

Trends in Firearm-Related Emergency Department Visits and Hospitalizations in California, 1992 to 2010



This report uses hospital and emergency department (ED) patient data collected by the Office of Statewide Health Planning and Development (OSHPD) to describe California trends in firearm-related injuries and those at risk. It analyzes OSHPD hospitalization data from 1992, just after hospitals began reporting injury-related diagnoses to OSHPD, to 2010, plus OSHPD ED data from 2006, just after reporting of ED visits to OSHPD began. The report also uses data from the California Department of Public Health and the United States Federal Bureau of Investigation to compare trends in reported firearm-related hospitalizations and ED visits during the 1990s and 2000s with firearm-related events such as mortality and homicides. In addition the report compares the main types of intention for firearm-related injury—assault, unintentional, self-inflicted, and injury due to legal intervention—and describes the groups most at risk, related medical care costs, and the outcomes for people cared for in hospitals and EDs.

Key Findings

- There has been a dramatic overall decline in hospitalizations for firearm-related injuries from 1992 through 2010.
 - Between 1992 and 2000 the hospitalization rate per 100,000 Californians for assault-related injuries dropped from 26.5 to 10.2, then remained at about 10 per year until 2008, when it began to decline to 6.8 by 2010.

- Overall, by 2010 the rate for assaults had dropped by 74.4%, from 26.5 to 6.8 per 100,000 population; for unintentional injuries the rate dropped 73.6%, from 5.3 to 1.4; and for self-inflicted injuries the rate dropped 63.6%, from 1.1 to 0.4.
- Firearm-related hospitalizations appear to follow the same 1992 to 2004 trend line as firearm-related mortality and homicide, which dropped steeply after 1992 and plateaued in the early 2000s.
- Government-sponsored insurance programs covered about two thirds of the costs of hospitalizations due to assault and legal intervention (65.4% and 67.9% respectively), and about half of the costs of unintentional and self-inflicted injuries (53.7% and 52.2% respectively).
- Rates for assault-related firearm injuries were higher in counties with large cities, while rates for unintentional and self-inflicted injuries were higher in the northern mountain counties and rates for legal intervention injuries were higher in rural counties.

Racial and Ethnic Group

- Hospitalization rates for all types of firearm-related cases declined very steeply from 1992 to 1998 for African Americans and Hispanics.
 - Rates for assaults declined from 126.3 to 45.4 for African Americans and 51.5 to 17.5 for Hispanics.
 - Unintentional injury rates declined from 13.9 to 4.8 for African Americans and 9.0 to 2.7 for Hispanics.

Table 1. Percentage* of Injuries Resulting in Death, Hospitalization, or Emergency Department Visit, by Intent and Instrument/Mean. California, 2008

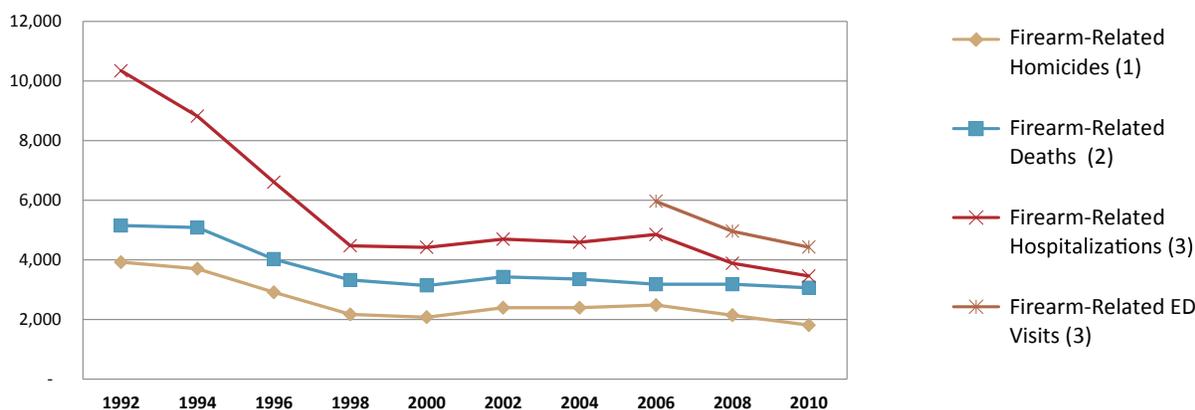
	Unintentional		Self-Inflicted/Suicide		Assault/Homicide	
	Firearms	Other Means	Firearms	Other Means	Firearms	Other Means
Died	2.0	0.5	91.8	8.0	23.3	2.6
Hospitalized (non-fatal)	26.8	9.8	5.9	34.3	41.7	11.0
Treated and released (ED visit)	71.1	89.7	2.4	57.7	35.0	86.4
	100.0	100.0	100.0	100.0	100.0	100.0

*Based on reported deaths, hospitalizations, and ED visits.

Source of frequency data: California Department of Public Health, Safe and Active Communities Branch. <http://epicenter.cdph.ca.gov>.



Figure 1. Number of Firearm-Related Homicides, Deaths, Hospitalizations and ED Visits. California, 1992 to 2010



Sources: CA Department of Justice, "Homicide in California, 2010"(1). CA Department of Public Health, Vital Statistics, Public Use Death Files(2). CA Office of Statewide Health Planning and Development, Patient Discharge and Emergency Department Data(3).

Assaults

- Hospitalization rates for firearm-related assaults were consistently much higher than the rates for other firearm-related injuries.
 - Rates were highest for people aged 13 to 20 and 21 to 30, for African Americans followed by Hispanics, and for males (over 90% of the cases). Rates declined across all age groups.

Unintentional Injuries

- The age and racial/ethnic hospitalization patterns of these cases were very similar to assaults, although the number of cases was lower than those due to assaults.

Self-Inflicted Injuries

- Hospitalization rates for these cases were higher for people aged 21 to 30, and over age 65; for Whites, followed by African Americans and Hispanics; and for males (83% of the cases).

Legal Intervention Cases

- Although the annual number of hospitalizations for legal intervention-related injuries remained relatively low, they had a gender and racial/ethnic profile similar to cases due to unintentional injuries and assaults.
- About half of the hospitalized cases were discharged to a prison or jail.

Background

Firearm-Related Injuries. Firearm-related injuries are wounds caused by handguns, rifles, or other types of guns. The injury may be self-inflicted, unintentional, caused by another person ("assault"), or caused by a law enforcement officer in the course of making an arrest or other type of legal intervention.

Firearm-related injuries tend to be more serious than inju-

ries by other means. In California during 2008, self-inflicted and assault-related injuries were about ten times more likely to result in death if they involved firearms; unintentional injuries involving firearms are four times more likely to result in death. (Table 1)

Trends in Firearm Use in the US and in California. In the US from 1974 to 2007, the **number** of murders, robberies and aggravated assaults reported to the US Federal Bureau of Investigation peaked in the early 1990s, then declined steeply until the year 2000 and then plateaued. Similarly, the **percentage** of these crimes that involved the use of firearms also peaked in the early 1990s then declined. (For murders and robberies, however, the percentage involving firearms began to rise again in about 2005.) Firearms were used on average in 65% of reported murders (range: 58% to 70%), 40% of robberies (range: 33% to 45%) and 22% of aggravated assaults (range: 18% to 25%). (Appendix Table A1)ⁱ

Firearms were also used in 5% to 7% of the self-harm injuries reported in the US from 2000 to 2009, according to the US Centers for Disease Control and Prevention. However, among the fatal self-harm injuries (suicides) firearms were used in over half of the cases (57% in 2000, declining to 51% in 2009).ⁱⁱ

What the OSHPD Hospital Patient Data Tells Us. The injury cases reported by hospitals and EDs are the ones that survived long enough to reach this type of medical care. On average in California, slightly more than half (51%) of assault-related firearm deaths took place in the hospital, as did 47% of those related to legal intervention and 45% of unintentional cases, in contrast to one out of six (17%) of firearm-related suicide attempts.ⁱⁱⁱ (Appendix Table A2)

During the 1990s firearm-related homicides, deaths, and hospitalizations steadily dropped, then remained nearly flat until 2006. (Figure 1 and Appendix Table A3)

Table 2. Hospitalizations and Emergency Department (ED) Visits for Firearm-Related Injuries and Rates, by Type of Care and Injury Intent. California, 1992 to 2010

Type of Care	Intent	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	Percent Change
Number of Cases												
Hospitalizations	Assault	8,221	6,985	5,318	3,476	3,489	3,753	3,679	3,974	3,091	2,654	-67.7
	Self-Inflicted	351	378	319	249	198	176	169	152	169	147	-58.1
	Unintentional	1,641	1,327	884	643	598	649	615	625	528	548	-66.6
	Legal Intervention	128	128	81	104	133	114	127	98	98	109	-14.8
	Unknown Intent	491	320	156	148	162	171	199	130	129	117	-76.2
ED Visits	Assault								3,575	2,773	2,665	-25.5
	Self-Inflicted								98	107	88	-10.2
	Unintentional								1,786	1,404	1,323	-25.9
	Legal Intervention								504	676	352	-30.2
	Unknown Intent								395	353	327	-17.2
Total	Hospitalizations	10,832	9,138	6,758	4,620	4,580	4,863	4,789	4,979	4,015	3,575	-67.0
	ED Visits								6,358	5,313	4,755	-25.2
Cases per 100,000 Californians												
Hospitalizations	Assault	26.5	22.2	16.6	10.6	10.2	10.6	10.1	10.7	8.1	6.8	-74.4
	Self-Inflicted	1.1	1.2	1.0	0.8	0.6	0.5	0.5	0.4	0.4	0.4	-66.8
	Unintentional	5.3	4.2	2.8	2.0	1.8	1.8	1.7	1.7	1.4	1.4	-73.6
	Legal Intervention	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	-32.6
	ED Visits	Assault								9.6	7.3	6.8
Self-Inflicted									0.3	0.3	0.2	-14.5
Unintentional									4.8	3.7	3.4	-29.4
Legal Intervention									1.4	1.8	0.9	-33.5
Total		Hospitalizations	35.0	29.0	21.1	14.1	13.4	13.8	13.1	13.4	10.5	9.1
	ED Visits								17.1	13.9	12.2	-28.8

Firearm-Related Hospitalizations and Emergency Department Visits

Reported Cases, 1992 to 2010. The hospitalization rate (cases per 100,000 Californians) was consistently highest across all years for assault-related injuries, followed by unintentional, self-inflicted, and legal intervention injuries. For all types of intent combined, the hospitalization rate dropped by 74%, from 35.0 to 9.1 from 1992 to 2010. (Table 2)

Between 1992 and 2000 the hospitalization rate per 100,000 Californians for assault-related injuries dropped from 26.5 to 10.2, then remained at about 10 until 2008, when it began to decline to 6.8 by 2010. Similarly, the hospitalization rate for unintentional injuries declined steeply from 1992 to 2000 (from 5.3 to 1.8), then remained at about 1.7 until 2008, when it dropped to 1.4. For self-inflicted and legal intervention cases, the hospitalization rates dropped steadily, from 1.1 to 0.4 and from 0.4 to 0.3 respectively, from 1992 to 2010. (Table 2)

ED data was only available for 2006 and later years. More than half of cases are seen in the ED and discharged to home; the number seen only in the ED is 25% greater than the number hospitalized. (Table 2)

Day of the Week. If all firearm-related hospitalizations and ED cases were spread out evenly during the week, then 14.3% would happen each day and 29% would happen on the two days of the weekend. On average for 2006, 2008 and 2010 the percentage of hospitalizations and ED visits that occurred on weekends was 41% and 43% for assault-related injuries, 39% and 38% for unintentional injuries, and 29% and 38% for legal intervention-related injuries. Thus, more than the expected percentage of assault, unintentional, and legal intervention cases happened on the weekends. However, there was no day-of-the-week pattern for self-inflicted injuries. (Figure 2 and Appendix Table A4)

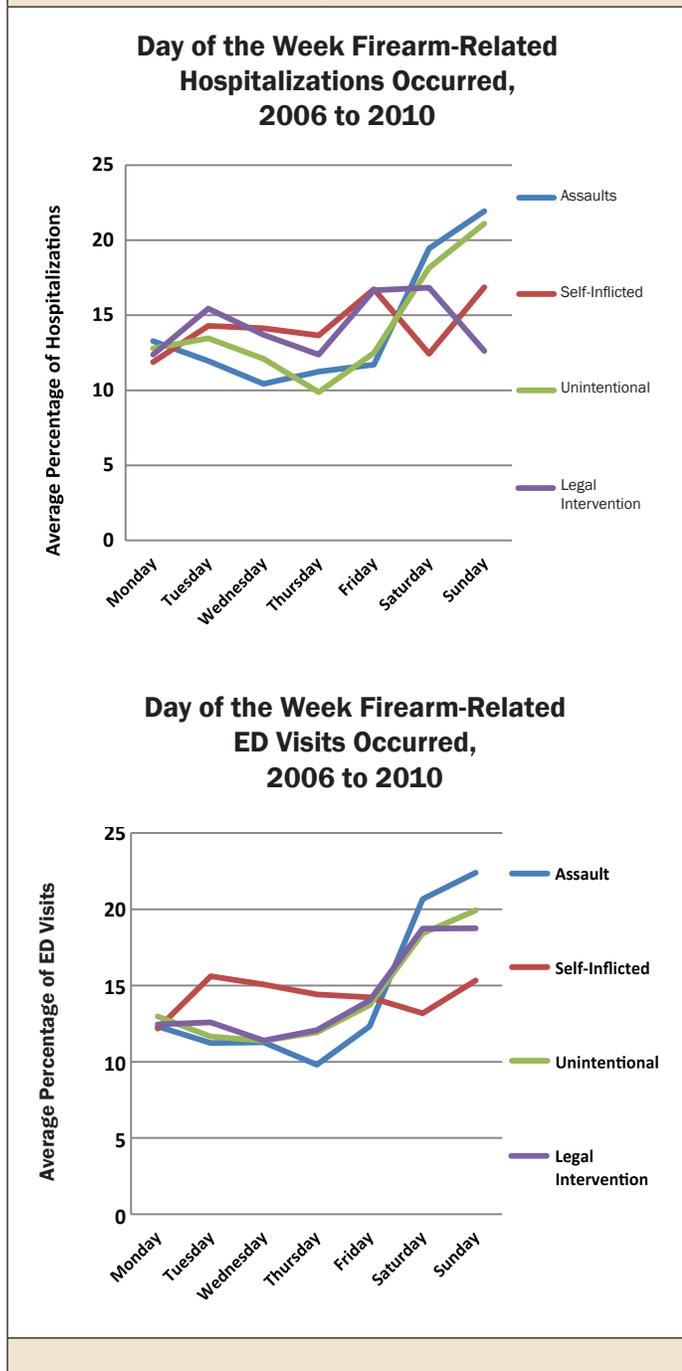
Length of Hospital Stay, Cost and Expected Source of Payment

Length of Stay and Cost. The total number of hospital days devoted to care for firearm-related injuries dropped from 68,200 per year (1992) to 27,176 (2010). However, the total cost for care dropped from \$110 million in 1992 to \$72 million in 1998, and then rebounded to \$112 million in 2010. (Appendix Table A5)

The cost per day more than doubled from \$1,859 in 1992 to \$4,120 in 2010 for all types of firearm-related hospitalization.

Costs per day have nearly always been higher for self-inflicted or

Figure 2. Weekly Pattern in Hospitalizations and Emergency Department Visits. California, 2006 - 2010



legal intervention cases than for those due to unintentional injuries or assault. (Appendix Table A5)

Expected Principal Source of Payment. For hospitalizations due to all types of firearm-related cases from 1992 to 2010, the most frequent expected source of payment was government: Medicare, Medi-Cal or other government programs. On average for assault-related hospitalization costs, Medi-Cal was expected to pay for 36.9% and other governmental payers were expected to pay for 27.2% of the cost. For legal interventions, almost half (48.9%) of the hospitalizations were expected to be paid for by other governmental payers, while private insurance was expected to pay for 32.5% of unintentional and 38% of self-inflicted cases,

and Medi-Cal was expected to pay for 29.3% of unintentional and 21.3% of self-inflicted cases. Over all years, the percentage of cases expected to be paid for by a public program were: 68% of legal interventions, 65% of assaults, 54% of unintentional injuries, and 52% of self-inflicted firearm-related injuries. (Figure 3 and Appendix Table A6)

Cost and Charges. Hospitals report the total amount charged for each hospitalization. To obtain an estimate of the actual cost to the hospital for the visit, the reported charge is multiplied (adjusted) by the cost-to-charge ratio, which is determined by OSHPD based on the financial reports submitted by hospitals to OSHPD. These are available online at <http://oshpd.ca.gov/hid/Products/Hospitals/AnnFinanData/DsclsureRpts/index.html>.

Comparison of County Rates

Across California's counties there is a wide variation in the population rate (cases per 100,000 county population) for firearm-related injuries seen in hospitals and EDs. The average rate 2006 to 2010 for assault-related hospitalization and ED cases ranged between 0.34 and 41.07 (average = 16.49) and the rate for unintentional cases ranged between 0.0 and 21.21 (average = 5.47). The rates for legal intervention hospitalization and ED cases ranged between 0.0 and 12.13 (average = 1.62) and the rates for self-inflicted cases ranged between 0.0 and 2.77 (average = 0.67). (For all county rates see Appendix Table A7)

Assault-related hospitalization and ED rates appear to be higher in counties with large cities—Alameda, San Francisco, Los Angeles and Fresno—while self-inflicted and unintentional injury rates tend to be higher in the northern rural (mountain) counties—Del Norte, Lassen, Modoc, Mono, Plumas, Sierra, Siskiyou and Trinity. The hospitalization and ED rates for legal intervention cases appear to be higher in rural counties throughout the State. (For all county rates see Appendix Table A7)

About nine out of ten firearm-related hospitalizations were for patients residing in the same county as the hospital and most of the remaining cases came from another California county. Less than one percent came from a different state or different country. These percentages have remained very similar over time. (Appendix Table A8)

Patterns Related to Sex, Race/Ethnicity and Age

Sex. A very large majority (83% to 94%) of all types of firearm-related hospitalization cases were male. On average from 1992 to 2010, females accounted for only 6% of hospitalizations related to legal intervention, 9% of assaults, 11% of unintentional cases and 17% of self-inflicted injuries. (Appendix Table A9)

Race and Ethnicity. Hospitalization rates for all types of firearm-related cases declined very steeply from 1992 to 1998 for African Americans and Hispanics; rates for assaults declined from 126.3 to 45.4 for African Americans and 51.5 to 17.5 for Hispanics, and unintentional injury rates declined from 13.9 to 4.8 for African Americans and 9.0 to 2.7 for Hispanics. Rates remained fairly stable from 2000 to 2010 for assaults and unintentional injuries. However, although the numbers are small, the rates for self-inflicted firearm injuries for Native Americans appear to be rising from historically low levels (0.5 in 2002 to 0.8 in 2010). (Figure 4 and Appendix Table A10)

Age. The average hospitalization rate per 100,000 Californians is shown in Figure 5 by age group and intent of injury. For assault, 1992 through 2010, youths aged 13 to 20 had the highest hospitalization rates (42.0), followed by young adults aged 21 to 30 (33.1). For unintentional firearm injuries the rates were highest for the same two age groups (6.8 and 5.3, respectively). Rates for legal intervention-related injuries were highest for those aged 21 to 30 (0.9). In contrast, for self-inflicted firearm injuries the rates were highest for those aged 86+ years (1.4), followed by people aged 21 to 30 and those aged 66 to 85 (1.0). Note that the assault rate (13.2) is much higher than rates for the other three causes of firearm-related injuries for all ages. (Figure 5 and Appendix Table A11)

Diagnosis and Outcome

Principal Diagnosis. The main type of wound involved in a firearm-related injury is reported in OSHPD hospital patient data as the “principal diagnosis.” The most frequent types of wounds represent 74% of all the firearm-related hospitalizations for 2006, 2008 and 2010 and 81% of the ED visits for the same years. The most frequent type of injury was similar for assaults, unintentional injuries and legal interventions. However, the most frequent self-inflicted injuries were fractures of the skull and face, and injury to the brain (marked by asterisk in Appendix Table A12).

While there was considerable overlap between the two lists, the ED cases were more likely to involve wounds of the limbs and back, abrasions of the trunk, and immediate cardiac crises. Hospitalizations more frequently involved open fractures of the skull and face, as well as the spine and leg, and injury to vital organs.

Final Outcome for Hospitalizations and Emergency Department Visits. Death was the final outcome for self-inflicted firearm injuries for 59% of ED visits and 37% of those who were hospitalized, 2006 through 2008. Among unintentional and legal intervention cases, respectively, 4% to 7% died, whether in the ED or during hospitalization. For assault-related injuries, 12% of the ED cases and 6% of those hospitalized died in the hospital. (Figure 6 and Appendix Table A13)

- *Assaults and Unintentional Injuries:* About three quarters of assault and unintentional injury cases were discharged to home, whether seen in the ED or hospital. An additional 7% to 11% were transferred to another acute care hospital, residential care, skilled nursing facility, rehabilitation, or other type of care.
- *Self-Inflicted Injuries:* About one quarter (23.1%) of hospitalized cases were transferred to another acute care facility and another one quarter (22.4%) were discharged to home. Among the cases seen in the ED and released, only 16% were discharged to home.
- *Legal Intervention Injuries:* Nearly half (48.8%) of the hospitalized cases were discharged to a prison or jail, compared with only 6.4% of ED visits. In contrast, about three quarters (74.7%) of ED visit cases were discharged to home, compared with only one quarter (23.7%) of those who were hospitalized.

Summary and Conclusions

There has been a dramatic decline in the occurrence of hospitalization for firearm-related injuries. Overall, by 2010 the hospitalization rate for assaults had dropped 74.4%, from 26.5 to 6.8 per 100,000 population; for unintentional injuries the rate dropped 73.6%, from 5.3 to 1.4; and for self-inflicted injuries the rate dropped 63.6%, from 1.1 to 0.4. The trend line - a sharp drop during the 1990s, then a plateau, then further decline after 2006 - was paralleled by trends in firearm-related mortality and assault and it occurred in all the main racial/ethnic groups and for both sexes.

Just over half of the cases reaching medical care are treated in the ED and released. These are more likely cases of cardiac arrest, wounds of the extremities, or examinations for medicolegal purposes. The cases that have to be hospitalized tend to have injuries of the head or vital internal organs. The cost per day of hospital care doubled across these years, for all types of cases.

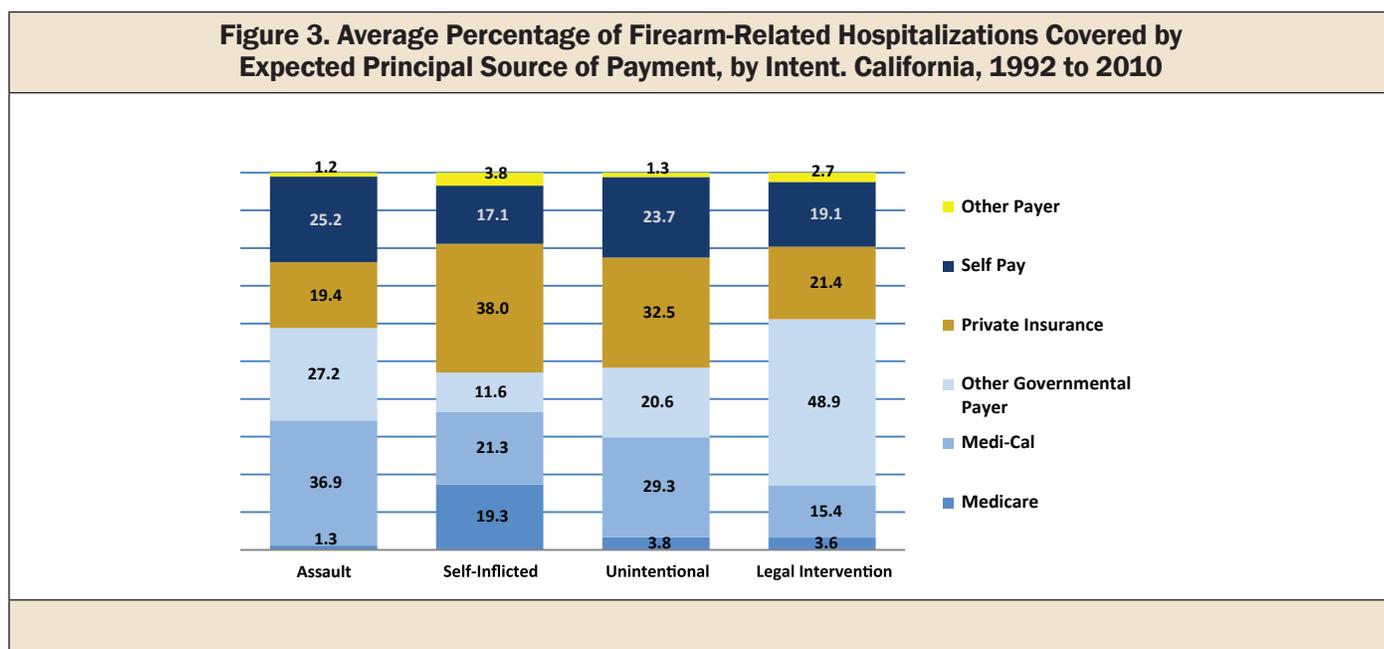
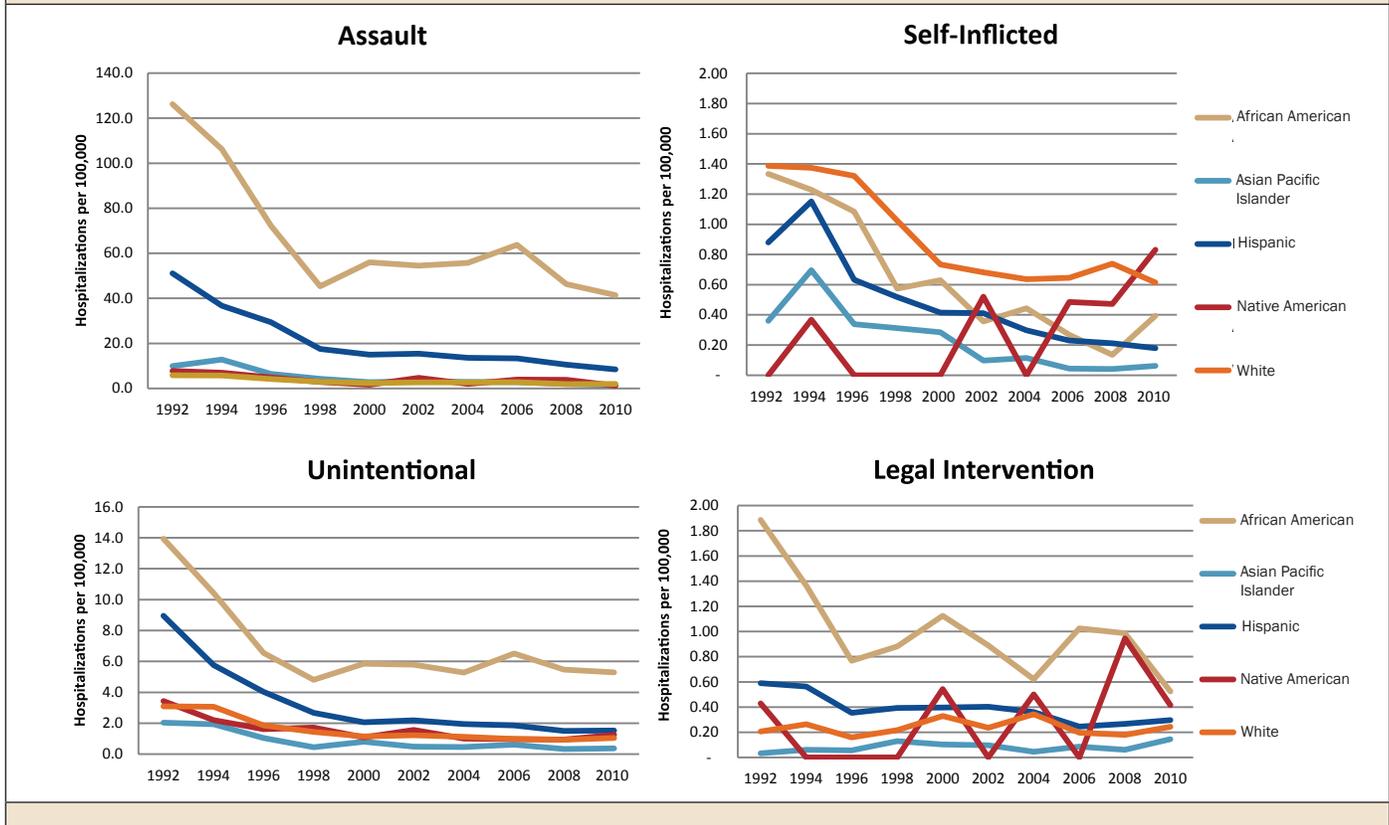


Figure 4. Average Hospitalization Rate per 100,000 Californians for the Main Racial and Ethnic Groups, by Intent of Firearm-Related Injury. California Hospitals, 1992 to 2010



Government-sponsored insurance programs covered roughly two thirds of the costs for assault and legal intervention cases and half of the costs for unintentional and self-inflicted cases.

Assaults and Unintentional Injuries. The hospitalization population rates for firearm-related assaults and unintentional injuries were consistently much higher than the rates for self-inflicted and legal intervention injuries. Rates for assaults and unintentional injuries were highest for people aged 13 to 20 and 21 to 30, for African Americans (followed by Hispanics), and males (91% of the cases for assault, 89.3% of the cases for unintentional injuries). Only 1 out of 20 died in the hospital or ED; most (about 75%) were discharged to home.

The finding that age-related hospitalization population rates dropped steeply for all ages over the period covered by the report suggests that the overall decline in firearm-related cases cannot be explained merely by shifts in the numbers of people in the population in the higher-risk age groups.

Self-Inflicted Injuries. Hospitalization rates for self-inflicted injuries were higher for people over age 65, people aged 21 to 30 and for Whites (followed by African Americans and Hispanics). A large majority (83%) were male; the remaining 17% were female, which is a higher percentage than for other types of intent.

Among the small percentage of cases that actually reached a hospital or ED, mortality remained high: 60% of ED visits and 40% of hospitalizations resulted in death at the hospital.

Legal Intervention Cases. Although the number of cases reported each year remained relatively small, they had the same age, gender, and racial/ethnic profile as cases due to unintentional and assault-related injuries. About half of the hospitalized cases were discharged to a prison or jail.

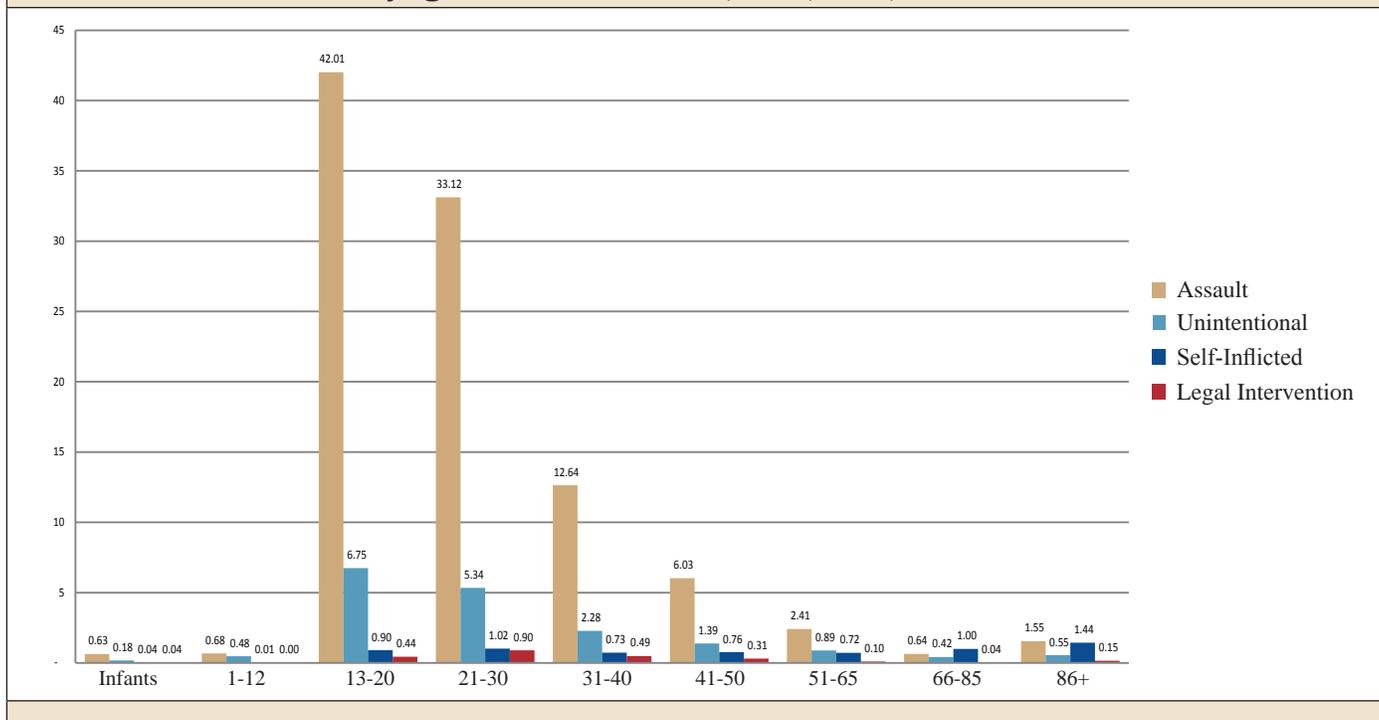
Technical Notes

Data Sources. The following data sources were analyzed in preparation of this report:

- Hospital patient data (Office of Statewide Health Planning and Development): 1992 to 2010, even-numbered years
- ED patient data (Office of Statewide Health Planning and Development): 2006 to 2010, even-numbered years
- California Hospital Annual Financial Reports (Office of Statewide Health Planning and Development), for cost-to-charge ratios: 1992 to 2010, even-numbered years
- California Public Use Death Files (California Department of Public Health, Vital Statistics): 1990 to 2008
- California population estimates/projections (California Department of Finance, Demographic Unit): 1992 to 2010

Analysis and Coding. Firearm-related injuries are reported in the patient data as External cause of injury codes (“E-codes”). E-codes for firearm-related injury include detail about the intent of the injury (assault, unintentional/accidental, self-inflicted, legal intervention, or undetermined), as well as the type of firearm involved. Place where the injury occurred is reported in a separate E-code (E-849 series). Reporting of E-Codes in the patient data collected by OSHPD began July 1, 1990. For this analysis, cases were included in the analysis if there was

Figure 5. Average Hospitalization Rate per 100,000 Population for Firearm-Related Injuries, by Age and Intent. California, 1992, 2000, and 2010



an E-code for firearm-related injury in either the principal E-code field or any of the four secondary E-code fields.

The selection of specific codes to define cases followed the U.S. Centers for Disease Control and Prevention recommended framework of E-code groupings for presenting firearm-related injury mortality and morbidity data, December 1, 2008. (<http://www.cdc.gov/injury/wisqars/index.html> accessed 4/25/2011), as follows:

- Assault-related: E965.0, E965.1, E965.2, E965.3, E965.4, E979.4
- Self-Inflicted: E955.0, E955.1, E955.2, E955.3, E955.4
- Unintentional/Accidental: E922.0, E922.1, E922.2, E922.3, E922.8, E922.9
- Legal Intervention: E970
- Undetermined or unknown intent: E985.0, E985.1, E985.2, E985.3, E985.4

Exclusions. The analysis of data for this report does not include firearm-related injuries related to war, nor injuries due to air guns, flare pistols or “late effects” (conditions related to the injury but occurring some time after the initial, acute effects) of firearm-related injuries. Cases were not excluded based on where the patient lived, source of admission (e.g., newborn), final disposition (e.g., death), or missing age information.

Analyses were based on hospitalizations and ED visits, not on “patients.” All analyses were performed using PC SAS ver. 9.2.

Limitations

Data from 1988 and 1990 were omitted because E-codes, which are the only source of information about firearm-related injuries in the patient data, were not included in the OSHPD patient data

until July, 1990. Also, ED data files prior to 2006 were not available because OSHPD did not begin collecting outpatient data (ED and ambulatory surgery data) until 2005.

Information about type of firearm used and place where the injury occurred was missing or unspecified for over half of the patient records. Results from analyses of these data items are omitted from the report because they might lead to incorrect conclusions.

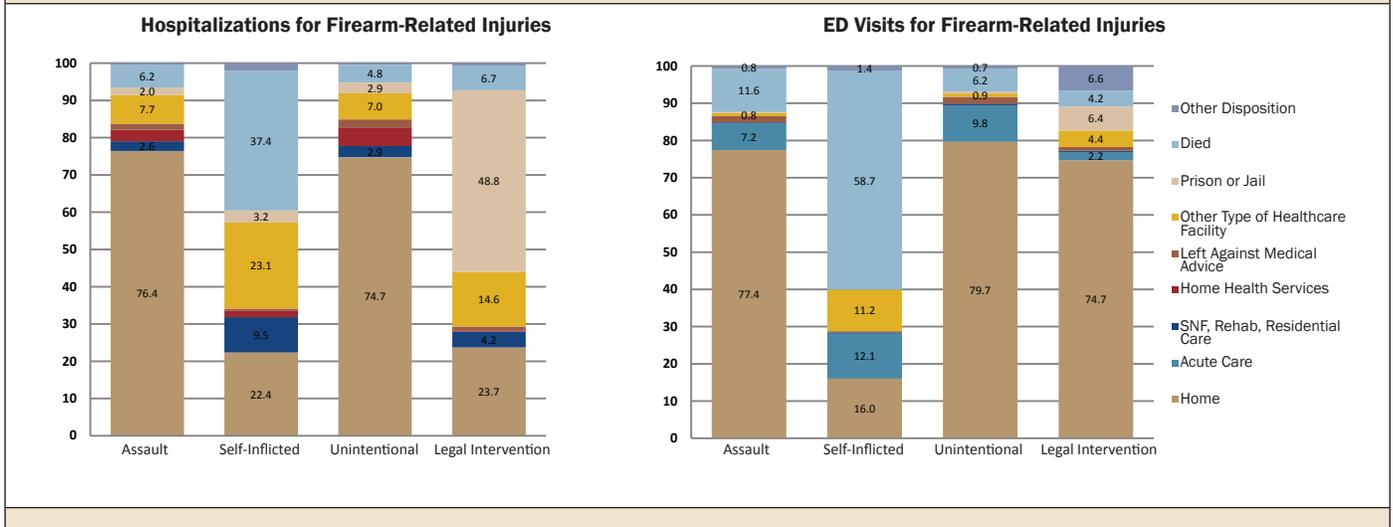
In the analysis of the reported patient data, it was found that the percentage of firearm-related hospitalizations with additional diagnoses of drug or alcohol problems or psychiatric conditions appeared to have increased three- and four-fold. However, the percentage was lower for firearm-related ED visits than for the hospitalizations. It could not be determined whether the cases seen in the ED were actually less likely to have these problems or there was insufficient time in the ED to complete full medical histories for them. Because of uncertainty about the reporting of these data, the results have been omitted from the report.

Additional Resources

California Department of Public Health

- EpiCenter (“lookup” data website available at <http://epicenter.cdph.ca.gov>)
- Injury-related publications by CDPH available at <http://www.cdph.ca.gov/HealthInfo/injviosaf/Pages/EPICPublicationsandDirectories.aspx>
- Guide to violence prevention resources (county listing, mainly re: domestic violence and child abuse) available at <http://www.cdph.ca.gov/HealthInfo/injviosaf/Pages/ViolencePreventionResourceDirectory.aspx>

Figure 6. Hospitalizations and ED Visits for Firearm-Related Injuries: Average Percentage Discharged to Each Site, by Intent. California, 1992 to 2010



- Preventive interventions implemented in hospitals:
 - Prevention of further violence: Ceasefire, Youth Alive
 - Screening for substance abuse

Centers for Disease Control and Prevention (CDC)

- WISQARS (Web-based Injury Statistics Query and Reporting System)
<http://www.cdc.gov/injury/wisqars/index.html>
- CDC Injury Center publications:
<http://www.cdc.gov/injury/publications/index.html>

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Endnotes

- ⁱ FBI Uniform Crime Report:
<http://bjs.ojp.usdoj.gov/content/glance/tables/guncrimetab.cfm>
- ⁱⁱ CDC web-based Injury Statistics Query and Reporting System, WISQARS: <http://www.cdc.gov/injury/wisqars/index.html>
- ⁱⁱⁱ California death certificates, 1990 to 2008. California Department of Public Health, Vital Statistics

Glossary	
Intent: Legal Intervention (1)	Injuries inflicted by the police or other law-enforcing agents, including military on duty, in the course of arresting or attempting to arrest lawbreakers, suppressing disturbances, maintaining order, and other legal action. Legal execution. Excludes injuries caused by civil insurrections.
Firearm Injury (2)	Injury resulting from handgun (pistol, revolver), shotgun (automatic), hunting rifle, military firearms, air gun (BB gun, pellet gun), flare pistol. This report excludes air guns, flare pistols.
Intent: Accidental (2)	Unintentional injury.
Intent: Assault (2)	Injuries inflicted by another person with intent to injure or kill.
Intent: Self-inflicted (2)	Injury resulting from suicide and attempted suicide. A self-inflicted injury specified as intentional.
Intent: Undetermined (2)	Intent is unspecified or it cannot be determined whether the injuries are accidental (unintentional), suicide (attempted) or assault.
(1) 2005 ICD-9-CM for Physicians, Volumes 1 and 2 Ed., Ingenix, Salt Lake City, UT (2) Hart AC, Hopkins CA. Medicode, Ingenix Companies, 2001. ICD-9-CM Expert for Hospitals, Vol 1, 2, and 3. 6th Edition. West Valley City, UT, 84120	

APPENDIX

Table A1. Murders, Robberies, and Aggravated Assault Cases Report in the US, 1974 to 2007

	Number of Cases			Percentage Committed with Firearms		
	Murders	Robberies	Aggravated Assault	Murders	Robberies	Aggravated Assault
1974	20,600	441,290	452,720	67.9	44.7	25.4
1975	20,510	464,970	484,710	65.8	44.8	24.9
1976	18,780	420,210	490,850	63.8	42.7	23.6
1977	19,120	404,850	522,510	62.5	41.6	23.2
1978	19,555	417,038	558,102	63.6	40.8	22.4
1979	21,456	466,881	614,213	63.3	39.7	23.0
1980	23,040	548,810	654,960	62.4	40.3	23.9
1981	22,520	574,130	643,720	62.4	40.1	23.6
1982	21,010	536,890	650,042	60.2	39.9	22.4
1983	19,310	500,220	639,530	58.3	36.7	21.2
1984	18,690	485,010	685,350	58.8	35.8	21.1
1985	18,980	497,870	723,250	58.7	35.3	21.3
1986	20,610	542,780	834,320	59.1	34.3	21.3
1987	20,100	517,700	855,090	59.1	33.0	21.4
1988	20,680	542,970	910,090	60.7	33.4	21.1
1989	21,500	578,330	951,710	62.4	33.2	21.5
1990	23,440	639,270	1,054,860	64.1	36.6	23.1
1991	24,700	687,730	1,092,740	66.3	39.9	23.6
1992	23,760	672,480	1,126,970	68.2	40.3	24.7
1993	24,530	659,760	1,135,100	69.5	42.4	25.1
1994	23,305	618,817	1,119,950	70.0	41.6	24.0
1995	21,597	580,545	1,099,179	68.0	41.0	22.9
1996	19,645	537,050	1,029,814	67.8	40.7	22.0
1997	18,208	498,534	1,023,201	67.8	39.7	20.0
1998	16,914	446,625	974,402	64.9	38.2	18.8
1999	15,533	409,670	916,383	65.2	39.9	18.0
2000	15,517	407,842	910,744	65.6	40.9	18.1
2001	15,980	422,921	907,219	69.5	42.0	18.3
2002	16,204	420,637	894,348	66.7	42.1	19.0
2003	16,503	413,402	857,921	66.9	41.8	19.1
2004	16,137	401,326	854,911	66.0	40.6	19.3
2005	16,692	417,122	862,947	68.0	42.1	21.0
2006	17,034	447,403	860,853	67.9	42.2	21.9
2007	16,929	445,125	855,856	68.0	42.8	21.4
Lowest	15,517	401,326	452,720	58.3	33.0	18.0
Highest	24,700	687,730	1,135,100	70.0	44.8	25.4
Average	19,679	501,947	830,840	64.7	39.7	21.8

Source: FBI Uniform Crime Report <http://bjs.ojp.usdoj.gov/content/glance/tables/guncrimetab.cfm>

**Table A2. Number of Firearm-Related Deaths, by Intent and Place of Death.
California, 1990 to 2008**

Intent	Place	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	Average
Assault	In Hospital/Outpt.	1,449	1,705	1,487	1,096	725	777	954	939	695	827	-
	Other Place	1,141	1,366	1,474	1,099	845	718	865	895	883	751	-
	Total	2,590	3,071	2,961	2,195	1,570	1,495	1,819	1,834	1,578	1,578	-
	% of All Firearms Deaths	54.0	59.6	58.3	54.5	47.3	47.6	53.1	54.7	49.6	49.6	52.8
	% In Hospital	55.9	55.5	50.2	49.9	46.2	52.0	52.4	51.2	44.0	52.4	51.0
Self-Inflicted	In Hospital/Outpt.	433	408	376	280	298	217	192	179	337	204	-
	Other Place	1,676	1,582	1,619	1,479	1,383	1,305	1,319	1,209	1,157	1,290	-
	Total	2,109	1,990	1,995	1,759	1,681	1,522	1,511	1,388	1,494	1,494	-
	% of All Firearms Deaths	44.0	38.6	39.3	43.7	50.6	48.5	44.1	41.4	47.0	47.0	44.4
	% In Hospital	20.5	20.5	18.8	15.9	17.7	14.3	12.7	12.9	22.6	13.7	17.0
Unintentional	In Hospital/Outpt.	13	15	20	8	4	25	23	31	5	13	-
	Other Place	9	7	25	8	14	30	27	21	31	23	-
	Total	22	22	45	16	18	55	50	52	36	36	-
	% of All Firearms Deaths	0.46	0.43	0.89	0.40	0.54	1.75	1.46	1.55	1.13	1.13	1.0
	% In Hospital	59.1	68.2	44.4	50.0	22.2	45.5	46.0	59.6	13.9	36.1	44.5
Legal Intervention	In Hospital/Outpt.	41	34	37	24	29	30	25	31	24	33	-
	Other Place	35	33	43	30	23	36	21	48	48	39	-
	Total	76	67	80	54	52	66	46	79	72	72	-
	% of All Firearms Deaths	1.6	1.3	1.6	1.3	1.6	2.1	1.3	2.4	2.3	2.3	1.8
	% In Hospital	53.9	50.7	46.3	44.4	55.8	45.5	54.3	39.2	33.3	45.8	46.9
Total	In Hospital/Outpt.	1,936	2,162	1,920	1,408	1,056	1,049	1,194	1,180	1,061	1,077	-
	Other Place	2,861	2,988	3,161	2,616	2,265	2,089	2,232	2,173	2,119	2,103	-
	Total	4,797	5,150	5,081	4,024	3,321	3,138	3,426	3,353	3,180	3,180	-
	% In Hospital	40.4	42.0	37.8	35.0	31.8	33.4	34.9	35.2	33.4	33.9	35.8

Table A3. Number of Firearm-Related Homicides, Deaths, Hospitalizations and Emergency Department Visits. California, 1992 to 2010

	Firearm-Related Homicides (1)	Firearm-Related Deaths (2)	Firearm-Related Hospitalizations (3)	Firearm-Related ED Visits (3)
1992	3,920	5,150	10,341	-
1994	3,699	5,081	8,818	-
1996	2,910	4,024	6,602	-
1998	2,170	3,321	4,472	-
2000	2,074	3,138	4,418	-
2002	2,392	3,426	4,692	-
2004	2,394	3,353	4,590	-
2006	2,483	3,180	4,849	5,963
2008	2,143	3,180	3,886	4,960
2010	1,809	3,063	3,458	4,428

(1) Department of Justice, "Homicide in California, 2010", Table 21, Page 67.

(2) Department of Public Health, Vital Statistics, Public Use Death Files

(3) Office of Statewide Health Planning and Development, Patient Discharge and Emergency Department Data

Table A4. Average Percentage of Firearm-Related Hospitalizations and ED Visits that Occurred on Each Day of the Week, by Intent. California, 2006 to 2010

Hospitalizations								
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	% on Saturday and Sunday
Assault	13.3	12.0	10.4	11.2	11.7	19.4	21.9	41.4
Self-Inflicted	11.9	14.3	14.1	13.7	16.7	12.4	16.9	29.3
Unintentional	12.8	13.5	12.1	9.9	12.5	18.2	21.1	39.3
Legal Intervention	12.4	15.4	13.7	12.4	16.7	16.8	12.6	29.4
ED Visits								
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	% on Saturday and Sunday
Assault	12.3	11.2	11.3	9.8	12.3	20.7	22.4	43.1
Self-Inflicted	12.2	15.6	15.1	14.4	14.2	13.2	15.3	28.5
Unintentional	13.0	11.7	11.4	11.9	13.7	18.4	19.9	38.3
Legal Intervention	12.5	12.6	11.4	12.1	14.0	18.7	18.8	37.5

Note: If each day received the same percentage then each would receive 14.3%.

The two weekend days would receive $2 \times 14.3 = 28.6\%$

Table A5. Total Hospital Days, Cost* of Hospital Care, and Cost per Day for Firearm-Related Injuries, by Intent. California 1992 to 2008

Total Hospital Days	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	Ratio 2010:1992
Unintentional	9,406	8,361	5,062	5,462	2,916	3,734	3,118	5,041	3,231	3,201	0.3
Self Inflicted	2,514	3,046	2,444	1,903	1,176	1,072	1,044	1,186	1,610	1,405	0.6
Assault	52,354	44,367	34,164	24,703	22,889	28,876	27,167	29,624	23,269	20,544	0.4
Legal Intervention	1,297	950	618	669	857	898	991	637	666	1,105	0.9
Intent Unknown	2,629	2,000	1,205	930	1,175	1,078	1,261	868	717	921	0.4
Total	68,200	58,724	43,493	33,667	29,013	35,658	33,581	37,356	29,493	27,176	0.4
Total Costs (\$)	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2010:1992
Unintentional	15,639,663	14,754,017	9,806,664	7,970,298	8,262,155	11,683,407	10,405,418	14,091,088	12,058,103	13,264,869	0.8
Self Inflicted	5,307,919	7,295,365	5,624,736	6,146,385	4,442,120	3,619,645	4,189,040	4,652,370	7,225,747	6,499,583	1.2
Assault	80,601,549	85,857,007	71,701,955	53,810,049	71,606,572	79,930,603	83,219,008	100,095,624	90,731,169	84,199,469	1.0
Legal Intervention	2,240,711	2,189,198	1,552,143	1,509,877	3,693,569	3,002,480	3,151,749	2,505,219	2,796,851	5,325,123	2.4
Intent Unknown	5,926,031	4,677,528	2,268,432	2,314,887	3,243,349	2,971,440	3,991,254	3,551,246	2,878,741	2,680,221	0.5
Total	109,715,872	114,773,116	90,953,931	71,751,496	91,247,764	101,207,575	104,956,469	124,895,547	115,690,612	111,969,265	1.0
Cost (\$) per Day	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2010:1992
Unintentional	1,663	1,765	1,937	1,459	2,833	3,129	3,337	2,795	3,732	4,144	2.5
Self Inflicted	2,111	2,395	2,301	3,230	3,777	3,377	4,012	3,923	4,488	4,626	2.2
Assault	1,540	1,935	2,099	2,178	3,128	2,768	3,063	3,379	3,899	4,098	2.7
Legal Intervention	1,728	2,304	2,512	2,257	4,310	3,344	3,180	3,933	4,199	4,819	2.8
Intent Unknown	2,254	2,339	1,883	2,489	2,760	2,756	3,165	4,091	4,015	2,910	1.3
Average	1,859	2,148	2,146	2,323	3,362	3,075	3,352	3,624	4,067	4,120	2.2

* Cost and Charges. Hospitals report the total amount charged for each hospitalization. To obtain an estimate of the actual cost to the hospital for the visit, the reported charge is multiplied (adjusted) by the cost-to-charge ratio, which is determined by OSHPD based on the financial reports submitted by hospitals to OSHPD. These are available online at: <http://oshpd.ca.gov/hid/Products/Hospitals/AnnFinanData/DsclureRpts/index.html>.

Table A6. Average Percentage of Firearm-Related Hospitalizations Covered by Payer, by Intent. California, 1992 to 2010

	Medicare	Medi-Cal	Other Governmental Payer	Private Insurance	Self Pay	Other Payer	Percent Covered by Public Program
Assault	1.3	36.9	27.2	19.4	25.2	1.2	65.36
Self-Inflicted	19.3	21.3	11.6	38.0	17.1	3.8	52.20
Unintentional	3.8	29.3	20.6	32.5	23.7	1.3	53.65
Legal Intervention	3.6	15.4	48.9	21.4	19.1	2.7	67.95

Table A7. Hospitalizations and Emergency Department Visits for Firearm-Related Injuries per 100,000 Population, by County and Intent, California 1992 to 2010

County	Unintentional						Self-Inflicted						Assault						Legal Intervention					
	1992-1996		1998-2004		2006-2010		1992-1996		1998-2004		2006-2010		1992-1996		1998-2004		2006-2010		1992-1996		1998-2004		2006-2010	
	Hospital	Hospital +ED	Hospital	Hospital +ED	Hospital	Hospital +ED	Hospital	Hospital +ED	Hospital	Hospital +ED	Hospital	Hospital +ED	Hospital	Hospital +ED	Hospital	Hospital +ED	Hospital	Hospital +ED	Hospital	Hospital +ED	Hospital	Hospital +ED	Hospital	Hospital +ED
Alameda	2.77	1.10	1.49	6.06	7.56	0.71	0.90	0.32	0.26	0.58	26.27	12.77	19.61	21.45	41.07	0.28	0.16	0.19	1.06	1.26				
Butte	6.71	2.55	2.28	5.47	7.75	3.10	1.46	1.82	0.76	2.58	4.99	4.50	2.58	5.17	5.17	0.34	0.36	0.00	0.00	0.00				
Contra Costa	3.66	1.64	1.72	4.67	6.39	0.86	0.78	0.51	0.19	0.70	20.69	10.07	11.69	9.22	20.91	0.12	0.39	0.32	0.79	1.11				
El Dorado	2.13	0.94	0.74	2.61	3.35	0.47	0.00	0.19	0.37	0.56	0.71	0.16	0.56	0.74	1.30	0.47	0.00	0.00	0.56	0.56				
Fresno	4.54	2.11	1.55	5.36	6.91	1.45	0.64	0.68	0.29	0.97	27.92	7.87	12.92	13.39	26.32	0.82	0.61	0.58	11.56	12.13				
Humboldt	4.57	2.93	1.76	3.52	5.28	4.03	1.57	0.75	2.01	2.77	4.03	2.15	2.01	2.77	4.78	0.00	0.20	0.00	0.75	0.75				
Imperial	4.12	0.85	1.14	3.06	4.20	1.29	0.34	0.00	0.00	0.00	4.64	2.05	0.38	3.24	3.62	2.32	1.20	0.19	3.62	3.81				
Kern	5.03	1.55	2.14	5.18	7.32	2.26	0.63	0.45	0.33	0.78	17.12	10.12	8.18	10.40	18.58	0.72	0.74	0.78	8.72	9.50				
Kings	3.27	0.95	0.22	3.71	3.93	1.19	0.19	0.00	0.44	0.44	2.38	0.95	0.22	3.71	3.93	1.19	0.00	0.00	1.09	1.09				
Lake	3.61	2.10	1.04	6.27	7.31	0.60	0.00	0.00	1.04	1.04	1.20	0.84	2.09	0.52	2.61	0.00	0.00	0.00	0.00	0.00				
Los Angeles	5.08	2.31	1.69	4.58	6.28	0.93	0.52	0.27	0.17	0.45	42.95	21.56	14.65	13.06	27.71	0.42	0.34	0.29	0.57	0.87				
Madera	0.95	1.19	0.22	4.91	5.14	0.00	0.00	0.00	0.45	0.45	2.22	1.58	0.89	2.90	3.80	0.00	0.00	0.00	1.34	1.34				
Marin	0.42	0.30	0.39	1.95	2.34	1.27	0.51	0.52	0.00	0.52	1.41	0.81	0.91	0.39	1.30	0.00	0.00	0.39	0.52	0.91				
Mendocino	4.81	1.72	2.23	5.56	7.79	0.00	0.29	0.37	0.37	0.74	2.81	0.86	0.37	1.48	1.85	0.40	0.29	0.00	1.11	1.11				
Merced	2.23	0.69	0.13	3.70	3.83	0.00	0.00	0.00	0.00	0.00	3.60	1.96	0.66	9.64	10.30	0.00	0.00	0.00	1.06	1.06				
Monterey	3.47	1.36	1.01	3.35	4.37	1.19	0.31	0.31	0.31	0.62	11.95	9.35	4.37	10.99	15.36	0.00	0.43	0.08	1.95	2.03				
Napa	1.15	0.20	0.73	1.71	2.45	0.58	0.40	0.00	0.24	0.24	2.02	1.79	0.24	0.24	0.49	0.58	0.40	0.00	0.49	0.49				
Nevada	1.17	1.07	1.01	4.06	5.07	0.00	0.27	0.00	0.34	0.34	0.39	0.81	0.00	0.34	0.34	0.00	0.00	0.00	0.00	0.00				
Orange	3.57	1.03	0.80	1.90	2.70	0.99	0.46	0.30	0.20	0.50	10.30	4.30	2.84	2.30	5.14	0.31	0.21	0.16	1.52	1.68				
Placer	2.82	3.06	1.90	2.10	4.00	0.83	1.24	1.40	0.40	1.80	3.65	2.20	1.60	0.20	1.80	0.00	0.29	0.10	0.30	0.40				
Riverside	4.39	2.13	1.36	4.29	5.65	1.22	0.65	0.45	0.44	0.89	13.75	5.04	3.88	5.55	9.44	0.62	0.42	0.31	0.63	0.94				
Sacramento	5.83	4.57	3.84	5.22	9.06	1.74	0.74	0.89	0.38	1.27	18.02	10.34	11.08	6.64	17.72	0.45	0.60	0.31	0.35	0.66				

Table A7. Hospitalizations and Emergency Department Visits for Firearm-Related Injuries per 100,000 Population, by County and Intent, California 1992 to 2010

County	Unintentional						Self-inflicted						Assault						Legal Intervention					
	1992-1996		1998-2004		2006-2010		1992-1996		1998-2004		2006-2010		1992-1996		1998-2004		2006-2010		1992-1996		1998-2004		2006-2010	
	Hospital	Hospital	Hospital	Hospital	ED	Hospital +ED	Hospital	Hospital	Hospital	Hospital	ED	Hospital +ED	Hospital	Hospital	Hospital	Hospital	ED	Hospital +ED	Hospital	Hospital	Hospital	Hospital	ED	Hospital +ED
San Benito	0.80	0.93	0.58	1.16	1.73	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.80	0.93	1.16	1.73	2.89	0.00	0.00	0.00	0.00	0.58	8.67	9.25
S. Bernardino	7.11	2.33	1.70	4.44	6.14	0.84	1.84	0.69	0.28	0.97	0.97	13.79	10.83	6.86	6.93	13.79	0.45	0.50	0.31	0.45	0.50	0.31	0.72	1.03
S. Diego	3.54	1.43	1.09	1.66	2.76	0.61	1.28	0.42	0.22	0.65	0.65	7.20	5.75	4.82	2.38	7.20	0.31	0.58	0.41	0.31	0.58	0.41	0.98	1.39
S. Francisco	3.07	1.18	1.20	4.83	6.02	0.42	0.77	0.20	0.08	0.28	0.28	28.25	13.90	16.96	11.29	28.25	0.45	0.42	0.32	0.45	0.42	0.32	0.04	0.36
S. Joaquin	3.91	2.40	5.73	15.48	21.21	1.63	1.63	0.78	0.24	1.03	1.03	22.19	8.44	10.88	11.32	22.19	0.13	0.13	0.10	0.13	0.13	0.10	0.29	0.39
S. L. Obispo	3.67	1.10	0.50	3.10	3.60	1.91	1.91	0.25	0.50	0.74	0.74	1.24	0.90	0.62	0.62	1.24	0.44	0.10	0.25	0.44	0.10	0.25	0.50	0.74
San Mateo	1.50	0.28	0.27	0.72	0.99	0.11	0.75	0.00	0.00	0.00	0.00	1.45	0.57	0.36	1.08	1.45	0.00	0.04	0.04	0.00	0.04	0.14	0.14	0.27
S. Barbara	1.93	0.74	0.39	1.87	2.26	1.14	1.14	0.39	0.31	0.70	0.70	2.26	1.55	1.17	1.09	2.26	0.00	0.25	0.31	0.00	0.25	0.31	1.25	1.56
S. Clara	1.99	1.00	0.84	1.46	2.30	0.90	0.90	0.36	0.13	0.49	0.49	7.13	3.40	5.05	2.08	7.13	0.39	0.27	0.11	0.39	0.27	0.11	2.52	2.63
S. Cruz	0.98	0.29	0.38	2.38	2.75	0.70	0.70	0.25	0.25	0.50	0.50	3.63	0.49	1.13	2.50	3.63	0.00	0.10	0.00	0.00	0.10	0.00	0.13	0.13
Shasta	6.42	3.58	3.30	4.21	7.51	4.01	4.01	0.92	1.47	2.38	2.38	3.12	2.54	1.83	1.28	3.12	0.84	1.04	0.37	0.84	1.04	0.37	2.02	2.38
Solano	5.20	0.82	1.02	5.34	6.36	0.46	0.46	0.08	0.16	0.24	0.24	5.66	1.76	2.04	5.66	7.70	0.48	0.13	0.00	0.48	0.13	0.00	0.31	0.31
Sonoma	1.44	1.90	1.10	1.45	2.55	1.36	1.36	1.17	0.62	1.79	1.79	3.65	2.23	2.48	1.17	3.65	0.16	0.22	0.14	0.16	0.22	0.14	3.30	3.44
Stanislaus	7.39	3.32	1.79	4.79	6.58	2.05	2.05	1.34	0.51	1.85	1.85	23.59	7.88	9.78	13.81	23.59	0.25	0.38	0.45	0.25	0.38	0.45	1.15	1.60
Sutter	0.93	0.31	0.00	0.00	0.00	0.62	0.62	0.00	0.00	0.00	0.00	0.35	0.31	0.35	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tulare	3.13	1.33	1.16	5.47	6.62	0.66	0.66	0.00	0.54	0.54	0.54	22.64	6.92	7.24	15.40	22.64	0.00	0.27	0.39	0.00	0.27	0.39	1.77	2.16
Ventura	2.59	1.18	0.92	2.65	3.58	0.53	0.53	0.36	0.24	0.60	0.60	5.47	2.85	3.42	2.05	5.47	0.14	0.29	0.16	0.14	0.29	0.16	0.64	0.80
Yolo	0.88	0.14	0.17	1.52	1.69	0.22	0.22	0.00	0.00	0.00	0.00	0.51	0.14	0.00	0.51	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.17
Yuba	7.05	5.22	2.33	2.80	5.13	4.34	4.34	0.93	0.00	0.93	0.93	7.92	8.83	6.06	1.86	7.92	0.00	0.40	0.47	0.00	0.40	0.47	1.86	2.33
Del Norte, Lassen, Modoc, Mono, Plumas, Sierra, Siskiyou, Trinity	1.34	2.11	1.26	7.58	8.84	0.00	0.00	0.21	1.05	1.26	1.26	1.68	0.65	0.00	1.68	1.68	0.22	0.49	0.21	0.22	0.49	0.21	2.74	2.95
Colusa, Glenn, Tehama	2.07	0.24	0.30	6.50	6.50	0.34	0.34	0.00	0.89	0.89	0.89	0.59	0.24	0.00	0.59	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.30
Alpine, Amador, Calaveras, Inyo, Mariposa, Tuolumne	2.77	1.51	1.39	6.61	6.61	0.40	0.40	0.17	0.35	0.35	0.35	0.35	0.41	0.00	0.35	0.35	0.00	0.00	0.17	0.00	0.00	0.17	2.26	2.26
Total	4.10	1.82	1.50	3.97	5.47	1.12	1.12	0.58	0.41	0.67	0.67	16.49	10.46	8.55	7.93	16.49	0.36	0.35	0.27	0.36	0.35	0.27	1.35	1.62
Highest Rate	7.39	5.22	5.73	15.48	15.48	4.34	4.34	2.24	1.82	2.01	2.01	19.61	21.56	19.61	21.45	19.61	2.32	1.20	0.78	2.32	1.20	0.78	11.56	11.56
Lowest Rate	0.42	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table A8. Patient Place of Residence Compared with Hospital Location for Firearm-Related Injury Hospitalizations. California 1992, 2000, and 2008.

	Number of Hospitalizations							Percentage of Hospitalizations						
	Same County	Other County	Out-of-State	Outside US	Home-less	Unknown	Total	Same County	Other County	Out-of-State	Outside US	Home-less	Unknown	Total
1992														
Unintentional	1,464	147	7	0	-	23	1,641	89.2	9.0	0.4	0.0	-	1.4	100
Self inflicted	287	56	0	0	-	8	351	81.8	16.0	0.0	0.0	-	2.3	100
Assault	7,532	507	30	5	-	147	8,221	91.6	6.2	0.4	0.1	-	1.8	100
Legal Intervention	100	19	1	0	-	8	128	78.1	14.8	0.8	0.0	-	6.3	100
Intent Unknown	406	58	4	3	-	20	491	82.7	11.8	0.8	0.6	-	4.1	100
Total	9,789	787	42	8	-	206	10,832	90.4	7.3	0.4	0.1	-	1.9	100
2000														
Unintentional	511	66	3	3	4	11	598	85.5	11.0	0.5	0.5	0.7	1.8	100
Self-Inflicted	159	29	1	0	1	8	198	80.3	14.6	0.5	0.0	0.5	4.0	100
Assault	3,023	253	18	7	47	141	3,489	86.6	7.3	0.5	0.2	1.3	4.0	100
Legal Intervention	101	16	1	0	6	9	133	75.9	12.0	0.8	0.0	4.5	6.8	100
Intent Unknown	129	27	1	0	1	4	162	79.6	16.7	0.6	0.0	0.6	2.5	100
Total	3,923	391	24	10	59	173	4,580	85.7	8.5	0.5	0.2	1.3	3.8	100
2008														
Unintentional	430	80	7	0	4	7	528	81.44	15.15	1.33	0.00	0.76	1.33	100
Self-Inflicted	127	34	1	0	0	7	169	75.15	20.12	0.59	0.00	0.00	4.14	100
Assault	2,706	309	15	2	28	31	3,091	87.54	10.00	0.49	0.06	0.91	1.00	100
Legal Intervention	75	16	1	1	2	3	98	76.53	16.33	1.02	1.02	2.04	3.06	100
Intent Unknown	105	17	0	0	1	6	129	81.40	13.18	0.00	0.00	0.78	4.65	100
Total	3,443	456	24	3	35	54	4,015	85.75	11.36	0.60	0.07	0.87	1.34	100

Table A9. Hospitalizations for Firearm-Related Injuries (Percentage), by Intent and Sex. California, 1992 to 2010

Assault	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	Average 1992 - 2010	Ratio 1992:2010
Female	9.91	8.76	8.91	8.08	8.71	8.05	8.43	8.93	8.19	9.46	8.74	0.95
Male	90.09	91.24	91.09	91.92	91.29	91.95	91.57	90.99	91.81	90.47	91.24	1.00
Unknown	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.08	-	-
Total	100	-	-									
Self-Inflicted	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	Average 1992 - 2010	Ratio 1992:2010
Female	18.2	21.2	23.8	16.9	16.2	17.0	12.4	13.8	11.8	17.7	16.9	0.97
Male	81.8	78.8	76.2	83.1	83.8	83.0	87.6	86.2	88.2	82.3	83.1	1.01
Unknown	0	0	0	0	0	0	0	0	0	0	-	-
Total	100	-	-									
Unintentional	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	Average 1992 - 2010	Ratio 1992:2010
Female	12.5	11.3	10.3	10.9	7.7	8.6	10.2	9.4	11.4	14.2	10.7	1.14
Male	87.5	88.7	89.6	89.1	92.3	91.4	89.8	90.2	88.6	85.8	89.3	0.98
Unknown	0	0	0.11	0	0	0	0	0.32	0	0	-	-
Total	100	-	-									
Legal Intervention	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	Average 1992 - 2010	Ratio 1992:2010
Female	7.0	6.3	7.4	4.8	9.8	7.9	4.7	5.1	5.1	4.6	6.3	0.65
Male	93.0	93.8	92.6	95.2	90.2	92.1	95.3	94.9	94.9	95.4	93.7	1.03
Unknown	0	0	0	0	0	0	0	0	0	0	-	-
Total	100	-	-									

Table A10. Hospitalizations per 100,000 Population for Firearm-Related Injuries, by Intent and Race/Ethnicity. California 1992 to 2008

Assault	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	Average
African American	126.3	106.3	72.2	45.4	56.0	54.5	55.7	63.8	46.3	41.40	62.64
Asian/Pacific Islander	10.0	12.8	6.5	4.2	2.8	3.2	2.9	2.8	2.0	1.39	4.72
Hispanic	51.1	36.7	29.4	17.5	15.0	15.4	13.6	13.3	10.5	8.48	20.25
Native American	7.7	7.0	4.9	2.9	1.6	4.7	2.0	3.9	3.8	1.25	3.84
White	5.8	5.7	4.1	3.0	2.4	2.7	2.7	2.7	1.9	1.96	3.10
Other/Unknown	18.7	23.1	24.8	15.9	14.0	16.4	15.8	18.6	15.1	10.22	16.23
Total	26.5	22.2	16.6	10.6	10.2	10.6	10.1	10.7	8.1	6.78	12.56
Self-Inflicted	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	Average
African American	1.33	1.23	1.08	0.57	0.63	0.36	0.44	0.27	0.13	0.39	0.64
Asian/Pacific Islander	0.36	0.70	0.34	0.31	0.28	0.10	0.11	0.04	0.04	0.06	0.23
Hispanic	0.88	1.15	0.63	0.52	0.41	0.41	0.30	0.23	0.21	0.18	0.49
Native American	-	0.37	-	-	-	0.52	-	0.49	0.47	0.83	0.27
White	1.39	1.37	1.32	1.02	0.73	0.68	0.64	0.65	0.74	0.61	0.92
Other/Unknown	0.91	-	1.84	1.43	1.40	0.54	1.65	1.05	1.70	0.73	1.12
Total	1.13	1.20	1.00	0.76	0.58	0.50	0.46	0.41	0.44	0.38	0.69
Unintentional	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	Average
African American	13.9	10.4	6.6	4.8	5.9	5.8	5.3	6.5	5.5	5.29	6.99
Asian/Pacific Islander	2.0	1.9	1.0	0.4	0.8	0.5	0.5	0.6	0.3	0.37	0.85
Hispanic	9.0	5.8	4.0	2.7	2.1	2.2	1.9	1.9	1.5	1.53	3.25
Native American	3.4	2.2	1.6	1.7	1.1	1.6	1.0	1.0	0.9	1.25	1.58
White	3.1	3.1	1.9	1.4	1.1	1.2	1.1	1.0	0.9	1.04	1.59
Other/Unknown	5.1	4.7	5.2	3.3	3.4	5.1	5.4	4.7	2.7	1.58	4.13
Total	5.3	4.2	2.8	2.0	1.8	1.8	1.7	1.7	1.4	1.40	2.40
Legal Intervention	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	Average
African American	1.89	1.37	0.77	0.88	1.13	0.89	0.62	1.03	0.99	0.52	1.01
Asian/Pacific Islander	0.03	0.06	0.06	0.13	0.10	0.10	0.05	0.09	0.06	0.14	0.08
Hispanic	0.59	0.56	0.35	0.39	0.40	0.40	0.36	0.25	0.27	0.30	0.39
Native American	0.43	-	-	-	0.54	-	0.50	-	0.95	0.42	0.28
White	0.21	0.26	0.16	0.22	0.33	0.24	0.34	0.20	0.18	0.24	0.24
Other/Unknown	0.55	0.70	0.67	0.95	0.93	0.54	1.06	0.74	0.47	0.73	0.73
Total	0.41	0.41	0.25	0.32	0.39	0.32	0.35	0.26	0.26	0.28	0.32

Table A11. Firearm-Related Injury Hospitalizations per 100,000 Population, by Age and Intent. California, 1992, 2000, and 2010

Assault	1992	2000	2010	Average 1992 to 2010	Unintentional	1992	2000	2010	Average 1992 to 2010
Infants	1.65	0.40	0.35	0.63	Infants	0.3	0.00	0.00	0.18
1-12	1.56	0.54	0.43	0.68	1-12	1.3	0.2	0.2	0.48
13-20	87.87	31.86	18.54	42.01	13-20	17.2	4.8	3.3	6.75
21-30	58.03	28.47	18.24	33.12	21-30	10.4	4.3	3.6	5.34
31-40	25.43	9.05	8.26	12.64	31-40	4.1	1.8	1.4	2.28
41-50	11.46	4.32	3.51	6.03	41-50	2.8	0.9	0.9	1.39
51-65	4.57	1.57	1.38	2.41	51-65	1.6	0.8	0.6	0.89
66-85	1.30	0.95	0.28	0.64	66-85	1.0	0.3	0.4	0.42
86+	3.13	0.28	0.19	1.55	86+	2.7	0.00	0.00	0.55
All Ages	26.53	10.23	6.78	13.24	All Ages	5.3	1.8	1.4	2.40
Self-Inflicted	1992	2000	2010	Average 1992 to 2010	Legal Intervention	1992	2000	2010	Average 1992 to 2010
Infants	0.00	0.00	0.00	0.04	Infants	0.00	0.00	0.00	0.04
1-12	0.02	0.00	0.00	0.01	1-12	0.00	0.00	0.00	0.00
13-20	1.91	0.69	0.31	0.90	13-20	0.73	0.38	0.38	0.44
21-30	1.81	0.90	0.48	1.02	21-30	1.04	0.96	0.62	0.90
31-40	1.09	0.63	0.50	0.73	31-40	0.56	0.70	0.50	0.49
41-50	1.23	0.71	0.37	0.76	41-50	0.31	0.38	0.33	0.31
51-65	0.80	0.63	0.54	0.72	51-65	0.09	0.16	0.16	0.10
66-85	1.52	0.85	0.56	1.00	66-85	0.07	0.13	0.03	0.04
86+	4.70	0.83	0.57	1.44	86+	0.00	0.56	0.00	0.15
All Ages	1.13	0.58	0.38	0.69	All Ages	0.41	0.39	0.28	0.32

Table A12. Most Frequent* Diagnoses for Firearm-Related Injury Cases Treated in ED or Hospitalized. California, 2006, 2008, and 2010

Type of Injury	Hospitalization Diagnoses						ED Diagnoses					
	Unintentional	Self-Inflicted	Assault	Legal Intervention	Intent Unknown	Total	Unintentional	Self-Inflicted	Assault	Legal Intervention	Intent Unknown	Total
Abrasion, Burn, Splinter of Trunk							32	1	55	196	7	291
Wound, Fracture of Arm, Hand, Shoulder	125	7	777	29	22	960	1,026	9	1,613	110	175	2,933
Wound of Buttock							102		270	9	24	405
Open Wound of Chest, Abdominal Wall	85	11	515	15	25	651	351	12	966	181	92	1,602
Cardiac Arrest, Wound to Heart	34	22	352	19	6	433	110	16	326	19	38	509
Injury to Liver, Adrenals, Pancreas, Appendix	167	34	1,691	50	60	2,002						
Wound, Fracture of Leg, Foot	442	14	1,912	48	82	2,498	1,505	19	2,833	55	373	4,785
Wound of Lungs, Diaphragm, Throat	101	24	853	17	23	1,018	96	7	286	15	36	440
Open Fracture of Brain, Face; Brain Injury**	136	218	1,020	31	44	1,449	276	136	714	91	82	1,299
Wound, Fracture of Spine, Back	22	3	186	8	3	222	85	-	313	131	28	557
Examination for Administrative, Medicolegal Purposes							18	-	9	125	7	159
Number of Cases: With a High Frequency Diagnosis	1,112	333	7,306	217	265	9,233	3,601	200	7,385	932	862	12,980
Number of Cases: All Firearm-Related Diagnoses	1,701	468	9,719	305	376	12,569	4,513	293	9,013	1,532	1,075	16,426
Percentage of Cases With a High Frequency Diagnosis	65.4	71.2	75.2	71.1	70.5	73.5	79.8	68.3	81.9	60.8	80.2	79.0

* Injuries reported with one of the Top 25 ICD-9 codes for Principal Diagnosis.

** Most frequent self-inflicted injuries.



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