

Strategies for Reducing Gun Violence: The Role of Gangs, Drugs and Firearm Accessibility

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Table of contents

[Overview of the Report](#)

[Introduction](#)

[Recent Trends in Gun Violence](#)

- [Gangs, Drugs and Gun Availability](#)
 - [Gangs](#)
 - [Drug Markets](#)
 - [Accessibility to Firearms](#)
- [Crime Guns in Canada](#)
 - [Domestic Sources](#)
 - [International Trafficking](#)

[Strategic Considerations in Addressing Gun Violence](#)

- [Characteristics of Gangs](#)
 - [Gang Members](#)
 - [Gangs in the International Context](#)
 - [The Nature of Gang Violence](#)
- [Factors Associated with Gun Violence](#)
 - [Drug Use, Gang Membership and Firearms:](#)
 - [Gun Accessibility and Violence](#)
 - [Illegal Gun Markets:](#)
- [Promising Interventions](#)
 - [Limiting Access to Ammunition:](#)
 - [Civil Gang Injunctions are Effective](#)
 - [The Boston Model](#)
 - [Balancing Suppression and Intervention:](#)
 - [Collaboration](#)
 - [Legitimizing the Intervention](#)
 - [Linking Research to Interventions:](#)

[Conclusion and Future Directions](#)

[Bibliography](#)

[Additional Program Resources](#)

[Annotated Bibliography](#)

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Overview of the Report

This report on strategies to reduce gun violence begins with a brief overview of recent trends in gun violence with a particular focus on emerging trends and changes in Canada. A review of literature covers the linkages between gangs, drug markets and firearm accessibility and firearm violence. When possible, the impacts of these factors on patterns of violence are explored at both the individual and community levels.

Overall, the report highlights the prevalence and patterns of homicide and gun violence in North America, Britain, Mexico, Canada and other countries. Particular attention is paid to the role of gangs and drug markets in facilitating violence. In addition, research findings and program evaluations aimed at reducing gun violence are also included. Given the exceptionally high rates of interpersonal violence (especially gun violence) within the United States, and its long history of gang violence, it is not surprising that much of the literature is centered on programs and interventions in America. If the current trends of gun violence involving youth continue in Canada, it is important that Canadian policies learn from the successes and failures of recent gun violence reduction strategies elsewhere.

Drawing from the literature review as well as the first author's experiences in the design, implementation and evaluation of violence reduction strategies, this report includes a broad set of policy recommendations that might prove useful in the effort to control gun violence within the larger census metropolitan areas (CMAs) in Canada. The case is made that before any policies aimed at reducing gun violence are implemented, it is extremely important to conduct basic research into the nature of local gun and gang violence. One must first understand who is involved, and why they are involved in violence, before one can design and implement an effective gun violence strategy.

Finally, the report includes an Annotated Bibliography of the most current and useful gun and gang violence prevention and intervention resources.

Introduction

It is estimated that more than 200,000 people throughout the world die each year as the result of homicides, suicides or accidents involving small arms. Until very recently, gun violence showed a decade long decrease in the US. Even during this "low" period in gun violence, many Americans still die by gunfire and, of course, many more are affected by non-fatal gun violence. In 2004, there were 11,344 gun murders, 164,998 gun assaults, and 162,938 gun robberies (Bureau of Justice Statistics, US). Similar trends are noted in Canada where after a decade long decrease in violence, homicide rates began to increase with gun homicide trending upwards and alternating with knives as the most frequently used weapon. Though Canada has a much lower rate of gun homicide than the US, there is concern that the current gap may begin to narrow. After a spate of high profile gun murders in Toronto committed by rival gangs and involving innocent victims, Mayor David Miller of Toronto implicated the US experience with gun violence by stating that, "(T)he US is exporting its problem of violence to the streets of Toronto." To prevent gun violence in Canada from rivalling levels found in its southern neighbour, lawmakers in Canada would do well to learn from the decades of failed, as well as successful, US policies aimed at curbing gangs and gun violence.

The objective of this synthesis report is to document the prevalence and nature of gun violence in Canada, North America and elsewhere. An overview of the policies and interventions being used to address gun violence is also included. Particular attention will be paid to issues related to gangs, drug markets, and firearm accessibility both as they pertain to the levels and patterns of gun violence, and the types of interventions implemented to reduce gun violence.

Developing and implementing effective programs to reduce gun violence deserve high priority at all levels of government. National policies are most useful in addressing issues of gun accessibility both in terms of the access to firearms by private citizens and restricting the flow of illegal firearms across one's borders. Federal governments also need to provide the resources (social services, criminal justice agencies, perhaps data) and the funding necessary to implement specific gun violence initiatives at the local level. Local governments must contribute similar resources, but most importantly, local leaders need to insure that the policies and interventions being implemented are specifically tailored to the nature and causes of gun violence in their area.

Drawing heavily upon previous work conducted in the United States (especially California), particular attention will be given to efforts aimed at curbing gun violence using the "problem solving" approach. This approach is consistent with the *UN Guidelines for Prevention of Crime* (2002) in that rather than promoting a "one size fits all" approach to gun violence, research and local knowledge

is recognized as an essential element in the design and implementation of effective intervention, prevention and suppression efforts. The findings from this research can be used to inform policy makers and practitioners about central issues associated with local gun violence.

Recent Trends in Gun Violence

Guns and gun violence have become a growing concern for Canadians, especially within the larger census metropolitan areas (CMAs). Data recently published by the Canadian Centre for Justice Statistics ¹ shows that the overall homicide rate in Canada continues to remain relatively low (2.04 per 100,000 in 2005), especially in comparison to the United States (5.06 per 100,000 in 2005). The data also highlight several trends that may signal potentially important shifts in the patterns of homicide within Canada.

First, it should be noted that following years of decline, 2005 represented the second consecutive year that homicide rates in Canada have increased. The rate at which firearms are used in the commission of homicides has remained relatively stable over time. However, in 2005, firearms edged out knives to comprise the largest single category of weapon used to commit homicide. More importantly there has been a marked shift in the types of firearms being used. Prior to the mid-1990s, rifles and shotguns were the primary type of weapon used in homicide. In 2005, handguns (58 percent) were used in nearly twice the number of homicides than were rifles/shotguns (30 percent).

In 2005, gang homicides registered an alarming 48 percent increase over the total number from the prior year (72 to 107). Most of the increase in gang homicide was concentrated in the largest CMAs, especially within Ontario and Quebec. Whereas non-gang homicides involve firearms in less than 30 percent of all incidents, firearms were used in nearly 70 percent of all gang homicides. Not surprisingly, gang homicides occur in the larger CMAs.

Identifying trends in gun violence and understanding the reasons that gun violence might be increasing, especially among gang involved youth, has become a priority for governments and citizens. In order to design and implement effective gun violence reduction policies, this report provides a review of the gun violence prevention literature, focusing heavily on efforts to reduce gun violence among gang members.

After a decade long decline, gun violence is increasing in many cities in the United States. Much of this increase is being attributed to the revitalization of urban street gangs. Even in Los Angeles, where overall levels of violence continue to fall, gang violence is once again rising. The increase in gun/gang violence has not been limited to the US. Like Canada, Britain, especially in South London, has also experienced a spate of firearm homicides that have been attributed to conflicts among gangs and groups of youth involved in the illegal narcotics market.

Gangs, Drugs and Gun Availability

Attempts to explain unacceptably high levels of gun violence in the United States, Canada, and the rest of the world, are firmly centred on the issues of gangs, drugs, and gun availability. A brief overview of the established findings for each context is presented below.

Gangs

One of the more robust findings to emerge from both cross-sectional and longitudinal studies of youth addresses the relationship between gang membership and individual levels of delinquency and offending. Research in both the US and Canada has demonstrated that even after controlling for individual-level attributes gang members are more delinquent and commit more crime than do non-gang members (Esbensen and Huizinga 1993; Thornberry, Krohn, Lizotte, and Chard-Wierschem 1993; Huizinga 1997; Thornberry et al. 2003; Huff 2004; Gatti, Tremblay, Vitaro, and McDuff, 2005). The conclusion drawn most frequently from these findings is that the observed positive relationship between gang membership and offending levels cannot be explained through a simple process of self-selection, wherein only highly delinquent youth join gangs. Instead, there are additional influences that gang membership brings to bear in facilitating higher levels of offending among individuals who join. This is especially true for behaviours related to guns and violence. For instance, a recent study in Canada has shown that participation in gangs greatly increases the probability that a juvenile will be involved in an altercation (as offender or victim) involving guns (Erickson and Butters, 2006). A consistent story emerges from a series of studies conducted in such US cities as Denver, CO, Pittsburgh, PA, Rochester, NY and Seattle, WA. Using longitudinal data on youth, the researchers were able to identify whether or not an individual joined a gang, and for those who did join, the length of one's active membership in the gang. The findings clearly show that gang members were more likely to carry, use, and/or be victimized by a firearm. Furthermore, within the sample of individuals who did join a gang, the association with firearms was highest when the youth was active in the gang and retreated during periods of non-gang membership. ²

The above finding has implications for patterns and levels of firearm violence at the community level. As membership in a gang facilitates an increase in individual-level firearm related violence, that violence tends to be spatially concentrated around "set space" (the activity space) of gangs. ³ The research producing the aggregate level finding was conducted in what is known as an "emerging" gang city. This label refers to the class of cities that only began to experience serious problems with violent urban street gangs in the early 1990s. The other class of cities include places like Los Angeles and Chicago, which have had a long history of

gangs and are known as "chronic" gang cities. Though some of the initial emergent gang cities have experienced a significant decline in gang activity, others appear well on their way towards becoming "chronic" gang cities. The problem of violent urban street gangs in Canada appears to be recent enough that it can be thought of in the context of "emerging."

Very little is known generally about how urban street gangs evolve over time within the class of emerging gang cities. Canada may provide social scientists with an invaluable opportunity to study youth groups and gangs to determine the conditions that support the evolution of local gangs from loosely affiliated groups into local neighbourhood institutions. Furthermore, it is important to gain some understanding of the types of intervention activities that might be most effective at stunting such development before gangs and gang violence become a "chronic" problem. This latter point is especially important within the Canadian context as studies in the United States have demonstrated that gangs and gang violence often begins in major metropolitan areas and spreads to smaller cities. ⁴ Gangs have already diffused to smaller cities and rural areas in Canada forcing local officials to confront the problem of gangs and their related criminal activity. Fortunately, however, the evidence to date suggests that gun violence involving gangs is primarily impacting the largest CMAs.

Drug Markets

Participation in drug markets has also been linked to gun violence. Though many longitudinal studies of youth cited above implicate gangs as the primary catalyst responsible for increased levels of gun violence, drug market participation also seems to facilitate firearm involvement. That is, those who buy or sell drugs do experience higher levels of gun violence than non-drug participants. Moreover, a strong case can be made that the onset of the crack cocaine market was responsible for the proliferation of guns within urban communities in the United States. Guns became necessary "tools of the trade" in illicit drug markets. Given that sellers carried large sums of cash and valuable drugs, they needed to protect themselves against acts of robbery. As youth participation in the drug markets increased, carrying firearms soon became a status symbol and the carrying of guns soon diffused to non-drug youth as well. ⁵ Studies conducted outside of the United States seem to suggest that drug markets do, in fact, serve as the primary source of confrontations that end up culminating in gun violence. This relationship has been demonstrated in England and Wales (Bennett and Holloway, 2004), Scotland (McKeganey and Norrie, 2004), and Canada (Erickson and Butters, 2006).

Accessibility to Firearms

It is important to recognize that accessibility to firearms is generally set at the national level, and that the restrictions placed on private ownership of firearms vary considerably across countries. Countries that are most restrictive in the regulation of access to guns include Canada, Germany and Britain. The United States and Switzerland (prior to adoption of EU minimums) are viewed as some of the least restrictive in terms of firearm regulations. While the link between the restrictiveness of national gun control policy and the resulting levels of gun violence is a hotly debated topic within the literature, gun control policy does influence how guns get into the hands of offenders.

More restrictive limits on the private ownership of firearms are intended to reduce access to firearms by criminals. Even in the United States where there are fewer restrictions on ownership, individuals with a criminal record or other factors such as mental illness or history of drug abuse are not permitted to purchase or possess firearms or ammunition. The enforcement of these restrictions has increased since the passage of the Brady Act in 1994. Though evidence suggests the background checks mandated by Brady have been effective in keeping guns out of the hands of violent criminals ⁶, it is not known if these individuals obtained the firearms through unregulated, illegal channels. Furthermore, under all levels of gun control, one finds the majority of crime guns come from either the grey market ("straw purchasers") or through the black market (rogue gun dealers, theft). This suggests that greater regulation of the legal, primary market will only be effective if one can also shut down or cripple the illegal secondary market.

Crime Guns in Canada

According to the somewhat dated data available from the "[Coalition for Gun Control](#)" website, firearms used in crimes in Canada are evenly divided between those that were diverted from domestic owners (52 percent) and those that are smuggled in from the United States (48 percent). These findings are based on data from the mid-1990s.

Domestic Sources

Firearms that are purchased domestically may end up being used in a crime when either the legal purchaser misuses the firearm in the commission of a crime; the firearm is stolen from the legal owner; or when the legal owner knowingly diverts the firearm to an unauthorized user. The fact that these crime guns started in the hands of a legal owner has served as the primary rationale for creating and maintaining the Gun Registry in Canada. The assumption is that licensing firearm owners will increase the accountability of individual firearm owners. Owners will comply with safe storage regulations; they will be more likely to recognize the risks and responsibilities of firearm ownership; and because they are known to the authorities, they will be dissuaded from passing their legally owned firearm to the possession of an unauthorized individual.

International Trafficking

There is very little official data released regarding the volume or types of guns smuggled across the border into Canada from the United States. It is important to note, however, that any statistics will be biased downward as only those guns that become known to the authorities can ever be included in the count. According to the Coalition for Gun Control's website, smuggling appears to involve handguns (used in large border cities such as Vancouver or Toronto) more so than long guns. None of the national statistics provided on the website have been updated in the last decade. There is good reason to believe, however, that the problem of gun smuggling from the United States into Canada is very real.

In November of 2006, the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) and the Royal Canadian Mounted Police (RCMP) announced a joint agreement to increase the sharing of ballistics information on recovered guns. By increasing cooperation, the two agencies hope to develop intelligence and interventions that will help stem the flow of smuggled guns into Canada from the United States. According to a press release available from the United States Department of Justice website, [7](#) the increased cooperation will involve:

- **Sharing Forensic Firearms Data** – ATF and the RCMP will be able to share forensic ballistics information electronically and in real time through the Integrated Ballistics Identification System (IBIS).
- **Assistant Country Attaché** – ATF has expanded its presence in Canada by helping to facilitate cross-national investigation and coordinating efforts in the U.S. to investigate, arrest, and prosecute individuals who traffic guns into Canada.
- **Comprehensive Gun Analysis and Tracing** – To better assist in identifying crime guns that originated in the United States, the RCMP will begin using ATF's eTrace system to electronically trace firearms recovered at crime scenes in Canada.
- **Joint Collaboration with Initiatives** – In addition to currently working with the RCMP on firearms-related investigations, ATF will also coordinate training initiatives such as the International Firearms Trafficking Schools and the Serial Number Restoration Training.

In a personal interview conducted with the Special Agent in Charge [8](#) of the ATF's Crime Gun Tracing Center located in Seattle, Washington, it was learned that each year the Center traces between 150 and 200 handguns that were recovered in crimes in and around Vancouver, BC. The overwhelming majority of these handguns are purchased in the Washington state. The agent also informed us that there have been unintended consequences from the September 11th terrorist attacks that might be responsible for actually decreasing the trafficking of guns between the United States and Canada.

Since the attacks, border security has been greatly increased and thus fewer individuals may be willing to take the chance of being caught with an illegal firearm. He also noted that Washington has traditionally served as a provider of crime guns throughout the Pacific Northwest due to the relatively lax laws regulating firearms sales at the state level. However, his agents have reported seeing fewer vehicles registered in Canada in the parking lots of the local "gun shows," which often serve as venues for the transfer of guns. Finally, when asked about the demand for guns in Western Canada, the agent felt that most of the guns were being purchased by the members of gangs heavily involved in the drug trade in British Columbia. These gangs, which tend to be comprised of Indo-Asian youth, are responsible for importing large amounts of marijuana into the Pacific Northwest.

Strategic Considerations in Addressing Gun Violence

This section of the Report provides the synthesis of knowledge taken from the attached Annotated Bibliography. There are two broad types of articles included in the review: those that address basic social science questions related to gun violence and those that report on programs aimed at reducing gun violence.

In conducting the review, particular attention was paid to the role of gangs and drug markets in facilitating violence. Effective policies need to also consider the full extent of knowledge gained from the social science literature on the nature of gangs with respect to who joins gangs, why they join, and how gang membership influences one's behaviour. Understanding the question of "who joins gangs" is critical to the development of prevention strategies aimed at keeping youth from joining gangs or participating in other anti-social, delinquent behaviour. Such programs target "at risk" youth more generally and when successful produce the added benefit of reducing gang membership. It is also important to consider the realities of gang members (poor education, limited life skills, limited prospects for employment) so that programs can include meaningful alternatives for those who are interested in leaving the gang.

Given the exceptionally high rates of interpersonal violence (especially gun violence) within the United States, and its long history of gang violence, it is not surprising that much of the literature is centered on programs and interventions in America. Experiences in the United States have provided an invaluable lesson regarding youth gangs and violence: You cannot arrest your way out of the problem. That is, suppression does not work alone. One of the key recommendations from a major study recently conducted in Los Angeles is the need for law enforcement, prosecutors and other elements of the criminal justice system to work in concert with comprehensive community based intervention and prevention programs including local schools, health care providers, job training programs, child/parenting development courses and general economic development efforts. [9](#)

The broad context of issues related to gangs, drugs and guns are outlined below. These represent the primary issues one needs to consider to strategically address these problems.

Characteristics of Gangs

- **Gang Members:** Longitudinal studies of youth conducted in the United States (e.g., Thornberry et al. 2003; Hill et al., 1999) and Canada (Gatti, Tremblay, Vitaro, and McDuff, 2005) demonstrate that youth who join gangs tend to have lower levels of parental attachment, exhibit aggressive behaviour early in life, do poorly in school, and have lower levels of self-control. Gang members also tend to be marginalized members of society in terms of social and economic status (Erickson and Butters, 2006). Not surprisingly, gang members are overwhelmingly members of minority groups. The communities from which gang members reside are characterized by high levels of concentrated poverty, joblessness and crime. Investment in the community is lacking with regards to education, access to jobs, basic municipal services, and viable recreation alternatives for youth.
- **Gangs in the International Context:** Only recently has the issue of violent youth gangs garnered much academic attention outside of the United States. Studies conducted through the United Kingdom suggest that gang membership and gang activity are growing problems that deserve to be closely monitored. There are also important differences between U.S. and non-U.S. gangs with respect to social and demographic characteristics as well as types of problem behaviors. Gangs in the United States are comprised primarily of African-American youth and Latino youth typically of Mexican or El Salvadorian ancestry. Asian, Indo-Asian and Pacific Islander groups are less common. In Canada and Europe, many more gang members come from recent immigrant groups and include members of Indo-Asian, Caribbean/West Indies, and African descent. Gangs outside of the U.S. commit far fewer violent acts, especially lethally violent acts. The activities of these groups tend to include instrumental crimes related to drug dealing and robbery/theft.
- **The Nature of Gang Violence:** An overview of gangs by Howell (1998) summarizes many of the major findings with regards to gangs and violence. Though issues related to "turf" and "respect" motivates most gang-on-gang violence, surprisingly, disputes over drug markets play a minor role. Compared to non-gang homicides, gang homicides tend to involve more participants, more often occur outside (especially on the street), and are more likely to involve a firearm. Gang violence is concentrated within the neighborhoods where the gangs hang out (Tita and Ridgeway, 2007). Though a gang may decide to "go on a mission" in order to kill a rival, or perhaps kill "defensively" when a rival enters their territory, much of the violence appears to be opportunistic. By mapping and classifying events according to the location of the incident, the residence of the offender, and the residence of the victim, Tita and Griffiths (2005) [10](#) find that more than one-third of all gang homicides occurred in areas where neither the victim nor offender resided.

Factors Associated with Gun Violence

- **Drug Use, Gang Membership and Firearms:** Studies from Europe (Bennett and Holloway, 2004; Miron, 2001; McKeganey and Morrie, 2000) and North America (Hill et al. 1999) have demonstrated a link between drug use and the increased likelihood of being involved in an incident in which a firearm is present. Youth that report using and selling drugs report gun carrying more often than do similar youth who are not involved with illegal drugs. The finding is even stronger among gang members. Not only do they carry and use guns at a higher rate than similar non-gang youth, but they are also much more likely to be involved in a homicide as either offender or victim. Using data from a sample of young males (including offenders), Erickson and Butters (2006) find that participating in gang fights was the single strongest predictor of carrying a weapon in both Toronto and Montreal. The results hold for girls as well as boys as Erickson et al., (2006) find that some of the major predictors of weapon perpetrated violent behaviours included ethnic origin, early onset of delinquent activities, participation in delinquent acts in the past 12 months and gang fighting. The authors conclude that, for young women, drug market participation is not associated with the use of a weapon.
- **Gun Accessibility and Violence:** There is an ongoing debate regarding the relationship between firearm accessibility and levels of gun violence. In comparison with much of the world, citizens in the United States have greater access to the legal purchase of firearms. Thus, many point to this as a factor for explaining why the United States has a much higher rate of lethal violence than do other developed nations. Though there are some contradictory findings from studies conducted in Canada, Australia, Asia, Europe and the United States, the majority of carefully constructed studies find a positive relationship between firearm availability and lethal gun violence. In addition to rates of homicide and assault with guns, gun availability is also positively related to the rate of suicide committed with firearms.
- **Illegal Gun Markets:** Across all countries from which studies were available, the majority of crimes committed with a firearm involved firearms that were not legally purchased by the perpetrator. Studies in the United States are just now beginning to provide insight into how offenders gain access to these guns (see Cook and Braga, 2001). These studies tend to differentiate among two types of sources for crime guns: "point sources" and "diffuse sources". Point sources are large volume, single sources such as gun stores with unscrupulous business practices, rogue dealers who knowingly break the law, or "smash and grab" burglary rings that target gun stores. Looking across several studies, Cook and Braga (2001) found that the sources of guns given to criminals included family or friends (approximately 37 percent), the black market or "the street" (approximately 32 percent), retail outlets (18 percent), and theft (another 18 percent).

An ongoing study of the illegal gun market in Los Angeles (George Tita and Greg Ridgeway, 2007) has demonstrated that taken individually, diffuse sources such as single residential burglary or a single straw purchase have very little impact on the flow of guns into the illegal market. In the aggregate, however, diffuse sources account for the majority of guns used in crime. This is analogous to

the health hazards posed by air pollution. Though a single factory (point source) may contribute a large amount of pollution, in the aggregate, the impact of the single factory is dwarfed by the contribution to pollution that comes from the thousands and thousands of gasoline powered engines (diffuse sources) in an area.

Promising Interventions

The *Annotated Bibliography* contains a number of studies that offer promising strategies for reducing gun violence, especially gun violence that involves gangs. A summary of these studies and the key lessons learned are outlined below. In addition to specific elements of the strategies, issues pertaining to the processes in which interventions are designed, implemented, and sustained are also highlighted. For instance, Braga, Kennedy and Tita (2002) suggest that problem-solving frameworks have been effective in reducing homicides in many cities in the United States. The key elements they have identified in making these programs successful pertain both to the strategies (e.g., focusing on the most chronic offenders, group accountability, and "pulling levers"[defined later]) as well as the implementation (e.g., incorporating practitioner knowledge in understanding violence; developing an inter-agency working group; and including researcher involvement in action-oriented responses).

- **Limiting Access to Ammunition:** In the United States, two studies have demonstrated the potential benefit of tightening control of the accesses to ammunition. In Chicago, researchers found that while the access to guns through the illegal gun market was much more limited than suggested by conventional wisdom, inner-city youth had an even more difficult time gaining access to ammunition (Cook et al. 2005). Their research offers two particularly important points of intervention with regards to reducing gun violence among youth. First, youth found it very difficult to maintain a safe hiding place for their firearm. The modal choice was in one's locker at school. Therefore, by increasing the risks of storage by having school police become more vigilant in their searching of lockers, youth gun carrying can be further reduced. Second, the research participants reported that while guns were expensive, ammunition for guns was even much tougher to procure. Tighter regulation of ammunition might not change the carrying of guns for status, but it clearly will reduce the lethality of the weapon.

In Los Angeles, research has demonstrated that without background checks to deter their actions, those prohibited by federal law from possessing ammunition purchased more than 10,000 rounds of ammunition in a single six-month period (Tita et al. 2006). The authors offer several policy recommendations aimed at keeping ammunition (and guns) out of the possession of prohibited individuals. First, the authors suggest extending background checks to cover the purchase of ammunition. Alternatively, the ammunition purchases can be used to follow up on individuals who are also likely to be illegally in possession of a firearm.

Outside of these two studies, little is known about the secondary market for ammunition in the United States, Canada or elsewhere.

- **Civil Gang Injunctions are Effective:** Civil gang injunctions prohibit the public association of documented gang members within specific geographic areas. Furthermore, gang members may not possess cell phones or pagers in these areas. Carefully constructed quasi-experimental evaluations have demonstrated that the injunctions have a modest impact on reducing overall levels of crime (Grogger 2002). One of the criticisms levied against the injunction is that rather than offering a real decrease in crime, crime is simply displaced into neighbouring areas. However, this has not been the case. Like many other evaluations of spatially targeted interventions, the author concludes that rather than displacing crime, these spatially targeted interventions provide positive externalities to neighbouring areas as areas surrounding the injunction also experienced small decreases in crime. In addition to reducing crime, injunctions also increase the perception of safety among local residents (Maxson et al., 2003). The injunction offers local communities a respite from the presence of groups of young adults hanging out on the street. Local residents reported that they were less fearful of being the victim of a crime following the implementation of the injunction.
- **The Boston Model – Focused deterrence, pulling levers, and retailing the message:** No gun violence initiative has garnered more praise (or scepticism) than the original "Operation Ceasefire" program, which was launched in the mid-1990s in Boston, MA (Kennedy, Braga and Piehl, 2001). The details of the approach are well documented and not covered here, however, it is worth highlighting three main components of the intervention that continue to be replicated (to varying degree and varying success) in many places throughout the United States.
 - Focused deterrence, when applied in the gang context, refers to the attempt to influence individual behaviour through the promise of swift and severe collective punishment for any pre-defined offending behaviour. That is, if a member of a gang is known to have committed a crime involving a firearm (the pre-defined offending behaviour), then the entire group would be held "accountable". The approach is predicated on the existence of strong group norms that would deter an individual from being the person responsible for the increased law enforcement attention afforded to the group. Success of such an approach also rests upon the certainty that punishment will be meted out. If a rule is broken, the partners must respond quickly against the members of the offending gang.
 - "Pulling levers" refers to the actions taken in holding each member of the gang "accountable" for a violation of the pre-determined behaviour. Many gang members, especially those most likely to participate in acts of gun violence, are already "known" to the police. That is, they have been in jail and may currently be on probation or parole. Probation and parole officers rarely have the time and resources to closely monitor the individuals on their caseload. However, as a part of a

pulling levers strategy, any member of a violating group is immediately visited by one's probation/parole officer and if for any reason the gang member is non-compliant with their conditions of release, they can be imprisoned immediately. Non-felony warrants, garnishing of wages for unpaid fines or child support, mandatory drug testing, and eligibility to reside in publicly subsidized housing are some of the other "vulnerabilities" used as part of a pulling lever strategy.

- "Retailing the message" refers to the process of announcing the new policy for zero tolerance of gun violence (i.e., the pre-defined offending behaviour). Boston pioneered the retailing of the message using "offender notification meetings". Members of a violent gang were brought to a central location where they were introduced to the new rules of behaviour and the agencies involved in enforcing the pulling levers strategy (including local, state and federal criminal justice agencies and prosecutors). In addition, community leaders (especially from faith-based institutions) were also present to offer their support for any and all efforts aimed at reducing the injury and death being inflicted by on-going gang wars. The third group present represented the alternatives to the gang. Social service providers as diverse as tattoo removal services, job training centers, continuing education agencies and public health services were all present at the notification meetings to ensure that the gang members knew that there were alternatives to the gang, and where they could go to access particular services.
- **Balancing Suppression and Intervention:** Those projects that have been most successful in reducing gun violence have done so by carefully incorporating both increased (but fair) suppression with the allocation of intervention resources. In Los Angeles, Tita et al. (2003) argue that in highly impacted neighbourhoods where gangs are institutionalized within a community, it was important to distinguish one's effort to institute a program involving both suppression and intervention from the heavy-handed, solely suppression efforts that are frequently employed against gangs. This was accomplished in two ways. First, it was made very clear to the public that the intervention did not target "gangs" but instead targeted a particular behaviour, namely gun violence. Second, the intervention involved a "carrot and stick" approach. The job of the police and criminal justice systems was to reduce violence by increasing the costs of doing it. The job of the local community agencies and gang intervention specialist was to reduce violence by increasing the rewards of not committing violent acts (e.g., access to jobs/job training, tattoo removal, access to drug treatment).
- **Collaboration:** In reviewing the studies and evaluations of efforts to reduce gun (gang) violence in the United States, a general consensus emerged with respect to the need for collaboration. (This finding is consistent with the conclusion reached in an evaluation of Canada's National Crime Prevention Strategy. Leonard et al, 2005). Each study reviewed makes a convincing argument that the solution to the firearm violence problem cannot be resolved through local police efforts alone. In fact, law enforcement officials recognize this too. In speaking with leaders of law enforcement departments in Los Angeles, Oakland (CA), Boston and San Francisco, one realizes that they too view the role of suppression as an important component that offers a short-term solution but that it can do little to influence levels of gun/gang violence in the long-run. Efforts that have demonstrated success in reducing gang violence in such places as Boston, Chicago, Los Angeles, Philadelphia, and many other cities all relied heavily upon the successful collaboration of local, state, and federal criminal justice agencies working in tandem with social service providers, community stakeholders, and in some instances, street gang intervention specialists.

The failure to sustain collaboration is often to blame when a previously successful intervention fails to sustain its success. In Los Angeles, the reduction in gun violence was very real, but it was also short-lived. As soon as violence decreased, the focus of those in charge of resources shifted to other areas and the violence soon began to increase in the original target area (Tita et al., 2003). The authors chronicle the difficulties faced in trying to implement an invention that involves in-kind cooperation among a variety of criminal justice agencies, social service providers, and community-based organizations. They conclude that one way to induce and maintain collaboration is to make collaboration a necessary condition in order to gain local funding.

- **Legitimizing the Intervention:** The places in the United States where gun violence is highest tend to be the same communities that have the highest levels of distrust of the police and criminal justice system. Community partners, faith-based or otherwise, are vital in helping local residents to understand that the intervention is about targeting a particular behaviour (gun violence) and not particular individuals. Residents of impacted neighbourhoods in Los Angeles have experienced many "heavy-handed" attempts to eradicate guns. By declaring a "war on gangs," one is in essence declaring a war on the children of a community. In addition to being members of the community, it is also important to realize that in certain situations gang members provide a public good to the community. Some argue that they provide protection against criminal interlopers. Others have offered the idea that local community members tolerate the presence of a gang because the gang provides important economic benefits (e.g., access to stolen goods, opportunities to make money through drug dealing). For these reasons the Los Angeles project (Tita et al., 2003) was careful to note that the project had one, and only one, goal: Reduce gun violence. The discussion of gangs only entered into the dialogue after it could be demonstrated that gangs were responsible for a large majority of all homicide and gun crime in the community. Still, the message was clearly placed on reducing gun violence and not on locking up gang members or eradicating gangs.
- **Linking Research to Interventions:** The role of research in both the design and evaluation of gun/gang policies has come to prominence in recent years. Research can play two important roles. First, as noted above, basic scientific knowledge plays an important role in the identification of risk factors associated with the behaviours of interest. Identifying risk factors is especially important in the design of prevention and intervention programs. The second role researchers have come to play pertains to what has come to be known as the "problem-solving approach." This approach, the origins of which can be traced back to the famous "Boston Gun Project," entails involving an independent research agency (or university) as a primary partner in the

design, implementation and ongoing evaluation of the initiative. Ideally the research partner will rely on both official police data as well as data gleaned from interviews with community leaders, residents, and both gang and non-gang youth from the targeted community in defining the scope and nature of the gun violence problem. While in some instances this effort may result in quantifying and confirming the conventional wisdom as to who is involved in violence and why, in other instances widely held beliefs have been dismissed. For example, in the Los Angeles version of "Ceasefire", police and community members believed that battles over drug markets fueled many of the violent confrontations among gangs. However, upon close inspection of available data (primarily homicide reports) it was determined that disputes over drugs played an insignificant role in the motivation of violence. Such a finding had an important impact on the design of the intervention since it was determined that targeting the drug dealing enterprises of gang members would do little to reduce violence.

The other important information to emerge from the data analysis pertains to the identification of the most violent groups, and the members within those groups with the highest likelihood of committing violent acts. Again drawing upon the Los Angeles experience, law enforcement agencies listed more than 300 known members of one particularly violent gang. However, after talking with street level police officers, gang detectives, probation/parole officers, and various community members, it became apparent that of the total population of known gang members, less than 30 members were actively involved in the routine activities and decision-making of the gang. Several data analysis techniques have emerged from the efforts in Boston, Los Angeles and elsewhere that warrant a brief description:

- Mapping of Gang Boundaries – Utilizing Geographic Information Systems (GIS) it is possible to map the turf (or neighbourhood) of a gang as well as the "set space" or activity space of the gang. The mapping of gang turf provides a good approximation of the area from which the gang will recruit members. The more precise mapping of specific hang outs (set space) can help in refining geographically targeted patrols or interventions such as civil gang injunctions.
- Considering the Spatial Typology of Gang Incidents – The spatial typology ¹¹ refers to the mapping and classifying of events according to the location of the incident, the residence of the offender, and the residence of the victim. This method can provide insight into the structure of violence and whether a particular gang tends to be "predatory" by carrying violence out of their neighbourhood and into that of their rival; is protective of their turf and only attacks interlopers; or is opportunistic and will engage in confrontation as part of a chance meeting outside of either gangs' neighbourhood. Such data has been useful in court proceedings by demonstrating that a particular incident was in fact embedded within a series of retaliatory incidents between two gangs.
- Employing Social Network Analysis – Several projects have created social network diagrams depicting the ongoing rivalries (and to a lesser degree "alliances") among the population of gangs in an area. Visualization and simple analysis of the networks can readily identify the "central" players in the landscape of gangs. If a particular gang is attacked, one need only review the list of rivals to limit the pool of potential offenders. In the Los Angeles project, resource constraints made it impossible to target all of the gangs at once with the "focused deterrence" strategy. By relying on the network analysis it was possible to identify those gangs, who if neutralized, would have the greatest overall impact on the entire structure of gang rivalries in the area.
- Homicide Reviews – Homicide review sessions involve having the lead detective on each case brief the research partner of all the important details related to the event (motive, suspects/defendants, victims, date, time and location). Homicide review meetings are sometimes expanded to include detectives from multiple law enforcement agencies along with probation and parole officers. In addition to helping define the problem, such meetings also help in the investigation of the specific crime as it provides a forum for the participants to share information that otherwise might not have come to the attention of the lead investigator.

Finally, the research partner also provides an ongoing evaluation of the intervention. By examining the impact on predefined indicators of success, the research partner is able to suggest whether or not the intervention is having the desired results, and if not, how it might be changed. Such changes can pertain to either the overall design of the intervention or to the way it is being implemented.

Conclusion and Future Directions

In this concluding section, a series of research and policy recommendations are offered. The Canadian situation with respect to gangs, drugs and guns offers unique opportunities and challenges, especially in comparison to the U.S. experience. On the positive side of the ledger, Canadian gun policy should provide many more opportunities for the study of the effects of, and interdiction into, the illegal gun market. The current policy of requiring all gun owners to register their guns provides a rich data set that enables law enforcement to identify the last legal owner of a firearm used in a crime. The increased cooperation between the RCMP and ATF, also allows for the identification of firearms originating from the United States.

Unfortunately, a thorough review of the literature highlights a lack of information regarding gangs in Canada. With the important exception of recent research in Montreal and Toronto, there are few studies that examine the causes and correlations of gang membership. Little is known regarding the most basic elements of gangs in Canada (e.g., size, membership characteristics, ecology, etc.) Though the link between drug dealing (especially marijuana cultivation and distribution) and gangs is well documented in British Columbia, far less is known about the gang-drug-gun nexus.

To design effective gun/gang violence reduction strategies, more must be known about the specifics of the gang problem. However, the type of information that needs to be collected is not overwhelming in terms of the time or resources needed to complete the necessary studies. Furthermore, the recommendations offered below regarding the types of gun violence and gang initiatives have been shown to be robust in terms of gun violence of a group or retaliatory nature.

Drawing from the studies below, we offer the following suggestions as important directions in addressing gun violence (especially involving gangs) in Canada:

- *Understanding the Gangs*— Excluding "biker gangs," which do not appear to be driving gun violence trends, we found very little detailed scholarly work documenting the history, development, size and function of gangs in Canada. Of particular importance would be an ecological study of gangs in the major CMAs of Toronto, Montreal, and Vancouver. This would provide insight not only to the gangs, their activities, but also the kinds of communities that foster their development, or at least tolerate their presence.

A major hindrance to enacting effective gang strategies in the United States is the quality of data collected and maintained by local law enforcement. Definitional issues regarding "what is a gang" aside, consistent data on all types of criminal activity involving gang members must be maintained. In addition to being useful in characterizing the scope of the problem, such data will also aid in the identification of suppression and intervention policies. Gang violence involving drug market disputes will require a substantively different approach than if the violence among gangs is driven by issues of "turf" or "respect" among youth. If it is not already underway, law enforcement agencies should discuss the development of data collection and data sharing protocols.

- *Understanding Accesses to Illegal Weapons*— Canadian reports have demonstrated that most firearms used in crimes in Canada were not legally purchased by the offender. Currently, however, there exists no systematic analysis that documents the sources for illegal guns. Conversations with the Special Agent in Charge of the Gun Tracing Center (Bureau of Firearms, Tobacco, Alcohol, and Explosives) in Seattle, WA suggests that at approximately 150 – 200 crime guns originally purchased in the state of Washington are confiscated in Western Canada each year. Drawing on the increased cooperation with ATF and the RCMP, more precise estimates need to be collected for the whole of Canada before the true scope of the problem can be quantified.

In addition to better understanding the flow of guns from the United States, it is also important to understand the flow of legally purchased firearms to prohibited possessors in Canada. Research in Los Angeles has demonstrated that the diversion of firearms from local purchasers to prohibited possessors is local in nature. This suggests that prohibited possessors are contacting friends and associates who reside in close proximity to conduct "straw purchases." In California, all transfers of firearms among private citizens must be documented with the California Department of Justice. In order to dissuade straw purchases, a pilot program is underway where letters are sent to the purchaser immediately following the application to purchase a firearm. The intended purchaser is reminded of their legal obligation to register any transfers of the firearm with the state, and that they must also report the gun stolen within 48 hours of discovering the gun missing. Preliminary analysis shows that more than five percent of the individuals receiving the letter failed to pick up the firearm following the completion of the 10 day waiting period required in California for all firearm purchases. If similar evidence of a local gun market involving straw purchasers can be found in the CMAs, a similar approach might prove fruitful.

- *Adopting a Coordinated Approach to Gun Violence*— As noted on several occasions, you cannot arrest your way out of a gun violence problem. A balanced approach involving prevention and intervention is needed to address the underlying factors associated with gun violence be they gangs or drug markets. Longitudinal studies of youth conducted in both the United States and Canada have demonstrated that many of the risk factors associated with gun violence also underpin the reasons why youth join gangs or participate in the illegal drug market. Efforts to reduce poverty, increase educational attainment, and promote meaningful employment for at risk youth will help to reduce gun violence, gang membership and drug use.

The first step in undertaking a coordinated approach is to get the commitment of the important stakeholders. This is best accomplished by a political or community leader who is willing to champion the cause and has the social and political capital necessary to gain access to the heads of various criminal justice, social service, and intervention agencies. From personal experiences in Los Angeles, it will do very little good if only "most" of the necessary agencies want to work together. A successful intervention requires complete support and participation.

Coordinating efforts among agencies specializing in prevention, intervention and suppression is not a trivial task. Those involved in prevention and intervention activities are often distrustful of the efforts of law enforcement. Law enforcement, on the other hand, may fail to appreciate the value of these other approaches. Philosophical differences with regards to how best to address a particular problem may also lead to tension among participants. The single most important obstacle to overcome pertains to funding and resources. In the case of Los Angeles, agencies were expected to work together and commit resources without the benefit of any additional funding. The fact that no funding was made available for the community partners was even more damaging to the efforts to build a cohesive, cooperative structure. Therefore, in choosing to adopt a coordinated effort, it is imperative that the funding be sufficient to support the efforts of all the partners. This will go a long way in promoting trust, understanding and cooperation.

In addition to building trust and cooperation among agencies, it is also important to include in any efforts the communities most likely to be impacted by the intervention. Civic, business and religious leaders can bring resources to the project in terms of offering "word on the street" intelligence, helping to build legitimacy among the local residents, and serve as mentors/role models to the youth in gangs and gun violence. Involving youth, especially youth involved in gangs, is also crucial. It never hurts to ask a gang member, "What would it take to get you to stop fighting?" Experiences in several locations suggest the answer is always the same: Access to a good paying job. In many cities, the research partner has played the important role as facilitator between the official agency partners and the various community-based partners.

A comprehensive model aimed at addressing gun violence through prevention, intervention and suppression must be open to continuous evaluation. This requires that clearly defined and measurable goals are set, which will serve as benchmarks for success. By evaluating the efforts on an on-going basis, the design of the interventions can be modified as necessary. Because the evaluation must be fair and impartial, a research partner is frequently used in this capacity.

- **Adopting the Problem Solving Approach to Gun Violence**– By partnering with an experienced research partner, local law enforcement can gain valuable assistance in collecting and analyzing the data needed to fully understand local issues influencing gun violence. The types of interventions that might be consistent with the results of the analysis include:
 - "working groups" – pulling together an interagency enforcement group, typically comprised of police, probation/parole, prosecutors. This group should work in concert with a separate working group comprised of local service providers and community figures. Though the work of the two groups needs to be highly integrated, the sensitive nature of the information included in enforcement strategies requires some separation between the two groups.
 - "focused deterrence" – holding "notification meetings" for potential gun offenders to explain that gun violence will no longer be tolerated in their community. This communication must be done directly and repeatedly to let them know that they are under special scrutiny, to indicate what acts (such as shooting) will earn them special attention, and provide a constant re-enforcement of the message including what has happened to others who have continued to commit gun violence. A positive message highlighting alternatives such as education or employment opportunities must accompany the threat of punishment.
 - "pulling levers" – if the gun violence has a "group" component then all members of a group are held responsible for the actions of any single member. In addition to increased enforcement activities by police, other "vulnerabilities" of the group members must be identified including (but not limited to) probation/parole revocation and enforcement of any outstanding warrants, no matter how minor in nature. The pulling levers strategy is effective because, as research demonstrates, it is not the severity of punishment that deters illegal behaviour but rather it is the certainty of detection and punishment that truly matters.

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Additional Program Resources

Operation Ceasefire: First implemented in 1995 throughout Boston, Operation Ceasefire is a youth gun violence intervention strategy that uses a problem-oriented policing approach to combating violent crime. A "hotspots" strategy was used which targeted specific areas where gun violence and homicide rates were rampant. A particular focus was placed on gun trafficking, gun violence and gang violence. Two years after implementation, the number of youth homicides dropped substantially with only one handgun-related youth homicide occurring in 1999 and 2000. Proclaimed a successful strategy in reducing homicide, the Operation Ceasefire strategy has been replicated in several other cities including Los Angeles, CA and Minneapolis, MN.

Operation Ceasefire, Los Angeles, CA

The area of Hollenbeck, Los Angeles has consistently ranked near the top ten most violent areas. After preliminary data was collected, it was found that gangs were at the core of homicides and gun violence in Hollenbeck. Between 1995 and 1998, nearly 200 homicides were committed in Hollenbeck and the vast majority of those killings involved gangs. Following in the style of the original Operation Ceasefire, this L.A. model set up a working group which consisted of local practitioners, service workers and law enforcement personnel. An intervention was set up with both primary and secondary "levels" as well as applicable prevention services. Analyzing three categories of offenses – violent crime, gang crime, and gun crime – the research team found that intensive law enforcement took place in five reporting districts and in these districts, violent crime fell during the suppression phase. This decline continued and grew even stronger in the deterrence phase of the project (a 37 percent deduction in crime rates overall compared to an average 24 percent deduction in other areas).

Project Safe Neighborhoods: A national initiative, Project Safe Neighborhoods (PSN), has as its main goal to reduce gun violence in the United States. Project Safe Neighborhoods was established in 2001 and expands upon successful strategies used in Boston (Operation Ceasefire) and in Richmond, Virginia (Project Exile). Since 2001, over \$1.5 billion of federal dollars have been allocated to support Project Safe Neighborhoods. Overall, allocated funds have been used to support the training and development of community outreach programs. The following are examples of Safe Neighborhood projects throughout the United States.

PROJECT TITLE: Children Pledge against School Violence

LOCATION: Eastern District of Kentucky

To put together an event that would reach high school students not only in the Eastern District of Kentucky but across Kentucky, the USAO teamed with the Kentucky Center for School Safety (a legislatively created organization leading the state's efforts to provide safe schools) to involve students through the "Safe Schools Begin with Me!" Pledge against School Violence. This statewide pledge is designed to motivate and involve students in the effort to curb gun crime. More than 170,000 students from 70 school districts took this pledge against violence. In addition to taking the pledge, the students are required to create their own Stop the Violence Task Force at their schools.

PROJECT TITLE: Tip Hotline for Students

LOCATION: Middle District of Tennessee

In conjunction with the mayor's office, the Nashville Police Department began an anonymous tip hotline for students to report guns on school property. The program offered a \$500 reward if information led to an arrest. Now called crime stoppers, the program has resulted in sixty-four arrests since its inception in 1994. The anonymity of the callers is an important aspect of the program because people are more willing to come forward if they know that they can remain anonymous.

PROJECT TITLE: To-Be Paroled Prisoner Lectures
LOCATION: Southern District of Georgia and District of Nevada

The Southern District of Georgia has developed an innovative way of communicating the tenets of Project Safe Neighborhoods to the populations that need it most: prisoners about to reenter the community. Prisoner attendance at the orientation is a mandatory condition of release. The Assistant United States Attorneys emphasize the fact that there is no parole in the federal system for gun criminals. They cite stark statistics to the inmates to stress to the inmates the importance of steering clear of gun crime. Of the estimated 500 inmates that went to the lectures within a 16-month period, only 2 have been caught with a gun and both were prosecuted and convicted.

PROJECT TITLE: Outreach Trailer
LOCATION: Middle District of Louisiana

The Middle District of Louisiana has found a creative approach to spread the anti-gun violence message to local communities. It has designed an outreach trailer that is staffed by volunteers who provide information on Project Exile, Project Safe Neighborhoods, and federal law on gun crime. The trailer is brought to community festivals and fairs, where the target audiences are expected to attend. It is also sent to areas that are identified as having particularly high rates of violent crime. The major goal of the trailer is to educate felons and their loved ones so that they will stop using and carrying guns illegally.

PROJECT TITLE: Home Visits
LOCATION: District of Massachusetts

Operation Ceasefire in Massachusetts has found a direct and personalized method for outreach. Staff spreads the word about these programs by conducting home visits to individuals on probation. The Massachusetts Probation Department and the Boston Police Department formed a partnership to better supervise probationers. This operation became known as Operations Night Light and Home Front. Staff members visit the homes of probationers after their curfews to ensure that they are following court orders. This program deals with juveniles that are at risk of engaging in a life of crime. In addition, the program has given probation more tools and resources that aim to get the probationers' families involved.

PAX Real Solutions to Gun Violence: A non-profit organization working to help bring an end to gun violence, PAX has created national campaigns while promoting a foundational change in social attitudes, behaviours and public policy. This website has helpful information related to the issues behind the campaigns including current research from a public health perspective.

Annotated Bibliography

Andresen, M. A., Jenion, G. W. and M. L. Jenion (2003). "Conventional Calculations of Homicide Rates Lead to an Inaccurate Reflection of Canadian Trends." *Canadian Journal of Criminology and Criminal Justice* 45(1): 1-17.

The published Canadian homicide rate indicates a steady downward trend since the mid 1970s. Throughout the article, the authors suggest that the conventional homicide rate inaccurately reflects the nature of homicide when used as a "social barometer" and should be supplemented with new homicide rates calculated using available demographic information about offender characteristics. This paper uses recent advances in statistical techniques to show that an age-adjusted homicide rate exhibits a significantly different trend than the conventional rate whereas, 1) there is no structural break in the trend until the late 1980s; 2) the trend of the homicide rate increased until the early 1990s; and 3) though the trend of the homicide rate has been decreasing since the mid 1990s, there is insufficient statistical evidence to suggest a new downward trend. These findings suggest that demographics and time series analysis are required to properly assess homicide trends, helping to isolate social variables so their effects on homicide rates can be more accurately determined. The authors argue that since homicide rates have a substantial affect on social policy and public opinion, they should be critically calculated. Finally, this paper demonstrates the benefits of cooperation between academic disciplines and the utility of taking advantage of the latest theoretical and empirical techniques to reach a better understanding of social phenomena.

Bennett, T. H., and K. R. Holloway (2004). "Gang Membership, Drugs and Crime in the UK." *British Journal of Criminology*, 44(3): 1-19.

The authors claim that there is some evidence from national newspapers and government reports that the number of gangs and gang members in the United Kingdom is increasing. There are also reports that street gangs are involved in serious and violent offending and sometimes carry guns. However, there is little criminological research on gangs in the United Kingdom that can shed light on this development. In particular, little is known about whether gang members are different in any way from non-gang members of similar social background. These paper reports findings generated from the NEW-ADAM (New English and Welsh Arrestee Drug Abuse Monitoring) program on gang membership and its relation to crime and drug misuse. The research shows that there are some similarities between the current findings and the results reported in the US research with respect to the social characteristics and problem behaviors of gang members. However, there are also some important differences.

Research also suggests that there might be some important differences between UK and US gang members. For instance, the major difference lies in the different ethnic backgrounds of gang members in the United Kingdom and the United States. In the United States, the research suggests that the majority of gang members are from ethnic minority groups and that the dominant ethnic minority

group is black African American. However, the results of the current research suggest that the majority of gang members are white and that the dominant ethnic minority groups are Caribbean and Bangladeshi. Just over a third of ethnic group gang members were recorded as black (predominantly African and Caribbean) and just over a third were recorded as Asian (predominantly Bangladeshi and Pakistani). Anecdotal reports of 'Turkish' and 'Albanian' gangs suggest also that the United Kingdom might have a different kind of ethnic mix of gang members. The paper concludes that the United Kingdom may be entering a new phase in the development of street crime among young people and argues that it is important to monitor this development for the purpose of policy and fundamental knowledge.

Boyd, N. (2003). "Gun Control: Placing Costs in Context." *Canadian Journal of Criminology and Criminal Justice* 45(1): 473-479.

This article focuses on the costs and benefits of the Canadian Firearms Program. Canadian police forces are currently accessing the online firearms registry more than 1,500 times each day. Since 1995, more than 7,000 firearms licenses have been either refused or revoked, a number fifty times that for the five years preceding the program's inception. In addition, the law requires that all firearms owners have their licenses renewed every five years and that spouses must be notified of the license application. These preventative measures have received support from the Canadian Public Health Association, the Canadian Police Association, and the Canadian Association of Chiefs of Police. Boyd argues that the Canadian Firearms Program has received substantial compliance from gun owners and that the ability of the program to prevent fatalities outweighs the high costs of implementing the program.

Braga, A. A., Kennedy, D. M. and G. E. Tita. "New Approaches to the Strategic Prevention of Gang and Group-Involved Violence." In C. Ronald Huff, Ed. (2002). *Gangs in America* 3rd Edition. Thousand Oaks, CA: Sage Publications.

A change from deterrence strategies used to fight crime, problem-solving frameworks include problem assessment, focusing on understanding and controlling the early stages of violence. Within this chapter, the authors trace the developments of new problem-solving frameworks; discuss common similarities and differences across jurisdictions, and conclude with an analysis of key elements used in successful prevention schemes. The authors analyze the Strategic Approaches to Community Safety Initiative (SACSI), a U.S. Department of Justice pilot project that attempted to mirror the successful Boston Gun Project (Braga, Kennedy, Waring, and Piel, 2001) through the use of neighborhood partnerships and ongoing strategic assessment. The authors suggest that new problem-solving frameworks for assessing gang research and homicide have produced hopeful results. Key elements associated with program success rates include: 1) Recognizing that violence problems are concentrated among groups of chronic offenders who are often, but not always, gang involved; 2) Group and gang violence involves self-reinforcing positive feedback mechanisms; 3) The utility of the pulling-levers approach via direct consequences for violent behavior; 4) The importance of practitioner knowledge in understanding violence; 5) Creating and giving responsibility to an inter-agency working group; and 6) Emphasizing researcher involvement in action-oriented responses.

Brookman, F., and M. Maguire (2005). "Reducing Homicide: A Review of the Possibilities." *Journal of Crime, Law and Social Change*, 42(4-5), 325-403.

Focusing on the United Kingdom, this paper explores the potential for reducing homicide, and draws upon data from the Homicide Index, international research on homicide, and general crime reduction literature. Throughout, the authors note that homicide is highly diverse in its characteristics, causes and dynamics. Therefore, the authors suggest effective strategies to reduce homicide are likely to require tailoring to specific forms. The paper focuses upon four important categories including 1) domestic (partner) homicide which accounts for one in five of all homicides in England and Wales; 2) the killing of infants which shows that, over the data period, 80 percent of victims under age 1 are killed by a parent; 3) alcohol-related homicide where approximately nine percent of all homicides were committed under the influence of alcohol (with 88 percent of these being male perpetrators); and 4) homicide involving guns and knives; which only account for roughly six percent of homicides. During the 20 year time-periods, over 40 percent of all recorded homicides used sharp instruments while another 21 percent included aggressive hitting or kicking. From the data analyzed for this study, the authors found that the biggest risk factor associated with increased levels of homicide includes access to/ownership of guns, ownership of a knife, followed by displaying weapons within the household.

Calhoun, D., Craig Dodge, A., Journal, C. S. and E. Zahnd (2005). "The Supply and Demand for Guns to Juveniles: Oakland's Gun Tracing Project." *Journal of Urban Health*, 82(4): 552-559.

In response to Oakland, California's high level of juvenile gun violence, the East Oakland Partnership to Reduce Juvenile Gun Violence, a citywide collaboration, was formed in 1997. In 1999, the Partnership established the Oakland Gun Tracing Project to develop evidence-based policy recommendations aimed at reducing the supply of and demand for gun acquisition among urban youth. This advocacy project involved gathering, analyzing, and using police record and gun sale/registration data. Such data were collected for all gun crimes committed in Oakland, California between 1998 and 1999 in which a juvenile was either the suspect or the victim. A total of 213 cases involved 263 juveniles of which 170 were suspects/perpetrators and 93 were victims. It is noted throughout that suspects, as well as victims, were predominantly male and African American. Of the 213 cases involved, only 132 recovered guns. Only 55 percent of the recovered guns were traced to a federally licensed dealer while three-quarters of the guns were purchased near Oakland, California. Successful traces were defined by the authors as the ability to identify federally licensed dealers and initial purchasers. Of the 132 recovered guns, only 52 successful traces were completed, demonstrating systemic tracing difficulties. Findings from the data gathered was used to advocate for numerous policy changes including initiating a comprehensive gun tracing program

where police can track all secondary sales. In the future, new laws could require federal handgun registration which would track ownership changes, require the reporting of any stolen firearms, and provide effective intervention services to all juveniles the first time they enter the criminal justice system.

Carrington, P. J. (1999). "Gender, Gun Control, Suicide and Homicide in Canada." *Archives of Suicide Research*, 5(1): 71-75.

Concerned with the impact of the 1977 Canadian gun control legislation (C-51), this article is a response to a study conducted by Lennaars and Lester (1996). Based on a re-analysis of the data presented in Lennaars and Lester, the authors disagree with their conclusion that "the passage of C-51 seems to have a more beneficial impact on female victims than on male victims ... Males appear to be less influenced by gun restrictions ... Displacement, especially in males in suicide – and homicide – may impede efforts to prevent violence" (Lennaars & Lester, 1996: 229-232). By comparing trends over time during pre- and post-legislation C-51 periods, the authors conclude that Lennaars and Lester failed to calculate heterogeneity-of-slopes statistics, which would have indicated whether or not pre- and post- C-51 differences exist and whether or not they were statistically significant.

Using the data gathered by Lennaars and Lester, the authors calculated difference-of-sloped t-tests for pre- and post- C-51 comparisons of trends. They found that there is a significant rising trend in male suicides by guns prior to 1977 (slope = 0.32). This changed to a non-significant falling trend (slope = -0.21), and the change in slopes (-0.52) was also highly significant. Also, the authors found a significant rising trend in male homicide by guns prior to 1977 (slope = 0.07). This figure changed to a non-significant falling trend (slope = -0.02), with changes in slopes (-0.09) being highly significant as well. Similar changes were found in deaths of females from both suicide and homicide with guns. Gender differences are noted where the trend in rates of female deaths from non-firearm suicides changed significantly downward and that the trends in both the rates of firearm- and non-firearm deaths due to homicides and suicides experienced significant reductions after 1977 gun legislation.

Christeson, W. and S. Newman (2004). "Caught in the Crossfire: Arresting Gang Violence by Investing in Kids." *Research Report from Fight Crime: Invest in Kids, Washington, DC.*

Against the backdrop of statistics supporting an overall increase of 50% for gang violence, the research report offers a brief review of gangs in America in terms of their development, growth, and spread throughout the country. The report also highlights the monetary costs associated with crime in terms of public safety and incarceration expenditures. The conclusion is that effective suppression, prevention and intervention programs will save taxpayers billions of dollars every year.

The report goes on to summarize effective gang violence reduction strategies employed in Boston, MA, Philadelphia, PA, and Baton Rouge, LA. The key elements of the programs are identified as: Sending a clear message that violence will not be tolerated that must be supported and legitimated by the community as well as law enforcement; a collaborative approach bringing together all stake holders from the criminal justice system to the impacted communities; inter-agency cooperation and working groups; and offering alternatives and social support services to youth involved in gangs. The report also highlights the importance of providing the necessary funding needed to institutionalize and maintain the collaborative approach.

In addition to approaches that mix suppression with intervention, the report highlights several purely intervention programs aimed at keeping troubled youth from taking the next step and joining a gang. The focus is primarily on youth-family services and Multi-Systemic Therapy, which is aimed at addressing chronic behaviors related to violence and/or substance abuse. Finally, an overview of prevention programs that range from neo-natal care through after-school alternatives and anti-bullying programs are discussed.

Christie, L. E. (1999). "Australian Gun Controls: Should More be Done?" *Emergency Medicine*, 11(2): 94-100.

The purpose of the study is to examine the basic premises of gun control and the relationship linking legal firearm ownership to homicide and suicide in Australia. The data sources are available from the Australian Bureau of Statistics regarding firearms ownership. Suicides and homicides in Australia were reviewed. Medline database searches using key words of 'firearms', 'homicide, statistics, trends', 'suicide, statistics, trends' and 'violence, prevention and control, statistics' identified English language publications relating to violence prevention and/or firearms from 1966 to 1996. These papers were manually searched to identify additional references. Internet home pages of The Coalition for Gun Control, The Sporting Shooters Association of Australia, Handgun Control Inc. and The National Rifle Association were reviewed and information that could be independently validated was considered. Christie finds that few papers approach the subject of violence with the same focus, limiting the ability to perform meta-analysis or direct comparisons of data. Therefore, current knowledge is inconclusive, but does not provide strong support for some existing Australian firearm control measures. Evidence suggests that further reducing the levels of firearm ownership in Australia will not cause an overall reduction in rates of homicide or suicide.

Cook, P. J., Ludwig, J., Venkatesh, S. A., and A. A. Braga (2005). "Underground Gun Markets." *NBER Working Paper 11373, National Bureau of Economic Research, Washington, DC.*

This research uses an economics framework to explore the underground market for firearms in the city of Chicago. The authors point out that under the classic economic theory, the rise of illegal gun markets will thwart the efforts of the government to restrict access to firearms among those prohibited from purchasing them legally. The economist would argue that the profit incentive driven by demand for guns by prohibited possessors will result in the supply and prices of guns in the underground market to closely approximate supply and prices in the legitimate market. The work relies primarily on qualitative data collected in interviews with participants (buyers, sellers, importers of guns) of the underground market.

The authors find that the illegal gun market is very "thin" with fewer participants than expected. They attribute this to two key factors. First, because guns are durable goods (unlike other illicit goods such as drugs), there is no need for repeated transactions among buyers and sellers. Second, Chicago has very tight restrictions on gun ownership and the police take a very proactive approach to policing illegal gun markets (e.g., buy-bust operations). Therefore, gun transactions require a great deal of trust between buyer and seller thus making it difficult for an anonymous purchaser to simply approach a gun dealer and ask for a gun. Similarly, gun dealers can not advertise their merchandise too conspicuously. These factors serve to increase transactions cost, which leads to prices that are much higher (for mostly lower quality guns) in the underground market than in the legitimate market (which contradicts some of the conventional wisdom in criminological literature).

The thin market becomes even thinner because youth often lack the funds needed to purchase a gun on their own will end up banding together and purchasing a gun to "share." Because of the trust issue, the researchers find that youth who are involved in gangs find it much easier to purchase a firearm than do non-gang youth. However, the research also reveals that gang members often share guns and that the leaders of the gang loan them to younger members cautiously. Younger members may only carry a gun with the permission of the leaders. Regardless of gang affiliation, many youth carry guns as status symbols rather than for protection.

The research offers two particularly important points of intervention with regards to reducing gun violence among youth. First, youth found it very difficult to maintain a safe hiding place for their firearm. The modal choice was in one's locker at school. Therefore, by increasing the costs of storage by having school police become more vigilant in their searching of lockers, youth gun carrying can be further reduced. Second, the research participants reported that while guns were expensive, ammunition for guns was even much tougher to procure. Tighter regulation of ammunition might not change the carrying of guns for status, but it clearly will reduce the lethality of the weapon.

Cook, P. J. and A. A. Braga (2001). "Comprehensive Firearms Tracing: Strategic and Investigative Uses of New Data on Firearms Markets." *Arizona Law Review*, 43(2), 277-309.

The authors begin with a brief historical analysis of firearm tracking including United States Treasury Department's success in expanding and improving the Bureau of Alcohol, Tobacco, and Firearm's (ATF) tracing capacity. Cook and Braga suggest that the promising uses of new ATF tracing capacities can be positioned along three different categories: 1) informing strategic planning efforts which prohibit the transactions by which criminals acquire guns; 2) identifying firearm dealers and traffickers as targets for law enforcement; and 3) providing a basis for evaluating the effects of changes in gun control laws. Throughout, the authors use several sources of data including the Bureau of Alcohol, Tobacco, and Firearms (ATF), the Youth Crime Gun Interdiction Initiative (YCGII), three inmate surveys, and the effects of the Brady Law in Chicago.

First, the authors present several tables with statistics taken from ATF's firearm-trace-requests database. Here, the authors found that out of 154,494 guns that were submitted for tracking, 53.5 percent were completed while another 46.5 percent were not traced. The main reasons for failed traces included serial number problems (10.9%), dealer record problems (10.7%), and errors related to the actual trace request (10.2%).

Secondly, Cook and Braga analyzed the Youth Crime Gun Interdiction Initiative (YCGII). Within this section, the authors point out that all guns associated with YCGII are known as "crime" guns only where most trace requests were associated with guns that were confiscated in connection with possession, carrying offenses, and/or drug dealings. The authors found that within one year, 54,363 handguns were recovered while an additional 4,893 long guns were recovered. From these recoveries, roughly 65 percent of all handguns recovered dealt with firearm offenses and an additional 20 percent recovered dealt with vice and narcotics. Of the long guns, 57 percent recovered dealt with firearm offenses and an additional 28 percent recovered dealt with vice and narcotics. Other categories included homicide (2.6% handguns/2.3% long guns) and assault and robbery (10.5% handguns/10.4% long guns).

Thirdly, looking at Wright and Rossi's (1994) survey of felons and their firearms, Beck et al.'s (1993) survey of state prison inmates, and Sheley and Wright's (1995) survey of youths in juvenile correctional institutions, the authors found that the sources of guns given to criminals included family or friends (roughly 37 percent overall three studies), the black market or "the street" (roughly 32 percent over all three studies), retail outlets (18 percent over all three), and theft (another 18 percent over all three).

Finally, looking at policy implications of the Brady Bill in Chicago, the authors found that trace data provides a direct basis for assessing the effects of a policy on gun movements across jurisdictions as well as the use of particular types of guns involved with crimes. The data presented within the Chicago study is found to provide accurate data for tracking changes over time.

Cook, P. J., Molliconi, S., and T. B. Cole (1995). "Regulating Gun Markets." *Journal of Criminal Law and Criminology*, 86(1): 59-92.

This article provides a summary of the existing literature on gun markets and presents a yearlong data collection effort to develop an empirical description of gun markets as they operate in the Research Triangle area of North Carolina. The researchers argue that there is very little systematic information about the gun trade. This article has mapped out the particular perspective of keeping dangerous people from possessing guns. The researchers argue that when it comes to the criminal misuse of firearms, the stock of guns is less important than the flow. Effective regulation of transactions would quickly reduce gun crime. In addition, guns are readily exchanged for cash or drugs so they have value to the owner in trade as well as in use. Offenders tend to be active on both sides of the gun market. There are not many FFLs (Federal Firearms License) involved in a large of gun transactions each year, and such

transactions are beyond the reach of current regulatory apparatus. Furthermore, a large percentage of the transactions that supply guns to people involve stolen guns, and half a million guns are stolen nationwide each year. However, despite the incomplete reach of the FFLs, the licenses do influence the terms on which guns are available in the secondary market. More stringent regulation of sales by FFLs increases prices of guns on the street. Higher prices should persuade some youths and criminals to "economize" their gun possession. If both the federal and state government can adopt reforms to increase the licensing fee for FFLs and regulate them more closely, the availability and easy access to guns would decrease.

Cukier, W. (1998). "Firearms Regulation: Canada in the International Context." *Chronic Diseases in Canada*, 19(1): 25-34.

The author argues that gun deaths and injuries in Canada are a serious public health problem, claiming more than 1200 lives each year and resulting in over 1000 hospitalizations. While the issue has been hotly debated in recent years, considerable research in an international context suggests that there is a relationship between access to firearms and deaths and injuries caused by firearms. Interventions to reduce access to firearms include regulation, education and engineering. Legislative reforms aimed at reducing gun deaths and injuries have been introduced recently in Canada and in many other countries. Although domestic controls can affect the supply of guns, efforts are being coordinated on an inter-jurisdictional basis to decrease the illegal trafficking of firearms. As a result, the United Nations Crime Prevention and Criminal Justice Commission recently passed a resolution encouraging all countries that have not done so to strengthen their domestic gun controls. Weak controls in one country can affect security in others.

To ensure a wide range of sources, several different methods were used to collect material for this article. Searches were conducted on MEDLINE, Wilson and related databases for the period 1980-1997 using 'firearms' and 'gun' as the key words. International sources such as the Victimization Survey and the recent United Nations (UN) International Study on Firearm Regulation were consulted along with statistical sources from individual countries, such as Statistics Canada. In addition to the peer-reviewed literature, the records of recent government inquiries and proceedings were examined, including the Canadian House of Commons and Senate Committees and debates on Bill C-68, materials prepared for the Alberta Court of Appeal, the Lord Cullen Inquiry into Dunblane and the Review of Firearms Control in New Zealand. Additional materials were obtained from government and police sources in Great Britain, Japan, Australia and Switzerland. Gun deaths and injuries in Canada pose a serious problem that many researchers and practitioners believe can be reduced through effective public health strategies that combine legislation with education and enforcement.

Dahlberg L. L. (1998). "Youth Violence in the United States Major Trends, Risk Factors, and Prevention Approaches." A Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, Georgia, USA.

Violence among youths is an important public health problem. Between 1985 and 1991, homicide rates among youths 15–19 years of age increased 154% and remain, today, at historically high levels. This paper reviews the major trends in homicide victimization and perpetration among youths over the last decade, the key risk factors associated with violence, and summarizes the many primary prevention efforts under way to reduce violence. Previous research points to a number of factors that increase the probability of violence during adolescence and young adulthood. Some of these factors include the early onset of aggressive behavior in childhood, social problem-solving skill deficits, exposure to violence, poor parenting practices and family functioning, negative peer influences, access to firearms, and neighborhoods characterized by high rates of poverty, transience, family disruption, and social isolation. Efforts to address some of the primary risk factors for violence are under way across the United States, but evaluations to confirm program effectiveness are needed.

The majority of intervention programs taking place in this country focus on changing individual attitudes, beliefs, and behavior. Cognitive-behavior, behavior modification, and social-skills training are some of the more common approaches being used to reduce antisocial and aggressive behavior in children and violent victimization and perpetration among youths. Programs such as antiviolence awareness campaigns, safe-haven or community youth programs, and neighborhood helpers have been used to foster pro-social attitudes and behavior in neighborhoods.

Erickson, P. G. and J. E. Butters (2006). "Youth, Weapons and Violence in Toronto and Montreal." A Final Report prepared for Public Safety and Emergency Preparedness, Canada, under the direction of Project Manager, Rebecca Jesseman. University of Toronto, Canada.

For this report, the authors analyze research that addresses the relationships of youths, guns, and gang violence in Toronto and Montreal Canada. From 2000 to 2003, a questionnaire was created and distributed to three samples of male youths aged 14 to 17 in Toronto and Montreal. The sample includes three groups: students, dropouts, and offenders. After the data was collected, the research team completed a comparative analysis of the two cities and three samples within each city. For those youth surveyed in both cities, they reported that obtaining a gun could be done in less time in Toronto than in Montreal. Findings showed that the prevalence of gang fighting was higher in Montreal when compared to Toronto; however, in both cities gang fighting was the strongest predictor of gun violence among students and offenders. The authors also found that for those males sampled in Toronto, selling drugs - specifically crack/cocaine- significantly increased the odds of committing gun violence. This trend was not as significant in Montreal. For those male dropouts, selling drugs was also positively associated with gun violence and this relationship was found to be highly significant in Toronto.

Erickson, P. G., Butters, J. E., Cousineau, M., Harrison, L., and D. Korf (2006). "Girls and Weapons: An International Study of

the Perpetration of Violence." *Journal of Urban Health*, 83(5): 788-801.

The purpose of this study was to describe delinquent girls' weapons preferences, where and how often they carried weapons, as well as to identify the most important factors that explained four different weapon-related violent outcomes. A large, high-risk sample of female adolescents consisting of 510 girls aged 14–17 in four international cities were interviewed using the same questionnaire and methods. Tabular and logistic regression analyses were applied throughout. The authors found that knives emerged as the most frequently reported weapon in all cities. Rates of both lifetime victimization and perpetration of violence with weapons were high in all sites. Starting to carry a weapon as a result of violence was reported by 40 percent of the female participants in Toronto, 28 percent in Philadelphia, 25 percent in Amsterdam, and 16 percent in Montreal. Some of the major predictors of weapon perpetrated violent behaviors included ethnic origin, early onset of delinquent activities, participation in delinquent acts in the past 12 months, gang fighting, and carrying a weapon as a result of violence. Location (site), age, and heavy alcohol consumption had only minor impacts, while drug use, drug selling, and neighborhood features had none. Despite numerous differences in weapons' prevalence across the four cities, logistic regression analysis found that site were only significant in use of an object for participants in Toronto. Location site was not significant in threatening or hurting someone with either a knife or a gun or actually hurting others with a weapon. Clearly, these findings suggest commonality in serious female violence that extends beyond borders and cultures.

Frappier, J., Leonard, K. A., and D. Sacks (2005). "Position Statement (AH 2005-02) Youth and Firearms in Canada." *Pediatric Child Health*, 10(8): 473-478.

Canadian federal gun control laws require a screening process before the purchase of a firearm, and all firearm owners must be licensed. In addition, all firearms (both handguns and rifles) must be registered individually by the owner. Storage regulations require that a firearm be stored locked (either in a locked container or with a trigger lock) and unloaded, and separate from its ammunition. Registration requirements for handguns have been in place since the late 1970s, and the recent legislation phased in during the 1990s includes registration requirements for long guns, such as rifles and shotguns.

Before 1990, approximately 30 percent of Canadian firearm homicides involved handguns, and 70 percent involved rifles and shotguns. Since 1990, the rate of homicides committed with rifles and shotguns has steadily declined, whereas the homicide rate involving handguns has remained relatively stable. The result of the decline in the use of rifles and shotguns is that handgun-related homicides now account for approximately two-thirds of firearm homicides. Moreover, data collected since 1997 suggest that most handguns used to commit homicides were not legally acquired. Over the past decade, Canadian youths aged 12 to 17 years comprised nine percent of those charged with homicide, and 43 percent of their victims were aged 12 to 24 years. Wintemute (2002) has described the widespread movement of guns from the legal US firearms market into the illegal market, resulting in the easy availability of inexpensive small handguns to American youths. An understanding of where and how handguns are acquired by Canadian youths will be key to reducing the youth homicide rates in Canada.

Gabor, T. (2003). "Universal Firearm Registration in Canada: Three Perspectives." *Canadian Journal of Criminology and Criminal Justice*, 45(1): 465-472.

The author discusses the contributions of three academics that have written about firearms-related issues. Neil Boyd notes that the decline in firearm-related mortality in Canada has coincided with regulatory changes beginning in the late 1970s until the enactment of the Bill C-68 in 1995. Boyd claims that the increasing regulation of firearms reflects cultural change, in which there is a growing intolerance on the part of Canadians for firearm-related injury or death. In addition, Boyd suggests that the intense criticism of the program's cost is not due a lack of impact or poor management, but the result of the politicized nature of the program. Philip Stenning claims the program should focus on whether the substantial expenditures invested in the program will prevent more firearm injuries and fatalities than other preventive initiatives. Gabor concludes that in the absence of rigorous evaluation for the Firearms Act does not allow for definitive statements about the net benefits of universal registration. Gabor recommends a non-partisan research program to assess the registry's costs and benefits.

Gabor, T. (2003). "The Federal Gun Registry: An Urgent Need for Independent, Non-partisan Research." *Canadian Journal of Criminology and Criminal Justice*, 45(1): 489-499.

Gabor argues that the lack of participation by more than half the provinces and from many gun owners creates a major public policy dilemma. As of 2003, the Canadian Firearms Centre reported that about 200,000 of an estimated 2.3 million gun owners did not have a valid license and about 1.6 million of a estimated 7.9 million long guns were not registered (Gabor, 490). Gabor argues that to address claims that the gun registry has saved lives and other relevant questions; a non-partisan research effort is needed. Proponents of universal registration must address the public policy issues relating to the impact of potential non-compliance with the registration requirements. Some lessons that can be learned from past studies on firearm policy are that public support is crucial and that criminalizing behavior that many support undermines the justice system. In addition, those high-risk individuals may be less likely to comply, and the compliance rate is low, policy analysts must determine the potential success of a program than many of those who are most likely to be involved with firearm-related injury. The author concludes by recommending that the government undertake a rigorous assessment of both the implementation and impact of the new licensing and registration program.

Grogger, J. (2002). "The Effects of Civil Gang Injunctions on Reported Violence Crime: Evidence from Los Angeles County." *Journal of Law and Economics*, 45:69-90.

This evaluation examines the impact of civil gang injunctions on patterns and levels of violence within the areas where gangs have been enjoined. These injunctions prohibit the public association of documented gang members within specific geographic areas. Individuals who have been served under the injunction may not possess cell phones or pagers in these areas. The research focuses on all areas of Los Angeles County where gang injunctions had been employed through early 2001. One of the primary criticisms levied against these spatially targeted gang interventions is that they do little to reduce overall gang crime because they only serve to displace crime and gang activity to neighboring areas. Using a carefully constructed comparison sample, and a "Difference in Differences" approach that controls for local as well as global trends in the data, the author is able to demonstrate that not only do civil gang injunctions result in reductions of violence in the range of 5 - 10 percent, but areas adjacent to active gang injunctions also experienced a small, though statistically significant, reduction in crime. Like many other evaluations of spatially targeted interventions, the author concludes that rather than displacing crime, these spatially targeted interventions provide positive externalities to neighboring areas.

Hagedorn, J. M. (2005). "The Global Impact of Gangs." *Journal of Contemporary Criminal Justice* 21(2): 153-169.

This paper argues that the American study of gangs can no longer start and stop with local conditions but today must also be rooted in a global context. Studying gangs is important because of unprecedented world urbanization, the retreat of the state under the pressure of neo-liberal policies, the strengthening of cultural resistance identities, including fundamentalist religion, nationalism, and hip-hop culture, the valorization of some urban spaces and marginalization of others, and the institutionalization of gangs in some cities across the world. Dealing with gangs as social actors requires a policy of both intolerance of violence and tolerance of informal, nonviolent economic activity. In addition, it requires more negotiation and less suppression. How we deal with the reality of gangs and others among the socially excluded is one of those markers that will shape the nature, and the future of civilization.

Hastings, R. (2005). "Perspectives on Crime Prevention." *The Canadian Journal of Criminology and Criminal Justice* 47(2): 209-232.

In 1994 Canada launched its first phase of the National Crime Prevention Strategy and the founding of the International Centre for the Prevention of Crime (ICPC). This article focuses on the key developments and implications of crime prevention strategies in various countries. The author argues that considerable research over the past decade suggests that the public strongly supports crime prevention initiatives. For example, almost three-quarters of Canadian respondents perceived crime prevention to be more cost effective than law enforcement approaches to crime control. The National Crime Prevention Council (NCPC) designed approaches that would provide policy advice to governments on pro-active approaches to crime and, victimization. The ICPC is funded in part by the city of Montreal, the province of Quebec, the government of Canada, and nine other national governments. The purpose of the ICPC is to make the knowledge base for prevention more accessible, encourage the use of evidence-based practices, foster exchanges at both the local and international levels, and provide technical assistance and networking opportunities. Hastings discusses a number of challenges that must be faced. The author argues that the lack of agreement regarding the causes of crime and the targets of prevention and partnerships creates an illusion of consensus that impedes progress in this area. Going beyond the current level of prevention will require a new governance structure for prevention and the creation of new partnerships to ensure that the prevention is effective. Hastings claims that the role of research and development should be attributed to central authorities that are relatively independent from direct government influence. However, more leadership at the local level is needed since they are directly responsible for the design and delivery of prevention initiatives.

Hill, K. G., Howell, J. C., Hawkins, J. D., Battin-Pearson, S. R. (1999). "Childhood Risk Factors for Adolescent Gang Membership: Results from the Seattle Social Development Project." *Journal of Research in Crime and Delinquency*, 36(3): 300-322.

Adolescents who join gangs are more frequently involved in serious delinquency compared with those who do not, yet few studies have conducted a prospective examination of risk factors for gang membership. This study uses longitudinal data to predict gang membership in adolescence from factors measured in childhood. Data used throughout this study was gathered from the Seattle Social Development Project, an ethnically diverse, gender-balanced sample (n = 808) followed prospectively from age 10 to 18. Logistic regression analysis were used to identify risk factors at ages 10 through 12 predictive of joining a gang between the ages of 13 and 18. Neighborhood, family, school, peer, and individual factors significantly predicted joining a gang in adolescence. Youth exposed to multiple factors were much more likely to join a gang. Implications for the development of gang prevention interventions are discussed.

Hoskin, A. W. (2001). "Armed Americans: The Impact of Firearm Availability on National Homicide Rates." *Justice Quarterly*, 18(3): 569-592.

This study examines the relationship between firearm availability and national homicide rates. The authors examine both theoretical and empirical literatures and highlights their study that promotes a cross-national two-stage least squares regression analysis is described. The relationship between 1990 measures of firearm availability and the average homicide rate from 1990-1994 is examined across 36 countries. The author's use a two-stage least squares regression controlling for homicide's effect on firearm availability as well as a number of other co-founding factors. They find that there is a statistically significant positive effect of firearm availability on national homicide rates. The observed relationship is also found to be insensitive to sample composition however; the magnitude of the found association is considerable.

Kellerman, A. L., Fugua-Whitley, D. S., Rivara, F. P., Mercy, J. (1998). "Preventing Youth Violence: What Works?" In Fielding, J.E., Leave, L.B. and B. Starfield, Eds. *Annual Review of Public Health*, 19, 271-293.

Between 1985 and 1992, serious youth violence in the United States surged to unprecedented levels. The growing use of firearms to settle disputes has contributed to this phenomenon. Youth are most often victimized by one of their peers. In response to this problem, a wide variety of programs have been implemented in an attempt to prevent youth violence or reduce its severity. However, few have been adequately evaluated. In general, interventions applied between the prenatal period and age 6 appears to be more effective than interventions initiated in later childhood or adolescence. In addition, community-based programs that target certain high-risk behaviors may be beneficial as well. A sustained commitment to evaluation research is needed to identify the most effective approaches to youth violence prevention. The authors conclude that a variety of strategies have been implemented in an effort to reduce juvenile gun violence. However, many of them have yielded disappointing results when subjected to well designed evaluation. Some of the programs show promise, but most have been incompletely evaluated.

Kleck, G., Kovandzic, T., and M. E. Schaffer (2005). "Gun Prevalence, Homicide Rates and Causality:A GMM Approach to Endogeneity Bias." CEPR Discussion Paper no 5357. London, UK:Center for Economic Policy Research.

The positive correlation between gun prevalence and homicide rates has been widely documented. This study seeks to answer the question of whether this correlation reflects a causal relationship. Mainly, whether or not more guns cause more crime, and unlike nearly all previous such studies, the authors take into account the endogeneity of gun ownership levels. This paper discusses main sources of endogeneity bias:1) Reverse causality (where higher crime rates lead people to acquire guns for self-protection), 2) Mismeasurement of gun levels, and omitted/confounding variables, and 3) How the Generalized Method of Moments (GMM) can provide an empirical researcher with both a clear modeling framework and a set of estimation and specification testing procedures that can address these problems. For the purpose of this paper, a county level cross-sectional analysis was performed using data on every US county with a population of at least 25,000 in 1990. Therefore, the sample covered over 90 percent of the US population in that year. The authors suggest that suicide research indicated the best measure of gun levels for cross-sectional research and measures gun ownership levels using the percent of suicides committed with guns for that year. Kleck et al. apply procedures to these data and find strong evidence to support the existence of endogeneity problems. They suggest that when the problem is ignored, gun levels are associated with higher rates of gun homicide and that when the problem is addressed, this association disappears or reverses. The results indicate that gun prevalence has no significant net positive effect on homicide rates. For the authors, more guns do not mean more crime.

Koper, C. S., and J. A. Roth (2002). "The Impacts of the 1994 Federal Assault Weapons Ban on Gun Markets:An Assessment of Short-Term Primary and Secondary Market Effects." *Journal of Quantitative Criminology*. 18(3): 239-266.

The reactions of the gun market, including those of producers, wholesalers, retailers, and consumers, play an important role in shaping the potential impact of gun control policies on gun crime. As a case in point, this paper examines the federal *Violent Crime Control and Law Enforcement Act of 1994*, which bans a group of military-style semiautomatic firearms (i.e., assault weapons). Using a variety of national and local data sources, we assess the short-term (1994–1996) impact of the assault weapons ban on gun markets, examining trends in prices and production of the banned weapons in legal markets and assessing the availability of the banned weapons in illicit markets as measured by criminal use. Prices of assault weapons rose substantially around the time of the ban's enactment, reducing the availability of assault weapons to criminal users in the very short run. However, a surge in assault weapon production just before the ban caused prices to fall in the months following the ban. Implications of the findings for assessing this and other gun control policies are discussed.

Krug, E. G., Powell, K. E. and L. L. Dahlberg (1998). "Firearm-related deaths in the United States and 35 other high- and upper-middle income countries." *International Journal of Epidemiology*, 27(2): 214–221.

The Forty-Ninth World Health Assembly recently declared violence a worldwide public health problem. Improved understanding of cross-national differences is useful for identifying risk factors and may facilitate prevention efforts. Few cross-national studies, however, have explored firearm-related deaths. This paper compares the incidence of firearm-related deaths among 36 countries. Health officials in high-income (HI) and upper-middle-income countries (UMI) with populations greater than one million were asked to provide data using ICD-9 codes on firearm-related homicides, suicides, unintentional deaths and deaths of undetermined intent, as well as homicides and suicides for all methods combined. Thirty-six (78%) of the 46 countries provided complete data. Age-adjusted rates per 100,000 for each country and pooled rates by income group and geographical location were compared. The researchers found that during the one-year study period, 88,649 firearm deaths were reported. Overall firearm mortality rates are five to six times higher in HI and UMI countries in the Americas (12.72) than in Europe (2.17), or Oceania (2.57) and 95 times higher than in Asia (0.13). The rate of firearm deaths in the United States (14.24 per 100 000) exceeds that of its economic counterparts (1.76) eightfold and that of UMI countries (9.69) by a factor of 1.5. Suicide and homicide contribute equally to total firearm deaths in the US, but most firearm deaths are suicides (71%) in HI countries and homicides (72%) in UMI countries. Krug et al. argue that firearm death rates vary markedly throughout the industrialized world. Further research to identify risk factors associated with these variations may help improve prevention efforts.

Kwon, I. G., and D. W. Baack (2005). "Focus on Government Intervention: The Effectiveness of Legislation Controlling Gun Usage, A Holistic Measure of Gun Control Legislation." *The American Journal of Economics and Sociology*, 64(2): 1-15.

The purpose of this paper is to better trace the link between gun laws and deaths associated with firearms by using a more comprehensive measure of gun control legislation. In addition, this study argues that one of the reasons for conflicting results concerning the effectiveness of gun control is the use of individual laws as a major variable. Kwon and Baack use a holistic and comprehensive measure of state gun control laws, grouping states into extreme and lax gun control states. The authors conducted a multivariate statistical analysis of twenty-four U.S. states to establish the relationship between a set of determinants, including the holistic measure of state gun control laws and deaths associated with firearms. Moreover, the results indicate that a variety of socioeconomic and law enforcement variables affect the level of firearms deaths in a state. The results show that comprehensive gun control legislation lowers the number of gun-related deaths anywhere between one to almost six per 100,000 individuals in those states that have the most extreme gun-related legislation.

Leonard, L., Rosario, G., Scott, C., and J. Bressan (2005). "Building Safer Communities: Lessons Learned from Canada's National Strategy." *Canadian Journal of Criminology and Criminal Justice* 47(2): 233-251.

The purpose of this article is to discuss emerging trends in the development and implementation of locally based actions directed at crime prevention and community safety in Canada. Since the 1980s, several provinces in Canada have initiated crime prevention strategies with a focus on community and social development. In Canada, after a crime drop from 1995-1999, the national crime rate increased by six percent in 2003. Research on crime control strategies in the United Kingdom, Australia, and the United States revealed that the programs considered community safety to be a major component to governance and that local participation in crime prevention efforts show the community that the local government is positioned to effectively address crime and its prevention. The Crime Prevention Investment Fund (CPIF) had funded fifty-five large-scale projects and their evaluations. Results from some of the projects indicate reductions in offending, improved school attendance and academic achievement, decreased levels of violence, increased pro-social behaviors, and improved community safety. In addition, for the national strategy in Canada, building and maintaining local partnerships is key to the sustainability of the programs through collaborative action. Community-based prevention initiatives are the most promising. The authors conclude that the National Crime Prevention Strategy process and outcome evaluations have helped to produce evidence-based results, but also identify promising directions for future research.

Maxson, C. L., Hennigan, K, and D. C. Sloane. "For the Sake of the Neighborhood?: Civil Gang Injunctions as a Gang Intervention Tool in Southern California." In Scott H. Decker, Ed. (2003). *Policing Gangs and Youth Violence*. Belmont, CA: Wadsworth/Thomson Learning.

As defined within this chapter, Civil Gang Injunctions (CGI's) are spatially based neighborhood-level interventions intended to disrupt a gang's routine activities. CGI's identify specific individuals to be charged as well as specific areas where their activities are prohibited. Described as a place-based, community-oriented intervention scheme, the authors also suggest that the deterrence that comes from CGI's may also explain their perceived success rates. Within this chapter, the authors describe the historical and theoretical background of Civil Gang Injunctions, the process used to obtain CGI's, legal issues associated with CGI's, and the success rates of using CGI's to reduce gang activity. Finally, the authors conclude that Civil Gang Injunctions do not fit into previous gang models. Legal terminology and concerns point towards a suppression effect while community mobilization points to strategic intervention. Keeping this in mind, the authors end with the conclusion that CGI's can be just as helpful to the gangs as they can be to the neighborhood.

McGarrell, E. F., Chermak, S., Wilson, J. M. and N. Corsaro (2006). "Reducing Homicide Through a "Level-Pulling" Strategy." *Justice Quarterly*, 23(2): 214-231.

The decade of the 1990s witnessed large declines in homicide and serious firearm related violence. Yet, despite these unexpected declines, rates of firearms crime in the United States remain high compared to other western democracies. The authors articulate one promising approach to gun crime that emerged in Boston during the mid 1990s. This approach combined face-to-face communication of a deterrence message to youth gang members with social service outreach and crackdowns on several gangs. Boston experienced very significant declines in youth gun crime as did Minneapolis where the intervention was later replicated. This paper presents the results of a study of similar gun crime reduction efforts in Indianapolis. Using time-series analyses, the authors suggest a significant decline in homicide rates in Indianapolis is very similar to those observed in Boston and Minneapolis. Comparisons to six similar Midwestern cities revealed that Indianapolis was the only city to experience a significant decline in homicide rates. The results are discussed in the context of deterrence research and suggest the need to move beyond single-city evaluations of promising interventions.

McKeganey, N. and J. Norrie (2000). "Association Between Illegal Drugs and Weapon Carrying in Young People in Scotland: Schools' Survey." *British Medical Journal*, (320): 982-984.

This article identifies the type and extent of weapons being carried among young people in Scotland, while also determining the relation between illegal drugs use and weapon carrying. Several independent schools throughout Scotland were given a questionnaire and over 3,000 students aged 11 to 16 in 20 schools throughout Scotland participated. This paper analyses the data gathered via the questionnaires and found that for those self completed questionnaires, a higher rate of reported drug use and weapon carrying was found. Overall, 34 percent of males and around nine percent of females reported having carried a weapon ($P < 0.0001$). The age ranged from 29 percent of boys aged 11-13 to 39 percent of boys aged 13-15. When compared to previous studies, these values are higher. Weapon carrying in Lanarkshire was 70 percent higher for males than in the rural areas of Perth and Kinross. Both males and

females who had used drugs previously were more likely to carry weapons. Statistics report that roughly 64 percent of male drug users versus 21 percent of non-users and 23 percent of female drug users versus 4 percent of non-users (both $P < 0.0001$). Respectively, the proportions of males carrying weapons who used none, one, two, three, four, five or more illegal drugs were 21%, 52%, 68%, 74%, and 92%. Similar trends were also found among female participants.

Miron, J. A. (2001). "Violence, Guns, and Drugs: A Cross-Country Analysis." *Journal of Law & Economics, Guns, Crime and Safety: A Conference Sponsored by the American Enterprise Institute and the Center for Law Economics, and Public Policy at Yale Law School*, 44(2), Part 2:615-633.

Within this paper, Miron questions previous studies that have suggested that the role of gun control/availability explains cross-country differences in violence. This paper suggests that differences in the enforcement of drug prohibition are an important factor that should be considered when explaining differences in violence rates across countries (Israel, Switzerland, New Zealand, England and Japan). To determine the validity of this hypothesis, the paper examines data on homicide rates, drug prohibition enforcement, and gun control policy for a broad range of countries. Moreover, the fact that drug prohibition is lax in certain countries, implying low rates of violence, potentially explains why restrictive gun laws in countries such as England or Japan have not themselves given rise to violent black markets in guns. The low rate of drug-prohibition-induced violence in these countries implies a minimal demand for guns and thus small or nonexistent black markets for guns. The data shows that homicide rates differ substantially across countries. The results also suggest that greater prohibition of guns is associated with a higher homicide rate. In summary, the findings suggest a role for drug prohibition enforcement in explaining cross-country differences in violence, and they provide an alternative explanation for some of the apparent effects of gun control and availability on violence rates.

Neumayer, E. (2003). "Good Policy Can Lower Violent Crime: Evidence from a Cross-National Panel of Homicide Rates, 1980-97." *Journal of Peace Research*, 40(6):619-640.

This article provides empirical evidence that good political governance and good economic policies can lower homicide rates. Using rigorous econometric testing (fixed-effects estimators) based on a cross-national panel of homicide data from 117 countries over the period 1980-1997, Neumayer provides empirical evidence that policies that favor inclusion in governance and economic opportunity (but not equality) can lower homicide rates. The study tests modernization theory, opportunity theory, the impact of good policy in the area of equity, the impact of good political governance, and human rights violations on homicide rates. Dependent variables include cross-national data of homicide rates from the International Criminal Police Organization (Interpol), the United Nation (UN), and the World Health Organization (WHO). The independent variables include the gross domestic product (GDP) per capita in purchasing power parity, its growth rate, and the percentage of people living in urban areas as relevant variables in modernization theory. Urbanization data is from the World Bank. Other independent variables are economic inequality and relative deprivation.

After controlling for cultural factors in employing a fixed-effects estimator and controlling for various factors suggested by modernization and opportunity theory, Neumayer's analysis demonstrates how good policies can lower homicide rates. The results suggest that economic growth, higher income levels, respect for human rights, and the abolition of the death penalty are all associated with lower homicide rates. The same conclusion holds for high levels of democracy where Neumayer suggests that violent crime is not simply determined by modernization, population characteristics, and cultural factors. Results also indicate that policies aimed at improving equity have no effect on violent crime. In particular, there is evidence that the positive effect of income inequality on homicide rates found in many studies might be spurious. The results reported suggest that an effective way to lower homicide rates would be to implement policies that achieve good economic outcomes.

Papachristos, A. V., Meares, T. and J. Fagan (2006). "Attention Felons: Evaluating Project Safe Neighborhoods in Chicago." Conference Paper from the 2006 Law and Society Association Annual Meeting, Baltimore, MD.

This research uses a quasi-experimental design to evaluate the impact of Project Safe Neighborhood (PSN) initiatives on neighborhood level crime rates in Chicago. Four interventions are analyzed: 1) increased federal prosecutions for convicted felons carrying or using guns, 2) the length of sentences associated with federal prosecutions, 3) supply-side firearm policing activities, and 4) social marketing of deterrence and social norms messages through justice-style offender notification meetings. Using an individual growth curve models and propensity scores to adjust for non-random group assignment, the findings suggest that several PSN interventions are associated with greater declines of homicide in the treatment neighborhoods as compared to the control neighborhoods. The largest effect is associated with the offender notification meetings that stress individual deterrence, normative change in offender behavior, and increasing views on legitimacy and procedural justice.

Romero, M., Wintemute, G., Wright, M. and C. Parham (2003). "Shall-issue Policy and Criminal Activity Among Applicants for Permits to Carry Concealed Firearms." *Injury Prevention*, 9:367-369.

Several studies have made the claim that U.S. states which adopted "shall issue" laws requiring the state to grant a permit to "carry a concealed weapon" (CCW) to all applicants who pass a simple background check experienced a drop in violent crime after adopting such legislation. Many scholars have been highly critical of the methodology used in reaching this conclusion. The current research exploits a naturally occurring experiment where a local Sheriff in California, which is not a "shall issue" state, decided to approve all CCW applications within his limited jurisdiction so long as the individual passed the standard back ground check that all potential gun owners must pass. In essence, this jurisdiction became a "shall issue" jurisdiction while all other areas of California continued to operate under the more restrictive "may issue" guidelines by which applicants must provide a compelling reason justifying the need for

a permit to carry a concealed weapon. By created a matched sample of CCW permit holders from the local jurisdiction and from the rest of the state, the researchers argue that this comparison permits one to evaluate the impact of "shall issue" on local violent crime. Though the small sample sizes do not yield statistically significant results, their analysis does show an increase in the commission of violent crimes among those issued permits under the more lax "shall issue" policy of the local Sheriff. These finds do not support the work of other researchers who argue that "shall issue" policies reduce crime, but caution that a larger scale study is needed before reaching firm conclusions.

Rosenfeld, R., Fornango, R. and E. Baumer (2005). "Did Ceasefire, Compstat, and Exile Reduce Homicide?" *Criminology and Public Policy* 4:419-450.

This research examines homicide trends in three cities that instituted innovative interventions during the 1990s: Boston's Operation Ceasefire, New York's Compstat, and Richmond, Virginia's Project Exile. Applying growth-curve analysis to data from the 95 largest U.S. cities and controlling for conditions known to be associated with violent crime rates, the authors find that New York's homicide trend during the 1990s did not differ significantly from those of other large cities. Though they do find evidence that the homicide drop in Boston was greater than other cities, they caution against reaching strong conclusions due to the small number of events. By contrast, Richmond's homicide reduction was significantly greater than the decline in other large cities after the implementation of Project Exile (which increased the severity of punishment through federal prosecution of gun possession).

Sherman, L. W. and D. P. Rogan (1995). "Effects of Gun Seizures on Gun Violence:"Hot Spots" Patrol in Kansas City." *Justice Quarterly*, 12(4): 673-693.

Throughout, the authors tested the hypothesis that greater enforcement of existing laws against carrying concealed weapons could reduce firearms violence. Using quasi-experimental, target beat/comparison beat design, the authors completed a study over a six-month period in a ten-by-eight-block area. This area had a homicide rate 20 times higher than the national average. The authors found that intensive patrol near gun crime hot spots produced a 65 percent increase in firearms seized by police. Furthermore, gun crimes declined in the target area by 49 percent, with no significant displacement to any patrol beat surrounding the target area. Neither gun crimes nor guns seized changed significantly in the comparison beat several miles away.

Taylor, P. J. and J. Gunn (1999). "Homicides by People with Mental Illness: Myth and Reality." *British Journal of Psychiatry*, (174), 9-14.

The authors begin with an analysis of high profile killings by people with mental illness that have been used to suggest that the community care model for mental health services has failed. The main goals of this paper are to consider whether such homicides have become more frequent as psychiatric services have changed. Data was extracted from Home Office-generated criminal statistics for England and Wales between the years 1957 and 1995. All data collected was subject to trends analysis. Over the 38 years studied, the authors found little variation in numbers of people with a mental illness committing criminal homicide including a three percent annual decline in their overall contribution to the official statistics. The authors conclude that there are many reasons for improving the quality of care for people with mental disorders, but there is no evidence to claim that their living in the community should be reversed. Finally, the authors conclude that there is a need for specially focused improvements of services for people with personality disorder and/or substance abuse.

Tita, G. E., Braga, A. A., Ridgeway, G., and G. L. Pierce (2006). "The Criminal Purchase of Firearm Ammunition." *Injury Prevention*, 12:308-311.

Federal law, which prohibits certain individuals from possessing a firearm if they have exhibited certain behaviors (including, but not limited to, a felony conviction, being domestic violence misdemeanor, having history of drug abuse, or having been committed to a mental institution), also applies to the possession of ammunition. Unlike the purchase of firearms, however, background checks are not conducted for the purchase of ammunition. This research explores the characteristics of individuals who purchased ammunition during a six-month period in the city of Los Angeles, CA paying particular attention as to whether or not the purchasers were able to legally possess ammunition.. Los Angeles is among several jurisdictions within the United States that requires proof of identification and maintains the identifying information of all buyers in a logbook. Using this data to review the criminal histories of purchasers the authors find that nearly 3% of all purchases were made by prohibited possessors. The total number of bullets purchased by prohibited individuals during the study period exceeded 10,000 rounds of ammunition. The authors offer several policy recommendations aimed at keeping ammunition (and guns) out of the possession of prohibited individuals. First, the authors suggest extending background checks to cover the purchase of ammunition. Alternatively, the ammunition purchases can be used to follow up on individuals who are also likely to be illegally in possession of a firearm.

Tita, G. E., Riley, K. J., Ridgeway, G., Grammich, C., Abrahamse, A. and P. Greenwood (2003). "Reducing Gun Violence: Results from an Intervention in East Los Angeles." Rand Press: Santa Monica, CA.

This book provides a detailed evaluation of the process and outcomes related to a replication of the "Boston Gun Project" in a neighborhood of Los Angeles where gun violence was committed chiefly by gang members. The authors describe the importance of using a "problem solving" approach in defining the problem, choosing the correct strategy, and setting specific goals. The authors also argue that in highly impacted neighborhoods where gangs are institutionalized within a community, it is important to differentiate interventions that simply target "gangs" from those interventions that target a particular behavior (gun violence) committed by gang

members. The intervention involved a "carrot and stick" approach wherein the police and criminal justice systems attempted to increase the costs of doing violence while local community agencies and gang intervention specialist offered incentives aimed at increasing the rewards of not committing violent acts. The evaluation of the strategy employed in Los Angeles found mixed results. The intervention did reduce gun violence in the targeted areas, among the targeted gangs, and among the other gangs within the social networks of the targeted gangs. These results suggest that the intervention, which consisted mainly of additional police patrol and some additional intervention services, not only succeeded among the targeted gangs, but that the effects of the intervention diffused both spatially and socially to gangs not initially targeted. However, unlike the lasting success in Boston where the "pulling of levers" imparted a lasting deterrent effect, the reduction of gun violence in Los Angeles was short lived as once the resources began to exit the targeted areas, violence began to increase. The authors conclude by chronicling the difficulties faced in trying to implement an invention that involves cooperation among a variety of criminal justice agencies, social service providers, and community-based organizations.

Tita, G. E., Riley, K. J., and P. Greenwood. "From Boston to Boyle Heights: The Process and Prospects of a "Pulling Levers" Strategy in a Los Angeles Barrio. "In Scott H. Decker, Ed. (2003). *Policing Gangs and Youth Violence*. Belmont, CA: Wadsworth/Thomson Learning.

This chapter describes an effort to apply two important components of the Boston Gun Project, "problem solving" and "lever pulling," to Boyle Heights - a particularly violent area in the city of Los Angeles. A thorough analysis on violence in the Boyle Heights/Hollenbeck area was completed through a combination of quantitative and qualitative data analysis. The independent research confirmed much of the conventional wisdom in that a large majority (approximately 75%) of the gun violence in the community was committed by members of the nearly 30 unique urban street gangs, and the most of the gang violence was motivated by long standing rivalries. However, the research team found very little evidence to suggest that drug dealing motivates violence in this community. The authors also demonstrate that the gang violence had a clear structure. First, they show that by employing social network analysis, one can get a clear picture of precisely which gangs fight each other. Second, using a spatial typology that classifies crime events by an overlap of crime location, victim residence, and offender residence, the research team also concluded that most gang events are predatory (where the perpetrator invades the victim's neighborhood). Finally, the authors are able to demonstrate that some gangs are more actively involved in gun violence (as victims and/or offenders) than others, and that within the gang, some members are more likely to be perpetrators of victims of violence than other gang members. This information was value in the design of the intervention and aided in the targeting of limited resources towards the most violent gangs and individuals. The authors conclude by stating that any violence reduction strategies must always set a clear goal of reducing violence (versus violence reduction strategies that attempt to reduce gang violence or drug violence).

Vernick, J. S., O'Brien, M. Hepburn, L. M., Johnson, S. B., Webster, D. W. and S. W. Hargarten (2003). "Unintentional and Undetermined Firearm Related Deaths: A Preventable Death Analysis for Three Safety Devices." *Inj Prev*, 9(4): 307-311.

Throughout, the authors attempt to determine the proportion of unintentional and undetermined firearm related deaths that are preventable by three safety devices including personalization devices, loaded chamber indicators (LCIs), and magazine safeties. For this project, information regarding all unintentional and undetermined firearm deaths from 1991 to 1998 was obtained from the Office of the Chief Medical Examiner for Maryland as well as from the Wisconsin Firearm Injury Reporting System for Milwaukee. Data collected included information regarding the victim, shooter, weapon used, and circumstances of the situation. The researchers went through all obtained data and coded each death as "preventable," "possibly preventable," or "not preventable." The authors found that there were a total of 117 firearm related deaths where 81 percent involved handguns. 37 percent of all deaths were classified as "preventable" by personalized gun, 20 percent by LCI, and 4 percent by magazine safety. The authors conclude that 44 percent of all deaths were preventable by at least one safety device and that death involving children (age 0 to 17) and handguns were more likely to be preventable. The authors suggest that, if all guns had been equipped with safety devices, an estimated 442 deaths might have been prevented in 2000.

Wille, Christina. (2005). "Finding the Evidence: The Links between Weapon Collection Programmes, Gun Use and Homicide Rates in Cambodia." *African Security Review*, 15(2).

Cambodia is highlighted as a typical example of a post-conflict country where the lack of easily available data to guide policy design is one of the fundamental challenges to be addressed. While Cambodia has benefited from sustained Small Arms and Light Weapons (SALW) collection and destruction "programmes" (used throughout) since 1998, data analysis on the impact of gun proliferation and use or on these destruction programmes has been lacking. In 2005, the Small Arms Survey (SAS) collected data on firearm morbidity and mortality spanning the last ten years. The objective was to develop methods that can be used for data generation in countries without systematic data collection. Using hospital admissions records and a review of the main English newspaper, the author shows that collection and destruction programmes have made a significant difference to human security in Cambodia. The study also reveals that even where no official data is available, researchers can often derive useful indicators.

Wintemute, G. J., Cook, P. J., and M. A. (2005). "The Risk Factors Among Handgun Retailers for Frequent and Disproportionate Sales of Guns Used in Violent and Firearm Related Crimes." *Injury Prevention*, 11: 357-363.

The purpose of the article is to determine the retailer and community level factors associated with frequent and disproportionate sales of handguns that are later used in violent and firearm-related crimes (VFC). California records were used to identify all handguns sold

by study subjects during 1996-2000 and federal gun tracing records to determine which guns had been recovered by a police agency. Information from 421 licensed gun retailers in California selling at least 100 handguns annually during 1996-2000 was analyzed. The subjects accounted for roughly 12 percent of California retailers with handgun sales, 81.5 percent of handgun sales, and 85.5 percent of VFC handguns. Among the 421 subjects, 3426 VFC handguns accounted for 48 percent of all traced handguns and 65 percent of those linked to a specified crime. These findings suggest that handgun retailer' sales of guns that are later used in violent and firearm related crimes could be predicted, largely by factors measured at the retailer level. In addition, some risk factors can be predicted that exist at the retailer level associated with the disproportionate sales of handguns that are later used in violent crimes. The authors recommend screening to identify high-risk retailers. The results show that gun tracing can help identify important sources of guns used in violent crimes.

Wintemute, G. J. (2002) "Where the Guns Come From: The Gun Industry and Gun Commerce." *The Future of Children*, 12: 54-71.

This article provides an overview of how the gun industry and gun markets operate in the United States, and how these operations make guns easily accessible to children. In 1999 43 percent of all "crime guns," guns seized from criminals, were confiscated from youth. Trends in the handgun manufacturing coincide with trends in gun violence. Crime rates have fallen substantially since 1999, homicide arrests of persons under age eighteen decreased by 56 percent between 1995 and 1999. In addition, the demand for guns has also fallen, and as a result the annual production of semiautomatic pistols in the United States fell by 56 percent between 1993 and 1999. The domestic gun manufacturing industry has a large market for its products, and is engaged in aggressive marketing to youth.

In addition, the lax oversight of licensed firearm dealers combined with the inconsistent regulation of private sales allows guns to move to the illegal gun market where they can be readily acquired by young people. Practices such as bulk retail transactions and surrogate or straw purchasing make it easy for gun traffickers, who sometimes work in cooperation with corrupt licensed gun dealers, to buy guns and then resell them on the secondary market. Sales of guns on the secondary market increase the availability of guns because these sales are not subject to federal regulations such as background checks. Some interventions such as tracing crime guns, the strengthening of regulations pertaining to licensed dealers, and the screening of potential buyers have already been implemented in various states. Other strategies such as limiting gun sales, registering guns and licensing owners, regulating the secondary market, and banning certain types of weapons might also be effective in reducing youth access to guns.

Footnotes

[1](#) Dauvergne, M., and G. Li (2006). Homicide in Canada, 2005. *Juristat*. Vol. 26, No. 6. Ottawa: Canadian Centre for Justice Statistics, Statistics Canada.

[2](#) For a comprehensive review of the nexus between gang membership and delinquent/criminal behaviour see Thornberry, T.P, M. D. Krohn, A.J. Lizotte, C.A. Smith, and K. Tobin. 2003. *Gangs and delinquency in developmental perspective* Cambridge: Cambridge University Press.

[3](#) See Tita, G.E., and G. Ridgeway (2007) "The Impact of Gang Formation on Local Patterns of Crime." *Journal of Research on Crime and Delinquency*, 44:208-37.

[4](#) See Howell, J.C. 1998. [Youth Gangs: An Overview \(PDF Version\)](#). Washington, D.C.:U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

[5](#) See Blumstein, A. 1995. "Youth Violence, Guns, and the Illicit Drug Industry." *The Journal of Criminal Law and Criminology* 86:10-36.

[6](#) Wright, M.A., G.J. Wintemute, and F.P. Rivara (1999). "Effectiveness of denial of handgun purchase to persons believed to be at high risk for firearm violence," *American Journal of Public Health*, 89(1):88-90.

[7](#) The [full text of the joint announcement](#) can be found online.

[8](#) We thank ATF agent Douglas Kroh for sharing his expertise.

[9](#) The [report was issued by The Advancement Project Los Angeles](#)

[10](#) See Tita, G.E., and Griffiths, E.A. (2004) "Traveling to Violence: The Case for a Mobility-Based Spatial Typology of Homicide." *Journal of Research on Crime and Delinquency* 42: 275-308.

[11](#) See Tita, G.E., and Griffiths, E.A. (2004) "Traveling to Violence: The Case for a Mobility-Based Spatial Typology of Homicide." *Journal of Research on Crime and Delinquency* 42: 275-308.

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Gun Accessibility and Violence. Illegal Gun Markets: Promising Interventions. This report on strategies to reduce gun violence begins with a brief overview of recent trends in gun violence with a particular focus on emerging trends and changes in Canada. A review of literature covers the linkages between gangs, drug markets and firearm accessibility and firearm violence. When possible, the impacts of these factors on patterns of violence are explored at both the individual and community levels. Particular attention is paid to the role of gangs and drug markets in facilitating violence. In addition, research findings and program evaluations aimed at reducing gun violence are also included. Because Congress stifled gun violence research for years, many basic questions about the nature of mass shootings, such as the ones in El Paso (above) and Dayton, remain unanswered. JOEL ANGEL JUAREZ/Getty Images. To revisit this article, visit My Profile,

then View saved stories. Many basic statistics about gun violence stubbornly fail to exist. The science of how many, how often, and how bad hasn't been done. The studies of what causes people to become violent and use firearms, of who those people are, of how to find them and stop them—they haven't been done. The deeper problem here is that in 1996 Congress made it illegal to put federal money toward gun control and cut the gun violence research budget at the Centers for Disease Control and Prevention. The second way drugs and juvenile gun violence appear related is through the impact of drugs on a young person's perceptions. Adolescence is a time of taking risks and seeking stimulation, and juvenile delinquents report a certain level of excitement as well as fear of apprehension in the commission of a crime. Researchers have identified a number of factors that put youth at risk of gang involvement: poverty, school failure, substance abuse, family dysfunction, and domestic and societal violence.¹⁹ Easy access to illicit drugs and the perceived financial rewards of drug dealing pose attractive alternatives for youth with inadequate education and limited employment opportunities, leading them into high-risk behaviors and potential gang involvement.