

3.
CHARACTERISTICS OF PERSONS FATALLY INJURED
BY MOTOR VEHICLES, ARIZONA RESIDENTS,
1993-2007

For the purpose of mortality statistics, every death is attributed to one underlying condition or underlying cause of death. The underlying cause is defined as the disease or injury that initiated the chain of events leading directly to death. It is selected from up to 20 causes and conditions entered by the physician on the death certificate. The totality of all these conditions is known as multiple cause of death.

Both the Ninth (ICD-9) and the Tenth Revision (ICD-10) of the International Classification of Diseases permit the classification of external causes: environmental events, circumstances, and conditions as the cause of injury, poisoning, and other adverse effects. In ICD-9, the codes for external causes of mortality and morbidity constituted a classification supplementary to the 17 main chapters, indicating the nature of the condition. Similarly, the codes for external causes of mortality in ICD-10 are intended to be used in addition to a code from another chapter of the classification, which indicates the nature of the condition. However, only one code is used for the underlying cause of death and the preference is given to the external causes. For example, in an underlying death statistic a death resulting from a base skull fracture sustained in an automobile accident would be classified as a motor vehicle accident. As a result, underlying cause statistics provide information about deaths resulting from motor vehicle accidents but not on deaths involving skull fractures*. In ICD-10, the codes S00 – T98 for the nature of injuries that may be stated as due to external causes are classified in Chapter XIX: "Injury poisoning and certain other consequences of external causes".

In the Ninth Revision of the International Classification of Diseases the following fourth digits were used with categories E810 – E825 to identify the injured person:

- .0 Driver of motor vehicle other than motorcycle
- .1 Passenger in motor vehicle other than motorcycle
- .2 Motorcyclist
- .3 Passenger on motorcycle
- .4 Occupant of streetcar
- .5 Rider of animal; occupant of animal-drawn vehicle
- .6 Pedal cyclist
- .7 Pedestrian
- .8 Other specified person (includes: occupant of vehicle other than above, person in railway train involved in accident, unauthorized rider of motor vehicle)
- .9 Unspecified person

In 1993-1997, there were 6,741 resident deaths in motor vehicle accidents and 76 specific four-character ICD-9 E-codes were used to describe the external cause of injury ranging from E8100 to E8259 (**Table 3-1a**; this table provides not only the actual frequency counts by year, but also the descriptions associated with the specific E-codes).

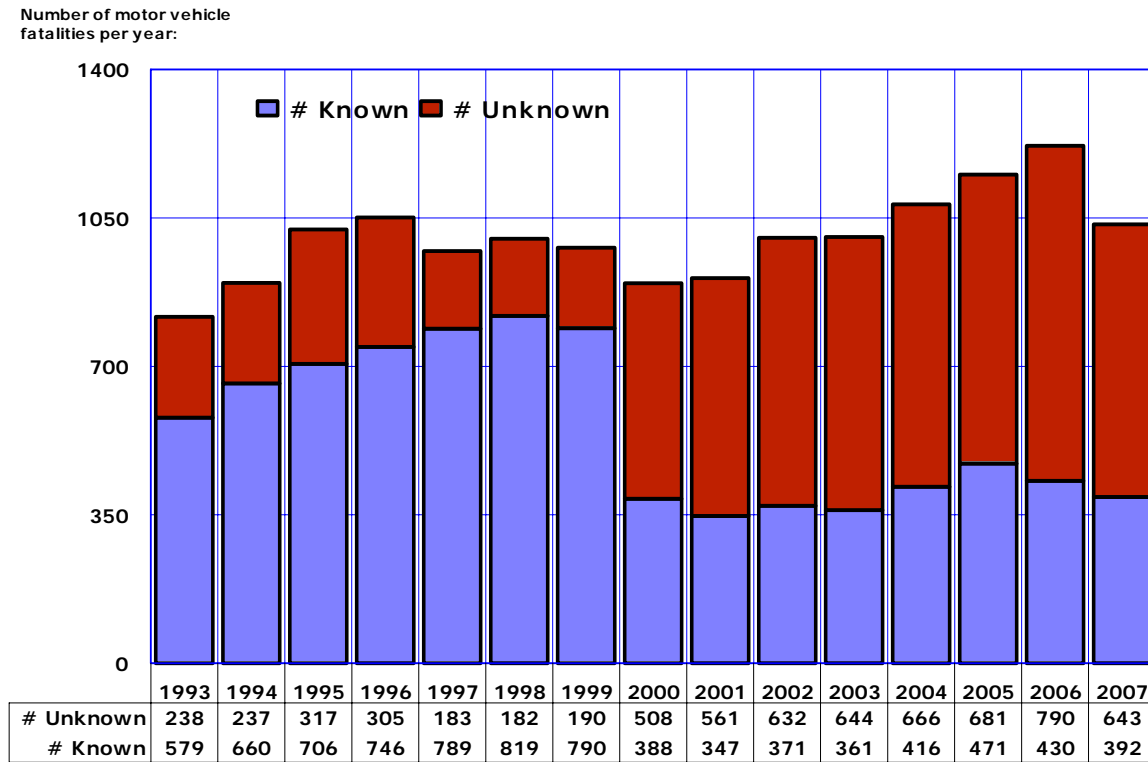
The Tenth Revision of the International Classification of Diseases is substantially more complex. ICD-10 is far more detailed than ICD-9, with about 8,000 categories compared with about 5,000 categories. Some of the coding rules and rules for selecting the underlying cause of death have been changed. The simplicity of ICD-9 coding system used to identify the victim of a motor vehicle accident was replaced with a complicated structure of three-character categories and fourth-character subdivisions.

Injuries sustained by *pedestrians* are classified by ICD-10 codes V02-V04 and V090-V092. Two ranges of codes V12-V14 and V190-V196 are used to classify the injuries to *pedal cyclists*. The codes within the range of V20-V29 are used to classify the injuries of *motorcycle riders*. A rich variety of circumstances in which *occupants* of motor vehicles were injured in both traffic and nontraffic accidents is defined by the ICD-10 codes V30-V79, V803-V805, V810-V811, V820-V821, and V83-V86. Last but not least, the codes V870-V878, V880-V888, V890, and V892 apply to motor vehicle accidents where the *victim's mode of transport was unknown*.

* Multiple cause statistics would provide information on both.

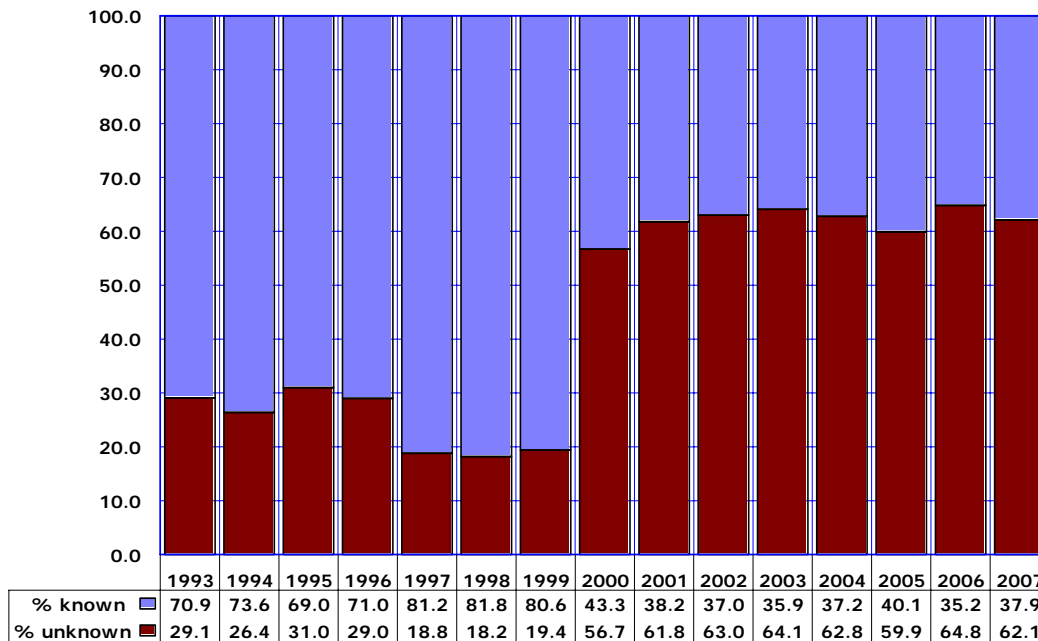
In 2000-2007, there were 8,264 resident deaths in motor vehicle accidents and 143 specific four-character ICD-10 V-codes were used to describe the external cause of injury ranging from V021 to V892 (**Table 3-1b**; this table also provides the actual frequency counts by year and the descriptions associated with the specific V-codes). Since the number of detailed categories used to describe the injuries in motor vehicle accidents almost doubled from 76 in 1993-1999 to 143 in 2000-2007 one could expect a substantial increase in the cognitive value of the epidemiology of accidental death. Unfortunately, the opposite happened, because beginning in 2000 the mode of transport has been unknown for the majority of the motor vehicle fatalities (**Figure 3-1**). In 2007, among the 1,035 motor vehicle-related deaths, the mode of transport was unknown for 643. Fortunately, the ICD-10 categories V87 and V88 exclude collisions involving pedal cyclists and pedestrians. However, we have lost the ability to properly identify other types of victims of motor vehicle accidents, such as drivers, persons on outside of vehicle, or persons injured while boarding or alighting.

Figure 3-1
Known and Unknown Type of Victims of Motor Vehicle Accidents by Year,
Arizona Residents, 1993-2007



The proportion of motor vehicle fatalities where victim type is unknown increased from a recent low of 18.2 percent in 1998 to 56.7 percent in 2000, and 64.8 percent in 2006 (**Figure 3-2**).

Figure 3-2
Percentage of Victims of Motor Vehicle Accidents whose Mode of Transport
was Unknown, Arizona Residents, 1993-2007



The reduction of trauma, death, and the associated social and economic costs stemming from accidents is approached most effectively by discovering and controlling their causes. From the epidemiologic perspective, accidents are not simple acts of fate, but rather ultimately predictable consequences of interaction between individual characteristics and environmental circumstances.* It is not possible to design an effective prevention strategy without taking into consideration characteristics of victims of motor vehicle accidents. Air bags and seat belts are known to decrease the number of serious injuries and fatalities among the occupants of motor vehicles, but they do nothing for persons on outside of vehicles. Similarly, wearing a helmet may work well for a motorcycle rider but it's unlikely to help a pedestrian.

From 1993 to 2007, males accounted for 2.2 times more motor vehicle fatalities than did females (68.5 and 31.5 percent respectively. The percentages are based on data in **Table 3-2**). This male to female ratio fell to a ratio of 1.9:1 for occupant deaths (grouped together with persons of unknown victim status in **Table 3-2**), and rose to a ratio of 7.5:1 for motorcycle rider deaths (925 vs. 123), and a ratio of 10.7:1 for pedal cyclist deaths (321 vs. 30). The disproportionality of males relative to females was almost threefold among young adult (20-44 years, 2.8:1) but less than twofold among children and adolescent (19 years or younger, 1:8:1), and older adult (45 years and older, 1:8:1. The percentages are based on data in **Table 3-3**).

Among every 100 fatalities in 1993-2007, 46 were young adults, 36 were older adults, and 18 were children and adolescents. In other words, 64 percent of Arizonans fatally injured in a motor vehicle accident had not reached their 45th birthday. Young adults accounted for the majority of deaths to motorcycle riders (58.9 percent), but not deaths to pedestrians (39.9 percent) or pedal cyclist (39.0 percent). In fact, being a pedal cyclist (compared to a motorcycle rider or occupant of motor vehicle) was the least likely way in which a young adult was fatally injured (2 percent). In contrast, 28.8 percent of children 14 years or younger were pedestrians, and 5.6 percent were pedal cyclists when they were fatally injured in a vehicular collision (**Table 3-3**).

* Joanne C. Gersten, O.M. Watterson, Fred Teitelbaum: *Accidental Deaths in Arizona*. Research Notes. Vol.2, No.2. Phoenix, Arizona Department of Health Services. August 1986. Pp. 1-2.

As shown in **Table 3-4**, American Indians fatally injured by motor vehicles from 1993 to 2007, were 27.2 times as likely to be pedestrians (24.5 percent) than motorcycle riders (0.9 percent), and 40.8 times more likely than pedal cyclists (0.6 percent). American Indians, comprising 5.3 percent of the State's population, accounted for 26 percent of fatally injured pedestrians but only 2.2 percent of fatally injured motorcycle riders. No different from the average for all groups, American Indian male residents of Arizona accounted for 2.2 times more motor vehicle fatalities than did American Indian females (1,737 vs. 793), but for 4 times as many pedestrian deaths as females (498 vs. 123, **Table 3-4**). Motorcycle fatalities were overwhelmingly (83.4 percent) a White-non-Hispanic phenomenon, while pedestrian fatalities were underrepresented among White non-Hispanics (43.6 percent). In 1993-2007, deaths to pedal cyclists were overrepresented among Blacks or African Americans (4.5 percent of all fatal injuries by motor vehicles, compared to a 2.3 percent average for all groups).

Compared to the average of 15.9 percent of all vehicular fatalities statewide, **pedestrians** were overrepresented as victims of motor vehicle accidents in Apache (25.4 percent), Gila (11.0 percent), Coconino (19.9 percent), and Navajo counties (19.1 percent. **Table 3-5**). These are four rural counties with significant American Indian populations. A timely response to the event is less likely in rural than in urban counties.

From 1993 to 2007, **motorcycle riders** accounted for 7 percent of all victims of motor vehicle accidents. The proportions of death to motorcycle riders were higher among the residents of Pima (9.7 percent), Cochise (8.9 percent), Yavapai (8.7 percent), Maricopa and Santa Cruz (7.9 percent) counties.

Among every 100 motor vehicle fatalities in 1993-2007, approximately 2 (2.3 percent) were **pedal cyclists**. Deaths to pedal cyclists were overrepresented among the residents of Yuma (4.1 percent), Maricopa (3.2 percent), and Pima (2.5 percent) counties.

It is important to note that in 1993-2007, approximately 7 percent of all resident deaths in motor vehicle accidents occurred out-of-State (1,050 out of 15,005).

Victims of motor vehicle accidents who were not classified as pedestrians, pedal cyclists, or motorcycle riders (both drivers and passengers) are shown as **other person** in Tables 3-2, 3-3, 3-4, and 3-5. This very heterogeneous group includes both drivers and non-driving occupants of motor vehicles except motorcycles, persons on outside of vehicle, persons injured while boarding or alighting, unspecified occupants of three-wheeled motor vehicles, unspecified occupants of pick-up trucks or vans, unspecified occupants of heavy transport vehicles, unspecified bus occupants, animal-riders or occupants of animal-drawn vehicles injured in collisions with motor vehicles, occupants of railway train or railway vehicle injured in collisions with motor vehicle accidents, occupants of streetcars, occupants of special vehicles mainly used on industrial premises, occupants of special vehicles mainly used in agriculture, occupants of special construction vehicles, and occupants of special all-terrain or other motor vehicles designed primarily for off-road use.

The Tenth Revision of the International Classification of Diseases evidently offers an impressive list of categories to classify the victims of motor vehicle-related injuries. For 2007, using the ICD-10 codes in Table 3-1b, we could identify 39 fatally injured drivers, and 58 non-driving occupants of motor vehicles. For comparison, the average annual number of driver deaths was 286/year in 1993-1999, while the average annual number of deaths of non-driving occupants of motor vehicles exceeded 190/year (based on data in Table 3-2). In 2000-2007, for 62 percent of resident deaths in motor vehicle accidents the mode of transport was unknown. Instead of providing misleading frequency counts for drivers and passengers of motor vehicles in Table 3-2, we consider this information to be not available (NA) for 2000-2007.

Table 3-1a
 Resident Deaths in Motor Vehicle Accidents by Detailed Code for the Underlying Cause of Death as Classified in ICD-9
 Arizona, 1993-1999

ICD-9 Code	Year of death									
	1993	1994	1995	1996	1997	1998	1999			
E8100	2	3	2	4	4	2	1			
E8101	1	0	1	1	2	0	2			
E8109	0	0	1	2	0	1	0			
E8110	1	0	1	0	0	0	0			
E8120	93	105	137	125	106	133	98			
E8121	53	63	77	71	70	76	42			
E8122	18	19	23	30	13	23	23			
E8123	5	3	1	2	2	0	0			
E8124	0	1	1	0	0	0	0			
E8126	0	0	0	2	0	0	0			
E8127	1	0	0	0	0	1	0			
E8128	0	0	0	2	2	0	1			
E8129	56	63	58	65	59	65	51			
E8130	0	1	0	3	1	0	0			
E8131	0	1	0	0	1	0	0			
E8136	17	20	29	24	33	19	16			
E8137	1	0	0	0	0	0	0			
E8138	0	1	0	0	0	3	0			
E8139	4	0	1	0	1	0	1			
E8142	0	0	0	0	1	0	0			
E8143	0	0	2	0	0	0	1			
E8146	0	1	0	0	2	1	7			
E8147	149	140	175	179	179	178	160			
E8149	1	0	0	0	0	0	0			
E8150	20	22	27	22	22	21	7			
E8151	14	9	12	9	8	10	7			
E8152	10	7	5	3	8	3	1			
E8153	0	1	0	1	1	1	3			
E8157	0	0	1	0	0	0	0			
E8159	8	8	9	10	9	11	4			
E8160	47	59	70	73	87	64	56			
E8161	42	33	36	62	61	46	34			
E8162	5	3	4	11	6	2	6			
E8163	0	0	0	1	0	1	1			
E8164	0	1	0	0	0	0	0			
E8168	0	0	0	0	0	1	0			
E8169	55	43	61	95	53	35	56			
E8171	0	1	0	0	0	0	0			
E8179	0	0	2	0	0	0	0			

Table 3-1a (continued)
 Resident Deaths in Motor Vehicle Accidents by Detailed Code for the Underlying Cause of Death as Classified in ICD-9
 Arizona, 1993-1999

ICD-9 Code	Year of death									
	1993	1994	1995	1996	1997	1998	1999			
E8180	3	3	0	1	4	6	6			
E8181	8	9	11	6	3	8	11			
E8182	1	0	0	1	0	0	1			
E8183	0	0	0	0	0	0	0			
E8187	1	0	0	0	0	0	0			
E8188	1	0	1	0	1	0	0			
E8189	11	8	12	16	5	9	7			
E8190	31	72	34	42	88	109	154			
E8191	32	58	37	46	58	86	110			
E8192	2	9	9	4	10	10	27			
E8193	0	0	1	1	3	1	1			
E8194	0	0	0	0	0	0	0			
E8196	0	0	0	0	1	0	0			
E8197	0	0	0	0	2	0	0			
E8198	1	0	1	0	0	2	4			
E8199	97	108	165	111	55	53	64			
E8208	0	0	0	0	1	0	0			
E8210	1	3	2	4	4	5	2			
E8211	0	0	0	1	0	0	1			
E8212	0	0	0	1	0	1	3			
E8217	0	1	0	2	0	0	0			
E8218	0	0	0	1	1	0	0			
E8219	1	2	3	4	0	4	5			
E8220	0	1	0	1	0	1	0			
E8221	1	0	0	0	0	0	0			
E8226	0	0	0	2	0	1	0			
E8227	10	7	4	2	1	2	1			
E8229	0	1	2	0	0	0	0			
E8230	1	0	0	0	0	0	0			
E8232	0	1	0	0	0	0	0			
E8249	1	3	0	0	0	2	0			
E8250	4	0	1	1	1	0	0			
E8251	1	0	1	3	1	0	0			
E8252	0	0	0	0	0	1	0			
E8255	0	0	0	0	0	1	0			
E8257	2	2	0	2	1	0	1			
E8259	4	1	3	2	1	2	2			
Total	817	897	1023	1051	972	1001	980			

Table 3-1a (continued)
Detailed Code Description for the Underlying Cause of Death as Classified in ICD-9 for Motor Vehicle Accidents

Motor Vehicle Traffic (E810-E819) and Non-Traffic (E820-E825) Accidents - for data table above

For definitions of motor vehicle traffic accident, and related terms see definitions (e) to (k).

Excludes: accidents involving motor vehicle and aircraft (E840-E845).

The following fourth digits are for use with categories E810-E819 to identify the injured person.

- .0 Driver of motor vehicle other than motorcycle - See definition (1)
 - .1 Passenger in motor vehicle other than motorcycle - See definition (1)
 - .2 Motorcyclist - See definition (1)
 - .3 Passenger on motorcycle - See definition (1)
 - .4 Occupant of streetcar
 - .5 Rider of animal; occupant of animal-drawn vehicle
 - .6 Pedal cyclist - See definition (p)
 - .7 Pedestrian - See definition (r)
 - .8 Other specified person
 - .9 Unspecified person
- Includes: occupant of vehicle other than above person in railway train involved in accident unauthorized rider of motor vehicle

ICD-9 CODE	CODE DESCRIPTION
E8100	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH TRAIN INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8101	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH TRAIN INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8109	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH TRAIN INJURING UNSPECIFIED PERSON
E8110	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING RE-ENTRANT COLLISION WITH ANOTHER MOTOR VEHICLE INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8120	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH MOTOR VEHICLE INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8121	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH MOTOR VEHICLE INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8122	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH MOTOR VEHICLE INJURING MOTORCYCLIST
E8123	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH MOTOR VEHICLE INJURING PASSENGER ON MOTORCYCLE
E8124	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH MOTOR VEHICLE INJURING OCCUPANT OF STREETCAR
E8126	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH MOTOR VEHICLE INJURING PEDAL CYCLIST
E8127	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH MOTOR VEHICLE INJURING PEDESTRIAN
E8128	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH MOTOR VEHICLE INJURING OTHER SPECIFIED PERSON
E8129	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH MOTOR VEHICLE INJURING UNSPECIFIED PERSON
E8130	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH OTHER VEHICLE INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8131	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH OTHER VEHICLE INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8136	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH OTHER VEHICLE INJURING PEDAL CYCLIST
E8137	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH OTHER VEHICLE INJURING PEDESTRIAN
E8138	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH OTHER VEHICLE INJURING OTHER SPECIFIED PERSON
E8139	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH OTHER VEHICLE INJURING UNSPECIFIED PERSON
E8142	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH PEDESTRIAN INJURING UNSPECIFIED PERSON
E8143	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH PEDESTRIAN INJURING MOTORCYCLIST
E8146	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH PEDESTRIAN INJURING PASSENGER ON MOTORCYCLE
E8147	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH PEDESTRIAN INJURING PEDAL CYCLIST
E8149	MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION WITH PEDESTRIAN INJURING PEDESTRIAN
E8150	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION ON THE HIGHWAY INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8151	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION ON THE HIGHWAY INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8152	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION ON THE HIGHWAY INJURING MOTORCYCLIST
E8153	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION ON THE HIGHWAY INJURING PASSENGER ON MOTORCYCLE
E8157	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION ON THE HIGHWAY INJURING PEDESTRIAN

Table 3-1a (continued)
Detailed Code Description for the Underlying Cause of Death as Classified in ICD-9 for Motor Vehicle Accidents

ICD-9 CODE	CODE DESCRIPTION
E8159	OTHER MOTOR VEHICLE TRAFFIC ACCIDENT INVOLVING COLLISION ON THE HIGHWAY INJURING UNSPECIFIED PERSON
E8160	MOTOR VEHICLE TRAFFIC ACCIDENT DUE TO LOSS OF CONTROL, WITHOUT COLLISION ON THE HIGHWAY, INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8161	MOTOR VEHICLE TRAFFIC ACCIDENT DUE TO LOSS OF CONTROL, WITHOUT COLLISION ON THE HIGHWAY, INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8162	MOTOR VEHICLE TRAFFIC ACCIDENT DUE TO LOSS OF CONTROL, WITHOUT COLLISION ON THE HIGHWAY, INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8163	MOTOR VEHICLE TRAFFIC ACCIDENT DUE TO LOSS OF CONTROL, WITHOUT COLLISION ON THE HIGHWAY, INJURING PASSENGER ON MOTORCYCLE
E8164	MOTOR VEHICLE TRAFFIC ACCIDENT DUE TO LOSS OF CONTROL, WITHOUT COLLISION ON THE HIGHWAY, INJURING OCCUPANT OF STREETCAR
E8168	MOTOR VEHICLE TRAFFIC ACCIDENT DUE TO LOSS OF CONTROL, WITHOUT COLLISION ON THE HIGHWAY, INJURING OTHER SPECIFIED PERSON
E8169	MOTOR VEHICLE TRAFFIC ACCIDENT DUE TO LOSS OF CONTROL, WITHOUT COLLISION ON THE HIGHWAY, INJURING UNSPECIFIED PERSON
E8171	NONCOLLISION MOTOR VEHICLE TRAFFIC ACCIDENT WHILE BOARDING OR ALIGHTING INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8179	NONCOLLISION MOTOR VEHICLE TRAFFIC ACCIDENT WHILE BOARDING OR ALIGHTING INJURING UNSPECIFIED PERSON
E8180	OTHER NONCOLLISION MOTOR VEHICLE TRAFFIC ACCIDENT INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8181	OTHER NONCOLLISION MOTOR VEHICLE TRAFFIC ACCIDENT INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8182	OTHER NONCOLLISION MOTOR VEHICLE TRAFFIC ACCIDENT INJURING PASSENGER ON MOTORCYCLE
E8183	OTHER NONCOLLISION MOTOR VEHICLE TRAFFIC ACCIDENT INJURING PASSENGER ON MOTORCYCLE
E8187	OTHER NONCOLLISION MOTOR VEHICLE TRAFFIC ACCIDENT INJURING PEDESTRIAN
E8188	OTHER NONCOLLISION MOTOR VEHICLE TRAFFIC ACCIDENT INJURING OTHER SPECIFIED PERSON
E8189	OTHER NONCOLLISION MOTOR VEHICLE TRAFFIC ACCIDENT INJURING UNSPECIFIED PERSON
E8190	MOTOR VEHICLE TRAFFIC ACCIDENT OF UNSPECIFIED NATURE INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8191	MOTOR VEHICLE TRAFFIC ACCIDENT OF UNSPECIFIED NATURE INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8192	MOTOR VEHICLE TRAFFIC ACCIDENT OF UNSPECIFIED NATURE INJURING MOTORCYCLIST
E8193	MOTOR VEHICLE TRAFFIC ACCIDENT OF UNSPECIFIED NATURE INJURING PASSENGER ON MOTORCYCLE
E8194	MOTOR VEHICLE TRAFFIC ACCIDENT OF UNSPECIFIED NATURE INJURING OCCUPANT OF STREETCAR
E8196	MOTOR VEHICLE TRAFFIC ACCIDENT OF UNSPECIFIED NATURE INJURING PEDAL CYCLIST
E8197	MOTOR VEHICLE TRAFFIC ACCIDENT OF UNSPECIFIED NATURE INJURING PEDESTRIAN
E8198	MOTOR VEHICLE TRAFFIC ACCIDENT OF UNSPECIFIED NATURE INJURING OTHER SPECIFIED PERSON
E8199	MOTOR VEHICLE TRAFFIC ACCIDENT OF UNSPECIFIED NATURE INJURING UNSPECIFIED PERSON
E8208	NONTRAFFIC ACCIDENT INVOLVING MOTOR-DRIVEN SNOW VEHICLE INJURING OTHER SPECIFIED PERSON
E8210	NONTRAFFIC ACCIDENT INVOLVING OTHER OFF-ROAD MOTOR VEHICLE INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8211	NONTRAFFIC ACCIDENT INVOLVING OTHER OFF-ROAD MOTOR VEHICLE INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8212	NONTRAFFIC ACCIDENT INVOLVING OTHER OFF-ROAD MOTOR VEHICLE INJURING MOTORCYCLIST
E8217	NONTRAFFIC ACCIDENT INVOLVING OTHER OFF-ROAD MOTOR VEHICLE INJURING PEDESTRIAN
E8218	NONTRAFFIC ACCIDENT INVOLVING OTHER OFF-ROAD MOTOR VEHICLE INJURING OTHER SPECIFIED PERSON
E8219	NONTRAFFIC ACCIDENT INVOLVING OTHER OFF-ROAD MOTOR VEHICLE INJURING UNSPECIFIED PERSON
E8220	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT INVOLVING COLLISION WITH MOVING OBJECT INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8221	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT INVOLVING COLLISION WITH MOVING OBJECT INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8226	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT INVOLVING COLLISION WITH MOVING OBJECT INJURING PEDAL CYCLIST
E8227	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT INVOLVING COLLISION WITH MOVING OBJECT INJURING PEDESTRIAN
E8229	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT INVOLVING COLLISION WITH MOVING OBJECT INJURING UNSPECIFIED PERSON
E8230	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT INVOLVING COLLISION WITH STATIONARY OBJECT INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8232	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT INVOLVING COLLISION WITH STATIONARY OBJECT INJURING MOTORCYCLIST
E8249	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT WHILE BOARDING AND ALIGHTING INJURING UNSPECIFIED PERSON
E8250	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT OF OTHER AND UNSPECIFIED NATURE INJURING DRIVER OF MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8251	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT OF OTHER AND UNSPECIFIED NATURE INJURING PASSENGER IN MOTOR VEHICLE OTHER THAN MOTORCYCLE
E8252	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT OF OTHER AND UNSPECIFIED NATURE INJURING MOTORCYCLIST
E8255	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT OF OTHER AND UNSPECIFIED NATURE INJURING RIDER OF ANIMAL; OCCUPANT OF ANIMAL-DRAWN VEHICLE
E8257	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT OF OTHER AND UNSPECIFIED NATURE INJURING PEDESTRIAN
E8259	OTHER MOTOR VEHICLE NONTRAFFIC ACCIDENT OF OTHER AND UNSPECIFIED NATURE INJURING UNSPECIFIED PERSON

Table 3-1b
 Resident Deaths in Motor Vehicle Accidents by Detailed Code for the Underlying Cause of Death as Classified in ICD-10
 Arizona, 2000-2007

ICD-10 Code	Year of death									
	2000	2001	2002	2003	2004	2005	2006	2007		
V021	1	0	0	0	0	0	0	0	0	1
V030	1	4	5	2	3	1	2	5		
V031	48	52	48	29	27	38	27	26		
V039	0	4	1	1	0	0	0	0		
V040	0	0	0	0	1	2	0	0		
V041	3	3	6	4	3	2	3	1		
V049	0	2	0	0	0	0	0	0		
V090	4	2	4	3	7	9	9	9		
V092	65	75	83	85	102	130	128	113		
V129	0	1	0	0	0	0	0	0		
V130	0	0	0	0	0	0	1	0		
V131	0	1	0	0	0	0	0	0		
V132	0	0	0	0	0	0	0	1		
V134	3	4	0	2	1	8	3	0		
V135	0	1	0	0	0	0	0	0		
V139	10	9	5	5	3	7	8	4		
V149	0	1	0	0	1	2	0	1		
V190	0	1	0	0	0	0	0	0		
V192	0	0	0	0	1	0	0	0		
V194	1	2	0	0	5	14	9	3		
V195	0	0	0	0	1	0	0	0		
V196	6	6	3	7	9	8	9	9		
V204	0	0	0	0	1	0	0	0		
V209	1	0	0	0	0	0	0	0		
V224	2	0	0	1	0	0	1	2		
V225	0	0	0	0	0	0	1	0		
V229	0	0	0	0	1	0	0	0		
V230	0	0	0	0	0	0	0	1		
V234	7	10	7	11	4	8	10	2		
V235	1	0	1	0	0	0	0	0		
V239	5	4	4	6	2	0	2	1		
V244	0	0	0	0	0	1	0	0		
V254	0	0	0	0	0	0	1	0		
V255	0	0	0	0	0	0	1	0		
V272	0	0	0	0	0	0	0	1		
V274	2	1	1	2	3	10	3	1		
V275	1	0	0	0	1	0	0	0		
V279	1	0	1	0	1	0	0	0		
V280	0	1	0	1	1	0	0	0		
V281	1	0	0	0	0	0	0	0		
V284	2	2	2	6	1	6	6	5		

Table 3-1b (continued)
 Resident Deaths in Motor Vehicle Accidents by Detailed Code for the Underlying Cause of Death as Classified in ICD-10
 Arizona, 2000-2007

ICD-10 Code	Year of death										
	2000	2001	2002	2003	2004	2005	2006	2007			
V285	3	0	0	0	1	2	0	0	0	0	0
V289	0	1	0	5	0	0	1	0	0	0	1
V290	1	1	0	0	0	0	0	0	0	0	0
V293	0	2	1	1	0	0	0	0	0	0	0
V294	11	15	11	6	26	10	8	6	0	0	0
V295	1	1	2	1	1	1	0	0	0	0	0
V296	6	0	5	3	2	0	0	0	0	0	0
V299	26	25	45	33	44	76	73	74	0	0	0
V393	1	0	0	0	0	0	0	0	0	0	0
V405	0	0	0	0	0	0	0	0	0	0	0
V406	0	0	1	0	0	0	0	0	0	0	0
V429	0	0	0	0	1	0	0	0	0	0	0
V430	2	0	0	0	0	0	0	0	0	0	0
V431	0	0	0	0	0	0	0	0	0	0	0
V435	18	20	11	7	10	10	9	4	0	0	0
V436	17	11	7	1	8	8	1	8	0	0	0
V439	12	6	7	15	12	10	4	4	0	0	0
V445	2	0	0	0	0	1	0	0	0	0	0
V446	1	0	0	0	0	1	0	0	0	0	0
V449	0	2	0	1	0	0	0	0	0	0	0
V450	1	0	0	0	0	0	0	0	0	0	0
V455	0	0	0	0	0	0	0	0	0	0	0
V456	1	0	0	0	0	0	0	0	0	0	0
V459	0	0	0	3	0	0	0	0	0	0	0
V465	0	0	1	0	0	0	0	0	0	0	0
V466	0	0	0	1	0	0	0	0	0	0	0
V470	0	0	0	0	0	0	0	0	0	0	0
V475	2	3	4	3	4	0	1	2	0	0	0
V476	3	1	1	2	3	1	0	1	0	0	0
V479	1	1	0	5	2	2	0	3	0	0	0
V480	0	0	0	1	0	0	0	0	0	0	0
V484	0	0	1	0	0	0	0	0	0	0	0
V485	16	8	15	17	9	12	13	10	0	0	0
V486	11	14	5	9	10	6	8	10	0	0	0
V489	10	2	8	16	15	5	3	6	0	0	0
V49	0	0	0	0	1	0	0	0	0	0	0
V490	0	0	1	1	0	0	0	0	0	0	0
V491	0	0	0	1	0	0	0	0	0	0	0
V493	0	0	0	1	0	0	1	0	0	0	0
V494	4	3	0	2	5	0	3	5	0	0	0
V495	3	4	7	4	3	0	0	3	0	0	0

Table 3-1b (continued)
 Resident Deaths in Motor Vehicle Accidents by Detailed Code for the Underlying Cause of Death as Classified in ICD-10
 Arizona, 2000-2007

ICD-10 Code	Year of death											
	2000	2001	2002	2003	2004	2005	2006	2007				
V850	1	0	0	0	1	0	0	0	0	0	0	0
V855	0	0	1	0	0	0	0	0	0	0	0	0
V859	0	0	0	0	0	2	0	0	0	0	0	0
V860	5	0	0	3	5	5	7	4				
V861	0	0	0	0	0	1	1	1				
V863	3	1	0	1	3	2	2	2				
V865	4	2	3	3	8	6	8	15				
V866	0	1	0	0	0	1	1	3				
V869	2	4	11	5	7	10	14	11				
V870	0	2	1	2	4	7	5	5				
V871	1	1	1	3	5	12	4	2				
V872	1	1	2	6	1	3	2	6				
V874	1	2	1	0	1	2	0	0				
V875	0	0	1	0	0	0	0	0				
V876	1	0	0	1	0	0	0	0				
V877	85	105	100	115	113	136	132	45				
V878	2	3	2	2	0	0	1	0				
V887	0	0	1	0	0	0	1	1				
V890	1	2	1	9	13	4	13	24				
V892	416	445	522	506	529	517	632	560				
Total	896	908	1003	1005	1060	1137	1220	1035				

Detailed Code Description for the Underlying Cause of Death as Classified in ICD-10 for Motor Vehicle Accidents

Pedestrian injured in transport accident (V01-V09)

Excludes: collision of pedestrian (conveyance) with other pedestrian; (conveyance) (W51.-); with subsequent fall (W03.-)

The following fourth-character subdivision are for use with categories V01-V09:

- .0 Nontraffic accident
- .1 Traffic accident
- .9 Unspecified whether traffic or nontraffic accident

ICD-10 CODE	CODE DESCRIPTION
V02	PEDESTRIAN INJURED IN COLLISION WITH TWO- OR THREE-WHEELED MOTOR VEHICLE
V03	PEDESTRIAN INJURED IN COLLISION WITH CAR, PICK-UP TRUCK OR VAN
V04	PEDESTRIAN INJURED IN COLLISION WITH HEAVY TRANSPORT VEHICLE OR BUS
V09	PEDESTRIAN INJURED IN OTHER AND UNSPECIFIED TRANSPORT ACCIDENTS (INCLUDES: PEDESTRIAN INJURED BY SPECIAL VEHICLE)
V09.2	PEDESTRIAN INJURED IN TRAFFIC ACCIDENT INVOLVING OTHER AND UNSPECIFIED MOTOR VEHICLES

Pedal cyclist injured in transport accident (V10-V19)

The following fourth-character subdivisions are for use with categories V10-V18:

- .0 Driver injured in nontraffic accident
- .1 Passenger injured in nontraffic accident
- .2 Unspecified pedal cyclist injured in nontraffic accident
- .3 Person injured while boarding or alighting
- .4 Driver injured in traffic accident
- .5 Passenger injured in traffic accident
- .9 Unspecified pedal cyclist injured in traffic accident

ICD-10 CODE	CODE DESCRIPTION
V12	PEDAL CYCLIST INJURED IN COLLISION WITH TWO- OR THREE-WHEELED MOTOR VEHICLE
V13	PEDAL CYCLIST INJURED IN COLLISION WITH CAR, PICK-UP TRUCK OR VAN
V14	PEDAL CYCLIST INJURED IN COLLISION WITH HEAVY TRANSPORT VEHICLE OR BUS
V19	PEDAL CYCLIST INJURED IN OTHER AND UNSPECIFIED TRANSPORT ACCIDENTS
V19.6	UNSPECIFIED PEDAL CYCLIST INJURED IN COLLISION WITH OTHER AND UNSPECIFIED MOTOR VEHICLES IN TRAFFIC ACCIDENT (PEDAL CYCLE COLLISION NOS (TRAFFIC))

Motorcycle rider injured in transport accident (V20-V29)

Includes: moped, motorcycle with sidecar, motorized bicycle, motor scooter

Excludes: three-wheeled motor vehicle (V30-V39)

The following fourth-character subdivisions are for use with categories V20-V28:

- .0 Driver injured in nontraffic accident
- .1 Passenger injured in nontraffic accident
- .2 Unspecified motorcycle rider injured in nontraffic accident
- .3 Person injured while boarding or alighting
- .4 Driver injured in traffic accident
- .5 Passenger injured in traffic accident
- .9 Unspecified motorcycle rider injured in traffic accident

ICD-10 CODE	CODE DESCRIPTION
V20	MOTORCYCLE RIDER INJURED IN COLLISION WITH PEDESTRIAN OR ANIMAL (EXCLUDES: COLLISION WITH ANIMAL-DRAWN VEHICLE OR ANIMAL BEING RIDDEN (V26.-))
V22	MOTORCYCLE RIDER INJURED IN COLLISION WITH TWO- OR THREE-WHEELED MOTOR VEHICLE
V23	MOTORCYCLE RIDER INJURED IN COLLISION WITH CAR, PICK-UP TRUCK OR VAN
V24	MOTORCYCLE RIDER INJURED IN COLLISION WITH HEAVY TRANSPORT VEHICLE OR BUS

Motorcycle rider injured in transport accident (V20-V29) (continued)

ICD-10 CODE	CODE DESCRIPTION
V25	MOTORCYCLE RIDER INJURED IN COLLISION WITH RAILWAY TRAIN OR RAILWAY VEHICLE
V27	MOTORCYCLE RIDER INJURED IN COLLISION WITH FIXED OR STATIONARY OBJECT
V28	MOTORCYCLE RIDER INJURED IN NONCOLLISION TRANSPORT ACCIDENT (INCLUDES: FALL OR THROWN FROM MOTORCYCLE (WITHOUT ANTECEDENT COLLISION), OVERTURNING, NOS, WITHOUT COLLISION)
V29	MOTORCYCLE RIDER INJURED IN OTHER AND UNSPECIFIED TRANSPORT ACCIDENTS
V29.6	UNSPECIFIED MOTORCYCLE RIDER INJURED IN COLLISION WITH OTHER AND UNSPECIFIED MOTOR VEHICLES IN TRAFFIC ACCIDENT (MOTORCYCLE COLLISION NOS (TRAFFIC))

Occupant of three-wheeled motor vehicle injured in transport accident (V30-V39)

Includes: motorized tricycle

Excludes: motorcycle with sidecar (V20-V29), vehicle designed primarily for off-road use (V86.-)

The following fourth-character subdivisions are for use with categories V30-V38:

- .0 Driver injured in nontraffic accident
- .1 Passenger injured in nontraffic accident
- .2 Person on outside of vehicle injured in nontraffic accident
- .3 Unspecified occupant of three-wheeled motor vehicle injured in nontraffic accident
- .4 Person injured while boarding or alighting
- .5 Driver injured in traffic accident
- .6 Passenger injured in traffic accident
- .7 Person on outside of vehicle injured in traffic accident
- .9 Unspecified occupant of three-wheeled motor vehicle injured in traffic accident

ICD-10 CODE	CODE DESCRIPTION
V39	OCCUPANT OF THREE-WHEELED MOTOR VEHICLE INJURED IN NONCOLLISION TRANSPORT ACCIDENT (INCLUDES: FALL OR THROWN FROM THREE-WHEELED MOTOR VEHICLE OVERTURNING: NOS, WITHOUT COLLISION)

Car occupant injured in transport accident (V40-V49)

Includes: minibus

The following fourth-character subdivisions are for use with categories V40-V48:

- .0 Driver injured in nontraffic accident
- .1 Passenger injured in nontraffic accident
- .2 Person on outside of vehicle injured in nontraffic accident
- .3 Unspecified car occupant injured in nontraffic accident
- .4 Person injured while boarding or alighting
- .5 Driver injured in traffic accident
- .6 Passenger injured in traffic accident
- .7 Person on outside of vehicle injured in traffic accident
- .9 Unspecified car occupant injured in traffic accident

ICD-10 CODE	CODE DESCRIPTION
V40	CAR OCCUPANT INJURED IN COLLISION WITH PEDESTRIAN OR ANIMAL (EXCLUDES: COLLISION WITH ANIMAL-DRAWN VEHICLE OR ANIMAL BEING RIDDEN (V46.-))
V42	CAR OCCUPANT INJURED IN COLLISION WITH TWO- OR THREE-WHEELED MOTOR VEHICLE
V43	CAR OCCUPANT INJURED IN COLLISION WITH CAR, PICK-UP TRUCK OR VAN
V44	CAR OCCUPANT INJURED IN COLLISION WITH HEAVY TRANSPORT VEHICLE OR BUS
V45	CAR OCCUPANT INJURED IN COLLISION WITH RAILWAY TRAIN OR RAILWAY VEHICLE
V46	CAR OCCUPANT INJURED IN COLLISION WITH OTHER NONMOTOR VEHICLE (INCLUDES: COLLISION WITH ANIMAL-DRAWN VEHICLE, ANIMAL BEING RIDDEN, STREETCAR)
V47	CAR OCCUPANT INJURED IN COLLISION WITH FIXED OR STATIONARY OBJECT
V48	CAR OCCUPANT INJURED IN NONCOLLISION TRANSPORT ACCIDENT (INCLUDES: OVERTURNING: NOS, WITHOUT COLLISION)
V49	CAR OCCUPANT INJURED IN OTHER AND UNSPECIFIED TRANSPORT ACCIDENTS
V49.8	CAR OCCUPANT (ANY) INJURED IN OTHER SPECIFIED TRANSPORT ACCIDENTS (TRAPPED BY DOOR OR OTHER PART CAR)

Occupant of pick-up truck or van injured in transport accident (V50-V59)

Excludes: heavy transport vehicle (V60-V69)

The following fourth-character subdivisions are for use with categories V50-V58:

- .0 Driver injured in nontraffic accident
- .1 Passenger injured in nontraffic accident
- .2 Person on outside of vehicle injured in nontraffic accident
- .3 Unspecified occupant of pick-up truck or van injured in nontraffic accident
- .4 Person injured while boarding or alighting
- .5 Driver injured in traffic accident
- .6 Passenger injured in traffic accident
- .7 Person on outside of vehicle injured in traffic accident
- .9 Unspecified occupant of pick-up truck or van injured in traffic accident

ICD-10 CODE	CODE DESCRIPTION
V50	OCCUPANT OF PICK-UP TRUCK OR VAN INJURED IN COLLISION WITH PEDESTRIAN OR ANIMAL (EXCLUDES: COLLISION WITH ANIMAL-DRAWN VEHICLE OR ANIMAL BEING RIDDEN (V56.-))
V53	OCCUPANT OF PICK-UP TRUCK OR VAN INJURED IN COLLISION WITH CAR, PICK-UP TRUCK OR VAN
V54	OCCUPANT OF PICK-UP TRUCK OR VAN INJURED IN COLLISION WITH HEAVY TRANSPORT VEHICLE OR BUS
V55	OCCUPANT OF PICK-UP TRUCK OR VAN INJURED IN COLLISION WITH RAILWAY TRAIN OR RAILWAY VEHICLE
V57	OCCUPANT OF PICK-UP TRUCK OR VAN INJURED IN COLLISION WITH FIXED OR STATIONARY OBJECT
V58	OCCUPANT OF PICK-UP TRUCK OR VAN INJURED IN NONCOLLISION TRANSPORT ACCIDENT (INCLUDES: OVERTURNING: NOS, WITHOUT COLLISION)
V59	OCCUPANT OF PICK-UP TRUCK OR VAN INJURED IN OTHER AND UNSPECIFIED TRANSPORT ACCIDENTS

Occupant of heavy transport vehicle injured in transport accident (V60-V69)

The following fourth-character subdivisions are for use with categories V60-V68:

- .0 Driver injured in nontraffic accident
- .1 Passenger injured in nontraffic accident
- .2 Person on outside of vehicle injured in nontraffic accident
- .3 Unspecified occupant of heavy transport vehicle injured in nontraffic accident
- .4 Person injured while boarding or alighting
- .5 Driver injured in traffic accident
- .6 Passenger injured in traffic accident
- .7 Person on outside of vehicle injured in traffic accident
- .9 Unspecified occupant of heavy transport vehicle injured in traffic accident

ICD-10 CODE	CODE DESCRIPTION
V63	OCCUPANT OF HEAVY TRANSPORT VEHICLE INJURED IN COLLISION WITH CAR, PICK-UP TRUCK OR VAN
V64	OCCUPANT OF HEAVY TRANSPORT VEHICLE INJURED IN COLLISION WITH HEAVY TRANSPORT VEHICLE OR BUS
V68	OCCUPANT OF HEAVY TRANSPORT VEHICLE INJURED IN NONCOLLISION TRANSPORT ACCIDENT (INCLUDES: OVERTURNING: NOS, WITHOUT COLLISION)
V69	OCCUPANT OF HEAVY TRANSPORT VEHICLE INJURED IN OTHER AND UNSPECIFIED TRANSPORT ACCIDENTS
V69.8	OCCUPANT (ANY) OF HEAVY TRANSPORT VEHICLE INJURED IN OTHER SPECIFIED TRANSPORT ACCIDENTS (TRAPPED BY DOOR OR OTHER PART OF HEAVY TRANSPORT VEHICLE)

Bus occupant injured in transport accident (V70-V79)

Excludes: minibus (V40-V49)

The following fourth-character subdivisions are for use with categories V70-V78:

- .0 Driver injured in nontraffic accident
- .1 Passenger injured in nontraffic accident
- .2 Person on outside of vehicle injured in nontraffic accident
- .3 Unspecified bus occupant injured in nontraffic accident
- .4 Person injured while boarding or alighting
- .5 Driver injured in traffic accident
- .6 Passenger injured in traffic accident

Bus occupant injured in transport accident (V70-V79) (continued)
Excludes: minibus (V40-V49)

The following fourth-character subdivisions are for use with categories V70-V78:

- .7 Person on outside of vehicle injured in traffic accident
- .9 Unspecified bus occupant injured in traffic accident

ICD-10 CODE	CODE DESCRIPTION
V79.8	BUS OCCUPANT (ANY) INJURED IN OTHER SPECIFIED TRANSPORT ACCIDENTS (TRAPPED BY DOOR OR OTHER PART OF BUS)

Other land transport accidents (V80-V89)

ICD-10 CODE	CODE DESCRIPTION
V81.1	OCCUPANT OF RAILWAY TRAIN OR RAILWAY VEHICLE INJURED IN COLLISION WITH MOTOR VEHICLE IN TRAFFIC ACCIDENT
V83.9	UNSPECIFIED OCCUPANT OF SPECIAL INDUSTRIAL VEHICLE INJURED IN NONTRAFFIC ACCIDENT (SPECIAL-INDUSTRIAL VEHICLE ACCIDENT NOS)
V84.0	DRIVER OF SPECIAL AGRICULTURAL VEHICLE INJURED IN TRAFFIC ACCIDENT
V84.5	DRIVER OF SPECIAL AGRICULTURAL VEHICLE INJURED IN NONTRAFFIC ACCIDENT
V84.9	UNSPECIFIED OCCUPANT OF SPECIAL AGRICULTURAL VEHICLE INJURED IN NONTRAFFIC ACCIDENT (SPECIAL-AGRICULTURAL VEHICLE ACCIDENT NOS)
V85.0	DRIVER OF SPECIAL CONSTRUCTION VEHICLE INJURED IN TRAFFIC ACCIDENT
V85.5	DRIVER OF SPECIAL CONSTRUCTION VEHICLE INJURED IN NONTRAFFIC ACCIDENT
V85.9	UNSPECIFIED OCCUPANT OF SPECIAL CONSTRUCTION VEHICLE INJURED IN NONTRAFFIC ACCIDENT (SPECIAL-CONSTRUCTION-VEHICLE ACCIDENT NOS)
V86.0	DRIVER OF ALL-TERRAIN OR OTHER OFF-ROAD MOTOR VEHICLE INJURED IN TRAFFIC ACCIDENT
V86.1	PASSENGER OF ALL-TERRAIN OR OTHER OFF-ROAD MOTOR VEHICLE INJURED IN TRAFFIC ACCIDENT
V86.3	UNSPECIFIED OCCUPANT OF ALL-TERRAIN OR OTHER OFF-ROAD MOTOR VEHICLE INJURED IN TRAFFIC ACCIDENT
V86.5	DRIVER OF ALL-TERRAIN OR OTHER OFF-ROAD MOTOR VEHICLE INJURED IN NONTRAFFIC ACCIDENT
V86.6	PASSENGER OF ALL-TERRAIN OR OTHER OFF-ROAD MOTOR VEHICLE INJURED IN NONTRAFFIC ACCIDENT
V86.9	UNSPECIFIED OCCUPANT OF ALL-TERRAIN OR OTHER OFF-ROAD MOTOR VEHICLE INJURED IN NONTRAFFIC ACCIDENT (ALL-TERRAIN MOTOR VEHICLE ACCIDENT NOS, OFF-ROAD MOTOR VEHICLE ACCIDENT NOS)
V87.0	PERSON INJURED IN COLLISION BETWEEN CAR AND TWO- OR THREE-WHEELED MOTOR VEHICLE (TRAFFIC)
V87.1	PERSON INJURED IN COLLISION BETWEEN OTHER MOTOR VEHICLE AND TWO- OR THREE-WHEELED MOTOR VEHICLE (TRAFFIC)
V87.2	PERSON INJURED IN COLLISION BETWEEN CAR AND PICK-UP TRUCK OR VAN (TRAFFIC)
V87.4	PERSON INJURED IN COLLISION BETWEEN CAR AND HEAVY TRANSPORT VEHICLE (TRAFFIC)
V87.5	PERSON INJURED IN COLLISION BETWEEN CAR AND HEAVY TRANSPORT VEHICLE AND BUS (TRAFFIC)
V87.7	PERSON INJURED IN COLLISION BETWEEN OTHER SPECIFIED MOTOR VEHICLES (TRAFFIC)
V87.8	PERSON INJURED IN OTHER SPECIFIED NONCOLLISION TRANSPORT ACCIDENTS INVOLVING MOTOR VEHICLE (TRAFFIC)
V88.7	PERSON INJURED IN COLLISION BETWEEN OTHER SPECIFIED MOTOR VEHICLES; NONTRAFFIC
V89.0	PERSON INJURED IN UNSPECIFIED MOTOR-VEHICLE ACCIDENT, NONTRAFFIC (MOTOR-VEHICLE ACCIDENT NOS, NONTRAFFIC)
V89.2	PERSON INJURED IN UNSPECIFIED MOTOR-VEHICLE ACCIDENT, TRAFFIC (MOTOR-VEHICLE ACCIDENT (MVA) NOS) (ROAD (TRAFFIC) ACCIDENT (RTA) NOS)

**Table 3-2
Number of Deaths from Motor Vehicle-Related Injuries by Person Injured, Gender and Year
Arizona Residents, 1993-2007**

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
TOTAL															
Total	817	897	1,023	1,051	972	1,001	980	896	908	1,003	1,005	1,060	1,137	1,220	1,035
Male	553	624	698	729	666	664	680	617	638	684	689	693	801	831	710
Female	264	273	325	322	306	337	300	279	270	319	316	367	336	389	325
Motorcyclist															
Total	41	43	45	55	44	43	68	71	61	81	76	89	113	115	103
Male	36	38	41	47	40	40	60	62	54	75	68	72	101	99	92
Female	5	5	4	8	4	3	8	9	7	6	8	17	12	16	11
Pedestrian															
Total	164	150	180	185	183	181	162	122	142	147	124	143	182	169	155
Male	120	110	134	127	134	129	131	97	101	103	88	99	141	123	103
Female	44	40	46	58	49	52	31	25	41	44	36	44	41	46	52
Pedal cyclist															
Total	17	21	29	28	36	21	23	20	26	8	14	21	39	30	18
Male	15	19	24	25	34	19	22	18	25	8	12	18	36	29	17
Female	2	2	5	3	2	2	1	2	1	0	2	3	3	1	1
Other person (incl. drivers and passengers of motor vehicles other than motorcycles)															
Total	595	683	769	783	709	756	727	683	679	767	791	807	810	918	766
Male	382	457	499	530	458	476	467	440	458	498	521	504	527	591	503
Female	213	226	270	253	251	280	260	243	221	269	270	303	283	327	263

Note: Beginning in 2000, the data are classified by the Tenth Revision of the International Classification of Diseases (ICD-10), replacing the Ninth Revision (ICD-9) used in Arizona during 1979-1999. The comparability ratio for motor vehicle accidents is 0.85, a decrease by 15 percent due to ICD-10. Since the implementation of ICD-10 in Arizona it is no longer possible to distinguish the deaths of drivers (M.V. driver) from passengers (M.V. passenger) of motor vehicles because the "victim's mode of transport" is unknown for the absolute majority of motor vehicle-related deaths (62.1 percent in 2007, or 643 out of 1,035 motor vehicle-related deaths). For comparison, M.V. drivers accounted for approximately 30 percent of all motor vehicle-related fatalities in 1993-1999 (see below).

M.V. driver															
Total	203	269	274	276	317	341	324	NA	NA	NA	NA	NA	NA	NA	NA
Male	131	198	198	200	230	229	217	NA	NA	NA	NA	NA	NA	NA	NA
Female	72	71	76	76	87	112	107	NA	NA	NA	NA	NA	NA	NA	NA
M.V. passenger															
Total	152	174	175	199	204	226	207	NA	NA	NA	NA	NA	NA	NA	NA
Male	82	98	90	115	95	121	109	NA	NA	NA	NA	NA	NA	NA	NA
Female	70	76	85	84	109	105	98	NA	NA	NA	NA	NA	NA	NA	NA
Other															
Total	240	240	320	308	188	189	196	683	679	767	791	807	810	918	766
Male	169	161	211	215	133	126	141	440	458	498	521	504	527	591	503
Female	71	79	109	93	55	63	55	243	221	269	270	303	283	327	263

**Table 3-3
Types of Victims of Motor Vehicle Accidents:
Percent Distribution by Age Group and Gender, Arizona Residents, 1993-2007**

	<15		15-19		20-44		45-64		65+		Unknown		Total	
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %
Male														
Motorcycle rider	12	2.0%	66	6.0%	543	10.6%	279	13.0%	25	1.9%	0	0.0%	925	9.0%
Pedestrian	174	29.4%	85	7.7%	739	14.5%	475	22.2%	243	18.8%	24	68.6%	1,740	16.9%
Pedal cyclist	49	8.3%	23	2.1%	127	2.5%	85	4.0%	37	2.9%	0	0.0%	321	3.1%
Other person	356	60.2%	927	84.2%	3,704	72.4%	1,305	60.9%	988	76.4%	11	31.4%	7,291	70.9%
Total	591	100.0%	1,101	100.0%	5,113	100.0%	2,144	100.0%	1,293	100.0%	35	100.0%	10,277	100.0%
Female														
Motorcycle rider	2	0.5%	9	1.7%	74	4.1%	33	3.5%	5	0.5%	0	0.0%	123	2.6%
Pedestrian	119	27.9%	36	6.8%	214	11.8%	136	14.5%	143	14.2%	1	50.0%	649	13.7%
Pedal cyclist	8	1.9%	4	0.8%	11	0.6%	6	0.6%	1	0.1%	0	0.0%	30	0.6%
Other person	298	69.8%	483	90.8%	1,522	83.6%	764	81.4%	858	85.2%	1	50.0%	3,926	83.0%
Total	427	100.0%	532	100.0%	1,821	100.0%	939	100.0%	1,007	100.0%	2	100.0%	4,728	100.0%
Total														
Motorcycle rider	14	1.4%	75	4.6%	617	8.9%	312	10.1%	30	1.3%	0	0.0%	1,048	7.0%
Pedestrian	293	28.8%	121	7.4%	953	13.7%	611	19.8%	386	16.8%	25	67.6%	2,389	15.9%
Pedal cyclist	57	5.6%	27	1.7%	138	2.0%	91	3.0%	38	1.7%	0	0.0%	351	2.3%
Other person	654	64.2%	1,410	86.3%	5,226	75.4%	2,069	67.1%	1,846	80.3%	12	32.4%	11,217	74.8%
Total	1,018	100.0%	1,633	100.0%	6,934	100.0%	3,083	100.0%	2,300	100.0%	37	100.0%	15,005	100.0%

**Table 3-4
Types of Victims of Motor Vehicle Accidents:
Percent Distribution by Race/Ethnicity and Gender, Arizona Residents, 1993-2007**

	White non-Hispanic		Hispanic or Latino		Black or African American		American Indian or Alaska Native		Asian or Pacific Islander		Other/Unknown		Total		
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	
Male	Motorcycle rider	769	14.0%	100	3.8%	29	9.0%	19	1.1%	7	7.9%	1	3.1%	925	9.0%
	Pedestrian	720	13.1%	444	17.0%	59	18.2%	498	28.7%	7	7.9%	12	37.5%	1,740	16.9%
	Pedal cyclist	207	3.8%	76	2.9%	18	5.6%	13	0.7%	7	7.9%	0	0.0%	321	3.1%
	Other person	3,785	69.1%	1,994	76.3%	218	67.3%	1,207	69.5%	68	76.4%	19	59.4%	7,291	70.9%
	Total	5,481	100.0%	2,614	100.0%	324	100.0%	1,737	100.0%	89	100.0%	32	100.0%	10,277	100.0%
Female	Motorcycle rider	105	3.9%	10	1.0%	3	2.5%	4	0.5%	0	0.0%	1	12.5%	123	2.6%
	Pedestrian	321	11.8%	162	16.0%	24	20.0%	123	15.5%	17	23.9%	2	25.0%	649	13.7%
	Pedal cyclist	19	0.7%	7	0.7%	2	1.7%	2	0.3%	0	0.0%	0	0.0%	30	0.6%
	Other person	2,278	83.7%	834	82.3%	91	75.8%	664	83.7%	54	76.1%	5	62.5%	3,926	83.0%
	Total	2,723	100.0%	1,013	100.0%	120	100.0%	793	100.0%	71	100.0%	8	100.0%	4,728	100.0%
Total	Motorcycle rider	874	10.7%	110	3.0%	32	7.2%	23	0.9%	7	4.4%	2	5.0%	1,048	7.0%
	Pedestrian	1,041	12.7%	606	16.7%	83	18.7%	621	24.5%	24	15.0%	14	35.0%	2,389	15.9%
	Pedal cyclist	226	2.8%	83	2.3%	20	4.5%	15	0.6%	7	4.4%	0	0.0%	351	2.3%
	Other person	6,063	73.9%	2,828	78.0%	309	69.6%	1,871	74.0%	122	76.3%	24	60.0%	11,217	74.8%
	Total	8,204	100.0%	3,627	100.0%	444	100.0%	2,530	100.0%	160	100.0%	40	100.0%	15,005	100.0%

**Table 3-5
Types of Victims of Motor Vehicle Accidents:
Percent Distribution by County of Residence and Gender, Arizona Residents, 1993-2007**

	Male						Female						Total															
	Motorcycle rider	Pedestrian	Pedal cyclist	Other person	Total		Motorcycle rider	Pedestrian	Pedal cyclist	Other person	Total		Motorcycle rider	Pedestrian	Pedal cyclist	Other person	Total											
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %										
Apache	8	1.7%	137	29.1%	1	0.2%	324	68.9%	470	100.0%	2	0.4%	36	7.7%	0	0.0%	172	36.2%	210	44.8%	10	2.2%	173	37.1%	1	0.2%	496	100.0%
Cochise	31	12.3%	24	9.5%	5	2.0%	193	76.3%	253	100.0%	3	1.2%	11	4.3%	0	0.0%	117	46.3%	131	51.9%	34	13.3%	35	13.4%	5	1.9%	310	100.0%
Coconino	14	3.4%	95	23.4%	5	1.2%	292	71.9%	406	100.0%	4	1.0%	21	5.2%	2	0.5%	149	36.7%	176	43.4%	18	4.4%	116	28.9%	7	1.7%	441	100.0%
Gila	12	6.5%	22	12.0%	0	0.0%	150	81.5%	184	100.0%	3	1.6%	6	3.3%	0	0.0%	61	33.2%	70	38.5%	15	8.2%	28	15.3%	0	0.0%	211	100.0%
Graham	2	1.8%	22	19.3%	2	1.8%	88	77.2%	114	100.0%	2	1.8%	10	8.8%	1	0.9%	32	28.1%	45	39.5%	4	3.5%	32	28.1%	3	2.7%	120	100.0%
Greenlee	0	0.0%	1	11.1%	0	0.0%	8	88.9%	9	100.0%	0	0.0%	1	11.1%	0	0.0%	7	77.8%	8	88.9%	0	0.0%	2	22.2%	0	0.0%	15	100.0%
Maricopa	513	10.2%	862	17.1%	215	4.3%	3,461	68.5%	5,051	100.0%	60	1.2%	348	6.9%	18	0.4%	1,808	36.0%	2,234	44.7%	573	11.4%	2,310	46.2%	233	4.6%	5,269	100.0%
Mohave	29	7.8%	53	14.2%	6	1.6%	284	76.3%	372	100.0%	2	0.5%	16	4.3%	0	0.0%	157	42.2%	175	47.0%	31	8.3%	69	18.4%	6	1.6%	441	100.0%
Navajo	10	1.9%	121	23.0%	3	0.6%	393	74.6%	527	100.0%	3	0.6%	24	4.5%	0	0.0%	205	38.9%	232	44.0%	13	2.5%	145	27.5%	3	0.6%	598	100.0%
Pima	173	13.1%	240	18.1%	46	3.5%	864	65.3%	1,323	100.0%	25	1.9%	115	8.7%	5	0.4%	567	42.8%	712	53.9%	198	15.0%	355	27.2%	51	3.9%	1,431	100.0%
Pinal	47	8.3%	61	10.8%	9	1.6%	450	79.4%	567	100.0%	5	0.9%	23	4.1%	1	0.2%	243	42.8%	272	48.3%	52	9.1%	84	14.6%	10	1.7%	693	100.0%
Santa Cruz	6	9.0%	6	9.0%	0	0.0%	55	82.1%	67	100.0%	1	1.5%	2	3.0%	0	0.0%	19	28.4%	22	32.8%	7	10.4%	8	11.9%	0	0.0%	74	100.0%
Yavapai	42	11.0%	28	7.3%	8	2.1%	303	79.5%	381	100.0%	9	2.4%	11	3.1%	0	0.0%	188	51.9%	208	59.8%	51	14.2%	39	10.8%	8	2.3%	491	100.0%
Yuma	15	5.7%	36	13.8%	14	5.4%	196	75.1%	261	100.0%	1	0.4%	13	5.0%	1	0.4%	89	34.1%	104	39.8%	16	6.1%	49	18.6%	15	5.7%	285	100.0%
La Paz	5	6.1%	8	9.8%	1	1.2%	68	82.9%	82	100.0%	1	1.2%	3	3.7%	0	0.0%	35	42.7%	39	47.5%	6	7.3%	11	13.4%	1	1.2%	103	100.0%
Unknown	18	8.6%	24	11.4%	6	2.9%	162	77.1%	210	100.0%	2	0.9%	9	4.3%	2	0.9%	77	36.7%	90	42.9%	20	9.5%	33	15.7%	8	3.8%	239	100.0%
Total	925	9.0%	1,740	16.9%	321	3.1%	7,291	70.9%	10,277	100.0%	123	1.2%	649	6.3%	30	0.3%	3,926	38.1%	4,728	46.0%	1,048	10.2%	2,389	23.2%	351	3.4%	11,217	100.0%