

# WORKING P A P E R

---

## Data-Driven Homicide Prevention

### An Examination of Five Project Safe Neighborhoods Target Areas

JOHN M. MACDONALD  
JEREMY M. WILSON  
GEORGE E. TITA

WR-284-OJP

July 2005

Prepared for the U.S. Department of Justice, Office of Justice Programs

This product is part of the RAND Infrastructure, Safety, and Environment working paper series. RAND working papers are intended to share researchers' latest findings and to solicit informal peer review. They have been approved for circulation by RAND Infrastructure, Safety, and Environment but have not been formally edited or peer reviewed. Unless otherwise indicated, working papers can be quoted and cited without permission of the author, provided the source is clearly referred to as a working paper. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. RAND® is a registered trademark.



INFRASTRUCTURE, SAFETY, AND ENVIRONMENT

## **Preface**

This working paper describes homicide in five target areas chosen by the Project Safe Neighborhoods task forces located in the Northern, Central, and Southern districts of California: the East and West Oakland areas of the Oakland Police Department, the entire city of Hayward, the 77<sup>th</sup> Street district of the Los Angeles Police Department, the Century Station area of the Los Angeles Sheriff's Department, and the Southeastern division of the San Diego Police Department. The RAND Corporation is the researcher partner in these California districts for Project Safe Neighborhoods, which is a national initiative funded by the U.S. Department of Justice. Project Safe Neighborhoods, coordinated through U.S. Attorneys' offices, is a strategic, coordinated approach to reducing gun violence in America. The role of RAND in these districts is to provide research and support for the strategic planning components of the initiative. The goals of this program are to (1) increase the capacity of Project Safe Neighborhood task forces to design data-driven strategies that produce measurable decreases in firearms-related crime and (2) improve the long-term ability of federal, state, and local agencies to work together to understand, prosecute, and prevent firearms-related violent crime within their jurisdictions.

The purpose of this working paper is to describe homicide violence in five Project Safe Neighborhoods target areas and illustrate how intervention strategies can be tied to local homicide patterns. The analysis described here should be of use to Project Safe Neighborhoods task forces throughout California and the nation as well as to others interested in violence prevention. Readers should understand that this document is a descriptive analysis and is not a final product prepared for either the funding source or U.S. Attorneys. This project was supported by grant numbers 2003-GP-CX-0001 and 2003-GP-CX-0178, awarded by the Bureau of Justice Assistance. Opinions or points of view in this document are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice.

This study was conducted within RAND Infrastructure, Safety, and Environment, which is a unit of the RAND Corporation. Among other areas, RAND Infrastructure, Safety, and Environment conducts research and analysis that helps inform policymakers and communities in the area of public safety, including law enforcement, terrorism preparedness, immigration, emergency response and management, and natural disasters; criminal justice, including sentencing and corrections policy, firearms, and community violence; and drug policy, including problems related to illegal drugs and substance abuse. Inquiries regarding RAND Infrastructure, Safety, and Environment may be directed to:

Debra Knopman, Director  
RAND Infrastructure, Safety, and Environment  
1200 South Hayes Street  
Arlington, VA 22202-5050

## Introduction

Wolfgang's classic study of homicide in Philadelphia (1958) has left a lasting impression on how homicide is thought about and measured. By following his lead and culling micro-level homicide data from police files, a much better idea of the social and psychological correlates of homicide have emerged (Smith & Zahn, 1999). This research indicates that homicide events should not be seen as single incidents but as underlying indicators of changes in social and economic conditions including: race, poverty, and social isolation (e.g., Sampson, 1987; Land, McCall, & Cohen, 1990; Gartner, 1990; Parker, 2004); alcohol consumption (e.g., Parker & Auerhahn, 1998); and the distribution of firearms (e.g., Ludwig & Cook, 2003). Homicide research has also focused on how macro-level changes in demographics, the economy, drug distribution, and criminal justice policies are associated with changes in homicide during particular time periods (e.g., Blumstein & Wallman, 2000). A number of studies indicate that homicide rates vary greatly by time and geographic location (e.g., Cohen & Tita, 1999; O'Brien, 2003; Fox & Piquero, 2003; Griffiths & Chavez, 2005). Homicide rates in Chicago, Illinois, for example, vary between neighborhoods according to the level of poverty and social cohesion (Morenoff, Sampson, & Raudenbush, 2001). Homicide patterns also vary according to the time of day and season (Tennenbaum & Fink, 1994). Time of day is associated with a number of sustenance activities, such as going out at night for social activities. Research indicates that lifestyle activities are related to the risk of personal victimization, through increasing one's exposure to violent offenders (Messner & Tardiff, 1986; Miethe, Stafford, & Douglas, 1990; Roundtree, Land, & Miethe, 1994; Felson, 1994). Together, there is a wealth of knowledge that has been generated on the correlates and characteristics homicide events (see Miethe & Regoeczi, 2004).

In the last decade, there has been a considerable increase in the number of published studies that explore the spatial distribution of violent crime, in general, and homicide, in particular. Much of this was fueled by the unprecedented growth in levels of youth homicide during the late 1980's through the early 1990's as researchers began to map homicide in an effort to identify susceptible populations, and to determine if the observed patterns of events were at least consistent with spatial diffusion or contagion. Studies at the national level (Blumstein & Rosenfeld, 1998; Cork, 1999), the county level (Baller et al., 2001), and the local level (Cohen & Tita, 1999; Fagan et al., 1998; Morenoff et al., 2001; Griffiths & Chavez, 2004) have consistently demonstrated two things. First, the subpopulation at greatest risk of homicide victimization was, and continues to be, young urban minority males killed with guns. Second, homicides exhibit a non-random pattern of spatial concentration (e.g., positive spatial autocorrelation) that typically occurs within disadvantaged urban areas. The presence of positive spatial autocorrelation has been interpreted as evidence of violence contagion. Third, the socio-economic composition of place fails to account for the spatial concentration of homicide events. That is, there appears to be certain social processes or neighborhoods that matter above and beyond poverty (see Morenoff et al., 2001).

A number of evaluation efforts also point to potential policies for reducing homicide. Research, for example, suggests that limiting the availability of alcohol establishments and more progressive policies aimed at curbing domestic violence and illegal gun carrying are likely to reduce homicide and violence. Dugan, Rosenfeld, and Nagin's (2003) analysis of domestic homicide in 48 cities over time, for example, found that the adoption of more aggressive arrest

policies is related to fewer deaths of unmarried intimates. In contrast, a local prosecutors' willingness to prosecute violators of protection orders was associated with increased intimate partner homicide. These results suggest that some criminal justice responses to domestic violence may be harmful. Sherman and Rogan (1995) found that stringent police enforcement strategies that target illegal gun carrying in violence prone areas were associated with reductions in violent crime in Kansas City, MO. Similarly, directed patrol efforts by police in high crime areas in Indianapolis, IN were associated with reductions in homicide and gun related crimes (McGarrell, Chermak, Weiss, & Wilson, 2001). Federal policy has slowly responded to this information and generated funding for a number of comprehensive community violence prevention programs. Weed and Seed, for example, is a federally funded community-driven strategic planning model that joins the resources of federal and local law enforcement agencies with community groups to develop methods of "weeding out" criminals in the community who participate in drugs and violence and then "seeding" these same areas with methods of neighborhood revitalization that restore community order and prevent crime. The Weed and Seed model is a broad model for bridging the resources of federal and local public safety agencies and community groups. An eight-site case study evaluation suggested mixed results for Weed and Seed success in reducing violent crime and increasing community capacity for crime control (Dunworth & Mills, 1999). Like other federally funded community-based initiatives the Weed and Seed program provided little specific guidance on how communities were supposed to organize and what crime prevention strategies should be employed. Much of the reluctance to provide specific guidance to local communities may have to do with the fact that policies geared at reducing crime have to be tailored to the idiosyncratic nature of local areas and local government politics.

The fact that violent crime and homicide patterns vary greatly by geographic area also suggests that universal approaches for its reduction may be less successful than programs developed with a knowledge of the local geographic conditions that produce violent areas. Lattimore et al.'s (1997) study of homicide in eight select U.S. cities noted that homicide patterns differed across cities for a variety of reasons. This report also noted that the trend in homicide rates across a number of cities was correlated with cocaine use levels measured in arrested adult males and the homicide clearance rate (Lattimore et al., 1997). Results from this study of eight cities suggested the need for localized responses to homicide.

While research has identified that homicide patterns have similarities and differences across locations, there are few examples in the literature that show how homicide patterns can be tied to localized preventative interventions (for exceptions see Kennedy & Braga, 1998). The goal of the present study, therefore, is to demonstrate how the patterns of homicide in five separate communities can be tied to specific local homicide prevention initiatives. In the following sections we discuss the prior literature on local criminal justice interventions to reduce homicide, provide an analysis of the characteristics of homicide incidents across five separate communities, and discuss specific policy recommendations in response to the homicide patterns. Finally, we conclude with a discussion of the need to strengthen the relationship between homicide analysis and prevention policies in local communities.

## **Results from Local Homicide Initiatives**

There are a number of localities that have experimented with collaborative community partnerships for reducing homicide and gun violence. The majority of these violence prevention programs focus on combining prevention, intervention and suppression by coupling law enforcement, education, and social service providers. The “Boston Gun Project” or Operation Ceasefire is one example of a collaborative community partnership between criminal justice agencies (e.g., prosecutors, police, and probation) and local activist groups (e.g., Ten Point Coalition) that focused on reducing youth homicide. The program involved an interagency problem-solving intervention that linked research analysis to the development of designed operations for intervention. The focus of the intervention was on individuals involved in illegal firearms trafficking and gang violence. The evaluation results of this program indicate that Operation Ceasefire was successful in significantly reducing youth homicide in Boston over time (Braga, Kennedy, Waring, & Piehl, 2001). The results from the Boston project reveal that problem-oriented partnerships that focus on identifying and targeting individuals and groups who have a high risk of involvement in violence can be effective in reducing homicide.

Similarly, Richmond, CA launched a comprehensive homicide initiative that involved the use of problem-oriented approach to homicide prevention and the use of both criminal justice enforcement and community-based education strategies (White et al., 2003). This homicide initiative involved the use of interagency collaboration between local, state, and federal law enforcement officials to target individuals involved in guns, drugs, and violence. Additionally, the program relied on community violence reduction meetings and educational materials explaining to residents how to eliminate drug dealing in their neighborhoods. The program also involved efforts to target youth at risk for violence, improved criminal investigations, youth outreach, and a variety of other localized community efforts. Results from the evaluation of the homicide program in Richmond indicate it was successful in reducing the overall homicide rate as well as specific types of homicides (e.g., homicides that occur outdoors, as a result of drive-by shootings, and those committed by offenders with prior convictions) (White et al.). The results from this evaluation, like that of Boston, suggest that localized homicide prevention programs can be effective at reducing homicide.

East Los Angeles, CA also experimented with a homicide and gun violence prevention initiative that was modeled on the Boston project. The program involved a collaborative community partnership between criminal justice, community, and faith-based organizations. In contrast to Boston, however, the East Los Angeles program focused almost exclusively on violence spawned from a rivalry between two gangs. Results from the evaluation of the program showed only mixed success (Tita, Riley, & Greenwood, 2003a). The evaluation indicated that violent and gun related crime decreased throughout the targeted intervention area, but that the effects of the program decreased over time.

Together, these select case studies provide evidence that local collaborations between law enforcement and community agencies can be effective in reducing homicide. Importantly, these programs appear to be relatively successful because they involve intervention strategies guided by a thorough assessment of the characteristics of the local homicides.

## ***Project Safe Neighborhoods***

Recognizing the success of the Boston program and the necessity for violence prevention to be geared to the local community, the U.S. Department of Justice launched the Project Safe Neighborhoods (PSN) initiative. The objective of PSN is to develop, implement, and evaluate data-driven violence reduction strategies at the local community level, and improve the long term ability of federal, state, and local partners to work together to prevent firearm related violent crime within their jurisdictions. Through a partnership between the local U.S. Attorney in each of the 94 federal jurisdictions and local criminal justice agencies and community groups PSN sites sought to develop a strong response to gun violence and homicide. Each PSN location, like the Boston Gun Project, was to focus on developing a collaborative multi-agency partnership guided by a thorough understanding of the nature of violence in their respective communities to develop appropriate violence prevention strategies. The RAND Corporation was charged with analyzing relevant data and suggesting potential policy directions for local PSN working groups in the San Francisco Bay, Los Angeles, and San Diego areas.

## ***Present Study***

The current study presents a comparative view of homicide characteristics in five separate PSN study sites and an assessment of the policy recommendations for each location. First, we assess whether the demographic characteristics of homicide victims and known offenders vary significantly across PSN sites. Next, we compare differences across PSN sites on weapons used and timing of homicides. Finally, we examine how the similarities and differences in homicide events in each location can be tied to specific policy recommendations for reducing homicide. This study, therefore, provides a descriptive example of how homicide research can guide prevention policies in local communities.

## **Data and Method**

In an effort to understand the nature of homicide in the five separate California PSN study sites we examined homicide case files for roughly four-year periods in select police districts with high crime in Oakland, Los Angeles, and San Diego. We also examined homicide patterns in Hayward, which has a population that is relatively small compared to the other PSN locations. Therefore, we examined homicide files for the entire city. We extracted homicide data from case files in the Hayward Police Department, the Oakland Police Department, the Los Angeles Sheriffs Department (LASD), the Los Angeles Police Department (LAPD), and the San Diego Police Department. From homicide investigation files we coded information on the time, location, motive, method of homicide, and the characteristics of victims and, where known, offenders. Given that homicides within cities are a local phenomenon and the need for PSN working groups to develop a specific focus area for intervention, each PSN site (with the exception of Hayward) chose a particular target area within their jurisdiction. PSN task forces in Los Angeles, Oakland, and San Diego selected geographic areas that corresponded to police reporting districts and were known to be areas characteristic for their high levels of gun crime and violence. Two areas of South Los Angeles were selected as the PSN target area: the 77<sup>th</sup> Street area of LAPD and the Century Station area of LASD. In Oakland the police reporting districts of East and West Oakland were selected. For the city of San Diego the Southeastern

division reporting district was selected as the target area for examination. The sample size and dates of homicide occurrence for each location are displayed in Table 1. In all, we examined 712 homicides across the five PSN study sites.

Table 1. Location and Sample Frame of Homicides in PSN sites

Location	Sample Size	Years
Hayward	39	January 1998 – December 2002
Oakland (East & West)	88	January 2000 – August 2003
Los Angeles County (Century Station)	193	January 2000-December 2003
Los Angeles City (77 <sup>th</sup> Street)	331	January 1999 – March 2003
San Diego (Southeastern)	61	January 1999 – March 2003

We chose to analyze homicides as the measure of violence for several reasons. In addition to being one of the most serious forms of violent crime, the detailed incident descriptions available in homicide reports help to understand the broader nature of violence in a given area. The difference between a homicide and an attempted homicide or an aggravated assault, for example, frequently does not depend on the intent of the offender but on the location of the wound and the speed of medical attention. As a result, the nature of homicide incidents may be relevant to other issues of violence occurring in a city. A city or neighborhood with a large percentage of gang or drug-related homicides is a strong indicator of a more prevalent problem with gang and drug violence in general. The rigor and consistency of homicide reporting is also greater than other forms of violent crime (Blumstein, 2000; Smith & Zahn, 1999). Differences in the interpretation of criminal statutes may result in some municipal police departments classifying violent crimes differently (e.g., aggravated assaults or robberies). The interpretation of a homicide is unlikely to vary by jurisdiction, because all involve the discovery of a dead body not likely to go undetected. Moreover, homicide cases are given greater attention and resources that translate into richer detail and information compared to other criminal offenses.

In the following section we present comparisons across the five PSN study sites on the time, location, method of homicide, and the characteristics of victims and, where known, offenders.

## Results

Table 2 presents descriptive comparisons across PSN sites on the characteristics of victims and known offenders. The distribution of ethnicity among homicide victims indicates substantive variation across PSN sites in the proportion of Black victims. The highest percentage of Black victims occurred in the Oakland (83%) and Los Angeles (LAPD) (76%) PSN sites. The fact that

East and West Oakland and 77<sup>th</sup> Street district of LAPD had a substantially higher percentage Black victims than Hayward and the Century Station area of LASD and the Southeastern division of San Diego is likely explained by demographic differences in the populations in the five locations. It is worth noting, however, that Blacks are over-represented among homicide victims in all locations. Blacks, for instance, represent only 11 percent of the population in Hayward but 23 percent of homicide victims. Hispanic victims were the second most-common ethnic group to be victims of homicide. Fifty-five percent of victims in the Century Station area of Los Angeles County (LASD), for example, were of Hispanic origin, compared to only 21 percent in the 77<sup>th</sup> Street district (LAPD). Hispanics make up the second largest share of homicide victims in Hayward (36%). These descriptive results also indicate that the Century Station area of Los Angeles County (LASD) had a higher percentage of Hispanic victims than the 77<sup>th</sup> Street district (LAPD), Oakland, and San Diego PSN sites.

Eighty-two percent of the homicide cases contained information on the ethnicity of known offenders. The distribution of offenders closely mirrors that of the victims, indicating that victims and offenders reflect similar demographic groups. For example, Blacks represented 92 percent of known offenders in East and West Oakland and 77 percent of known offenders in the 77<sup>th</sup> Street district of Los Angeles (LAPD). Descriptive results also indicate substantial variation across sites in the racial distribution of Black offenders. East and West Oakland and the 77<sup>th</sup> Street district of Los Angeles (LAPD), for example, had a larger percentage of Black homicide offenders than all other PSN sites. Similarly, there were substantial differences across PSN sites in the distribution of Hispanic offenders. Comparisons indicated that the Century Station area (LASD) had a higher percentage of Hispanic offenders (53%) than Hayward (30%), the 77<sup>th</sup> Street district (LAPD) (21%), and East and West Oakland (6%). The demographic composition of victims and known offenders in homicide cases in these PSN study sites suggests that Black and Hispanic minorities are over-represented across all five locations. The minorities with the greatest presence in a particular location (e.g., Blacks in East and West Oakland and 77<sup>th</sup> Street district of Los Angeles) make up the majority of both offenders and victims. The data also indicate that the majority of homicide cases were intra-racial. Where offender information was known, 80 percent of Black and 68 percent of Hispanic victims were killed by a member of their own racial or ethnic group. These results are consistent with other work in noting that victims and offenders come from similar demographic groups (Miethe & Regoeczi, 2004).

The age and gender distributions of victims and known offenders across PSN sites was very similar (see Table 2). Across all five PSN sites males and young adults make up the vast majority of homicide victims and offenders. For example, of all East and West Oakland homicides where the information was known, only one offender and two victims were under the age of 18. The average age of victims and known homicide offenders varies from 25 to 31 across the five PSN sites. On average males comprise over 80 percent of homicide victims and known offenders across all five locations, suggesting that males are more likely to kill and be killed.

Table 2. Demographic Characteristics of Homicide Victims and Offenders

Demographic Characteristics	Hayward	Century Station	77 <sup>th</sup> Street	East/West Oakland	South-eastern
% Black victim (N=712)	23	40	76	83	61
% Hispanic victim (N=712)	36	55	21	13	26
% Black offender (N=592)	43	47	77	92	53
% Hispanic offender (N=596)	30	53	21	6	43
% Male victim (N=692)	85	90	86	84	84
% Male offender (N=607)	96	98	97	96	96
Average victim age (N=694)	28	28	29	31	28
Average offender age (N=258)	30	30	27	25	28

Together, these data suggest that homicide is a problem concentrated among young, but not juvenile, minority males in all five PSN locations. These findings mirror what has previously been acknowledged in the homicide literature, in noting that homicide victims and known offenders are concentrated at disproportionate levels among young minority males (Blumstein, 2000; Miethe & Regoeczi, 2004). These patterns are also consistent with research on the relationship between age and crime, that indicates young males are over-represented in both violent offending and victimization (Gottfredson & Hirschi, 1990).

Next, we turn to examining the offense-related characteristics of the homicide incidents. Table 3 displays the results examining the differences among offense-related characteristics for homicides across the five PSN sites. When examining the relationships between victim and offenders it is apparent that stranger-related homicides are more prevalent in the Century Station area of Los Angeles County (LASD) (37%), the 77<sup>th</sup> Street district of Los Angeles (LAPD) (41%), and San Diego (39%) locations than in Hayward (7%) and Oakland (14%). Specifically,

it appears that San Diego and both Los Angeles sites (LASD and LAPD) have a higher percentage of homicides involving strangers than Oakland. In contrast, the majority of homicides in all five PSN locations occur in outdoor locations and there are no substantive differences between groups in this regard. In terms of weapons used in homicide events, the findings indicate substantive differences between Hayward and other PSN sites in the preference for handguns. Handguns, for example, are used in 24 percent of homicides in Hayward compared to 65 percent of homicides in Oakland.<sup>2</sup> In the PSN locations of Los Angeles (LAPD and LASD), Oakland, and San Diego it appears that handguns are the weapons of choice in homicide events. These findings are consistent with other research in large metropolitan cities that indicate handguns are the mostly likely weapons used in homicides (Lattimore, et al., 1997).

Table 3. Offense Characteristics of Homicide Events

Offense Characteristic (in %)	Hayward	Century Station	77 <sup>th</sup> Street	East/West Oakland	South- eastern
Victim/offender strangers (N=439)	7	37	41	14	39
Outdoors (N=680)	59	50	46	61	50
Handgun (N=680)	24	64	64	65	61
Drive-by (N=636)	11 <sup>d</sup>	31	29	41	12

In terms of the mode of killing the descriptive comparisons indicate drive-by shootings are more prevalent in the Century Station area of Los Angeles County (31%), the 77<sup>th</sup> Street district of Los Angeles (29%), and East and West Oakland (41%) than they are in Hayward (11%) or San Diego's Southeastern division (12%).<sup>3</sup>

<sup>1</sup> The reader may note that San Diego and both the Los Angeles sites have significantly more homicides involving strangers than Oakland, which comprised 14 percent, but was not significantly more than Hayward, which comprised 7 percent. This is likely due to lack of statistical power given the small frequency of these homicides in Hayward.

<sup>2</sup> Thirty-six percent of cases in Hayward involved a gun that was not identified in homicide files. If these unidentified guns were in fact handguns it is possible that the percentage of cases in Hayward involving handguns could be as high as 56 percent.

<sup>3</sup> Although we attempted to compare homicide motivation, we could not do so because these data were missing in approximately 80 percent of the cases in Hayward and 49 percent of the cases in Los Angeles (both target areas). In contrast, motivations were unknown in approximately 22 percent of cases in Oakland and 12 percent San Diego. Therefore, it is unclear from these data if drug, gang, and other related motivations for killings are actually more prevalent in one location or another or if differences are the simple artifact of missing data.

The temporal patterns of homicides appear to be very similar across all locations in terms of day of week and month of year. Homicides are the most prevalent on the weekend days of Saturday (19%) and Sunday (18%), and in the month of August (10%).

There do appear to be substantive differences across the five PSN sites in the time of day in which homicides are most likely to occur. Table 4 displays the proportion of homicides for each of the five PSN sites occurring within 4-hour blocks of the day. Across all five sites, about 35 percent of homicides occurred between the of 8pm and 11:59pm, and an additional one in five occurred between 4pm and 7:59pm. There were three blocks of time where the proportion of homicides differed across sites. Hayward (18 %) experienced a larger proportion of homicides between the early morning hours of 4am and 7:59am than either the Century Station area of LASD (5%) or LAPD’s 77<sup>th</sup> Street district (3%). Differences also occurred in the evening hours. Again, these differences are largely attributed to Hayward. With about two out of every five Hayward homicides occurring between 4pm and 7:59pm, the proportion of homicides occurring in this block of time was more than twice that in the Century Station area of LASD and the 77<sup>th</sup> district of LAPD (19% each) and more than three times that in east and West Oakland (12%). In contrast, a smaller proportion of homicides (8%) in Hayward occurred between 8pm and 11:59pm relative to all other sites. The greatest difference was with East and West Oakland. In this site, about 57 percent of homicides were committed during this time block, which is seven times greater than Hayward. East and West Oakland’s high rate of homicides in this 4-hour period was also greater than the rate of LASD’s Century Station (35%) and LAPD’s 77<sup>th</sup> Street (31%) in the same time block. The temporal pattern of homicides in these PSN study sites is consistent with other work indicating that lethal violence occurs most often during weekends and evening hours (Snyder & Sickmund, 1999). The results indicate that with the exception of Hayward, homicides occur most often during the late evening hours.

Table 4. Homicides by Time of Day

Time Block (in %)	Hayward	Century Station	77 <sup>th</sup> Street	East/West Oakland	South- eastern
Midnight-3:59am (N=700)	18	19	19	12	15
4am-7:59am (N=700)	18	5	3	6	7
8am-11:59am (N=700)	10	7	13	4	3
Noon-3:59pm (N=700)	5	15	15	11	10

4pm-7:59pm (N=700)	41	19	19	12	23
8pm-11:59pm (N=700)	8	35	31	57	42

### Summary of Findings

The results from the analysis of homicide events across the five PSN study sites indicate both similarities and differences in the characteristics of homicides. Homicide victims and known offenders are concentrated among Hispanic or Black minority populations in each location. The difference in ethnicity of homicide victims and offenders across PSN sites appears to reflect community differences in racial composition (see Tita et al., 2004; Wilson & Riley, 2004). The majority of homicide victims and known offenders are young adults. The majority of homicide offenses occur during evening hours, on weekends, and outdoors. Handguns appear to be the weapon of choice in all PSN locations, with the exception of the city of Hayward. A small proportion of homicide victims and offenders are strangers in Hayward and Oakland. However, in both Los Angeles sites and San Diego stranger-related homicides make up a substantial proportion of murders. Drive-by shootings appear to be fairly common in Los Angeles and Oakland PSN sites. Unfortunately, too much missing data exists to accurately compare gang and drug related motivations of homicides across locations. The culmination of these analyses suggests that there are similar patterns of homicides across locations with slight variations in the method and weapons used and the daily time pattern in the PSN locations. The findings, therefore, suggest few substantive differences in the characteristics of homicide events between sites and primarily differences in the demographic composition of offenders and victims, the timing of homicides, and the mode (drive-by) of killings.

Several key findings emerge from the analysis of homicide patterns across the five PSN locations that provide guidance for potential interventions to reduce violence. Handguns are synonymous with homicide in the majority of these locations. A large proportion of those who commit and are victims of homicide are young minority males. The majority of homicide offenses occur outdoors and involved non-stranger related offenses (e.g., acquaintances, family, and friends). Drive-by homicides are common in Los Angeles and Oakland. Homicides are most prevalent between 4pm and 7:59pm in Hayward, but between 8pm and 11:59pm in all other sites. While gangs are a notable problem in inner-city neighborhoods in California, especially Los Angeles (Tita et al., 2003b), these data did not permit the ability to examine this issue across sites.

### Summary of Potential Interventions

Our analysis of homicide patterns across the five PSN sites indicate that many homicides occur among young minority adults, involve guns, occur outdoors, and result from disputes between strangers. These patterns are important because they link to several potential homicide interventions that have proven to be successful in other localities. In the following section we discuss several potential interventions and how they could be applied to the five PSN sites.

### *Directed Patrol and Field Interrogations*

Directed patrol involves increasing police patrol to reduce violent crime in targeted areas and during peak times of the day. Research indicates that both “places and offenders are highly time-sensitive targets” (Sherman, 1992; p. 179). Directed patrol typically involves having officers working in particular high crime areas to concentrate their focus on targeting specific types of behaviors like traffic offenses, with the goal of catching more serious offenses (e.g., gun possession) or offenders (e.g., those wanted on warrants). Field interrogations involve officers spending extra-time questioning motorists, pedestrians, and others they stop for minor violations. The logic of this approach is that it will increase the perception that the probability of being caught for committing a violent crime is high, either by catching would-be offenders or changing an area’s perception of the likelihood of apprehension (Sherman, 1992). Research indicates that field interrogations and enforcement of traffic and disorderly conduct offenses are associated with lower rates of homicide and robbery (Wilson & Boland, 1978; Sampson & Cohen, 1988; MacDonald, 2002). Directed patrol in high crime areas also has shown to be an effective strategy in several cities for reducing homicide and gun violence, including Los Angeles (Tita et al., 2003a; Tita et al., 2003b), Indianapolis (McGarrell et al., 2001), and Kansas City (Sherman & Rogan, 1995).

Directed patrol and field interrogations have the advantage of requiring little coordination with other public safety agencies, and can be implemented swiftly. Across all five PSN sites patterns of homicide suggest that directed patrol could focus on particular days and times. Specifically, this strategy could be employed in each site on Saturday and Sunday, and during the early evening hours in Hayward and the late evening hours in all the other sites. This may at least limit violence in public spaces at these times, but the potential for the diffusion of homicide to other time periods necessitates close examination. Homicides, however, are fairly rare in the city of Hayward to suggest a specific geographic concentration of patrol efforts. In addition, when a series of violent incidents has occurred in a given area (e.g., armed robberies), police could also temporarily saturate an area with officers to “crackdown” on offenders in the area and reduce violent crime opportunities. Such an approach has proven to be effective in other cities for temporarily reducing crime (Sherman, 1990).

There may be limits to the effectiveness of directed patrol and field interrogations if the broader community perceives inconvenience resulting from increased police presence and stricter enforcement of traffic laws. This issue is particularly relevant in Los Angeles and Oakland - two police departments that are currently under consent agreements for issues relating to racial profiling. Gaining community trust and acceptance to make directed patrol effective may take a significant public relations effort. The costs of directed patrol would be incurred primarily by each police department, and therefore may be only as effective as department resources allow. Research, however, indicates that workload and manpower adjustment can be used to efficiently shift police resources to specific areas and times (Sherman, 1992). Even if collective bargaining agreements do not permit shifting rotations for officers without overtime pay, the benefits of directed patrol for deterring potential young adults from carrying guns during peak times of violence and homicide and in specific high crime areas suggests that it may be a worthy investment of resources in all five PSN locations.

## ***Firearms Law Enforcement***

Given the high proportion of homicides that are committed with firearms in all PSN locations, authorities could consider greater enforcement of firearms laws. Vigorous federal prosecution of prohibited possessors of firearms is one method to deter violent offenders from committing gun crimes. Convicted offenders are required to serve time in federal prisons outside the state of California. Interviews with active offenders suggest that federal prison time outside the state of California is a potential deterrent to gun crime (Tita et al., 2003a). This strategy also involves “retailing the message” to the community and “would be” offenders that engaging in violent activity and unlawful firearm possession will no longer be tolerated and will result in stiff penalties, including federal prison time. Prosecution of firearms cases was a key component of violence reduction strategies in Boston (Kennedy et al., 1996; Braga et al., 2001), Richmond (project exile) and Minneapolis (Kennedy & Braga, 1998). “Crackdowns” on specific persons are a related means for seizing illegal weapons and stopping violence. This tactic entails focusing probation, parole, and the police on a select group of violent persons for a short amount of time and appears to have helped reduce violence in Indianapolis, Indiana (Horty & Hutchens, 2004) and Richmond, California (White et al., 2003). Conducting visits and searches of probationers, parolees, and those with outstanding warrants known to engage in violence could increase the chance of seizing illegal weapons from such persons and removing them from the streets.

The benefit of such strategies is that, once planned, they can be carried out swiftly and yield immediate results. Duties can also be spread among federal and local law enforcement task forces. The drawback is that involving more agencies—e.g., coordinating efforts with parole and probation officers and gun law prosecutors—requires time for planning and coordination.

## ***Enforcing Collective Responsibility***

In some areas, holding gangs collectively responsible for the activities of individual members could help reduce crime. This intervention entails compiling a list of “vulnerabilities” for each gang member. These serve as “levers” that are “pulled” for each individual when any member commits a violent act. Levers may include serving outstanding warrants, seizure of assets, or stringent enforcement of regulations regarding parole and probation, public housing residency, vehicle licensure, child support, or truancy. In addition to these “sticks,” gangs could also offered “carrots” in the form of social service incentives for desisting from crime, including job referrals and education. Enforcing collective responsibility also entails “retailing the message” to violent offenders that further violence will not be tolerated and that services are available to help them lead law-abiding lives. A similar approach has shown some success in reducing homicide in Boston (Kennedy et al., 1996; McDevitt et al., 2003).

The multi-agency group needed to implement a strategy of enforcing collective responsibility is already in place for all PSN sites, although additional agencies may need to be represented. Time would be needed to gather the required information about offenders and their vulnerabilities. It is not clear from these data that gang and drug related homicides occur at a level that warrants an exclusive focus on gangs. Earlier work in Oakland suggested that drug related killings occurred through mostly loosely structured groups and not the highly structured gang organizations familiar to Southern California (Wilson & Riley, 2004). The very limited information on

homicide motives in each area does not offer enough evidence on how helpful this intervention would be in these locations. On the other hand, discussions with homicide investigators across locations suggest that there is a high enough prevalence of gang and drug related killings to warrant attempting this collective responsibility intervention, especially in the City of Los Angeles (Tita et al., 2003b; Tita et al., 2004).

### ***Education and Treatment***

In addition to criminal justice interventions, education, life skills training, and substance abuse treatment can be critical components of violence-prevention strategies. In such interventions, individuals at risk for committing crimes (e.g., probationers, parolees, marginal students, and the unemployed) can learn to lead lawful lives free of violence and substance abuse. These types of programs can assist individuals with daily life and help prepare them for the future, an area often lacking in at-risk youth at greatest risk for serious violence (Loeber & Farrington, 1998). Life skills training can also produce results in a short time (Lipsey & Wilson, 1998). There are several difficulties, however, for assessing the potential benefits of this option in all PSN sites. First, such programs can be very costly and often beyond the means of local jurisdictions. Second, the benefits from some such investments can take years to realize. Research, for example, indicates that parent training and therapy for families with young school-age children who have shown aggressive behavior can be an effective method of preventing future violence in adolescence and adulthood (Greenwood et al., 1998). This type of program, however, takes years for its violence reduction benefits to manifest. The long-term benefits of these programs, however, do exceed the costs of diverting a youth from a life of crime and violence (Cohen, 1998). The fact that the majority of homicide offenders and victims are young minority men suggests that early prevention efforts focused on these at-risk populations can achieve lasting violence reduction effects.

### **Conclusions**

The preceding discussion demonstrated how the analysis of homicide patterns in local areas could be used to develop and recommend interventions for communities impacted by violence. The success of any of the recommended interventions depends on good relations between the police and the community, a commitment to program fidelity, and rigorous program evaluation. The analysis of homicide files provides a first step for assessing violence in a community and developing a data-driven intervention. Engaging criminal justice officials and community members to construct violence-reduction strategies is the next step in the process. Once mutually agreeable strategies have been adopted outcome evaluations can be designed that assess their effectiveness at reducing homicide in each targeted area and identify any potential elements for modification or improvement.

## References

- Baller, R. D., Anselin, L., Messner, S., Deane, G., & Hawkins, D. F. (2001). Structural covariates of U.S. country homicide rates: Incorporating spatial effects *Criminology*, 39, 561-590.
- Blumstein, A. (2000). Disaggregating the violence trends. In A. Blumstein & J. Wallman (Eds.), *The crime drop in America* (pp. 13-44). New York, NY: Cambridge University Press.
- Blumstein A. & Rosenfeld, R. (1998). Explaining recent trends in U.S. homicide rates. *Journal of Criminal Law and Criminology*, 88, 1175-1216.
- Blumstein, A., & Wallman, J. (Eds.). (2000). *The crime drop in America*. New York, NY: Cambridge University Press.
- Braga, A. A., Kennedy, D. M., Waring, & E. J., Piehl, A. M. (2001). Problem-oriented policing, deterrence, and youth violence: An evaluation of Boston's operation ceasefire. *Journal of Research in Crime and Delinquency*, 38, 195-226.
- Cohen, J. & Tita, G. (1999). Spatial diffusion in homicide: Exploring a general method of detecting spatial diffusion processes. *Journal of Quantitative Criminology*, 15, 373-378.
- Cohen, M. A. (1998). The monetary value of saving a high-risk youth. *Journal of Quantitative Criminology*, 14, 5-33.
- Cork, D. (1999). Examining space-time interaction in city-level homicide data: Crack markets and the diffusion of guns among youth. *Journal of Quantitative Criminology*, 15, 379-406.
- Dugan, L., Rosenfeld, R., & Nagin, D. S. (2003). Exposure reduction or retaliation? The effects of domestic violence resources on intimate-partner homicide. *Law and Society Review*, 37, 169-98.
- Dunworth, T., & Mills, G. (1999). *National evaluation of Weed and Seed. Research in Brief*. Washington, DC: National Institute of Justice, US Department of Justice.
- Fagan, J., Zimring, F., & Kim, J. (1998). Declining homicide in New York City: A tale of two trends. *Journal of Criminal Law and Criminology*, 88, 1277-1324.
- Felson, M. 1994. *Crime and everyday life: Insights and implications for society*. Thousand Oaks, CA: Pine Forge Press.
- Fox, J. A., & Piquero, A. R. (2003). Deadly demographics: Population characteristics and forecasting homicide trends. *Crime and Delinquency*, 49, 339-359.
- Gartner, R. (1990). The victims of homicide: A temporal and cross-national comparison. *American Sociological Review*, 55, 92-106.

- Gottfredson, M. & Hirschi, T. (1990). *A general theory of crime*. Palo Alto, CA: Stanford University Press.
- Greenwood, P. W., Model, K. E., Rydell, C. P., & Chiesa, J. R. (1998). *Diverting children from a life of crime: Measuring costs and benefits*. Santa Monica, CA: RAND MR-699-1-UCB/RC/IF.
- Griffiths, E., & Chavez, J. M. (2004). Communities, street guns and homicide trajectories in Chicago, 1980-1995: Merging methods for examining homicide trends across space and time. *Criminology*, 42, 941-978.
- Horty, T., & Hutchens, J. (2004). *Warrant enforcement*. Presented at Specialized Workshop for PSN Coordinators and Research Partners, New Orleans.
- Kennedy, D. M., Piehl, A. M., & Braga, A. A. (1996). Youth violence in Boston: Gun markets, serious youth offenders, and a use-reduction strategy. *Law and Contemporary Problems*, 59, 147-196.
- Kennedy, D. M., & Braga, A. A. (1998). Homicide in Minneapolis: Research for problem solving. *Homicide Studies*, 2, 263-290.
- Land, K. C., McCall, P. L., & Cohen, L. E. (1990). Structural covariates of homicide rates: Are there any invariances across time and social space? *American Journal of Sociology*, 95, 922-963.
- Lattimore, P. K., Riley, K. J., Trudeau, J., Leiter, J., & Edwards, S. (1997). *Homicide in eight U.S. cities: Trends, context and policy implications*. Washington, DC: National Institute of Justice, U.S. Department of Justice, NCJ 167262.
- Lipsey, M. W., & Wilson, D. (1998). Effective interventions for serious juvenile offenders. In R. Loeber & D. P. Farrington (Eds.), *Serious and violent juvenile offenders* (pp. 313-345). Thousand Oaks, CA: Sage.
- Loeber, R., & Farrington, D. P. (Eds.) (1998). *Serious and violent juvenile offenders*. Thousand Oaks, CA: Sage.
- Ludwig, J., Cook, P. J (Eds.). (2003). *Evaluating gun policy: Effects on crime and violence*. Washington, DC: Brookings Institution Press.
- MacDonald, J. M. (2002). The effectiveness of community policing in reducing urban violence. *Crime and Delinquency*, 48, 592-618.
- McDevitt, J., Braga, A., Nurge, D., & Buerger, M. (2003). Boston's youth violence prevention program: A Comprehensive community-wide approach. In S. H. Decker (Ed.), *Policing gangs and youth violence* (pp. 53-76). Belmont, CA: Wadsworth.

- McGarrell, E. F., Chermak, S., Weiss, A., Wilson, J. (2001). Reducing firearms violence through directed police patrol. *Criminology and Public Policy*, 1, 119-148.
- Miethe, T. D., & Regoeczi, W. C. (1994). *Rethinking homicide: Exploring the structure and process underlying deadly situations*. New York, NY: Cambridge University Press.
- Miethe, T. D., Stafford, M. C., & Douglas, S. (1990). Lifestyle changes and risks of criminal victimization. *Journal of Quantitative Criminology*, 6, 357-376.
- Messner, S. F., & Tardiff, K. (1986). The social ecology of urban homicide: An application of the 'routine activities' approach. *Criminology*, 23, 241-267.
- Morenoff, J. D., R. J. Sampson, R. J., & Raudenbush, S. (2001). Neighborhood inequality, collective efficacy, and the spatial dynamics of homicide. *Criminology*, 39, 517-560.
- Neter, J., Wasserman, W., & Kutner, M. H. (1996). *Applied linear statistical models*. Boston: McGraw-Hill.
- O'Brien, R. M. (2003). UCR violent crime rates, 1958-2000: Recorded and offender-generated trends. *Social Science Research*, 32, 499-518.
- Parker, K. P. (2004). Industrial shift, polarized labor markets, and urban violence: Modeling the dynamics between the economic transformation and disaggregated homicide. *Criminology*, 42, 619-646.
- Parker, R. N., & Auerhahn, K. (1998). Alcohol, drugs, and violence. *Annual Review of Sociology*, 24, 291-311.
- Roundtree, P. W., Land, K. C., & Miethe, T. D. (1994). Macro-micro integration in the study of victimization: A hierarchical logistic model analysis across Seattle neighborhoods. *Criminology*, 32, 387-414.
- Sampson, R. (1987). Urban black violence: The effect of male joblessness and family disruption. *American Journal of Sociology*, 93, 348-382.
- Sampson, R., & Cohen, J. (1988). Deterrent effects of the police on crime: A replication and theoretical extension. *Law and Society Review*, 22, 163-189.
- Sherman, L. W. (1990). Police crackdowns: Initial and residual deterrence. In M. Tonry & N. Morris (Eds.), *Crime and Justice: A Review of Research* (Vol. 12, pp. 1-48). Chicago: University of Chicago Press..
- Sherman, L. W. (1992). Attacking crime: Policing and crime control. In M. Tonry & N. Morris (Eds.), *Crime and Justice: A Review of Research* (Vol. 15 pp. 159-230). Chicago: University of Chicago Press.

- Sherman, L. W., & Rogan, D. P. (1995). Effects of gun seizures on gun violence: 'hot spots' patrol in Kansas City. *Justice Quarterly*, 12, 673-693.
- Sherman, L. W., Gottfredson, D. C., MacKenzie, D., Eck, J., & Bushway, S. (1998). *Preventing Crime: What works, what doesn't, what's promising*. National Institute of Justice Research Brief. Washington, DC: National Institute of Department of Justice.
- Smith, D. M., & Zahn, M. A. (1999). *Studying and preventing homicide: Issues and challenges*. Thousand Oaks, CA: Sage.
- Syner, H., & Sickmund, M. (1999). *Juvenile offenders and victims: 1999 national report*. Pittsburgh, PA: National Center for Juvenile Justice.
- Tennenbaum, A. N., & Fink, E. L. (1994). Temporal regularities in homicide: Cycles, seasons, and autoregression. *Journal of Quantitative Criminology*, 10, 317-342.
- Tita, G., Riley, J. R., & Greenwood, P. (2003a). From Boston to Boyle Heights: Prospects of a 'pulling levers' strategy in a Los Angeles barrio. In S. Decker (Ed.), *Gangs and youth violence* (pp. 102-130). Belmont, CA: Wadsworth.
- Tita, G., Riley, J. K., Ridgeway, G., Grammich, C., Abrahamse, A., & Greenwood, P. (2003b). *Reducing gun violence: Results from an intervention in East Los Angeles*. Santa Monica, CA: RAND MR-1764-NIJ.
- Tita, G., Hiromoto, S., Wilson, J. M., Christian, J., & Grammich, C. (2004). *Gun violence in the LAPD 77<sup>th</sup> Street area: Research results and policy options*. Santa Monica, CA: RAND WR-128-OJP.
- White, M. D., Fyfe, J., Campbell, S. P., & Goldkamp, J. S. (2003). The police role in preventing homicide: Considering the impact of problem-oriented policing on the prevalence of murder. *Journal of Research in Crime and Delinquency*, 40, 194-225.
- Wilson, J. Q., & Boland, B. (1978). The effect of the police on crime. *Law and Society Review*, 12, 267-390.
- Wilson, J. M., & Riley, K. J. (2004). *Violence in East and West Oakland: A descriptive analysis*. Santa Monica, CA: RAND WR-129-OJP.
- Wolfgang, M. E. (1958). *Patterns in criminal homicide*. Philadelphia: University of Pennsylvania Press.