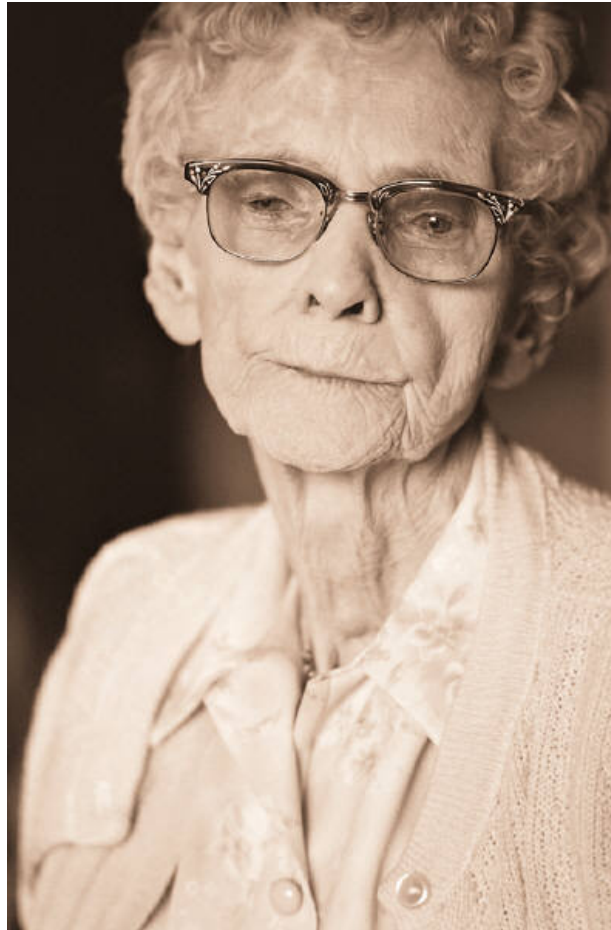
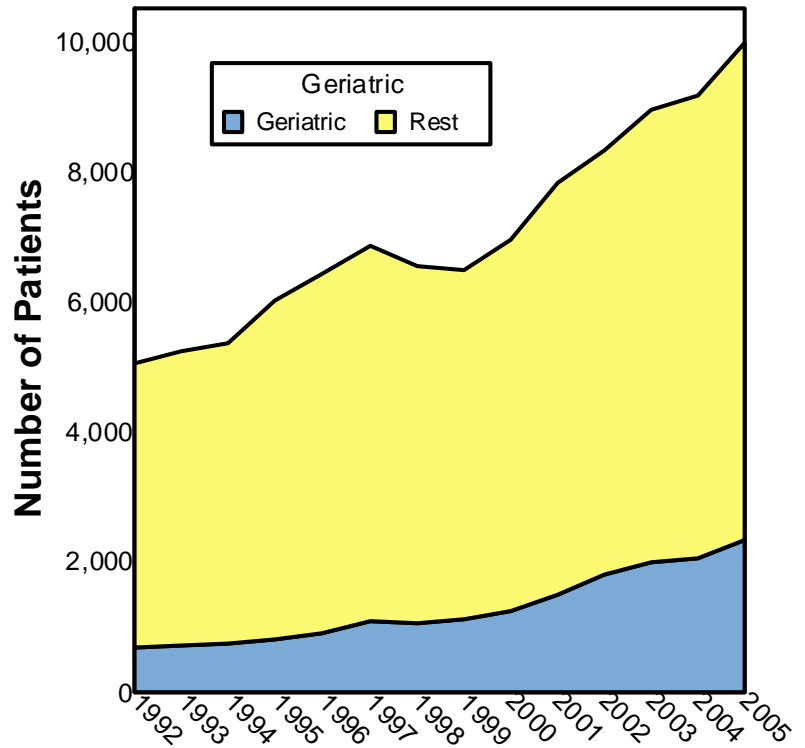


# GERIATRIC TRAUMA



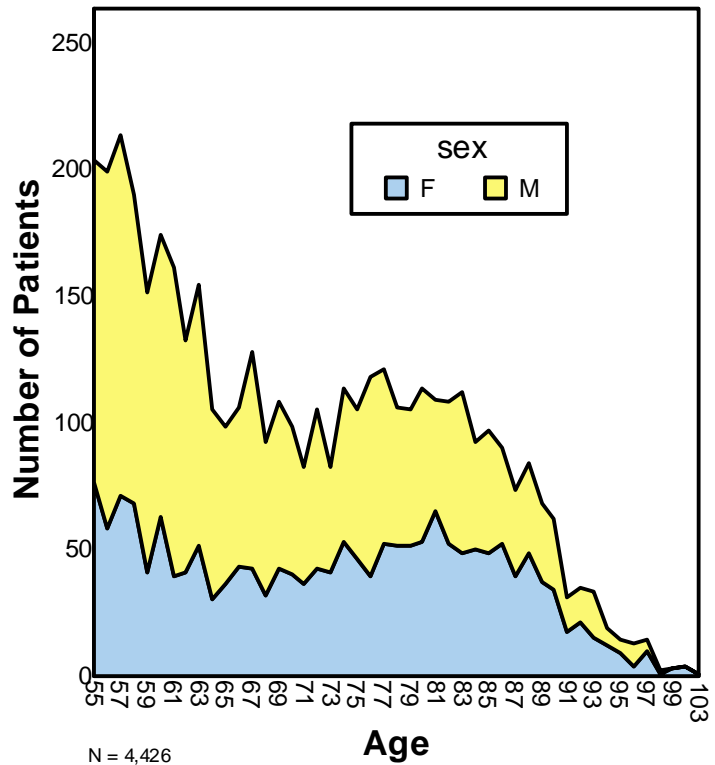
As the total trauma patient volume has increased since 1992, the geriatric patient population has also increased.

**Figure 68: Geriatric Trauma Volume**



At age 55 male trauma patients outnumber females by 3:1. This ratio decreases as age increases.

**Figure 69: Geriatric Trauma by Age**



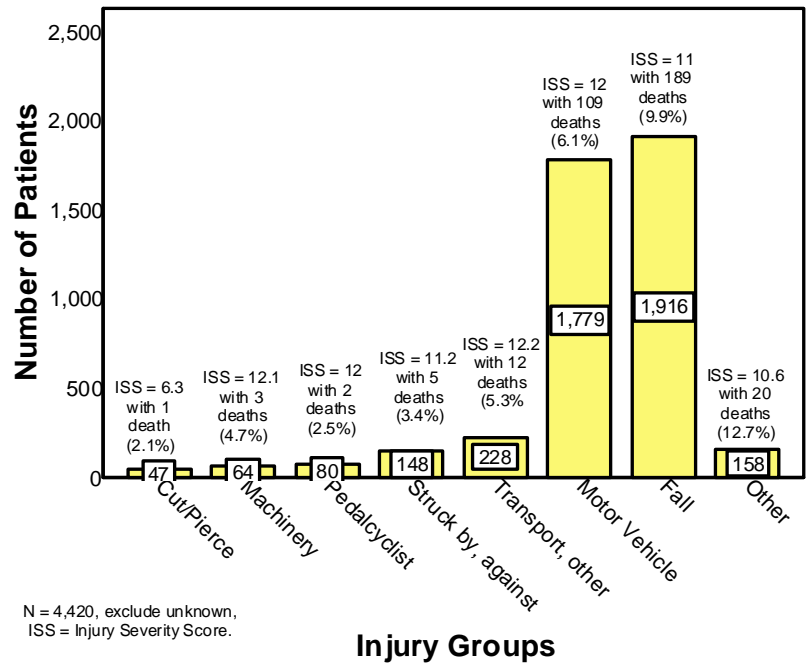
Pre-existing medical conditions were reported for 81.7% of geriatric patients. Table 6 indicates that the most frequently reported pre-existing medical condition for the geriatric population is cardiac in nature. These conditions are not mutually exclusive, and one or more conditions may be reported for each patient.

**Table 6: Occurrence of Pre-Existing Disease In Geriatric Trauma Patients**

Medical History	Occurrences
None	812
Cardiac	1595
Respiratory	321
Liver	54
Renal	99
Diabetes	377
Pregnancy	0
Other	1289

The two most common mechanisms of injury for the elderly population were falls (43.3%) and motor vehicle crashes (40.2%). These mechanisms also have the highest mortality rates (9.9% and 6.1%, respectively) after Other Trauma which includes drowning, burns, machinery, suffocation, and natural or environmental causes.

**Figure 70: Geriatric Trauma Mechanism of Injury**



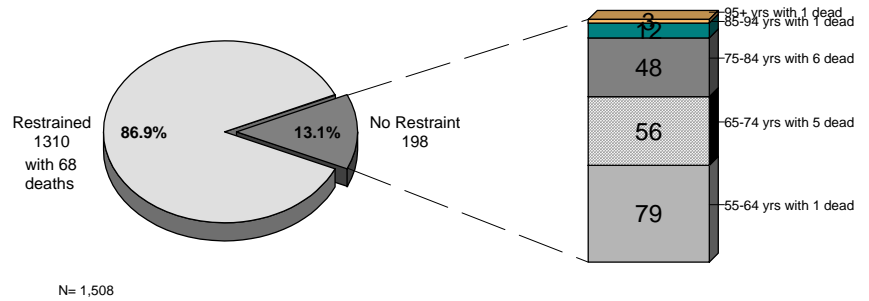
**Table 7: Fall Detail for the Geriatric Trauma Patient**

Type of Fall	Number	Percent
ACCIDENTAL:		
Fall on same level		
....Fall from non-motor scooter	7	0.5
....Fall from skateboard	1	0.1
....Fall from skis	3	0.2
....Fall from snowboard	1	0.1
....Fall on same level from slipping, tripping and stumbling	401	31.4
Fall from one level to another		
....Fall on escalator	5	0.4
....Fall from curb or sidewalk	17	1.3
....Fall on stairs/steps NEC	249	19.5
....Fall from ladder	221	17.3
....Fall from scaffolding	14	1.1
....Fall from building	71	5.6
....Fall into other hole	1	0.1
....Fall from cliff	6	0.5
....Fall from chair	25	2
....Fall from wheelchair	38	3
....Fall from bed	52	4.1
....Fall from other furniture	4	0.3
....Fall from toilet	12	0.9
....Fall from one level to another NEC	120	9.4
Fall on level NEC/NOS	5	0.4
Fall strike head on sharp object	8	0.6
Unspecified fall	17	1.3
SELF-INFLICTED:		
Jump from structure NEC	1	0.1
	<b>Total</b>	<b>1279</b>
		<b>100</b>
NEC = Not elsewhere classified		
NOS = Not otherwise specified		

Table 7 provides specific detail for geriatric trauma patients who received hospital care for their fall injuries. The most common mechanism was a fall on the same level as a result of slipping, tripping, or stumbling (31.4%), followed by falls from steps or stairs (19.5%). The incidence of a fall injury of this type increases as the patients' age increases. The third most common mechanism of injury was a fall from a ladder (17.3%), which decreases in frequency as age increases. These three types of falls accounted for 68.2% of the known fall injuries.

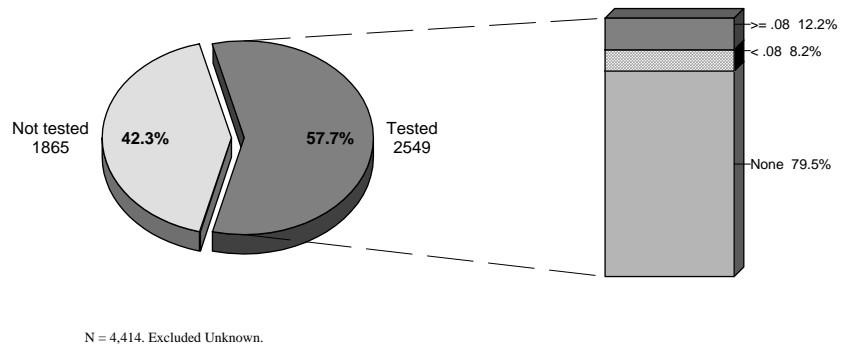
Eighty-seven percent of geriatric patients were using a restraint device (seatbelt) when the motor vehicle they were driving or riding in crashed. The mortality rate for those wearing a seatbelt was 5.2% versus 7.1% for the non-restrained.

**Figure 71: Geriatric Restraint Use in Motor Vehicle Crashes**



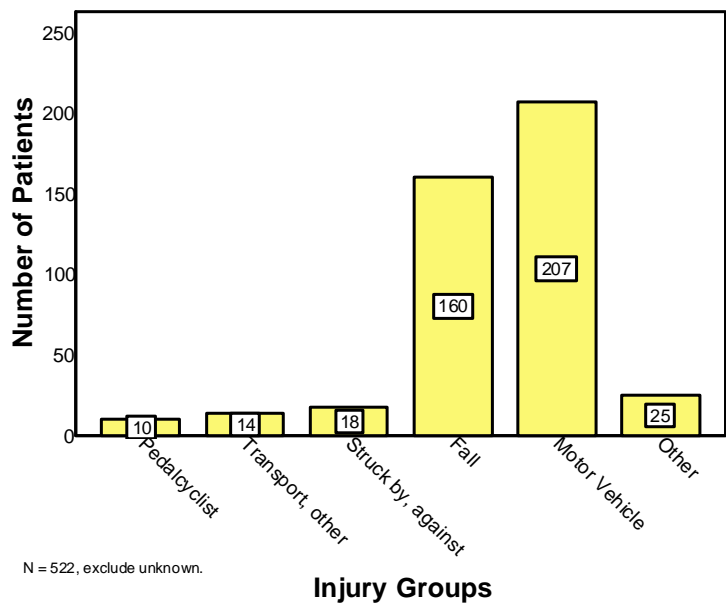
Fifty-eight percent of injured geriatric patients were tested for alcohol use. Of those tested, 20.4% tested positive for blood alcohol levels: 8.2% had alcohol level less than .08 gm/100cc, and 12.2% were positive at a level above the legal limit of .08 gm/100cc.

**Figure 72: Alcohol Use Among Injured Geriatric Patients**



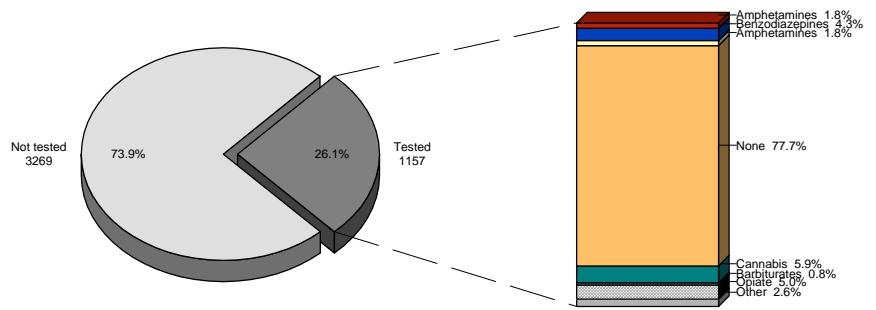
The most common mechanisms of injury for geriatric trauma patients testing positive for alcohol use were motor vehicle crashes (39.7%) and falls (30.7%).

**Figure 73: Positive Test for Alcohol in Geriatric Patients by Injury Group**



Twenty-six percent of injured geriatric patients underwent urine or blood testing for drug use. Of those tested, 22.3% tested positive for drugs. The most frequently reported drugs were cannabis (5.9%), opiates (5.0%) and benzodiazepines (4.3%). These tests are not mutually exclusive, and patients frequently have positive results for more than one drug. In this group, 75% had one drug present; 18% had two drugs detected; and 7% tested positive for three or more drugs.

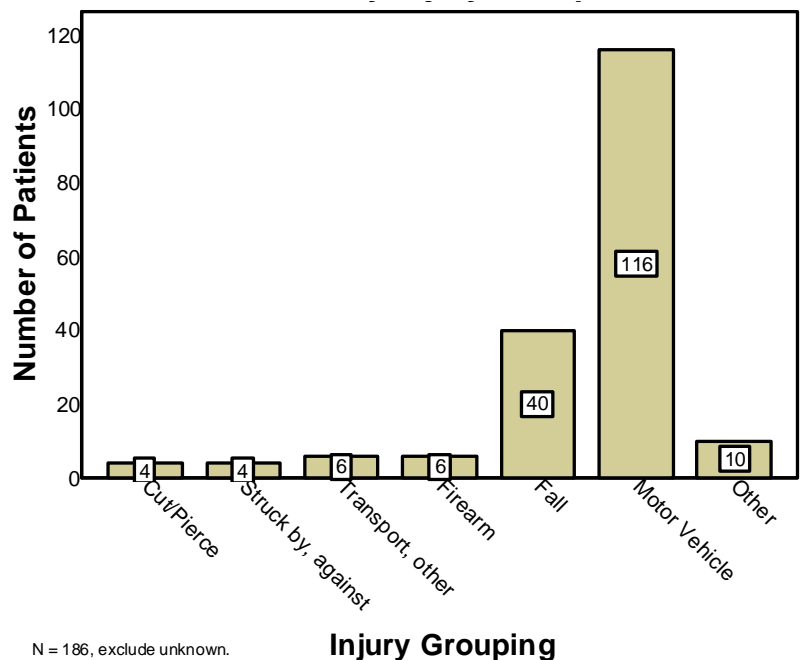
**Figure 74: Drug Use Among Injured Geriatric Patients**



N = 4,426. Excluded unknown, not mutually exclusive

The most common mechanisms of injury for geriatric trauma patients who tested positive for drugs were motor vehicle crashes (62.4%) and falls (21.5%).

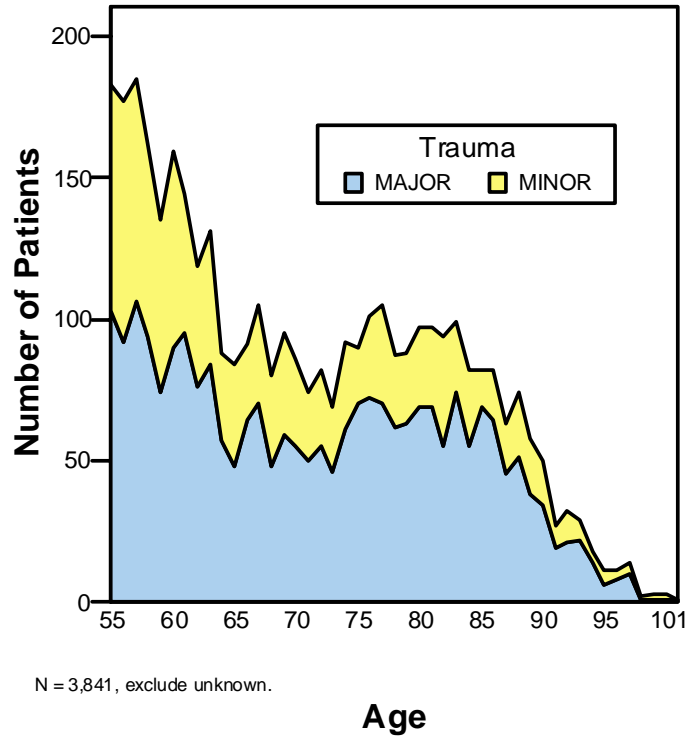
**Figure 75: Positive Test for Drug Use in Geriatric Patients by Injury Group**



N = 186, exclude unknown.

Although the geriatric population decreases in relationship to other age groups, the injury rate remains consistent. Additionally, as age increases, the ratio of major to minor injuries increases.

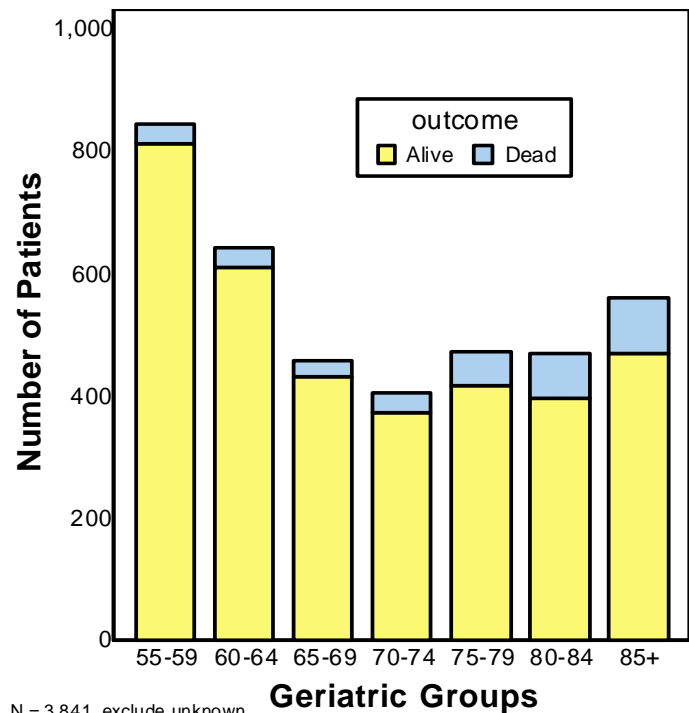
**Figure 76: Injury Severity by Age for Geriatric Patients**



N = 3,841, exclude unknown.

The mortality rate for geriatric trauma increases with age even though the mean Injury Severity Score (ISS) does not. Patients in the oldest age group are over 4 times more likely to die from a trauma injury than those in the youngest geriatric age group.

**Figure 77: Geriatric Trauma by Age Groups and Mortality**

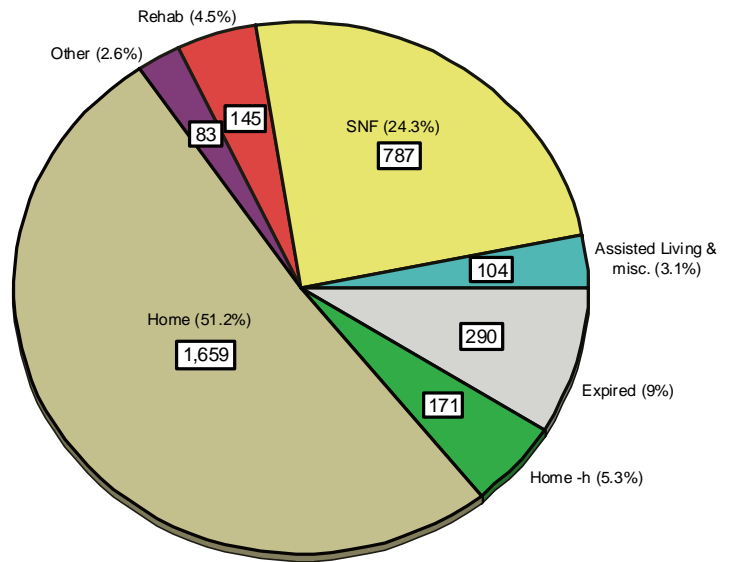


N = 3,841, exclude unknown.

Geriatric Groups	ISS Mean	N	Std. Deviation	Fatality Rate
55-59	11.31	842	8.969	3.7%
60-64	11.86	641	8.586	4.8%
65-69	11.79	455	9.022	5.7%
70-74	11.77	403	8.763	7.7%
75-79	11.28	471	8.125	11.9%
80-84	11.12	469	8.190	15.6%
85+	11.04	560	8.325	16.6%
Total	11.44	3841	8.603	8.9%

Figure 78 displays the disposition of geriatric trauma patients who were hospitalized for definitive care of their injuries. Over 51% of patients were able to return home, with an additional 5.3% requiring home health services. Over 24% were discharged to a skilled nursing facility and 7.6% went to either a rehabilitation unit or an assisted living facility. Nine percent died during their hospital stay. The Other category (2.6%) includes patients discharged to a psychiatric facility, and those who left against medical advice (AMA) or who entered law enforcement custody.

**Figure 78: Geriatric Patients Disposition Following Hospitalization**



N = 3,239, exclude unknown.