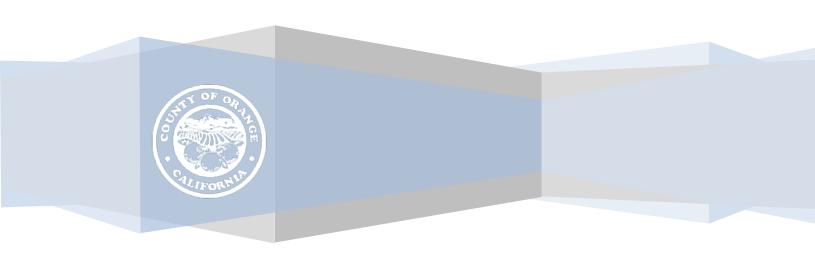
Firearm-Related Injury and Death in Orange County (2009-2011)

Orange County Health Care Agency
Health Policy & Communication – Research

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Firearm-Related Injury and Death in Orange County

There were 1,292 firearm-related incidents in Orange County between 2009 and 2011 that resulted in the death of 439 persons. The majority (48%, n=621) of the 1,292 firearm-related incidents were treated solely in the emergency department (ED), while 23% (n=300) of the victims required hospitalization. For 29% of incidents (n=371) the victim was declared deceased at the scene and not transported to the ED. The first section of this report presents ED data and the second reports on patients admitted to the hospital. Data concerning the mechanism of injury, patient demographics and dispositions are provided for ED visits and hospitalizations.^{1,2} The final section details firearm-related deaths as reported in the Orange County Master Death File records including the mechanism of death, demographic and geographic characteristics of the decedents.³

Emergency Department Visits

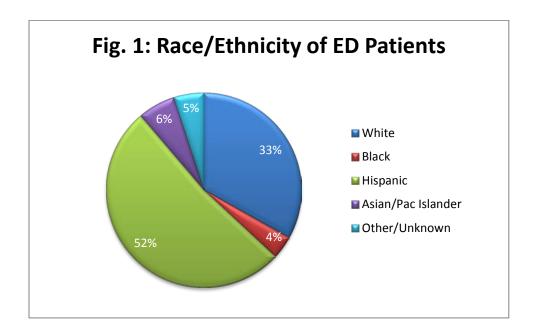
As shown in **Table 1**, nearly half of all firearm-related ED visits (44%, n=409) were due to accidental injuries caused by the projectile or missile of a firearm. Most notably, about half (47%, n=191/409) of such injuries were due to air or paintball guns. Assaults by firearms accounted for the second highest number of cases (n=358, 39%) during this time period. Self-inflicted or attempted suicides accounted for about 4% (n=32) of such ED visits, while 10% (n=88) were due to legal interventions involving law enforcement discharging a firearm.

Table 1: ED Visits by Mechanism of Injury	2009	2010	2011	Total	%Total
Accident Caused by Firearm or Air Gun Missile (E922)	150	138	121	409	44%
Suicide and Self-Inflicted Injury (E955)	9	10	13	32	3%
Assault by Firearm (E965)	108	135	115	358	39%
Injury Undetermined Whether Accidentally or Purposely Inflicted (E985)	12	10	12	34	4%
Legal Intervention Involving Firearm Discharge (E970)	33	19	36	88	10%
Total	312	312	297	921	100%

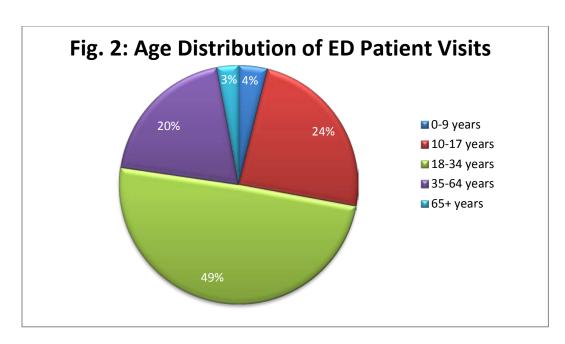
As shown in **Table 2**, males presenting at EDs for firearm-related injuries were disproportionately represented (91%; n=836) compared to females (9%; n=85).

Table 2: ED Visits by Gender	2009	2010	2011	Total	%Total
Female	24	27	34	85	9%
Male	288	285	263	836	91%
Total	312	312	297	921	100%

Hispanics composed half (52%; n=478) of all firearm-related ED visits, followed by non-Hispanic whites at 33% (n=305). Asian/Pacific Islanders accounted for 6% (n=57) of cases and blacks 4% (n=35; **Fig. 1**).

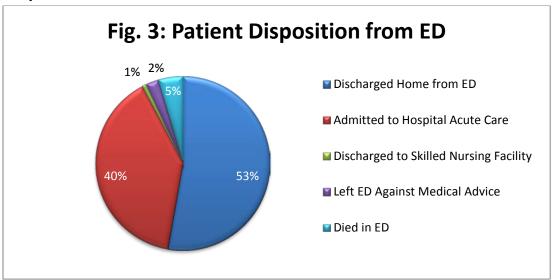


Over three quarters of the victims of firearm-related injuries were under 35 years of age (**Fig. 2**). Specifically, about half (49%, n=455) of all people injured by firearms were adults 18-34 years of age and nearly a quarter (24%, n=221) were children 10-17 years and 4% (n=36) less than 10 years of age.



Emergency Department Dispositions

The dispositions of patients treated in the ED are presented below in **Figure 3**. A little over half (53%, n=486) of victims were discharged home. Forty percent (n=364) of patients were admitted to the hospital for care and a small number of patients left the ED against medical advice (2%, n=22). Five percent of victims (n=42) died in the emergency department as a result of their injuries.



Hospitalizations

Between 2009 and 2011, a total of 300 victims were hospitalized due to firearm-related injuries. Of these hospitalizations, **Table 3** shows that the majority (59%, n=177) were due to assaults or injury purposely inflicted by another individual.

Table 3: Hospitalizations	2009	2010	2011	Total	%Total
Accident Caused by Firearm or Air Gun Missile (E922)	26	29	29	84	28%
Suicide and Self-Inflicted Injury (E955)	6	5	4	15	5%
Assault by Firearm (E965)	59	59	59	177	59%
Injury Undetermined Whether Accidentally or Purposely Inflicted (E985)	3	0	3	6	2%
Legal Intervention Involving Firearm Discharge (E970)	6	6	6	18	6%
Total	100	99	101	300	100%

The second highest reason for firearm-related hospitalization was due to accidental injuries inflicted by firearms (n=84, 28%). Intentional, self-inflicted firearm injuries accounted for about 5% of such hospitalizations (n=15), legal interventions for 6% (n=18), and 2% of cases (n=6) where the intent could not be determined.

As shown in **Figure 4**, the majority (55%, n=164) of hospitalized patients were Hispanic, while 27% were non-Hispanic white (n=82). The remainder of cases were Asian/Pacific Islander (10%, n=29), black (2%, n=8) or other/unknown (6%, n=17).

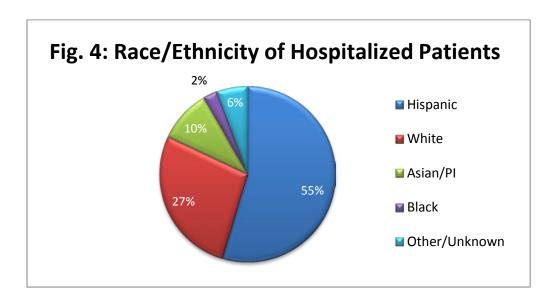
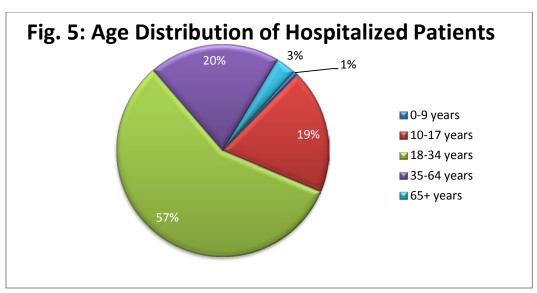


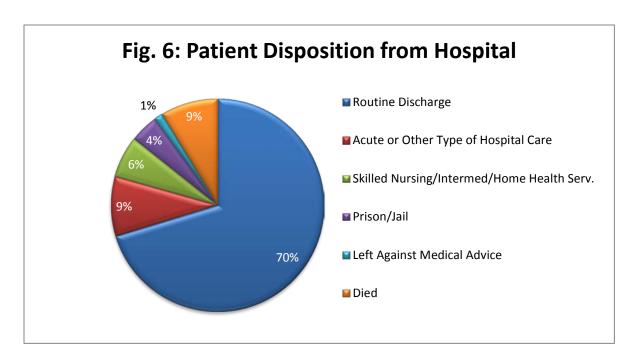
Figure 5 shows the age distribution of patients hospitalized due to firearm-related injuries. Similar to ED visits, the majority of individuals hospitalized were between 18 and 34 years of age (57%, n=172). This was followed by children 10-17 years (19%, n=57), adults 35-64 years (20%, n=53). Seniors accounted for only about 3% of cases (n=9) during this time period and 1% for children less than 10 years of age (n=2).



The overwhelming majority of hospitalized patients were male (92%, n=275) and 8% were female (n=25).

Hospital Dispositions

As shown in **Figure 6**, the majority of hospitalized patients survived and were discharged home (70%, n=211), while 9% of patients died (n=26) as a result of their injuries. About 6% required subsequent care at another facility such as a skilled nursing facility (SNF, 6%, n=19) or intermediate care. About 1 in 10 were transfer to another inpatient care (other type of care at same or another hospital, 9%, n=27). A small percentage were sent to jail (4%, n=13).



Hospitalization Charges and Insurance

The hospitalization charges associated with these 300 firearm-related hospitalizations averaged \$158,541 per admission and a length of stay of eight days. During the three-year time period of 2009 to 2011, the sum total charges amounted to about \$48 million or an average of about \$16 million per year. **Table 4** below shows that about 51% (n=153) of firearm-related hospitalizations were paid through government insurance programs like Medi-Cal or county indigent programs, while 23% of cases were paid through private insurance (n=68).

Table 4: Source of Payment	2009	2010	2011	Total	%Total
Government Insurance	49	50	54	153	51%
Private Insurance	21	22	25	68	23%
Uninsured	17	14	11	42	14%
Other/Unknown	13	13	11	37	12%
Total	100	99	101	300	100%

Uninsured patients (n=42) accounted for 14%, and 12% had some other form of payment (n=37).

Geographic Distribution of Firearm-Related Injuries

The geographic distribution of firearm-related injuries based on combined ED visits and hospitalizations are summarized by city of residence and mechanism of injury in **Table 5.**

Table 5: Firearm-Related Injuries by City of Residence (2009-2011)	Firearm Accident	Self- Inflicted	Air Gun/ Paint Ball	Assault	Legal Intervention	Undetermined	Total	3-Year Average Injury Rate (per 100,000 pop.)
VILLA PARK	3	0	3	3	2	0	11	63.1*
SANTA ANA	71	3	30	125	8	11	248	25.5
ANAHEIM	35	4	36	74	12	4	165	16.4
LA HABRA	3	0	6	10	5	3	27	14.9
STANTON	3	0	3	9	1	0	16	14.0
WESTMINSTER	8	0	4	11	6	3	32	11.9
LOS ALAMITOS	1	0	2	1	0	0	4	11.6
PLACENTIA	3	2	2	2	8	0	17	11.2
GARDEN GROVE	16	2	5	24	7	3	57	11.1
TUSTIN	9	0	3	12	0	0	24	10.6
ORANGE COUNTY	218	32	191	358	88	34	921	10.2
BUENA PARK	6	0	2	12	1	0	21	8.7
BREA	1	1	5	2	1	0	10	8.5
SAN CLEMENTE	6	2	5	3	0	0	16	8.4
FULLERTON	3	2	10	11	6	2	34	8.4
HUNTINGTON BEACH	3	1	14	9	19	1	47	8.2
ORANGE	7	1	3	17	1	3	32	7.8
SAN JUAN CAPISTRANO	2	0	4	1	1	0	8	7.7
FOUNTAIN VALLEY	3	2	0	5	2	0	12	7.2
CYPRESS	2	0	2	4	2	0	10	7.0
SEAL BEACH	1	0	3	1	0	0	5	6.9
LA PALMA	1	1	0	1	0	0	3	6.4
COSTA MESA	4	3	4	8	1	1	21	6.4
YORBA LINDA	2	0	5	1	3	1	12	6.2
LAGUNA BEACH	1	0	2	1	0	0	4	5.9
MISSION VIEJO	5	1	7	1	0	1	15	5.4
LAKE FOREST	5	1	4	1	1	0	12	5.2
DANA POINT	2	0	3	0	0	0	5	5.0
RSM	1	2	4	0	0	0	7	4.9
LAGUNA HILLS	0	1	2	1	0	0	4	4.4
NEWPORT BEACH	3	2	4	2	0	0	11	4.3
LAGUNA WOODS	1	1	0	0	0	0	2	4.1
LAGUNA NIGUEL	1	0	4	0	0	1	6	3.2
IRVINE	3	0	5	5	0	0	13	2.0
ALISO VIEJO	1	0	1	0	0	0	2	1.4
UNINCORPORATED	2	0	4	1	1	0	8	2.2

Nearly half (45.8%) of all incidents between 2009 and 2011 occurred to residents of Santa Ana (26.9%, n=248) and Anaheim (17.9%, n=165). *While Villa Park had 11 incidents, this city's small population can lead to unreliable rate estimates and should be interpreted with caution. Santa Ana and Anaheim followed with the second and third highest firearm-related injury rates at 25.5 and 16.4 per 100,000 population, respectively. The top ten cities for firearm-related injury rates were rounded out with La Habra (14.9), Stanton (14.0), Westminster (11.9), Los Alamitos (11.6), Placentia (11.2), Garden Grove (11.1), and Tustin (10.6) – all above the countywide rate of 10.2 per 100,000 population.

Changes in Firearm-Related Injury ED Visits

A comparison of mechanism of firearm-related events between the current time period of the present study (2009-11) and the earlier (2006-08) time period reported previously, ⁴ showed that essentially the same total number of firearm-related events between these two 3-year time periods (-1.8% decline; **Table 6**). However, there were specific changes in some of the mechanisms of firearm injuries. For example, there were fewer accidents involving projectiles (-12.4%) and in events of underdetermined intent (-78.6%). Conversely, there were marked increases in the number of legal interventions (+87.2%) and assaults (+50.4%) during the 2009-11 time period that resulted in treatment in the ED and/or hospitalization. There was also a small increase in the number of self-inflicted firearm injuries (+18.5%).

Table 6: Changes in Firearm-Related Injuries (2006-08 vs. 2009-11)	2006-2008	2009-2011	% Change
Accident Caused by Firearm or Air Gun Missile (E922)	467	409	-12.4%
Suicide and Self-Inflicted Injury (E955)	27	32	18.5%
Assault by Firearm (E965)	238	358	50.4%
Injury Undetermined Whether Accidentally or Purposely Inflicted (E985)	159	34	-78.6%
Legal Intervention Involving Firearm Discharge (E970)	47	88	87.2%
Total	938	921	-1.8%

The observed increase in firearm-related assaults that resulted in an ED visit were primarily non-lethal, as the number of homicides committed with a firearm remained relatively level across these time periods (see **Table 12**; *Note that the overall homicide rate for OC has remained relatively level over the past decade*). Similarly, the increase in legal intervention injuries observed here for 2009-11 were also non-lethal as the number of deaths due to legal intervention decreased by half (see **Table 12**). Law enforcement's increased reliance on non-lethal firearms such as bean-bags are likely contributing to this decline.

Deaths

Firearm-related deaths are reported in the Orange County Master Death File and include cases (n=371) not reported in the ED or hospitalization data when the individual was pronounced in the field and not transported for care. A total of 439 persons died as a result of firearms between 2009 and 2011, for an annual average of about 146.3 deaths.

The mechanism or cause of death for firearm-related incidents is presented in **Table 7**. The majority of firearm-related deaths were due to intentional self-harm or suicide (63%, n=278). The second most common occurrence was intentional assaults or homicides which accounted for 1 in 3 firearm-related deaths (32%, n=142). Less common were firearm deaths related to legal interventions by law enforcement (3%, n=12), accidental discharges (1%, n=4) and situations where the intent could not be determined (1%, n=3).

Table 7: Cause of Death (ICD-10 Group)	2009	2010	2011	Total	%Total
Suicide by Firearm (X72-X74)	75	99	104	278	63%
Assault/Homicide by Firearm (X93-X95)	49	43	50	142	32%
Legal Intervention Involving Firearm Discharge (Y35.0)	6	4	2	12	3%
Firearm Death - Undetermined Intent (Y22-Y24)	2	1	0	3	1%
Accidental Discharge of Firearm (W32-W34)	0	3	1	4	1%
Total	132	150	157	439	100%

The mechanism of firearm-related death is presented by age group in **Table 8**. The majority (46%, n=204) of firearm-related deaths were to middle aged persons (35-64 years) followed by 18-24 year olds (28%, n=124). Twenty-one percent (n=92) of firearm-related deaths were to seniors, 3% (n=15) were to children 10-17 years, and 1% to children less than 10 years of age.

Table 8: Mechanism of Firearm-Related Death by Age Group (2009-11)

Age Groups (2009-11)	Accidental	Suicide	Homicide	Undet. Intent	Legal Intervention	Total	%Total
0 - 9 years	0	0	4	0	0	4	1%
10 - 17 years	1	6	8	0	0	15	3%
18 - 34 years	3	40	71	1	9	124	28%
35 - 64 years	0	147	52	2	3	204	46%
65+ years	0	85	7	0	0	92	21%
Total	4	278	142	3	12	439	100%

The 35-64 year old age group accounted for the majority of firearm-related suicides (53%, n=147/278), while 18-34 year olds accounted for half all homicide victims killed with a firearm

(50%, n=71/142). Older adults (65+ years) accounted for the second highest number of firearm-related suicides (n=85, 31%; see also ref. 5), while adults (35-64 years) had the second highest number of firearm-related homicides (n=52, 37%; **Table 8**).

Table 9 shows that non-Hispanic whites accounted for the majority (63%, n=277) of firearm-related deaths followed by Hispanics (25%, n=108), Asian/Pacific Islanders (8%, n=35) and blacks (3%, n=11).

Table 9: Mechanism of Firearm-Related Death by Race Ethnicity (2009-11)

Race/Ethnicity (2009-2011)	Accidental	Suicide	Homicide	Undet. Intent	Legal Intervention	Total	%Total
Hispanic	2	20	78	1	7	108	25%
White	2	232	39	1	3	277	63%
Asian/Pacific Islander	0	17	17	0	1	35	8%
Black	0	5	6	0	0	11	3%
Other/Unknown	0	4	2	1	1	8	2%
Total	4	278	142	3	12	439	100%

For Hispanics, nearly three quarters (72%) of firearm-related deaths were due to homicide (n=78), compared to 19% suicide (n=20; **Table 9**). Conversely, the overwhelming majority (84%) of firearm-related deaths for whites were due to self-inflicted gun-shot wounds (n=232), compared to 14% homicide (n=39). For Asian/Pacific Islanders and blacks, roughly half of all gun-related deaths for each group were due to homicide or suicide. Of the 12 deaths due to legal intervention, the majority (58%, n=7) were to Hispanics followed by whites (25%, n=3).

As shown in **Table 10**, the overwhelming majority of firearm-related deaths (82%, n=361) were to males, while 18% were to females (n=78). For males, the majority of firearm-related deaths (79%, n=240) were due to suicide, followed by 29% homicide (n=104), and 3% due to legal intervention (n=12). By comparison, firearm-related deaths to females were equally divided between suicide (n=38) and homicide (n=38).

Table 10: Mechanism of Firearm-Related Death by Gender (2009-11)

Gender (2009-2011)	Accidental	Suicide	Homicide	Undet. Intent	Legal Intervention	Total	% Total
Male	2	240	104	3	12	361	82%
Female	2	38	38	0	0	78	18%
Total	4	278	142	3	12	439	100%

Geographic Distribution of Firearm-Related Deaths

The geographic distribution of firearm-related deaths to county residents for the 2009-2011 time period were geocoded based on the decedent's residence and summarized in **Table 11** by city and other census designated places.

Cities with the highest per capita death rate due to firearms included Laguna Woods at 18.5 per 100,000 population followed by Seal Beach (11.0), Los Alamitos/Rossmoor (9.2) and Fountain Valley (8.4). In all, 17 Orange County cities/areas had a firearm death rate higher than the countywide rate of 4.9 per 100,000 population (See Appendix A for a more detailed breakout of manner of death).

Nearly half (47.2%) of all 439 firearm-related deaths occurred in six cities with the highest number of incidents: Santa Ana (n=55, 12.5%), Anaheim (n=45, 10.3%), Huntington Beach (n=39, 8.9%), Costa Mesa (n=25, 5.7%), Garden Grove (n=22, 5.0%), and Orange (n=21, 4.8%).

The map on the following page (Figure 7) summarizes the geographic distribution of firearm-related deaths (dots) along with the number of injuries per ZIP code that resulted in a visit to the emergency department and/or admission to the hospital.

Cities with higher number of firearm-related injuries (refer to **Table 5**) also had higher numbers of deaths (e.g., Santa Ana, Anaheim).

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Table 11: Firearm- Related Deaths by City of Residence (2009-2011)	Total # Deaths	% Total Deaths	3-Yr Average Rate
LAGUNA WOODS	9	2.1%	18.5
SEAL BEACH	8	1.8%	11.0
LOS ALAMITOS/ROSSMOOR	6	1.4%	9.2
FOUNTAIN VALLEY	14	3.2%	8.4
LA HABRA	14	3.2%	7.7
COSTA MESA	25	5.7%	7.6
LAGUNA BEACH	5	1.1%	7.3
HUNTINGTON BEACH	39	8.9%	6.8
WESTMINSTER	17	3.9%	6.3
SAN CLEMENTE	12	2.7%	6.3
NEWPORT BEACH	16	3.6%	6.3
DANA POINT	6	1.4%	6.0
SAN JUAN CAPISTRANO	6	1.4%	5.8
SANTA ANA	55	12.5%	5.6
CYPRESS	8	1.8%	5.6
ALISO VIEJO	8	1.8%	5.6
ORANGE	21	4.8%	5.1
ORANGE COUNTY	439	100.0%	4.9
ANAHEIM	45	10.3%	4.5
TUSTIN	10	2.3%	4.4
GARDEN GROVE	22	5.0%	4.3
LA PALMA	2	0.5%	4.3
FULLERTON	17	3.9%	4.2
RSM	6	1.4%	4.2
YORBA LINDA	8	1.8%	4.2
MIDWAY CITY	1	0.2%	3.9
STANTON	4	0.9%	3.5
PLACENTIA	5	1.1%	3.3
ROSSMOOR	1	0.2%	3.3
LADERA RANCH	2	0.5%	2.9
BUENA PARK	7	1.6%	2.9
MISSION VIEJO	8	1.8%	2.9
LAKE FOREST	6	1.4%	2.6
BREA	3	0.7%	2.5
IRVINE	16	3.6%	2.5
COTO DE CAZA	1	0.2%	2.2
LAGUNA HILLS	2	0.5%	2.2
LAGUNA NIGUEL	2	0.5%	1.1
VILLA PARK	0	0.0%	0.0

Firearm-Related Injuries and Deaths Figure 7 (2009-2011)**FULLERTON** PLACENTIA-YORBA LINDA ANAHEIM VILLA PARK LOS ALAMITOS SEAL BEACH FOUNTAIN VALLEY HUNTINGTON BEACH IRVINE LAKE FOREST RANCHO SANTA MARGARITA LAGUÑA WOODS) MISSION VIEJO NEWPORT BEACH Firearm-Related Deaths LAGUNA HILLS Accidental Suicide 277 Homicide 139 L'AGUNA BEACH Other/Unknown # Firearm-Related Injuries SAN JUAN CAPISTRANO 1 - 15 DANA POINT 16 - 30 31 - 45 SAN CLEMENTE 46 - 63 Firearm-Related Injury and Death in OC 11 Orange County Health Care Agency - Research & Planning

Changes in Firearm-Related Deaths

A comparison of the mechanism of firearm-related deaths between the current 3-year time period of the present study and the previous (2006-08) time period showed that essentially the same number of firearm-related deaths (**Table 12**). Specifically, there was no change in the number of gun-related homicides and a very small (5.3%) increase in the use of guns to commit suicide between the two time periods. The most marked change between these time periods was the 52% decrease in the number of deaths due to legal intervention – half as many people were killed by law enforcement firearm discharges during the 2009-11 period (n=12) compared to the 25 deaths during 2006-08.

Table 12: Changes in Number of Firearm-Related Deaths (2006-08 vs. 2009-11)	2006-2008	2009-2011	% Change
Suicide by Firearm (X72-X74)	264	278	+5.3%
Assault/Homicide by Firearm (X93-X95)	144	142	-1.4%
Legal Intervention Involving Firearm Discharge (Y35.0)	25	12	-52.0%
Firearm Death - Undetermined Intent (Y22-Y24)	3	3	*
Accidental Discharge of Firearm (W32-W34)	1	4	*
Total	437	439	0.5%

^{*}Very small cell sizes can result in unstable and unreliable estimates.

Orange County's firearm-related mortality rate, crude rate and age-adjusted rate (to control for the age of the area's population) was markedly lower compared to neighboring counties and the state of California (**Table 13**).⁶ Specifically, the county's firearm-related death rate was 4.7 (per 100,000 population) and lower than California's rate of 7.8. The state and all counties listed here are well below above the Healthy People 2020 goal of 9.2.

Table 13: Firearm-Related Mortality Comparison	Avg. Number of deaths/year (2009-2011)	Crude Death Rate	Age- Adjusted Death Rate
Orange County	146.3	4.8	4.7
San Diego County	191.3	6.2	6.0
Riverside County	149.0	6.8	6.9
Los Angeles	797.0	8.1	7.8
California	2,969.7	8.0	7.8
Healthy People 2020 (IVP-30)	-	_	9.2

Conclusions

About 430 people are injured by firearms in Orange County each year and 146 die from their injuries. While the personal and economic losses associated with these incidents are difficult to measure, the cost associated with hospitalization averaged \$16 million per year, half of which was paid for by public forms of insurance. Less severe injuries were typically the result of accidental discharges of firearms, while more serious injuries were the result of firearm assaults. Lethal firearm incidents were most often associated with suicide (63%) and homicide (32%).

Compared to a recent national study by Leventhal et al. (2014), Orange County had a markedly lower rate of children and adolescents hospitalized due to firearm-related injuries. Using 2009 Kids' Inpatient Database (KID) the authors reported a national rate of 8.9 per 100,000 children (<20 years) hospitalized due to firearm injuries. In the present study for Orange County, we found a 3-year average rate of 3.6 per 100,000 children – 2.5 times lower.

The rate of firearm-related deaths has decreased over the past decade – to a rate (4.7 per 100,000 for 2009-11) that is below the Healthy People 2020 goal of 9.2 deaths per 100,000 population. However, the rate of firearm-related suicide death remains the most prominent loss of life due to firearms in the county. Efforts to identify those most at risk of intentional self-harm or suicide, getting them into treatment, and limiting their access to firearms would help reduce this preventable loss of life.

In regard to prevention efforts and initiatives, the Suicide Prevention Initiative is one of the Prevention and Early Intervention Initiatives implemented by the California Mental Health Services Authority (CalMHSA) through funding from the Mental Health Services Act (Prop 63). Didi Hirsch Mental Health Services is leading a project to partner with local stakeholders to identify and select local suicide prevention practices, that will be submitted to the Suicide Prevention Resource Center's (SPRC) Best Practices Registry (http://www.sprc.org/bpr). One of the best practices focuses on firearm safety, in partnership with the gun owning community, in an effort to reduce suicide. This practice was developed by Shasta County and will be available in the next several months to other communities who are interested in implementing firearm safety strategies. These efforts along with firearm safety training could also reduce injuries and deaths caused by accidental discharges.

Data Sources

- **1.** Office of Statewide Planning and Development. 2009 to 2011 Non-Public Emergency Department Data for Orange County, CA.
- **2.** Office of Statewide Planning and Development. *2009 to 2011 Non-Public Patient Discharge Data for Orange County, CA*.
- **3.** Orange County Health Care Agency, Public Health Services. *2009 to 2011 Orange County Master Death Files*. Santa Ana, CA.
- **4.** Gunawardena, D., and Condon, C.J. (2010) Firearm-related injury and death in Orange County (2006-2008). OC Health Care Agency, QM Research and Planning, Santa Ana, CA. http://ochealthinfo.com/civicax/filebank/blobdload.aspx?BlobID=11097
- **5.** Self-Inflicted Injury and Suicide in Orange County Based on 2005-2007 Emergency Department, Hospitalization and Death Records. OC Health Care Agency, QM Research and Planning, Santa Ana, CA, 2009. http://ochealthinfo.com/docs/behavioral/SIIS.pdf
- **6.** California Department of Health Services and California Conference of Local Health Officers. *County Health Status Profiles 2013.* Sacramento, CA: California Department of Health Services, 2013.
- **7.** Leventhal, J.M., Gaither, J.R., and Sege, R. (2014) Hospitalizations Due to Firearm Injuries in Children and Adolescents. *Pediatrics*, Vol. 133, No. 2, February 2014, pages 219-225.

Appendix A: Firearm- Related Deaths by City of Residence (2009-2011)	Accidental (W32- W34)	Suicide (X72- X74)	Homicide (X93- X95)	Legal Intervention (Y35.0)	Undetermined (Y22-Y24)	Total # Deaths	3-Yr Average Rate per 100,000 population
LAGUNA WOODS	0	7	2	0	0	9	18.5*
SEAL BEACH	0	4	4	0	0	8	11.0
LOS ALAMITOS/ROSSMOOR	0	6	0	0	0	6	9.2
FOUNTAIN VALLEY	0	9	5	0	0	14	8.4
LA HABRA	0	9	5	0	0	14	7.7
COSTA MESA	0	18	6	0	1	25	7.6
LAGUNA BEACH	0	4	1	0	0	5	7.3
HUNTINGTON BEACH	0	30	9	0	0	39	6.8
WESTMINSTER	0	11	6	0	0	17	6.3
SAN CLEMENTE	0	11	0	1	0	12	6.3
NEWPORT BEACH	0	14	2	0	0	16	6.3
DANA POINT	1	5	0	0	0	6	6.0
SAN JUAN CAPISTRANO	0	5	1	0	0	6	5.8
SANTA ANA	1	10	40	3	1	55	5.6
CYPRESS	0	4	4	0	0	8	5.6
ALISO VIEJO	0	6	2	0	0	8	5.6
ORANGE	0	17	3	1	0	21	5.1
ORANGE COUNTY	4	278	142	12	3	439	4.9
ANAHEIM	1	20	23	1	0	45	4.5
TUSTIN	0	6	4	0	0	10	4.4
GARDEN GROVE	0	10	7	4	1	22	4.3
LA PALMA	0	2	0	0	0	2	4.3
FULLERTON	0	10	6	1	0	17	4.2
RSM	0	5	1	0	0	6	4.2
YORBA LINDA	0	6	1	1	0	8	4.2
MIDWAY CITY	0	1	0	0	0	1	3.9
STANTON	0	2	2	0	0	4	3.5
PLACENTIA	0	4	1	0	0	5	3.3
ROSSMOOR	0	1	0	0	0	1	3.3
LADERA RANCH	0	2	0	0	0	2	2.9
BUENA PARK	0	5	2	0	0	7	2.9
MISSION VIEJO	1	7	0	0	0	8	2.9
LAKE FOREST	0	6	0	0	0	6	2.6
BREA	0	2	1	0	0	3	2.5
IRVINE	0	12	4	0	0	16	2.5
COTO DE CAZA	0	1	0	0	0	1	2.2
LAGUNA HILLS	0	2	0	0	0	2	2.2
LAGUNA NIGUEL	0	2	0	0	0	2	1.1
VILLA PARK	0	0	0	0	0	0	0.0
UNICORP/UNKNOWN	0	3	0	0	0	3	-