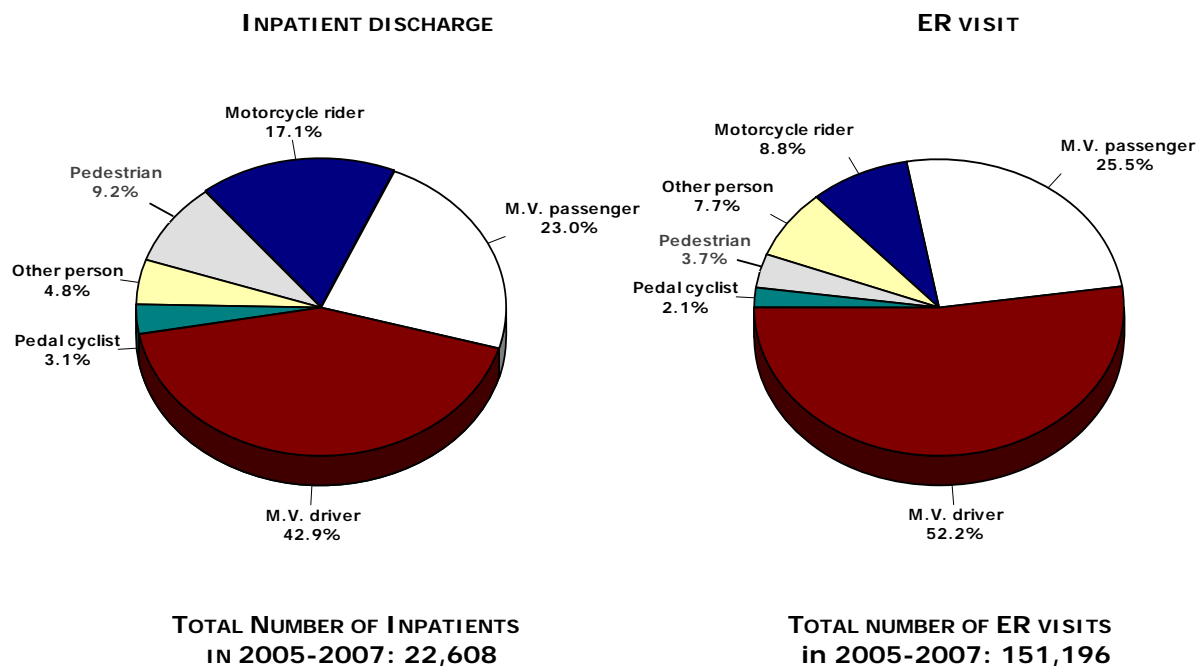
The distribution of ER patients differed considerably from the distribution of inpatients by type of victim (**Table 4-2, Figure 4-3**). Drivers of motor vehicles other than motorcycles comprised 42.9 percent of inpatient discharges but 52.2 of ER visits. Injured pedestrians were 2.5 times more prevalent among the inpatients (9.2 percent), than among the victims of motor vehicle accidents who were treated in emergency rooms (3.7 percent). Similar differences were seen for motorcycle riders (17.1 percent vs. 8.8 percent), and pedal cyclists (3.1 percent vs. 2.1 percent).

With the exception of children aged 14 years or younger, drivers were the most prevalent type of victim treated in the emergency room or admitted as inpatients among adolescents 15-19 years, young adults 20-44 years, middle-aged adults 45-64 years, and elderly aged 65 years and older (**Table 4-2**).

In contrast, and more likely than any other age group, children under 15 years of age who were hospitalized for motor vehicle-related injuries, sustained these injuries as non-driving occupants of motor vehicles, pedestrians, or pedal cyclists.

Among Arizona residents who, in 2005-2007, were treated in emergency rooms because of vehicle-related injuries, the number of females and males was essentially identical (75,405 vs. 75,781, **Table 4-3**). In contrast, males outnumbered females by a ratio of 1.8:1 among the inpatient discharges with motor vehicle-related diagnosis (14,568 vs. 8,037).

Figure 4-3
Percent Distribution by Type of Injured Person of Inpatient Discharges and
Emergency Room Visits with Motor Vehicle-Related Injury Diagnosis,
Arizona Residents, 2005-2007



Among both the inpatient discharges and ER visits, females were more likely than males to be treated for injuries sustained as drivers or non-driving occupants of motor vehicles (**Table 4-3**). In contrast, males accounted for 89.5 percent of all inpatient discharges of injured motorcycle riders. Among females who were treated in the ER because of motor vehicle-related injury, 2.4 percent were motorcycle riders compared to 15.2 percent among males. Compared to injured females, injured males also were more likely to sustain injuries as pedal cyclists (3.2 percent of injured males treated in the ER vs. 0.9 percent of injured females) or pedestrians (4.4 percent vs. 3.0 percent).

Similar pattern of gender-specific differences was seen among the inpatient discharges. Almost one in four males who were admitted as inpatients with motor vehicle-related injury diagnosis was a motorcycle rider (23.7 percent, **Table 4-3**), compared to 5.0 percent of females. In contrast, non-driving occupants of motor vehicles comprised 33.9 percent of females who were hospitalized because of vehicle-related injuries, twice the proportion of hospitalized males (16.9 percent).

**Table 4-3
Frequency Counts and Percent Distribution of Emergency Room Visits and Inpatient Discharges with Motor
Vehicle-Related Injury Diagnosis by Type of Injured Person and Gender, Arizona Residents, 2005-2007**

	Inpatient discharge		Emergency room visit		Female	Male	Total*	
	Count	Col %	Count	Col %				
Inpatient discharge	M.V. driver		3,676	45.7%	6,023	41.3%	9,699	
	M.V. passenger		2,728	33.9%	2,468	16.9%	5,196	
	Motorcycle rider		404	5.0%	3,452	23.7%	3,857	
	Pedestrian		701	8.7%	1,377	9.5%	2,080	
	Pedal cyclist		117	1.5%	577	4.0%	694	
	Other person		411	5.1%	671	4.6%	1,082	
	Total		8,037	100.0%	14,568	100.0%	22,608	
	Emergency room visit	M.V. driver		41,570	55.1%	37,397	49.3%	78,972
		M.V. passenger		23,478	31.1%	15,091	19.9%	38,573
		Motorcycle rider		1,839	2.4%	11,522	15.2%	13,361
Pedestrian			2,260	3.0%	3,304	4.4%	5,564	
Pedal cyclist			659	0.9%	2,449	3.2%	3,108	
Other person			5,599	7.4%	6,018	7.9%	11,618	
Total			75,405	100.0%	75,781	100.0%	151,196	
							100.0%	100.0%

*Includes unknown gender.