

HEALTHY COMMUNITIES DATA AND INDICATORS PROJECT

Short Title: Violent Crime Rate

Full Title: Number of Violent Crimes per 1000 Population

1. **Healthy Community Framework:** Social relationships that are supportive and respectful
2. **What is our aspirational goal:** Safe communities, free of crime and violence
3. **Why is this important to health?**

Description of significance and health connection

Safe neighborhoods that are free of crime and violence are an integral component of healthy neighborhoods. Injuries – both physical and mental – from violence and crime contribute greatly to the overall burden of disease and death. Violent crimes disproportionately affect communities of color and young adults. Post-traumatic stress in victims, families, and community members add significantly to mental health problems and are risk factors for chronic illnesses like cardiovascular disease. In addition to direct physical and mental impacts, fear of crime and violence inhibit the use of community assets and social interaction that promote health. These include stifling opportunities for physical exercise at nearby parks and playgrounds, or walking or bicycling as a way to commute to local destinations for basic needs. Furthermore, violence contributes to negative perceptions of neighborhoods and impacts real estate, housing, and economic development.

Summary of evidence

Ten percent of all deaths in young California adults aged 15-44 years are related to assault and homicide. In 2010, California law enforcement agencies reported 1,809 murders, 8,331 rapes, and over 95,000 aggravated assaults. African Americans in California are 11 times more likely to die of assault and homicide than Whites.

References:

1. Fowler PJ et al. Community violence: A meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. *Dev Psychopathol* 2009;21(1):227-259.
2. Takagi D, Ken'ichi I, Kawachi I. Neighborhood social capital and crime victimization: Comparison of spatial regression analysis. *Soc Sci Med* 2012.
3. EpiCenter: California Injury Data Online. Assault/Homicide. Sacramento, CA: California Department of Public Health.
<http://epicenter.cdph.ca.gov/ReportMenus/InjuryDataByTopic.aspx>. Accessed on February 24, 2013.

4. **What is the indicator?**

Detailed Definition: Number of violent crimes per 1,000 residents

- Stratification: Race/ethnicity stratification not available

Data Description

- Data source: Uniform Crime Reports from the Federal Bureau of Investigation
<http://www.fbi.gov/about-us/cjis/ucr/ucr>
- Years available: 2006-2010

- Updated: Annually
- Geographies available: City/towns, counties, regions, state

The Uniform Crime Reports is a nationwide, cooperative statistical effort of nearly 18,000 city, university and college, county, state, tribal, and federal law enforcement agencies that voluntarily report data on crimes discovered by police and those reported to the police by the general public. The Federal Bureau of Investigation compiles these reports in a standard format annually. Four types of major crimes fall into the category of violent crimes: 1) murder and non-negligent manslaughter, 2) forcible rape, 3) robbery, 4) aggravated assault. These tend to be more reliably reported than other less serious crimes, but underreporting has been well documented.

UCR crime reports were downloaded as Excel files from the FBI website (<http://www.fbi.gov/about-us/cjis/ucr/ucr>, Table 8). The violent crime rate per 1,000 populations was calculated for each town/city by dividing the number of violent crimes by the total population and multiplying by 1,000. Standard errors were calculated using the Poisson distribution and were used to compute 95% confidence intervals. Relative standard errors (to assess statistical reliability) were computed by dividing the standard error by the violent crime rate. Cities and towns were assigned a 5-digit U.S. Census place code based on a database join matching city names in the UCR file to a reference file of California place names, census city and county FIPS codes, and population counts from the 2010 Census. City name matches were manually inspected for concordance with population counts and errors were corrected for a few false positive matches. To obtain county rates, the number of violent crimes and population of cities were aggregated by county FIPS codes. To obtain regional rates, the number of violent crimes and population of counties were aggregated by county FIPS conforming to the metropolitan transportation organizations (MPO) regions as reported in the *2010 California Regional Progress Report* (http://www.dot.ca.gov/hq/tpp/offices/orip/Collaborative%20Planning/Files/CARegionalProgress_2-1-2011.pdf).

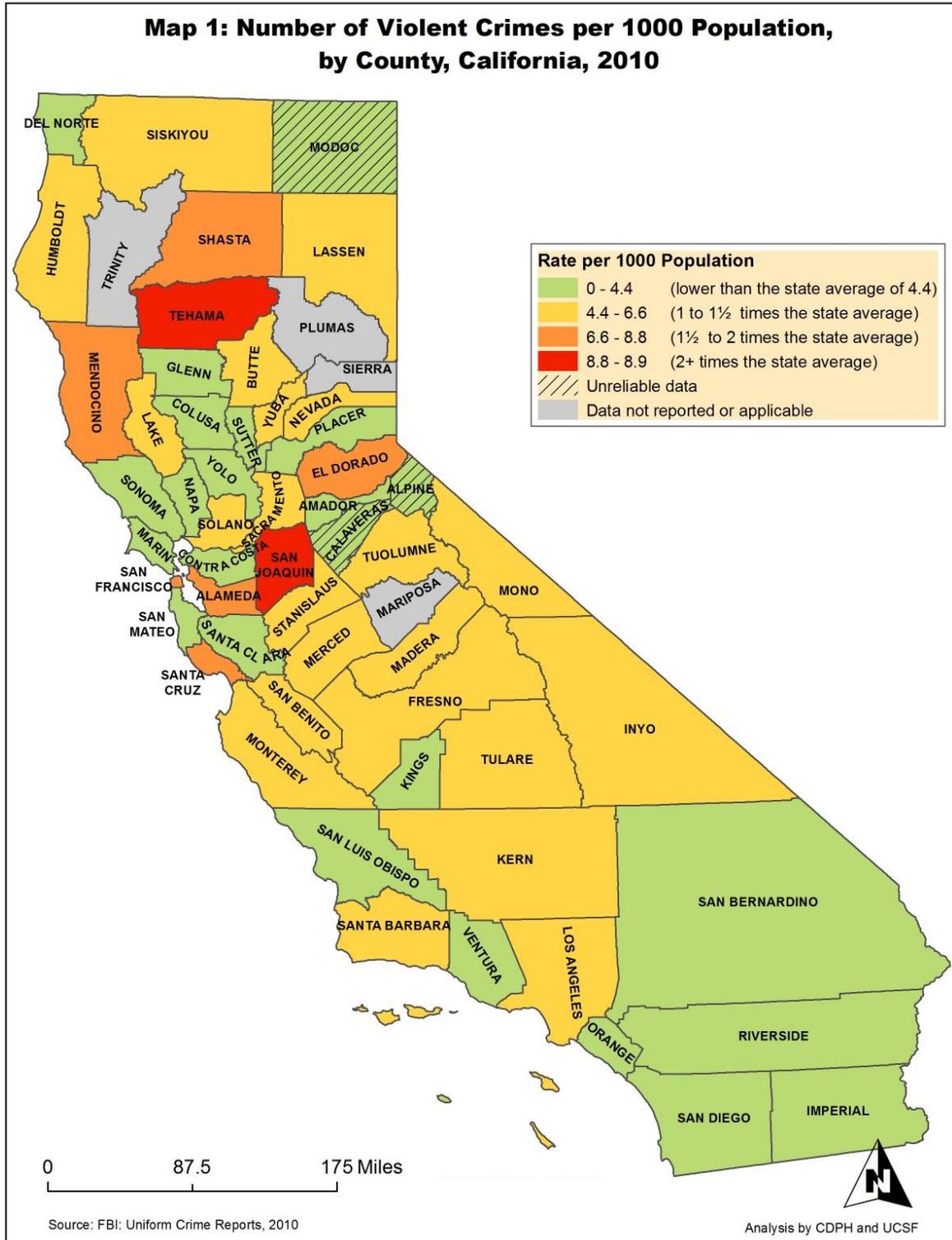
5. Limitations

Crime data are based on incidents that are reported to law enforcement agencies. Limitations in the use of these data are detailed at <http://www.fbi.gov/about-us/cjis/ucr/ucr-statistics-their-proper-use>. Because some crimes such as sexual assaults are underreported, crime data are not always accurate. Even with underreporting, it still may be possible to observe trends over time if reporting biases hold steady within a jurisdiction. The Healthy Communities Indicators Project is also exploring an indicator based on injury rates from assaults treated in emergency departments. This measure has the advantage of being less susceptible to reporting biases, and can provide information at zip code geographies and for different race/ethnicity groups. However, this alternative provides information on where the victim resides rather than where the assault occurred.

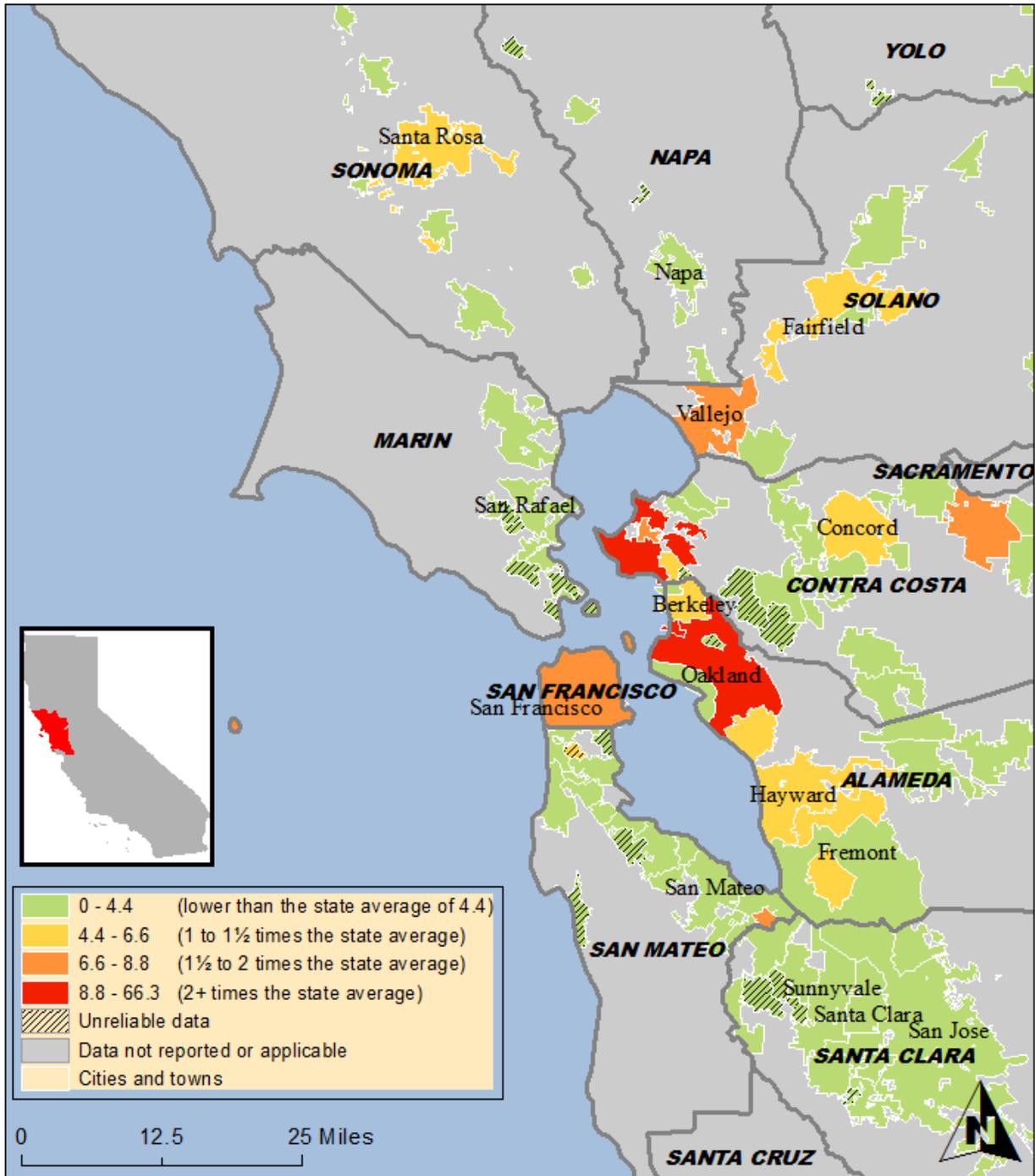
6. Projects using this indicator

1. Baltimore Neighborhood Indicators Alliance (<http://www.bnaijfi.org>)
2. San Francisco Department of Public Health's Sustainable Communities Index (<http://www.sustainablessf.org>)

Examples of Maps, Figures, and Tables



Map 2: Number of Violent Crimes per 1000 Population, Cities and Towns, Bay Area Region, 2010



Source: FBI: Uniform Crime Reports, 2010

Analysis by CDPH and UCSF

Table 1. Number (N) of Violent Crimes per 1000 Population, by City/Town, Sonoma County, 2006-2010

City/Town	2006			2007			2008			2009			2010		
	N	Pop.	Rate												
Cloverdale	25	8,088	3.1	28	8,319	3.4	14	8,333	1.7	16	8,304	1.9	19	8,357	2.3
Cotati	56	7,202	7.8	34	7,272	4.7	39	7,267	5.4	32	7,248	4.4	35	7,306	4.8
Healdsburg	21	11,151	1.9	19	10,955	1.7	25	10,913	2.3	16	10,968	1.5	16	11,146	1.4
Petaluma	211	55,340	3.8	226	54,624	4.1	213	54,454	3.9	168	54,649	3.1	197	55,168	3.6
Rohnert Park	207	41,471	5.0	238	41,043	5.8	215	40,431	5.3	201	40,401	5.0	164	40,843	4.0
Santa Rosa	891	154,537	5.8	771	154,953	5.0	751	154,874	4.8	803	156,541	5.1	767	158,182	4.8
Sebastopol	17	7,666	2.2	7	7,523	0.9*	11	7,445	1.5*	15	7,487	2.0	17	7,574	2.2
Sonoma	51	9,974	5.1	33	9,981	3.3	37	9,929	3.7	25	9,955	2.5	33	10,068	3.3
Windsor	86	25,193	3.4	87	25,633	3.4	87	25,600	3.4	80	25,634	3.1	38	25,870	1.5
Sonoma Co.	1,565	320,622	4.9	1,443	320,303	4.5	1,392	319,246	4.4	1,356	321,187	4.2	1,286	324,514	4.0
Bay Area	34,922	6,356,957	5.5	35,094	6,370,680	5.5	35,021	6,453,648	5.5	31,781	6,509,000	4.9	30,036	6,551,301	4.6

Note: Violent crime includes murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault

Data Source: FBI: Uniform Crime Reports, 2006-2010

* Not statistically reliable (Relative Standard Error > 30%)

Figure 1. Number of Violent Crimes per 1000 Population, Rohnert Park, Sonoma County, Bay Area, California, 2010

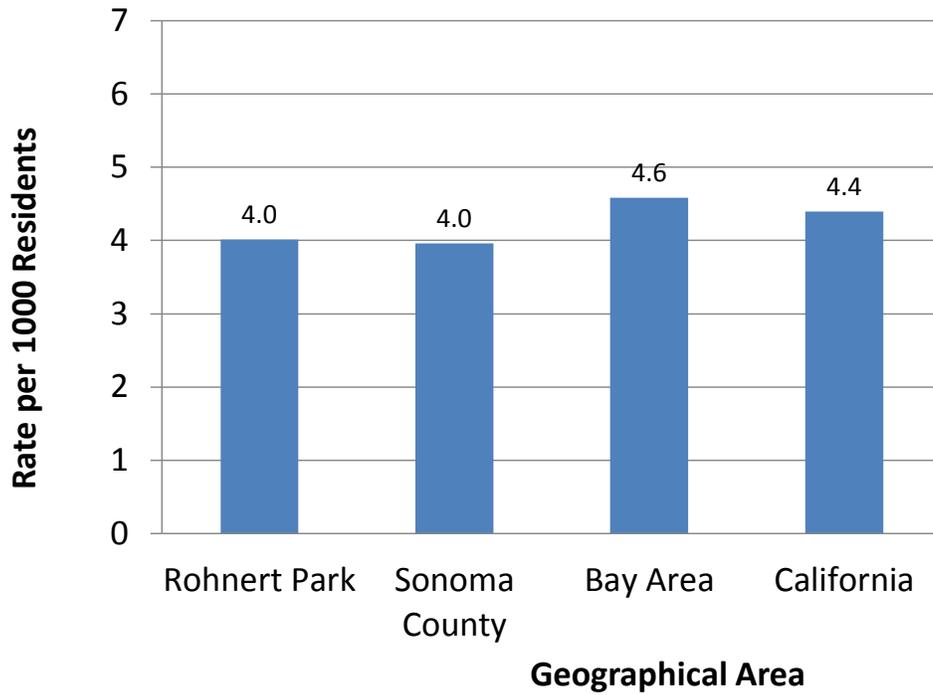
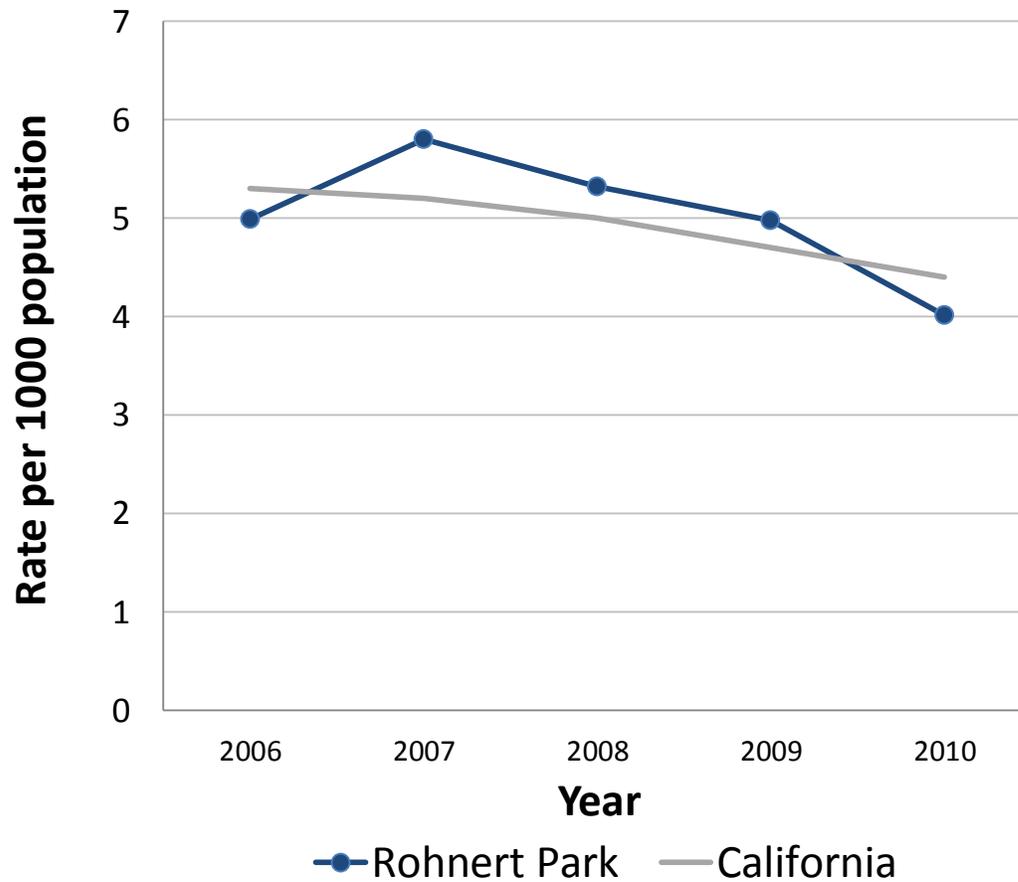


Figure 2. Number of Violent* Crimes per 1000 population, Rohnert Park, CA, 2006-2010



Data Source: FBI: Uniform Crime Reports, 2006-2010

* Violent crime includes murder and non-negligent manslaughter, forcible rape, robbery, aggravated assault