

**6.**

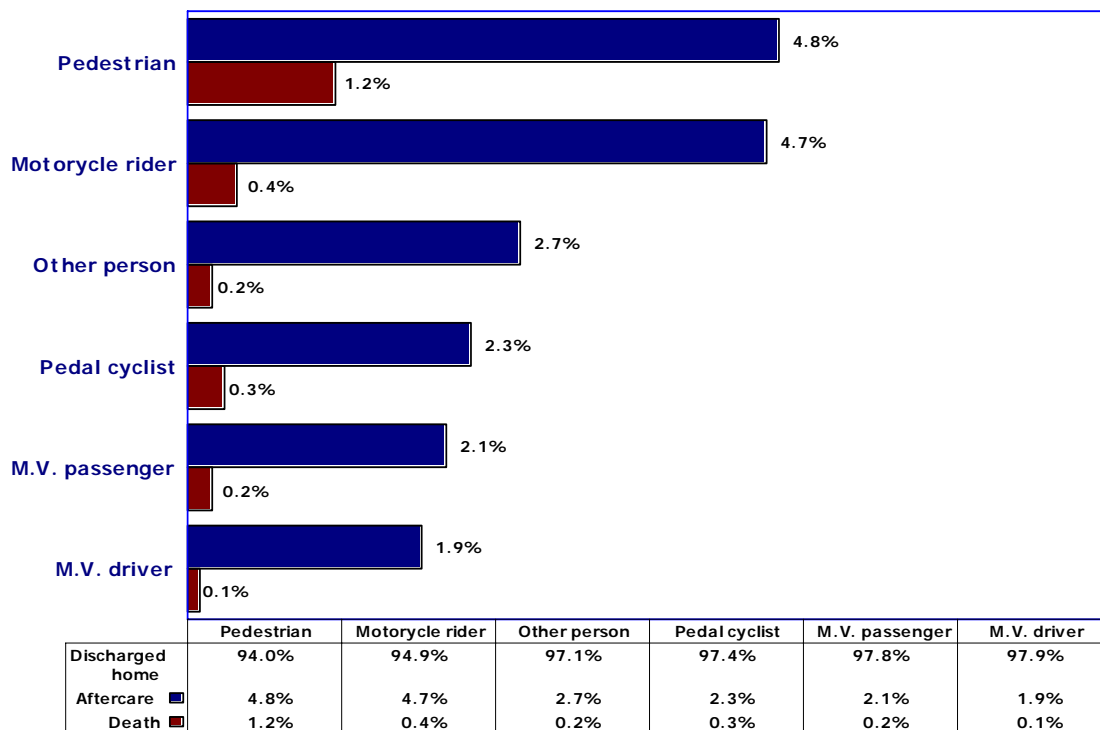
**PROBABILITY OF VARIOUS OUTCOMES  
FOR INPATIENT DISCHARGES AND EMERGENCY ROOM  
VISITS WITH MOTOR VEHICLE-RELATED INJURY  
DIAGNOSIS BY TYPE OF INJURY AND  
TYPE OF INJURED PERSON,  
ARIZONA RESIDENTS,  
2005-2007**



The distribution of injured persons by type of victim differed considerably from the victim distribution of fatalities. In 2005-2007, among those who were treated in emergency rooms (ER) drivers were most prevalent at 52.2 percent, followed by occupants at 25.5 percent, motorcycle riders at 8.8 percent, pedestrians at 3.7 percent, and pedal cyclists at 2.1 percent (the percentages are based on data in **Table 6-1**).

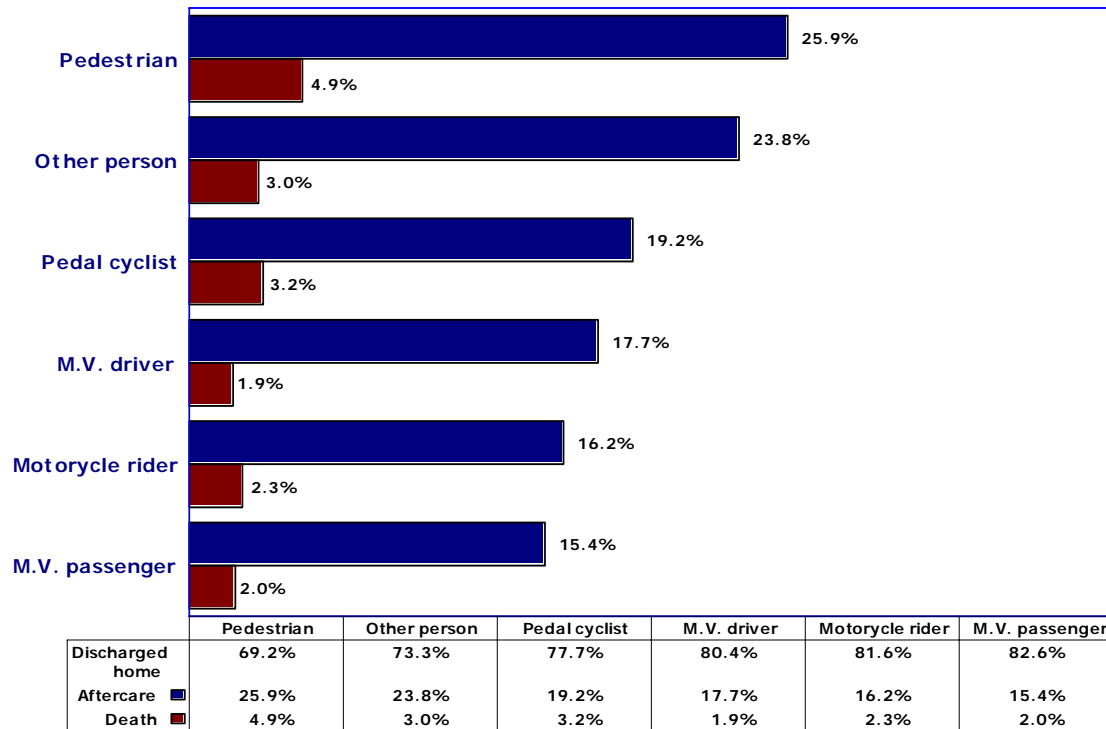
Three hundred of the ER injury patients died during the visit for a case-fatality rate of 0.2 percent. Pedestrians' case fatality rate was the highest (1.2 percent), followed by motorcycle riders (0.4 percent), and pedal cyclists (0.3 percent, **Figure 6-1**). Pedestrians (4.8 percent) and motorcycle riders (4.7 percent) were also more likely to be discharged from the emergency room to other care facilities, referred to as aftercare. Aftercare includes short term care, skilled nursing home, intermediate care, or rehabilitative care. Overall, 97.4 percent of injured ER patients were discharged home.

**Figure 6-1**  
**Probability of Various Outcomes by Type of Injured Person among Emergency Room Visits with Motor Vehicle-Related Injury Diagnosis, Arizona Residents, 2005-2007**



The ER data include only those who were not admitted as inpatients. Among the 22,608 Arizonans who survived long enough to become inpatients, 534 died during their hospital stay for a case fatality of 2.4 percent. Again, pedestrians' case fatality rate was the highest (4.9 percent), followed by pedal cyclists (3.2 percent, **Table 6-1**, **Figure 6-2**). Pedestrians also were more likely than any other victim category to require aftercare (25.9 percent). Compared to 97.4 of persons treated in emergency rooms, those admitted to inpatient treatment were considerably less likely to be discharged home (79.7 percent).

**Figure 6-2**  
**Probability of Various Outcomes by Type of Injured Person among Inpatient Discharges with Motor Vehicle-Related Injury Diagnosis, Arizona Residents, 2005-2007**



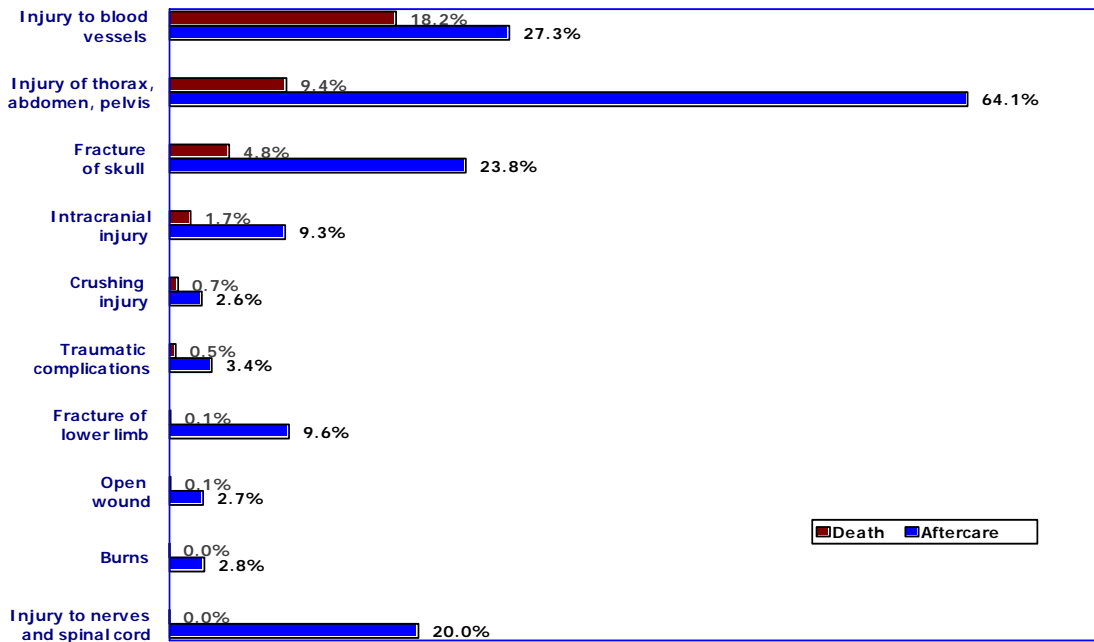
**Table 6-2** compares the probability of death, as well as the likelihood of extended morbidity, as indexed by aftercare, for the 15 diagnostic categories. The specific bodily trauma of each injured ER patient or hospital inpatient was equivalent to his/her primary diagnosis as stated in ICD-9-CM codes.

Six diagnostic categories captured 89.6 percent of the ER cases. From the highest to lowest frequency, these categories were sprains and strains of joints and adjacent muscles (40.9 percent), contusion with intact skin surface (22.8 percent), open wound (8.2 percent), traumatic complications and unspecified injuries (7.6 percent), fracture of upper limb (5.3 percent), and superficial injury (5.0 percent).

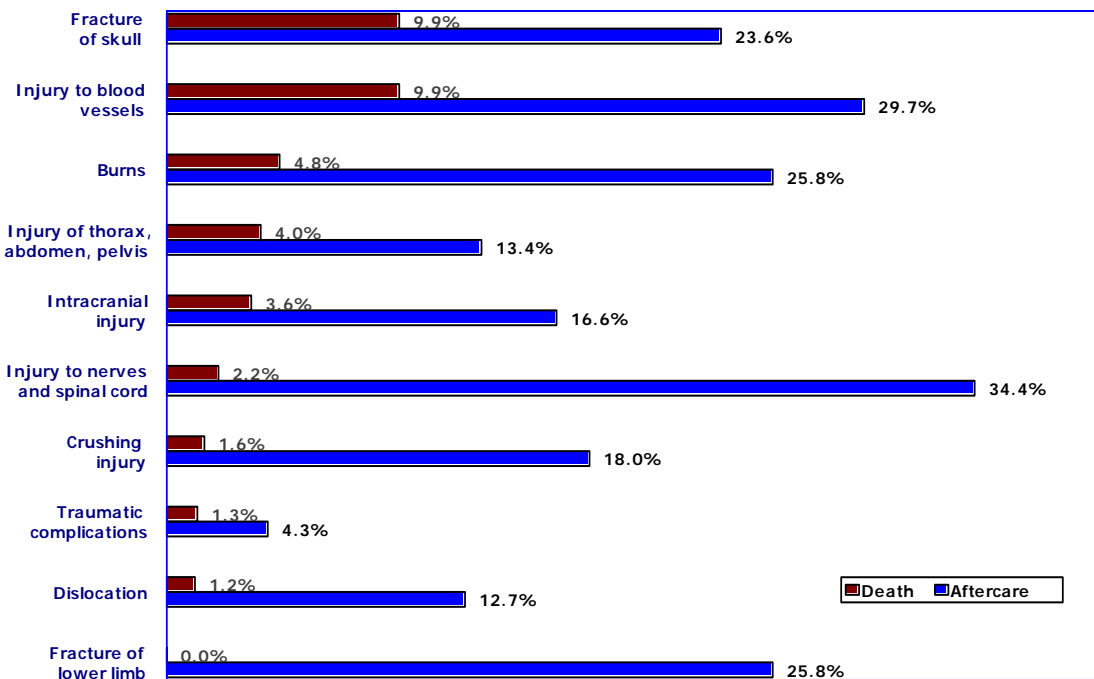
In 2005-2007, injury to blood vessels (18.2 percent of ER patients died), injury to thorax, abdomen or pelvis (9.4 percent), fracture of skull (4.8 percent), and intracranial injury (1.7 percent) had the highest probabilities of death (**Figure 6-3**). Among ER patients with injury to thorax/abdomen/pelvis who survived the scene of the motor vehicle accident, transport to emergency room, and emergency room treatment, 64.1 percent required aftercare.

The top six diagnostic categories that accounted for 72.8 percent of the inpatient cases in 2005-2007 were as follows: fracture of lower limb (20.4 percent), intracranial injury (excluding those with skull fracture, 17.1 percent), internal injury of thorax/abdomen/pelvis (9.8 percent), fracture of upper limb (9.7 percent), fracture of skull (9.4 percent), and open wound (6.3 percent). Fracture of skull and injury to blood vessels had the highest probability of death (9.9 percent) for inpatients. Inpatients with injury to nerves and spinal cord (34.4 percent) followed by injury to blood vessels (29.7 percent) were most likely to be discharged to aftercare.

**Figure 6-3**  
**Probability of Death or Aftercare for Selected Diagnostic Categories among Emergency Room Visits with Motor Vehicle-Related Injury Diagnosis, Arizona Residents, 2005-2007**



**Figure 6-4**  
**Probability of Death or Aftercare for Selected Diagnostic Categories among Inpatient Discharges with Motor Vehicle-Related Injury Diagnosis, Arizona Residents, 2005-2007**



**Table 6-1  
 Inpatient Discharges and Emergency Room Visits with Motor Vehicle-Related Injury Diagnosis and  
 Probability of Various Outcomes by Type of Injured Person, Arizona Residents, 2005-2007**

	Outcomes										Total	
	Discharged home		Aftercare in a different facility		Death							
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %
<b>Inpatient discharge</b>	M.V. driver	7,800	80.4%	1,714	17.7%	185	1.9%	9,699	100.0%			
	M.V. passenger	4,292	82.6%	798	15.4%	106	2.0%	5,196	100.0%			
	Motorcycle rider	3,146	81.6%	624	16.2%	87	2.3%	3,857	100.0%			
	Pedestrian	1,439	69.2%	539	25.9%	102	4.9%	2,080	100.0%			
	Pedal cyclist	539	77.7%	133	19.2%	22	3.2%	694	100.0%			
	Other person	793	73.3%	257	23.8%	32	3.0%	1,082	100.0%			
	<b>Total</b>	<b>18,009</b>	<b>79.7%</b>	<b>4,065</b>	<b>18.0%</b>	<b>534</b>	<b>2.4%</b>	<b>22,608</b>	<b>100.0%</b>			
<b>Emergency room visit</b>	M.V. driver	77,347	97.9%	1,533	1.9%	92	0.1%	78,972	100.0%			
	M.V. passenger	37,717	97.8%	794	2.1%	62	0.2%	38,573	100.0%			
	Motorcycle rider	12,682	94.9%	631	4.7%	48	0.4%	13,361	100.0%			
	Pedestrian	5,228	94.0%	267	4.8%	69	1.2%	5,564	100.0%			
	Pedal cyclist	3,027	97.4%	73	2.3%	8	0.3%	3,108	100.0%			
	Other person	11,278	97.1%	319	2.7%	21	0.2%	11,618	100.0%			
	<b>Total</b>	<b>147,279</b>	<b>97.4%</b>	<b>3,617</b>	<b>2.4%</b>	<b>300</b>	<b>0.2%</b>	<b>151,196</b>	<b>100.0%</b>			

**Table 6-2  
Inpatient Discharges and Emergency Room Visits with Motor Vehicle-Related Injury Diagnosis by  
Probability of Various Outcomes for Each Diagnostic Category, Arizona Residents, 2005-2007**

			Outcomes			Total
			Discharged home	Aftercare in a different facility	Death	
Inpatient discharge	Fracture of skull	Count	1,416	503	210	2,129
		Row %	66.5%	23.6%	9.9%	100.0%
	Fracture of upper limb	Count	1,962	226	5	2,193
		Row %	89.5%	10.3%	0.2%	100.0%
	Fracture of lower limb	Count	3,419	1,192	8	4,619
		Row %	74.0%	25.8%	0.0	100.0%
	Dislocation	Count	224	33	3	260
		Row %	86.2%	12.7%	1.2%	100.0%
	Sprains and strains of joints and adjacent muscles	Count	283	8	0	291
		Row %	97.3%	2.7%	0.0%	100.0%
	Intracranial injury, excluding those with skull fracture	Count	3,081	639	139	3,859
		Row %	79.8%	16.6%	3.6%	100.0%
	Internal injury of thorax, abdomen, and pelvis	Count	1,831	298	89.0	2,218
		Row %	82.6%	13.4%	4.0%	100.0%
	Open wound	Count	1,336	94	0.0	1,430
		Row %	93.4%	6.6%	0.0%	100.0%
	Injury to blood vessels	Count	61	30	10	101
		Row %	60.4%	29.7%	9.9%	100.0%
	Superficial injury	Count	197	6	0	203
		Row %	97.0%	3.0%	0.0%	100.0%
	Contusion with intact skin surface	Count	631	24	0	655
		Row %	96.3%	3.7%	0.0%	100.0%
	Crushing injury	Count	98	22	2	122
		Row %	80.3%	18.0%	1.6%	100.0%
Burns	Count	43	16	3	62	
	Row %	69.4%	25.8%	4.8%	100.0%	
Injury to nerves and spinal cord	Count	57	31	2	90	
	Row %	63.3%	34.4%	2.2%	100.0%	
Traumatic complications and unspecified injuries	Count	843	38	12	893	
	Row %	94.4%	4.3%	1.3%	100.0%	
Total	Count	18,009	4,065	534	22,608	
	Row %	79.7%	18.9%	2.4%	100.0%	
Emergency room visit	Fracture of skull	Count	772	257	52	1,081
		Row %	71.4%	23.8%	4.8%	100.0%
	Fracture of upper limb	Count	7,692	301	3	7,996
		Row %	96.2%	3.8%	0.0%	100.0%
	Fracture of lower limb	Count	3,322	354	3	3,679
		Row %	90.3%	9.6%	0.1%	100.0%
	Dislocation	Count	1,437	38	1	1,476
		Row %	97.4%	2.6%	0.1%	100.0%
	Sprains and strains of joints and adjacent muscles	Count	61,658	136	1	61,795
		Row %	99.8%	0.2%	0.0%	100.0%
	Intracranial injury, excl. those with skull fracture	Count	4,632	482	88	5,202
		Row %	89.0%	9.3%	1.7%	100.0%
	Internal injury of thorax, abdomen, and pelvis	Count	127	307	45	479
		Row %	26.5%	64.1%	9.4%	100.0%
	Open wound	Count	12,010	329	13	12,352
		Row %	97.2%	2.7%	0.1%	100.0%
	Injury to blood vessels	Count	6	3	2	11
		Row %	54.5%	27.3%	18.2%	100.0%
	Superficial injury	Count	7,421	84	3	7,508
		Row %	98.8%	1.1%	0.0%	100.0%
	Contusion with intact skin surface	Count	34,215	233	4	34,452
		Row %	99.3%	0.7%	0.0%	100.0%
	Crushing injury	Count	403	11	3	417
		Row %	96.6%	2.6%	0.7%	100.0%
Burns	Count	313	9	0	322	
	Row %	97.2%	2.8%	0.0%	100.0%	
Injury to nerves and spinal cord	Count	36	9	0	45	
	Row %	80.0%	20.0%	0.0%	100.0%	
Traumatic complications and unspecified injuries	Count	10,976	391	62	11,429	
	Row %	96.0%	3.4%	0.5%	100.0%	
Total	Count	147,279	3,617	300	151,196	
	Row %	97.4%	2.4%	0.2%	100.0%	

