

## Medical Treatment and Hospitalization

### How many victims were dead at the scene?

*Twenty-two percent (46) of all victims were dead at the scene.*

### How often were victims treated and released from the emergency department?

*Of the 162 victims taken to the SFGH ED, 32% (52) were treated and released.*

### How long did the victims stay in the hospital?

*Forty-seven percent (51) were hospitalized for 1 day or less. The average length of hospitalization for a nonfatality victim was 7 days, with a median of 2 days, ranging from 1 day to 58 days.*

### When the victims were released from the hospital, what was their disposition?

*Seventy-five percent (82) of the victims who were hospitalized were discharged home; however, being discharged home does not indicate that additional care was not required.*

### How much did it cost to treat these injuries?

*We do not have data on the actual costs. However, we know from California hospital discharge data that in SF in 1998, average hospital charges were \$29,759 per firearm victim. For the 109 hospitalized victims this would represent 3.2 million dollars, with 61% of these charges—or 1.9 million dollars—being covered by public funds.*

### How many of the victims applied for disability?

*This information was not collected.*

#### In this section

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- Survival Time
- Final Disposition of Victims Hospitalized at San Francisco General Hospital
- Medical Insurance
- Bullet Entry and Wound Location



## Medical Treatment and Hospitalization

### Fatal and Nonfatal Firearm-related Injuries

#### Emergency Medical Services

Emergency Medical Services (EMS) responded to the scene for 161 (76%) of the 213 victims of firearm-related injuries, with 22% (46) of the victims pronounced dead at the incident location, while 2 persons were shot at a hospital, 1 fatally and 1 nonfatally. Seventy-five percent (123) of the victims were transported by ambulance to SFGH, and 25% (42) used other modes of travel to a hospital (Table 35). Figure 77 shows the location of death.

**Table 35: Mode of Victim Transportation to Hospital: San Francisco, 1999**

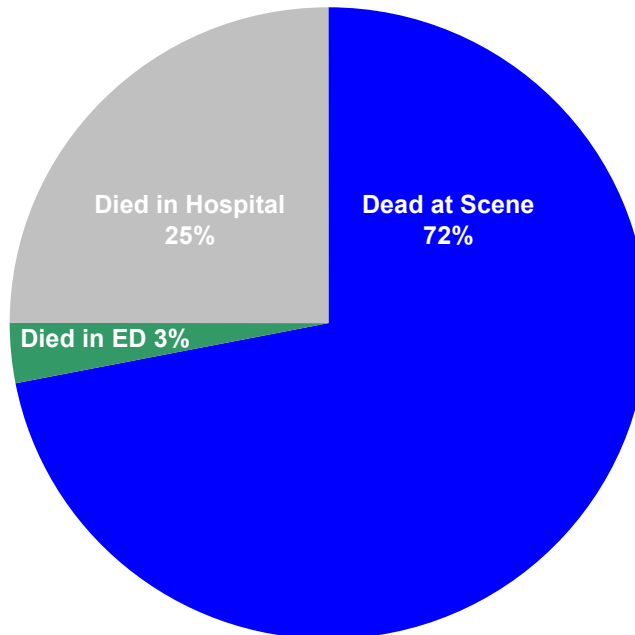
Mode to Hospital	Overall		Homicide		Assault		Suicide		Legal Intervention		Self-inflicted <sup>a</sup>		Another-inflicted <sup>b</sup>	
	n=165	%	n=13	%	n=137	%	n=2	%	n=7	%	n=5	%	n=2	%
Ambulance to SFGH	123	74.5	13	100.0	96	70.1	2	100.0	7	100.0	3	60.0	2	100.0
Friend/private	23	13.9	0	--	21	15.3	0	--	0	--	2	40.0	0	--
Self	10	6.1	0	--	10	7.2	0	--	0	--	0	--	0	--
Stranger	2	1.2	0	--	2	1.5	0	--	0	--	0	--	0	--
Police	1	0.6	0	--	1	0.7	0	--	0	--	0	--	0	--
Unknown	6	3.6	0	--	6	4.4	0	--	0	--	0	--	0	--

Note: The Medical Examiner took charge of the bodies of 46 victims. There was a single victim who was shot and killed at a hospital, and another victim who suffered a nonfatal injury at a hospital—both victims required no transportation.

<sup>a</sup>Self-inflicted incidents are those in which victims unintentionally shot themselves.

<sup>b</sup>Another-inflicted incidents are those in which victims were unintentionally shot by another person.

<sup>c</sup>A victim was shot while at a hospital.



**Figure 77: Location of Death of Victims of Firearm-related Violence: San Francisco, 1999 (n=64)**

A single victim was shot and killed at a hospital other than SFGH.

**Place of Treatment**

A total of 162 victims were treated at SFGH. The remaining 3% were treated at other hospitals (Table 36). Of the victims who were treated at SFGH, 32% (52) were treated and released from the SFGH ED, one died in the SFGH ED, and 67% (109) were hospitalized from the SFGH ED (Figure 78). There were 103 victims where both an injury time and a triage time at the SFGH ED were available. Of these, the 14 fatality victims had a mean time from injury to triage of 51 minutes with a median of 60 minutes, and a range of 16 minutes to 1 hour and 20 minutes. There were 89 nonfatality victims whose time from injury to ED triage averaged 54 minutes, with a median of 53 minutes, and range of 9 minutes to 3 hours and 40 minutes. We did not have data on the time that EMS arrived at the scene and the time that EMS arrived at the ED.

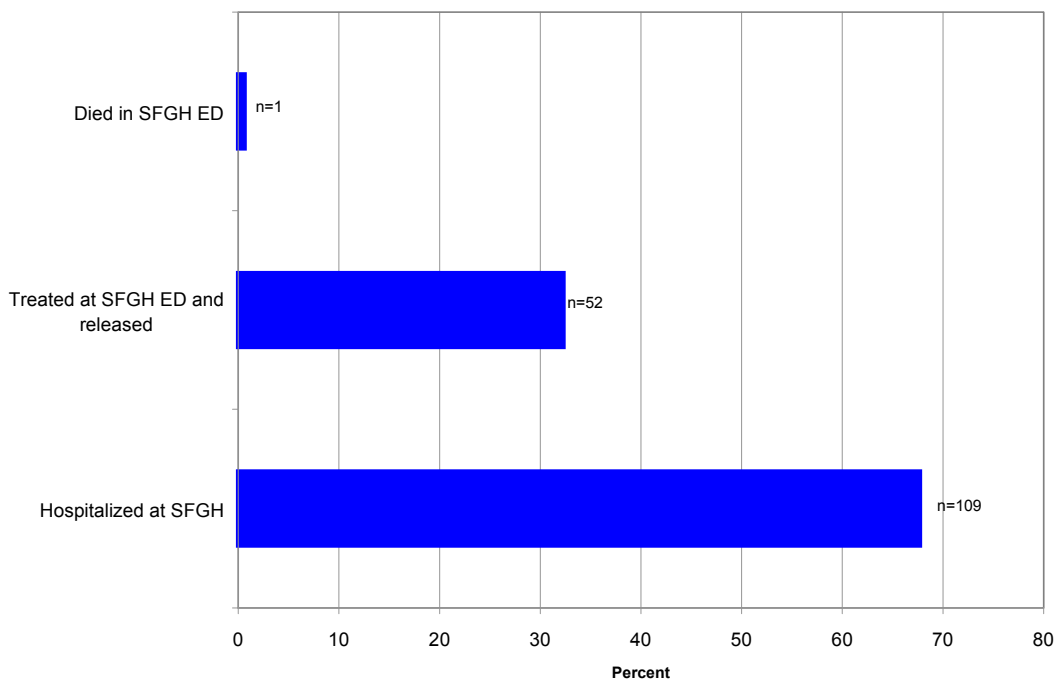
**Table 36: Hospital Where Firearm Injury Victims Were Treated: San Francisco, 1999**

Hospital Treated	Overall		Homicide		Assault		Suicide		Legal Intervention		Self-inflicted <sup>a</sup>		Another-inflicted <sup>b</sup>	
	n=167	%	n=14	%	n=137	%	n=2	%	n=7	%	n=5	%	n=2	%
SFGH	162	97.0	13	92.8	133	97.1	2	100.0	7	100.0	5	100.0	2	100.0
Mount Zion	3	1.8	1	7.1	2	1.5	0	--	0	--	0	--	0	--
UCSF	1	0.6	0	--	1	0.7	0	--	0	--	0	--	0	--
St Luke's	1	0.6	0	--	1	0.7	0	--	0	--	0	--	0	--

Notes: There were 6 victims who were treated initially at another hospital (two at Kaiser SF, one at Kaiser Oakland, and 3 at St Luke's). These 6 were transferred to SFGH and are not included in the "other" hospital counts, but are included in the SFGH count.

<sup>a</sup>Self-inflicted incidents are those in which victims unintentionally shot themselves.

<sup>b</sup>Another-inflicted incidents are those in which victims were unintentionally shot by another person.



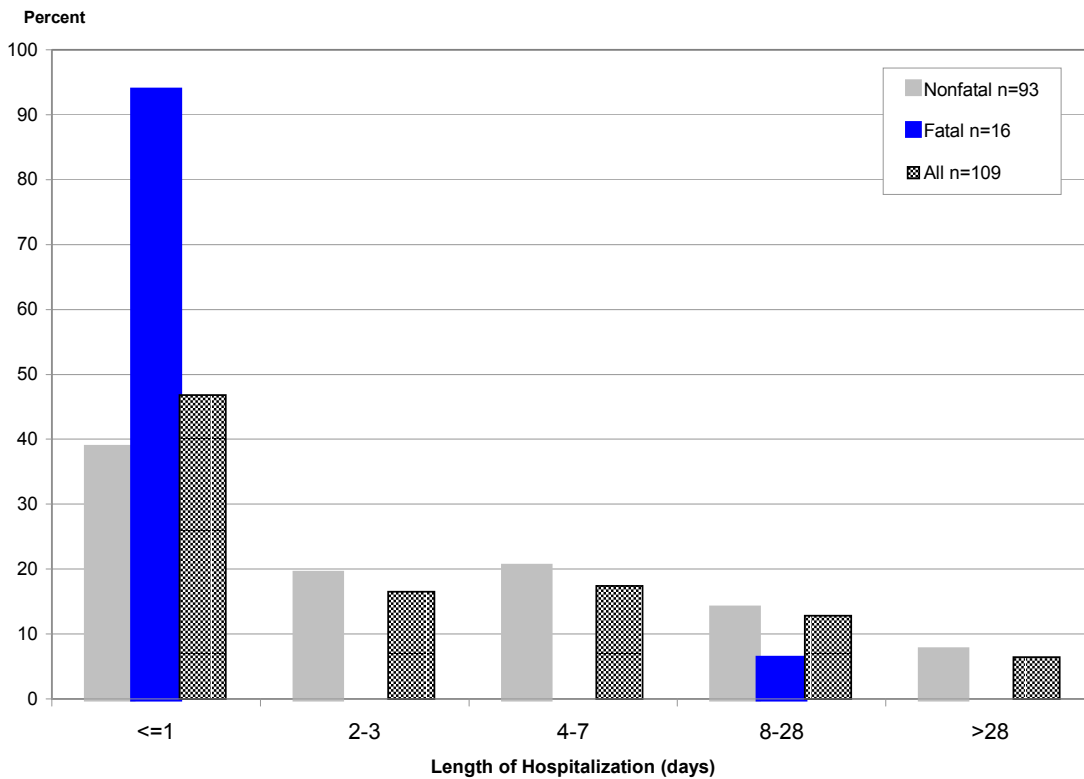
**Figure 78: Treatment of Victims at San Francisco General Hospital: San Francisco, 1999**

**Length of Hospitalization and Injury Severity**

Of the 109 victims who were admitted to SFGH, 47% (51) were admitted for a day or less and 37% (40) of the victims stayed more than four days (Table 37). Of the 64 fatalities, 16 were hospitalized and 15 expired in less than 1 day. The last victim died 11 days after the incident. The 93 nonfatal injury victims were hospitalized for a total of 644 days, with an average length of stay of 7 days, a median of 2 days, and a range from 1 to 58 days (Figure 79). Assault victims accounted for 92% (86) of all nonfatality hospitalizations.

**Table 37: Length of Hospitalization at San Francisco General Hospital, by Outcome: San Francisco, 1999**

Days	Overall		Fatal		Nonfatal	
	n=109	%	n=16	%	n=93	%
<1	25	22.9	15	93.8	10	10.8
1	26	23.9	0	--	26	28.0
2-3	18	16.5	0	--	18	19.4
4-7	19	17.4	0	--	19	20.4
8-28	14	12.8	1	6.3	13	14.0
> 28	7	6.4	0	--	7	7.5



**Figure 79: Length of Hospitalization of Firearm-related Victims at San Francisco General Hospital, by Outcome: San Francisco, 1999**

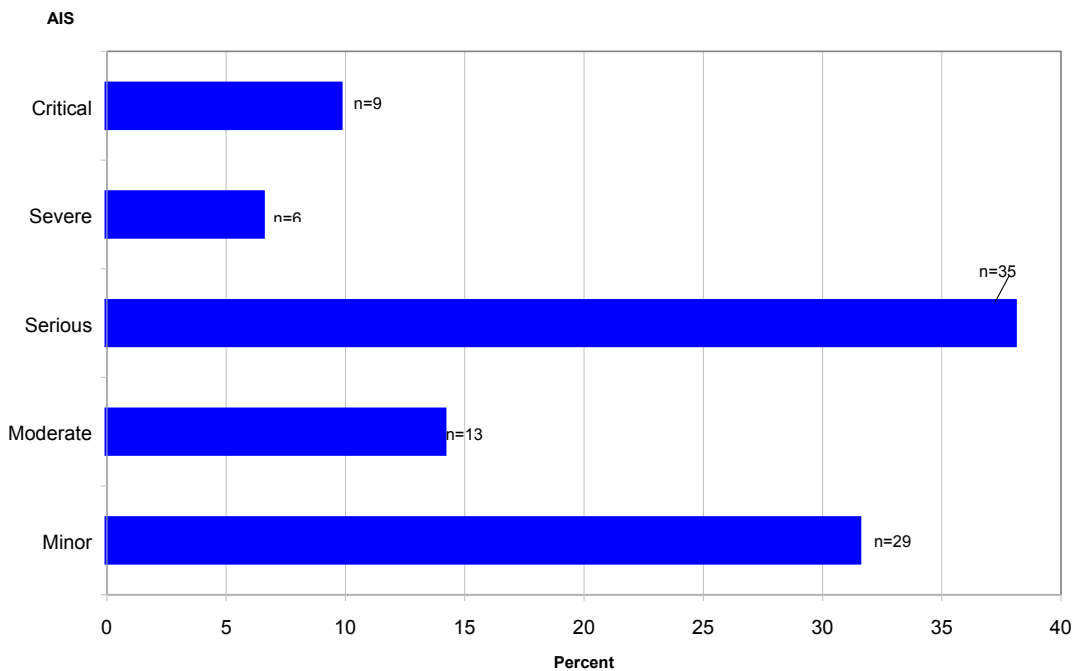
Approximately 37% (32) of the assault victims stayed for a single day or less, and 44% (38) of the assault victims stayed four or more days (Table 38).

**Table 38: Length of Hospitalization at San Francisco General Hospital, by Intent: San Francisco, 1999**

Days	Homicide		Assault		Suicide		Legal Intervention		Self-inflicted <sup>a</sup>		Another-inflicted <sup>b</sup>	
	n=12	%	n=86	%	n=2	%	n=6	%	n=1	%	n=2	%
<1	12	100.0	8	9.3	1	50.0	3	50.0	0	--	1	50.0
1	0	--	24	27.9	0	--	2	33.3	0	--	0	--
2-3	0	--	16	18.6	0	--	0	--	1	100.0	1	50.0
4-7	0	--	18	20.9	0	--	1	16.7	0	--	0	--
8-28	0	--	13	15.1	1	50.0	0	--	0	--	0	--
> 28	0	--	7	8.1	0	--	0	--	0	--	0	--

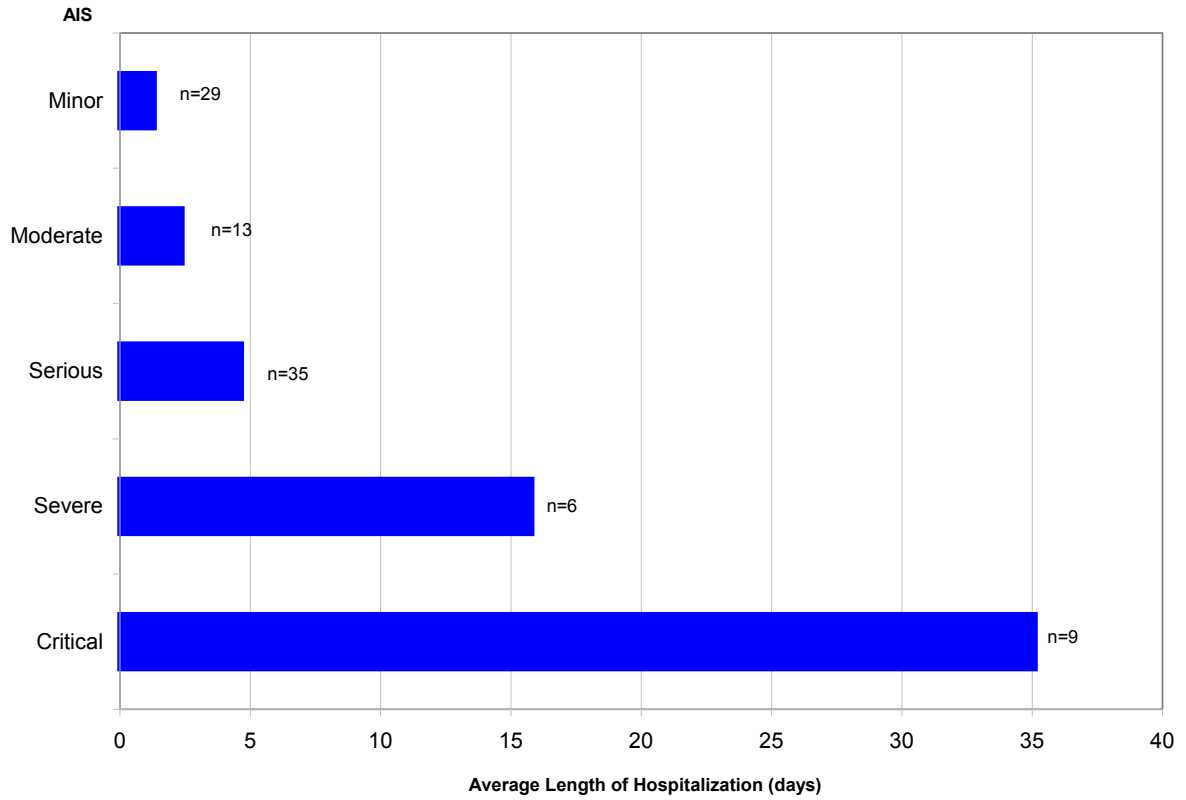
Note: There were 2 legal intervention fatalities who were admitted for less than 1 day.  
<sup>a</sup>Self-inflicted incidents are those in which victims unintentionally shot themselves.  
<sup>b</sup>Another-inflicted incidents are those in which victims were unintentionally shot by another person.

Abbreviated Injury Scores (AIS) were available for 92 of the hospitalized nonfatality victims. As Figure 80 shows, 54% (50) of the firearm-related victims' injuries were coded as serious, severe, or critical, and 46% (42) were coded as being of minor to moderate severity.



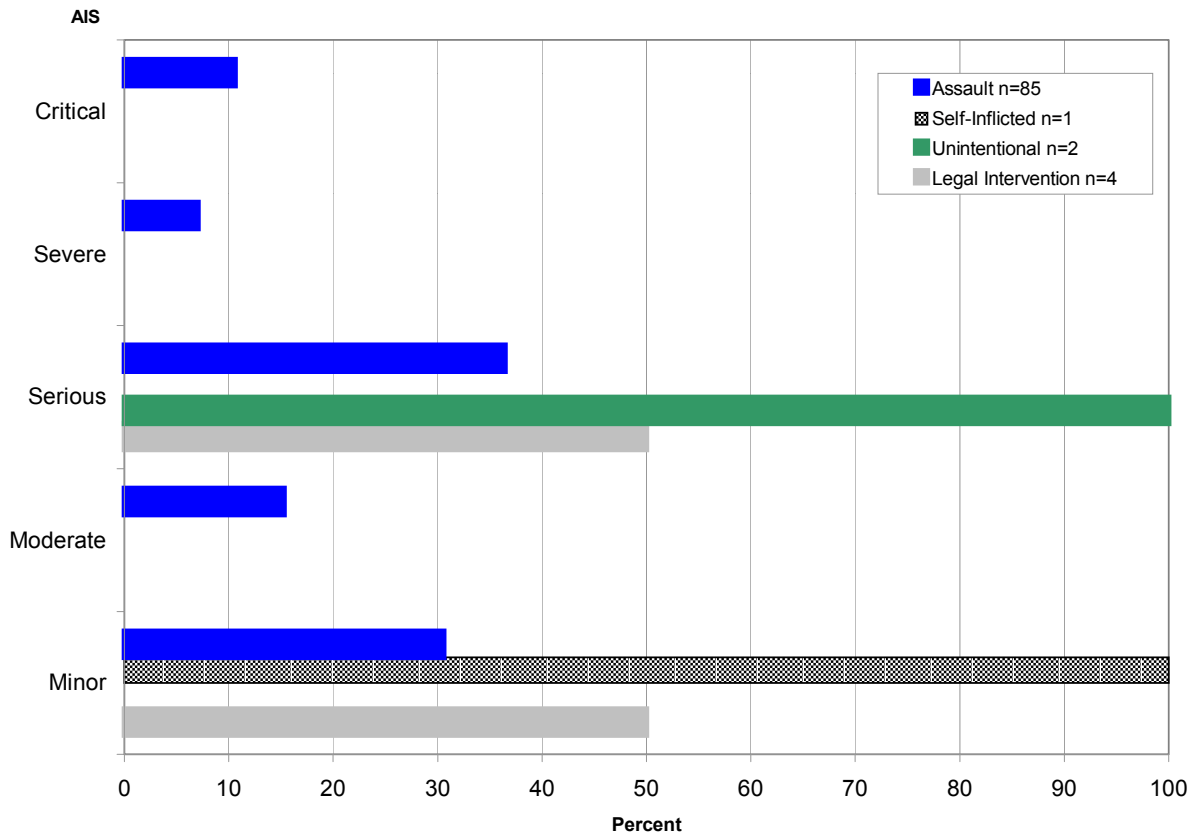
**Figure 80: Abbreviated Injury Severity Scores for Hospitalized Victims of Firearm-related Injuries: San Francisco, 1999 (n=92)**  
 Note: A single AIS was unknown.

Ten percent (9) of the victims who had an AIS rated as critical had an average hospital stay of 35 days. And 44% (41) of the victims who had a serious to severe injury were hospitalized from an average of 5 to 16 days (Figure 81).



**Figure 81: Average Length of Hospitalization for Nonfatal Firearm-related Injuries, by Abbreviated Injury Severity (AIS) Score: San Francisco, 1999**  
 Note: Self-inflicted incidents are those in which victims unintentionally shot themselves. Another-inflicted incidents are those in which victims were unintentionally shot by another person.

Figure 82 shows 55% (47) of the assaults resulted in serious, severe, or critical injuries. None of the other intents resulted in any severe or critical injuries.

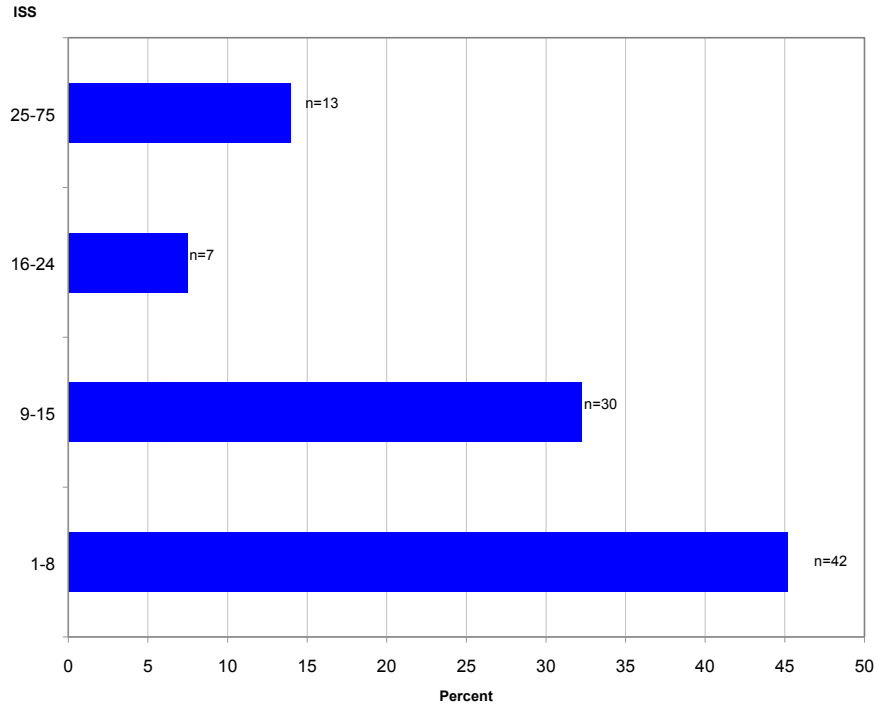


**Figure 82: Intent of Nonfatal Firearm-related Injury, by Victim's Abbreviated Injury Severity (AIS) Score: San Francisco, 1999**  
 Note: Unintentional victims were unintentionally shot by another.

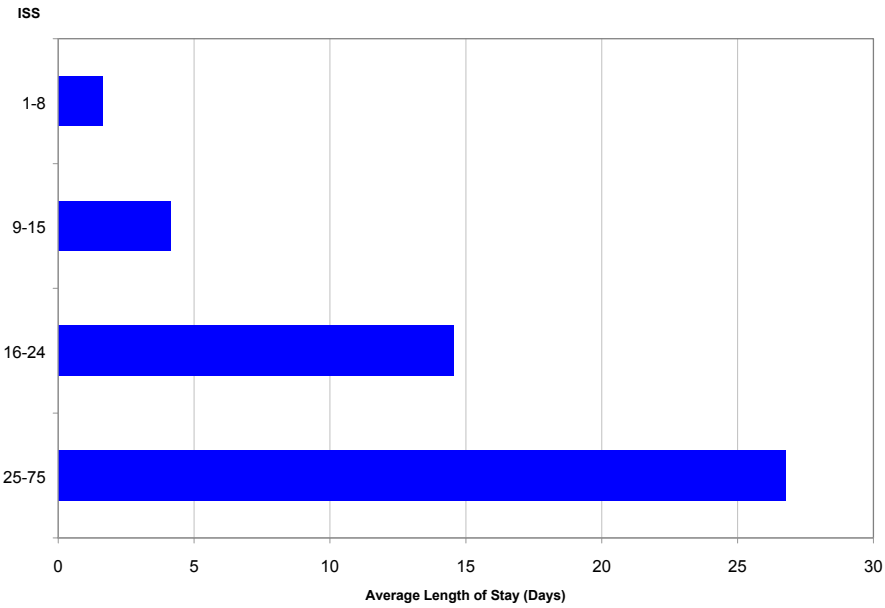
**Injury Severity Score (ISS)**

Almost 45% (42) of the nonfatality victims who were hospitalized had an Injury Severity Score (ISS) between 1 and 8 (on a possible scale of 1-75), 32% (30) had an ISS between 9 and 15, and 22% (20) had an ISS ranging from 16 to 75 (Figure 83). As the ISS increased, the length of stay in the hospital also increased (Figure 84). There was a single victim with an ISS of 75.





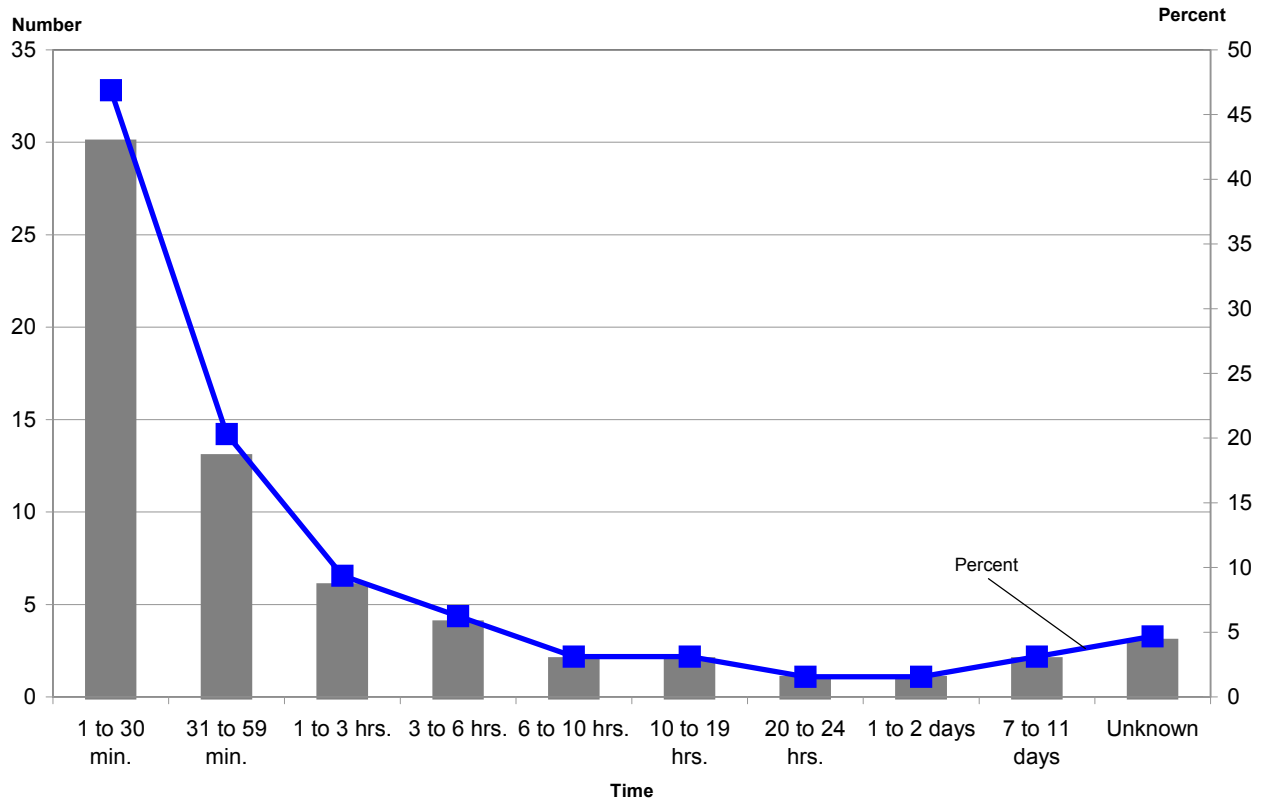
**Figure 83: Injury Severity Scores for Hospitalized Victims of Nonfatal Firearm-related Injuries: San Francisco, 1999 (n=92)**



**Figure 84: Injury Severity Scores for Hospitalized Victims of Nonfatal Firearm-related Injuries, by Length of Stay: San Francisco, 1999 (n=92)**

**Survival Time**

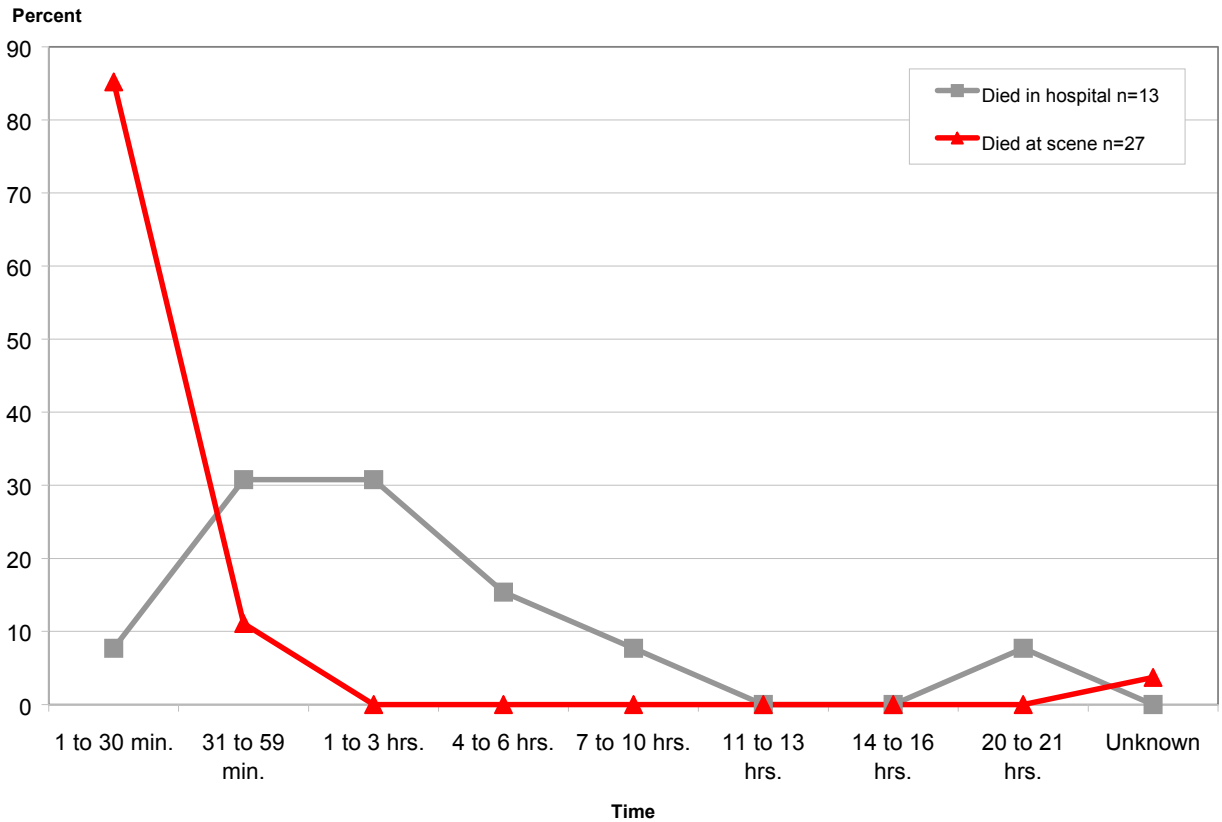
Forty-seven percent (30) of the 64 fatalities died within 30 minutes or less of the time of the shooting. Another 20 % (13) of the victims died within 1 hour. The longest surviving victim died at 11 days after the incident (Figure 85).



**Figure 85: Initial Survival Time of Firearm-related Fatalities: San Francisco, 1999 (n=64)**

Note: There was 1 victim who survived 1-2 days, 1 who survived 7 days, and 1 who survived for 11 days. There were 3 suicide victims with unknown survival times since the exact time of injury was unknown.

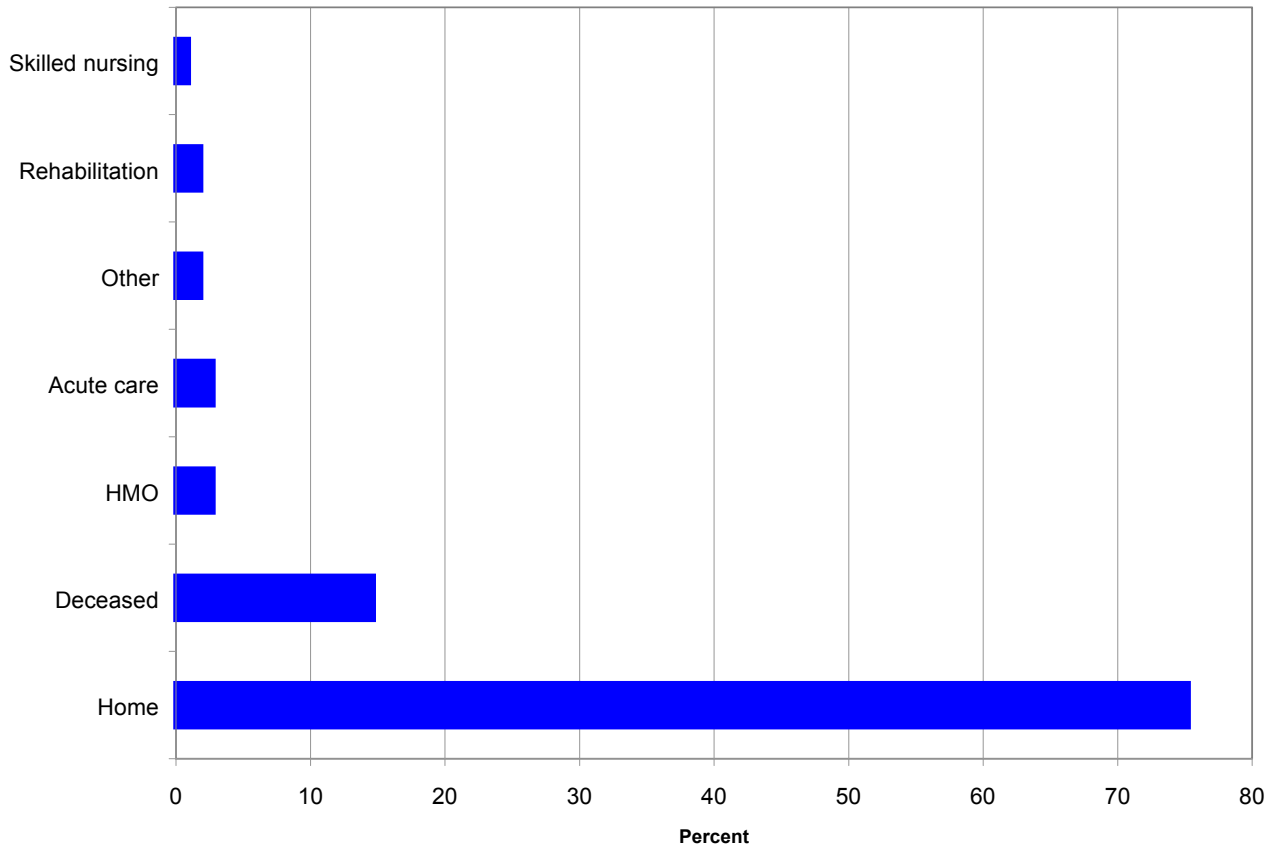
Twenty-seven of the 40 homicide victims were dead at the scene, and 3 were dead between 31 and 59 minutes after the time of injury. There was a single homicide victim with an unknown time of survival. Twelve of the homicide victims who were admitted to SFGH died between 49 minutes and 20 hours after the incident (Figure 86).



**Figure 86: Survival Time for Firearm-related Homicide Victims, by Location of Death: San Francisco, 1999 (n=40)**

**Final Disposition of Victims Hospitalized at San Francisco General Hospital**

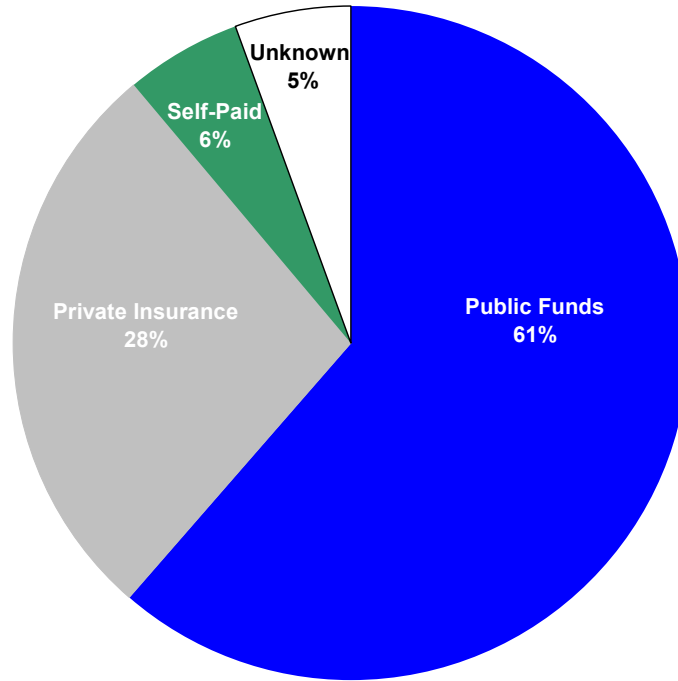
Figure 87 shows that 75% (82) of the victims who were hospitalized at SFGH were discharged home, 10% (11) went to another care facility (skilled nursing, rehabilitation, acute care, HMO, and other), and 15% (16) died while hospitalized.



**Figure 87: Disposition of Firearm-related Victims Following Hospitalization at San Francisco General Hospital: San Francisco, 1999 (n=109)**

**Medical Insurance**

Of the victims who were admitted to SFGH, 61% (67) relied on public funds, 28% (30) used private insurance to pay hospitalization costs, 6% (6) were self-paid, and 5% (5) used an unknown source of payment (Figure 88). The California State hospitalization and death data for SF County in 1998 indicated that hospitalization charges for gunshot victims averaged \$29,759 per victim.<sup>14</sup> Thus, it can be estimated that these 109 admissions represented hospital charges totaling more than 3.2 million dollars, with 1.9 million having been paid with public funds.



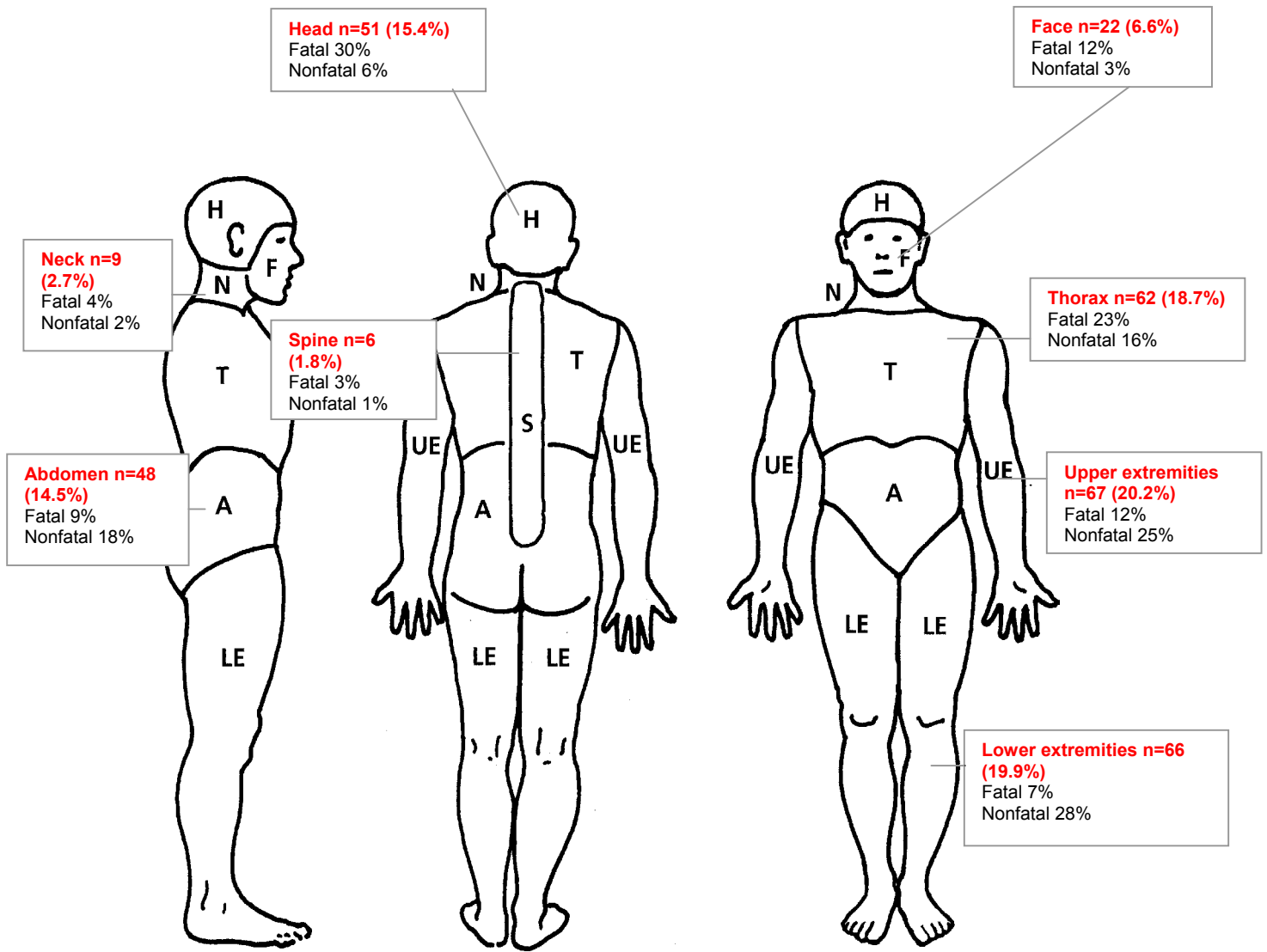
**Figure 88: Source of Funding of Hospitalization Costs: San Francisco, 1999 (n=109)**

<sup>14</sup>San Francisco Injury Center and the San Francisco Department of Public Health. *Profile of Injury in San Francisco*; 2001.

### **Bullet Entry and Wound Location**

Of the fatality victims, 41% (26) received a single bullet wound, 16% (10) were shot with a single bullet resulting in multiple wounds, and 44% (28) received multiple wounds resulting from multiple bullets. Sixteen of the suicide victims sustained a single gunshot wound, with 5 sustaining two wounds. The wound locations are shown in Figure 89 according to body region. There were a total of 130 wounds to fatality victims; of these wounds, 30% (39) were head injuries, 23% (30) were thorax injuries, 12% (16) were face injuries, and another 12% (16) were injuries to the upper extremities.

Of the nonfatality victims, 74% (110) received a single bullet wound, 7% (11) of the victims were shot with a single bullet resulting in multiple wounds, 18% (27) received multiple wounds resulting from multiple bullets, and one victim had an unknown number of wounds resulting from an unknown number of bullets. As shown in Figure 89, there were a total of 202 wound locations to nonfatality victims. Of these wounds, twenty-eight percent (57) were lower extremity injuries, 25% (51) were upper extremity injuries, and 18% (36) were abdominal injuries. For nonfatality victims who were not hospitalized, the number of bullet wounds and number of bullets inflicting injury were obtained either from SFGH ED registry database or from police reports. For these cases, therefore, the available information regarding the number of bullets that were used and the exact wound locations was less precise.



**Figure 89: Initial Location of Body Wounds for Fatal and Nonfatal Firearm-related Injuries: San Francisco, 1999**

Notes: There were 64 fatality victims sustaining 130 wounds and 149 nonfatality victims sustaining 202 wounds, for 332 wound locations. The percentages represent the proportion of fatal and nonfatal wounds, respectively, sustained by all victims in that body region. There was a single unknown wound location for a nonfatality victim.

H - Head	S - Spine	A - Abdomen, lower back
N - Neck	F - Face	T - Thorax
UE - Upper extremities	LE - Lower extremities	

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