

## Introduction

### **Aren't firearm injuries decreasing?**

*Yes, both locally and nationally. However, there are still segments of our community experiencing excessive numbers of injuries and deaths.*

### **What more do we need to know?**

*The types of circumstances that led to the incident, such as: the number of women killed in domestic violence attacks who had outstanding restraining orders against the offender. Where youths obtained the firearm they used in these acts of violence. How often multiple homicides occurred in public places like schools and workplaces.*

### **Isn't this information being collected by the criminal justice system?**

*Multiple federal agencies are currently collecting data on every death. Also, agencies conduct surveys of victimization, hospitalizations, and emergency room cases. However, these data are based on a sampling and none of the federal agencies have data that are linked. This unlinked data leaves many gaps and unanswered questions.*

### **Historically, what mechanism is most frequently used in San Francisco homicides?**

*Based on California Department of Justice data, from 1987 to 1999, 60% of all homicides in San Francisco County were committed with a firearm.*

### **How does San Francisco County compare to other California jurisdictions and to the nation?**

*Compared with 6 other counties of similar size, San Francisco had the second lowest firearm-fatality rate. However, data are not available to make comparisons of nonfatal injuries. In SF, the fatality rate (5.5 per 100,000) was 48% lower than the national rate (10.6 per 100,000).*

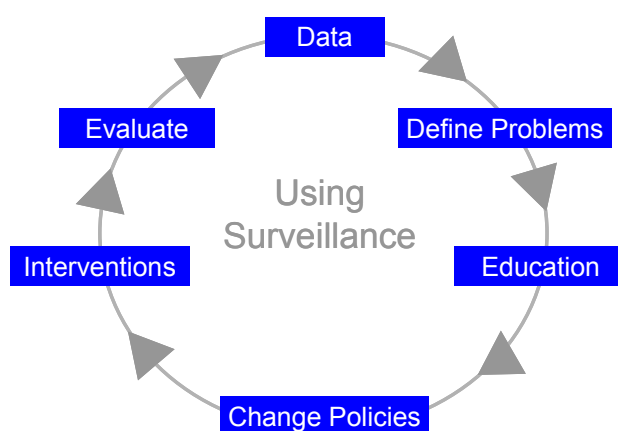
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## Introduction

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Violence affects virtually everyone, whether it's through personal experience or conveyed through the media. Law enforcement, policymakers, health care providers, criminal justice officials, educators, and community leaders are engaged in the efforts to address violence in our communities. Finding the answers to questions about the social, economic and situational factors that influence violence would save countless lives. The demand for answers to these questions is intensifying; however, violence is a multifaceted problem involving many contributing elements. Local data about violence is needed to understand the magnitude, epidemiology, geographic patterns, economic impact and policy implications of the problem. Surveillance data from the San Francisco Firearm Injury Reporting System (SFFIRS) ultimately serves as a framework for the development of prevention strategies, allocation of resources, and evaluation of interventions (Figure 1).



**Figure 1: Framework for Using Surveillance Data**

Until the last decade, violence had been addressed primarily in the criminal justice and sociological domains and was not a concern for the public health system. Just as public health principles and strategies were applied to reduce the number of deaths due to motor vehicles and deaths due to tobacco use, the public health model can help to reduce the extent of injuries attributed to violence. The Fatality Analysis Reporting System (FARS) of the National Highway Traffic Safety Administration collects over 125 variables on each fatal incident, including information on the crash circumstances, vehicles, drivers, passengers, victims, roadway and weather conditions. These data have been vital to the efforts to identify ways to improve vehicle, driver, and passenger safety and have led to significant reductions in injuries and deaths over the last two decades. A similar effort for reporting of firearm injuries and deaths would provide a basis for moving from disparate data systems currently based in federal, state, and local agencies to a shared multi-agency system. The ability to reduce firearm violence is not based in any single agency. Having the capacity to share data will promote unified approaches to guide prevention efforts.

The public health approach 1) uses surveillance processes designed to gather data that establish the nature of the problem and the trends in its incidence and prevalence; 2) identifies potential causes through epidemiological analyses that identify risk and protective factors associated with

the problem; 3) designs, develops, and evaluates the effectiveness of interventions; and 4) disseminates successful models for best practices which incorporate partnerships with stakeholders and communication strategies aimed at empowering individuals and communities to become involved in risk reduction efforts.

### **Project Background**

Since 1996, the San Francisco Department of Public Health (SFDPH) has been developing an infrastructure and a community network to address violence as a public health issue. The cornerstone of this effort has been the Violent Injury Prevention Project (VIPP). With grants from the California Department of Health Services (CDHS), retrospective collection and analysis of data was completed for nearly 700 victims who died or were hospitalized due to firearm injuries between 1992 and 1995.<sup>2</sup> Efforts to identify risk factors and analyze trends were hindered by disparate and redundant data collection systems used by the police, emergency medical services, trauma center, medical examiner, and district attorney. In response, during 1998, key representatives from each agency joined the VIPP to form a task force for the establishment of a multi-agency system for surveillance of firearm injuries in San Francisco (SF). Later in 1999, in collaboration with investigators from the University of California, SF Injury Center, funding to establish the system was awarded through the Harvard School of Public Health, as SF was chosen as one of eleven pilot sites for development of the National Violent Death Reporting System (NVDRS). In summary, the SF Firearm Injury Reporting System (SFFIRS) was established to link data from multiple agencies in an effort to:

- 1) facilitate timely and accurate reporting of data;
- 2) provide a centralized system to assist program officials and policy makers with decisions about resource needs for violence prevention programs;
- 3) analyze trends and conduct prospective research aimed at examining the impact of prevention efforts and laws on rates of violent injuries and deaths; and
- 4) serve as a grant site for pilot testing of NVDRS.

As shown in Table 1 and in Figure 2, before 1999 data on firearm injuries and deaths were only available from state hospital discharge data and from death certificates, and only for SF residents. The SFDPH was unable to determine the number of victims who were treated and released from the emergency departments and was underreporting the number of nonresidents who were injured in SF County. For example, in 1999, 25% of the victims who were injured by firearms in SF County were nonresidents. Thus, we were underestimating the impact of firearm-related injuries in our community.

Firearm-related injury data from the CDHS and from the SFDPH, including data from the *Profile of Injury in San Francisco, 2001*<sup>3</sup> reported that from 1992 to 1999 there have been 638 deaths and 1,368 hospitalizations of nonfatal injuries to SF residents which occurred in the County (Table 1 and Figure 2). The fewest number of residents hospitalized as a result of nonfatal firearm-related injuries occurred in 1999 with 71 injuries—a 9% decrease from 1998.

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<sup>2</sup>San Francisco Department of Public Health. *Firearm Hospitalizations and Deaths of San Francisco Residents 1992-1995*; 1998.

<sup>3</sup>San Francisco Injury Center and the San Francisco Department of Public Health. *Profile of Injury in San Francisco*; 2001.

**Table 1: State Hospitalization and Death Certificate Data for Firearm-related Injuries of San Francisco Residents from 1992 to 1999**

	State Hospitalization and Death Certificate Data							SFFIRS <sup>c</sup>
	1992 <sup>a</sup>	1993	1994	1995	1996	1997	1998 <sup>b</sup>	1999
<b>Fatalities Total</b>	97	116	93	92	88	63	45	44
Suicide	40	38	32	39	41	30	17	16
Homicide	56	72	55	51	45	33	28	28
Another-inflicted <sup>d</sup>	0	2	3	1	2	0	0	0
Legal Intervention	0	2	1	1	0	0	0	0
Undetermined	1	2	2	0	0	0	0	0
<b>Nonfatalities Total</b>	290	290	227	182	130	100	78	71
Self-inflicted <sup>e</sup>	8	3	7	2	0	5	2	1
Assault	255	267	189	167	113	86	67	67
Another-inflicted	21	15	22	11	10	6	4	2
Legal Intervention	3	1	6	2	0	3	0	1
Undetermined	3	4	3	0	7	0	5	0

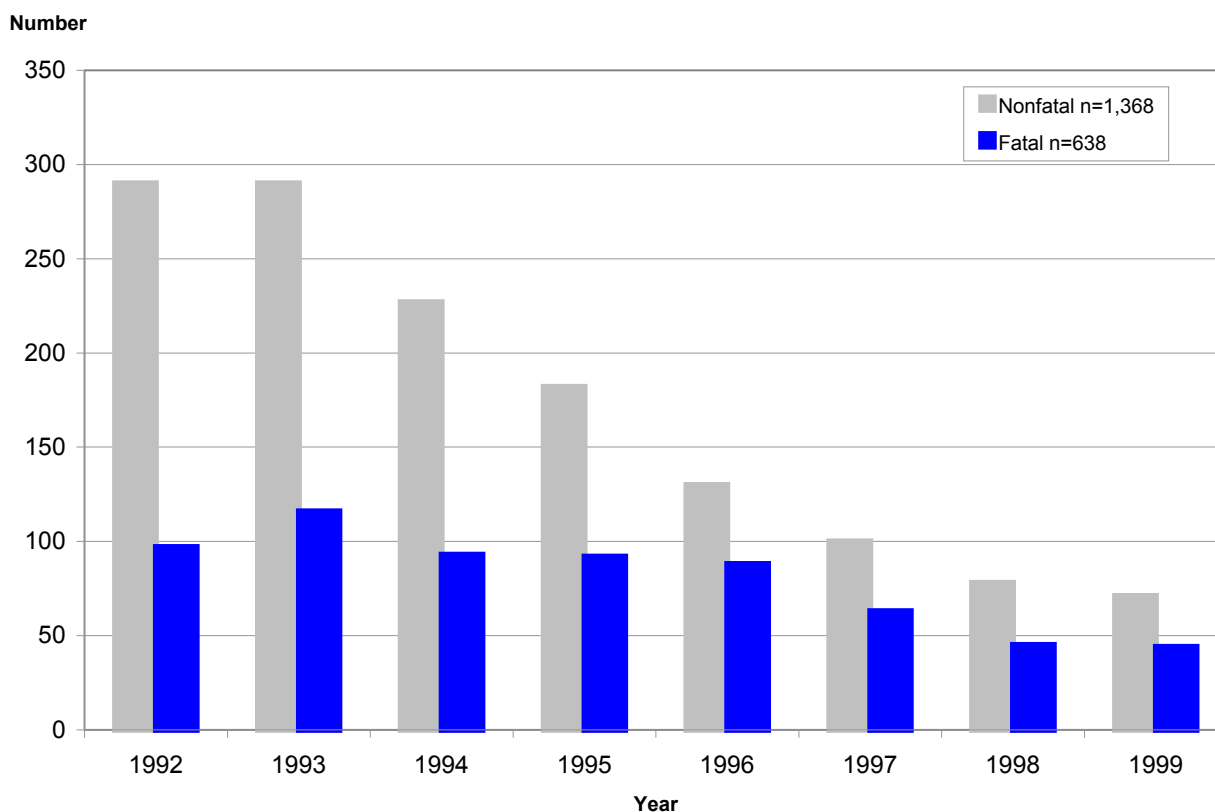
<sup>a</sup>Hospitalization and death certificate data from the California Department of Health Services.

<sup>b</sup>Hospitalization and death certificate data as reported in the *San Francisco Profile of Injury* 1998 and 2001.

<sup>c</sup>Data from the San Francisco Firearm Injury Reporting System (SFFIRS) includes police incident reports, San Francisco Emergency Department, Trauma Register, Medical Examiner, and death certificates. These deaths and nonfatality hospitalizations are of San Francisco residents.

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

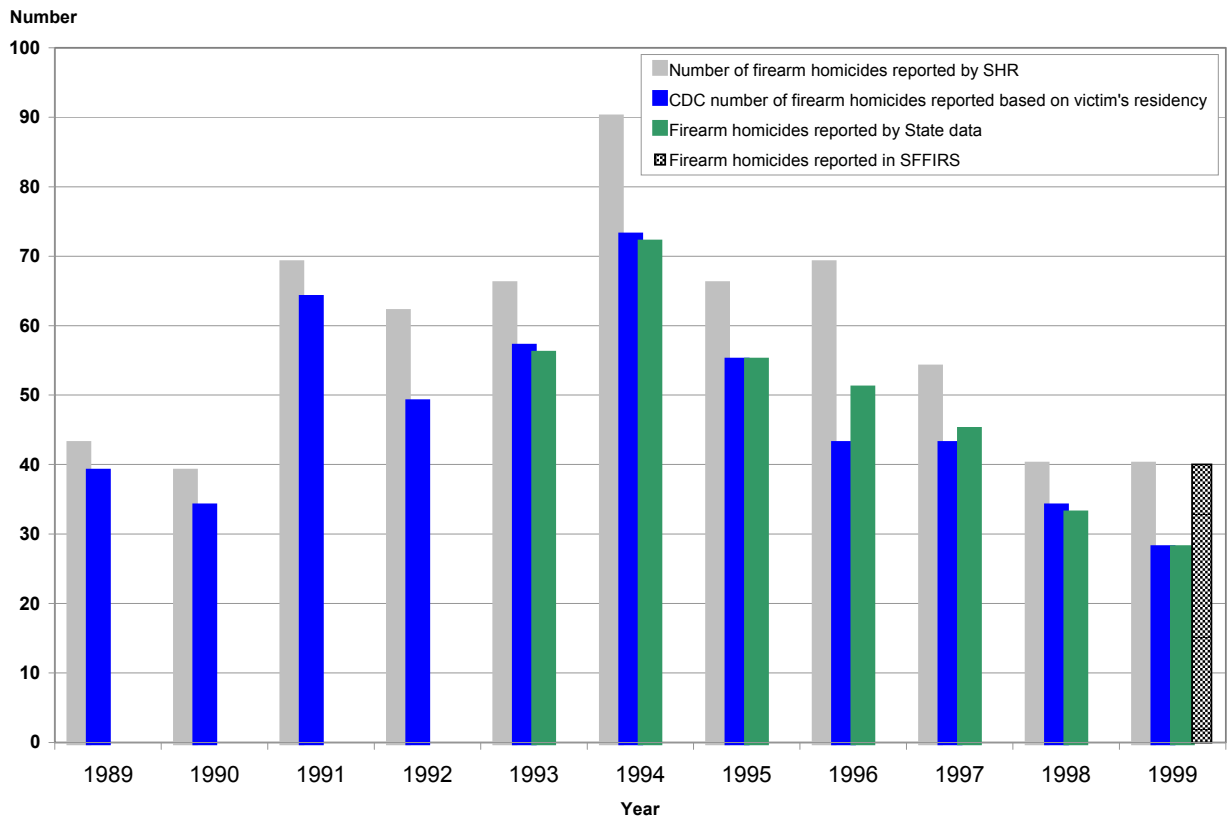
<sup>e</sup>Self-inflicted incidents are those in which victims unintentionally shot themselves.



**Figure 2: Number of Firearm-related Deaths and Hospitalizations of San Francisco Residents from 1992 to 1999**

Source: *Profile of Injury in San Francisco*. San Francisco Injury Center, 2001. Firearm Hospitalizations and Deaths of San Francisco Residents 1992-1995. 1998. San Francisco Public Health Department; 1999 first year to include all firearm-related injuries San Francisco Firearm Injury Reporting System.

As shown in Figure 3, since 1993 federal agencies such as the Centers for Disease Control and Prevention (CDC), CDHS, and the California Department of Justice (CADOJ) have reported on the number of firearm homicides. The CDC and CDHS reported the number of homicides based on the residence of the victim. The CADOJ reported homicides based on the county where the incident occurred. Thus, even at the federal and state levels there were disparate numbers being reported for firearm homicides. As of 1999, the SFFIRS is in agreement with the CADOJ concerning the number of homicides that occurred within SF County.



**Figure 3: Number of Firearm Homicides as Reported by the California Department of Justice Supplemental Homicide Reports (SHR), Centers for Disease Control and Prevention (CDC), California State Department of Health Services, and San Francisco Firearm Injury Reporting System (SFFIRS): San Francisco, 1999**

## **Magnitude of Firearm-related Violence**

In the United States (U.S.) during 1999, 28,874 persons died from firearm injuries, which represents an age-adjusted death rate of 10.6 per 100,000 (Table 2).<sup>4</sup> Of these deaths, 58% were due to suicides and 38% were due to homicides. During 1999 in California, there were 3,013 firearm deaths and a rate of 9.2 per 100,000. Of these, 50% (1,508) were due to suicides and 45% (1,362) were due to homicides.<sup>5</sup> Table 2 and Figure 4 show the deaths during 1999 for all nine SF Bay Area Counties, as well as other California counties with populations over 500,000, as reported by the CDHS. SF ranked sixth among the nine Bay Area Counties with 44 deaths reported for residents, representing a death rate of 5.5 per 100,000. In contrast to the U.S. and California statistics, in SF 36% (16) of the firearm deaths of residents were due to suicides and 64% (28) were due to homicides. Among the seven California counties with populations of 500,000 to under 1 million, the firearm death rate for SF ranked sixth. Overall, the firearm death rate in SF was below the Healthy People 2000 national goal of 11.6 per 100,000. The SF firearm death rate for African Americans was also 33% (20.1 per 100,000) lower than the Healthy People 2000 goal of 30 deaths per 100,000 persons.

**Table 2: 1999 Firearm Age-adjusted Death Rates for United States, State of California, San Francisco Bay Area Counties, and Other California Counties With Populations Over 500,000<sup>a</sup>**

County	1999 population	1999 firearm deaths	Age-adjusted death rate <sup>b</sup>
San Bernardino	1,688,984	198	12.7
Los Angeles	9,727,841	1,077	11.7
Kern	662,472	69	11.1
Contra Costa	921,662	96	10.6
<b>United States</b>	<b>272,945,000</b>	<b>28,874</b>	<b>10.6</b>
San Joaquin	566,793	57	10.3
Sacramento	1,189,056	114	9.8
Fresno	800,121	68	9.3
<b>California</b>	<b>34,072,478</b>	<b>3,013</b>	<b>9.2</b>
Alameda	1,448,643	120	8.5
Solano	392,201	29	7.9
San Diego	2,884,572	197	7.3
Orange	2,787,593	172	6.7
Ventura	744,825	46	6.7
Napa	125,123	8	6.5
<b>San Francisco<sup>b</sup></b>	<b>788,975</b>	<b>44</b>	<b>5.5</b>
Sonoma	450,187	28	6.2
San Mateo	735,381	40	5.4
Santa Clara	1,732,034	81	5.1
Marin	247,073	6	2.4

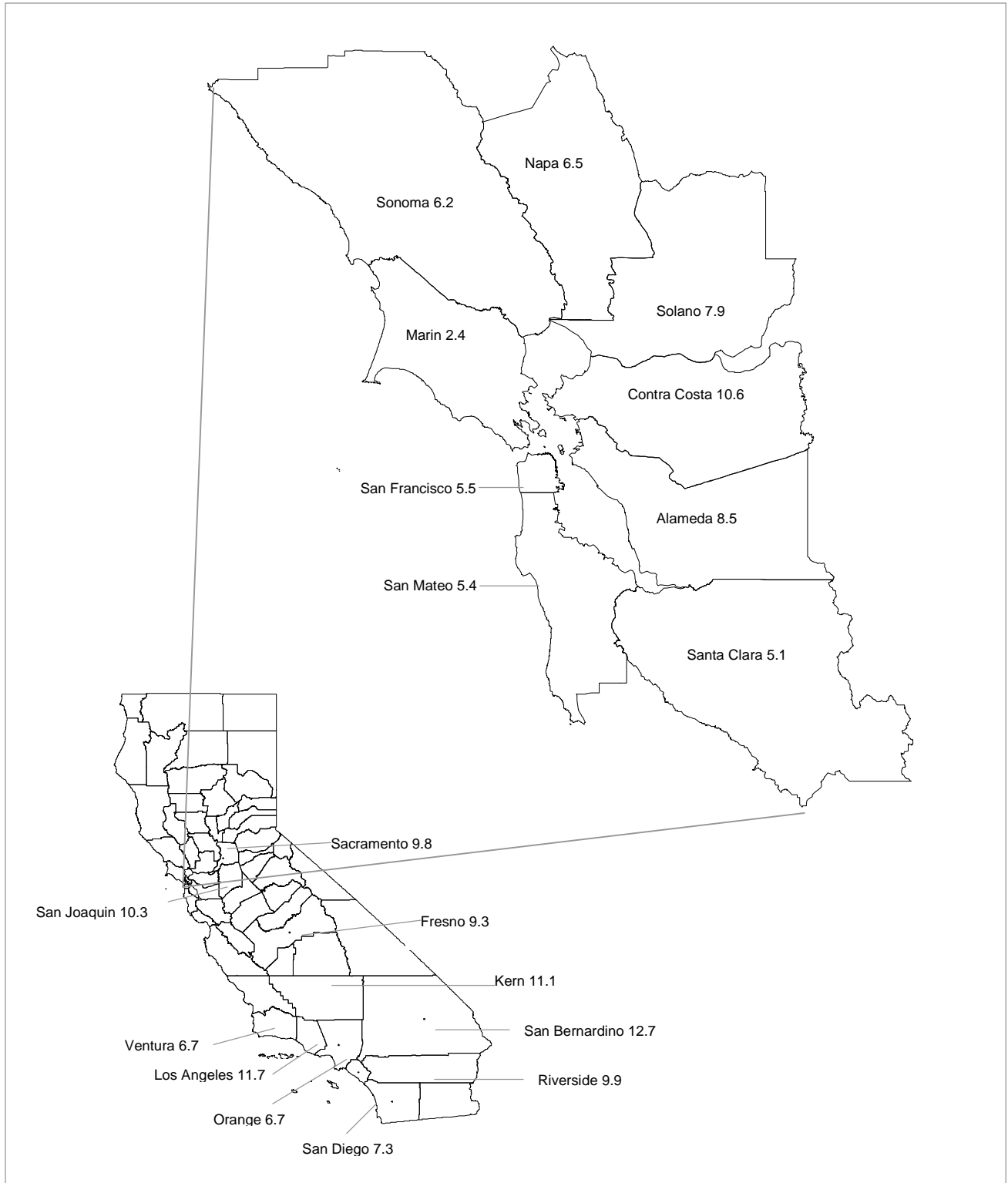
<sup>a</sup>[www.dhs.ca.gov/hisp/chs/OHIR/Publication/publicationindex.htm](http://www.dhs.ca.gov/hisp/chs/OHIR/Publication/publicationindex.htm)  
[www.census.gov/population/www/estimates/nat90s1.htm](http://www.census.gov/population/www/estimates/nat90s1.htm)  
[www.cdc.gov/nchs](http://www.cdc.gov/nchs)

<sup>b</sup>All rates are age-adjusted to the standard million United States 2000 population and all are reported per 100,000 population.

<sup>c</sup>California Department of Health Services reported 50 San Francisco residents being killed by firearms; however, 6 of these deaths did not occur in the County.

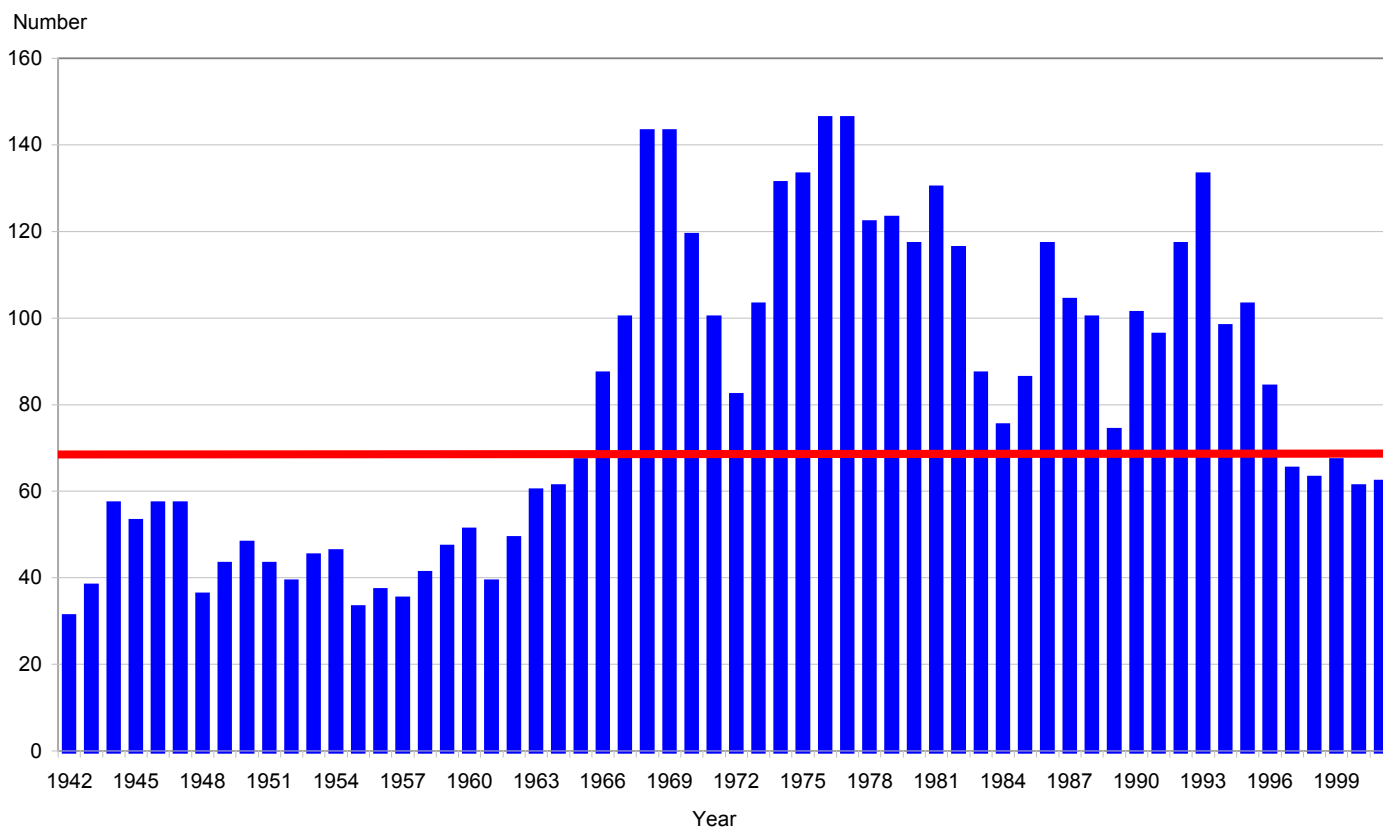
<sup>4</sup>Hoyert DL, Arias E, Smith BL, Murphy SL, Kochanek KD. Deaths: *Final Data for 1999*. National Vital Statistics reports; vol. 49 no 8. Hyattsville, Maryland: National Center for Health Statistics; 2001.

<sup>5</sup>California Department of Health Services. *County Health Status Profiles 2000*. California Department of Health Services; 2001.



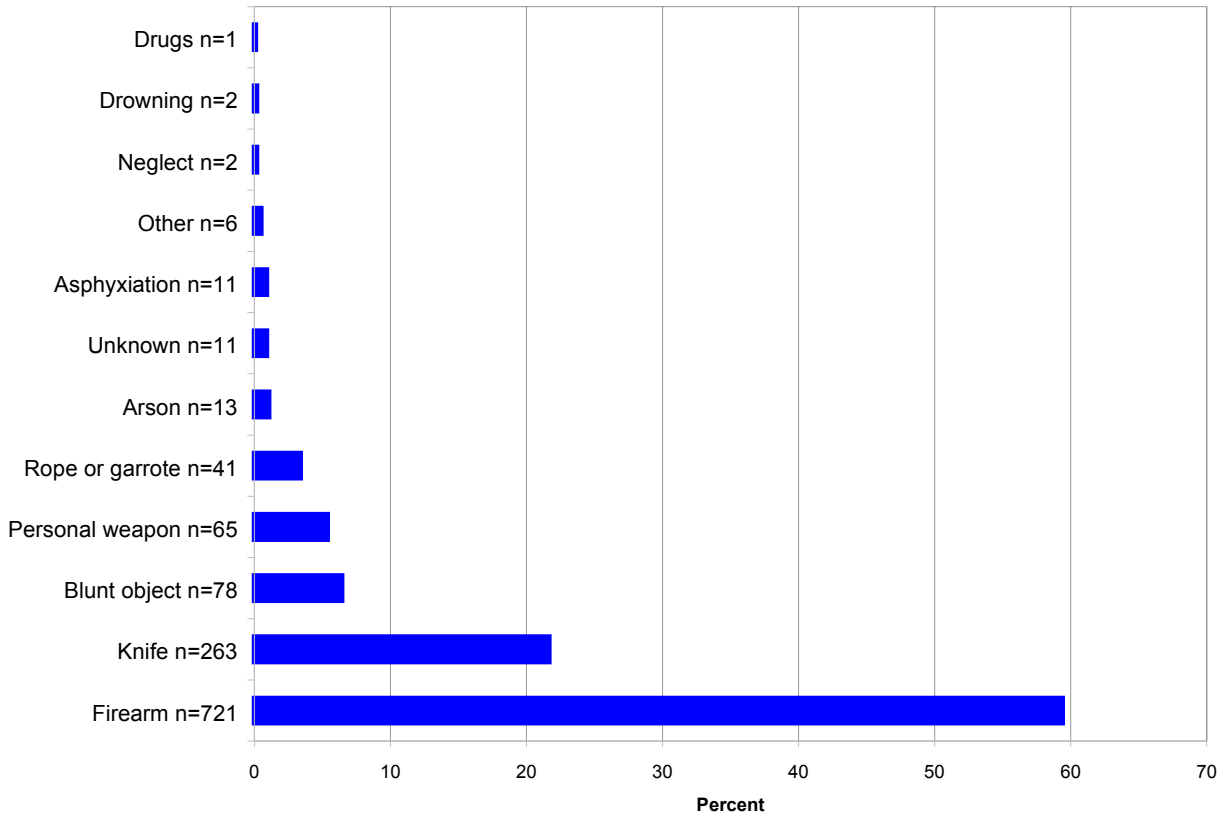
**Figure 4: Age-adjusted Firearm Death Rates for the San Francisco Bay Area Counties and California Counties with Populations Over 500,000: California, 1999**

According to the San Francisco Police Department (SFPD) Homicide Unit, between 1942 and 2001 (11/29/01) there have been 4,847 homicides in SF County with an average of 81 homicides committed each year, ranging from a low of 31 in 1942 to a high of 143 in 1976 (Figure 5). Based on a review of Supplementary Homicide Reports (SHR) provided by the CADOJ, firearms were used on average in nearly 60% (721) of the homicides committed between 1987 and 1999 (Figure 6). This translates into an estimated 2,908 victims of firearm violence over the past 60 years .



**Figure 5: Number of Homicide Victims (Residents and Nonresidents) in San Francisco County from 1942 to 2001.**

Source: San Francisco Police Department, Homicide Unit. Homicides from 2000 and 2001 are based on counts obtained by SFFIRS.



**Figure 6: Mechanism Used in Homicide Incidents: San Francisco, 1987 to 1999 (N=1,214)**  
Source: California Department of Justice, Supplemental Homicide Reports

In summary, a multi-agency approach provides a platform for a more comprehensive understanding of the epidemiology of violent injuries. The next steps—using the data—will require precedent-setting levels of collaboration between agencies, programs, and individuals all working to reduce deaths and injuries due to violence. While there are no simple or short-term solutions, a reduction of violence in our County can be achieved with a commitment to a unified approach.



