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ABSTRACT

                Weapons violence is a major public health problem
that especially impacts minority youth. Interventions designed to
reduce weapon use by youth are categorized as educational/behavioral
change, legal, and technological/environmental. Few educational
programs currently exist, but those that do largely concern firearm
safety courses, public information campaigns, counseling, classroom
education, peer education and mentoring, and crisis intervention.
Given that legal and technological countermeasures have difficulty in
controlling weapons violence, education seems a critical first step
toward a comprehensive approach to preventing weapons-related
violence. Potential educational interventions include educating
students and their communities about the dangers inherent in carrying
or possessing firearms. Potential legal interventions include firearm
legislation assessment, taxation, stricter licensing and registration
policies, and bans on selected types of firearms. Potential
technological/environment interventions include designing safer
weapons, eliminating ammunition types, and modifying the adverse
environment in which weapons are used or carried. A combination of
strategies should be used, but before interventions are discussed,
professionals must address the inadequacy of current information on
which to base firearm policy, ethical and philosophical issues
involving metal detector use, and the community's role. The appendix
contains a list of 16 associations to contact for additional
information. (GLR)

WEAPONS AND MINORITY YOUTH VIOLENCE

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Background paper prepared for the
Forum on Youth Violence in Minority Communities:
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PROJECT STAFF

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EXECUTIVE SUMMARY

Weapons violence is a major public health problem. Each year, growing numbers of young people are killed or severely disabled in violent altercations that involve weapons. And among the young, minorities suffer disproportionately. In fact, homicide by firearm is the number one cause of death for young African American men. Although firearms and other weapons are only part of the problem, they are the tools by which aggression and violence turn fatal. If the weapon happens to be a gun, then the chances of the anger becoming fatal increase. Recognizing this problem, schools and communities across the United States have begun to address the problem with a handful of programs and interventions that target weapons and youth violence. This paper reviews those existing and potential strategies designed to reduce weapon use by youth. These interventions have been categorized into three broad categories: educational/behavioral change, legal, and technological/environmental.

Currently, there exist only a few educational programs designed to prevent weapons misuse by youth, especially minority youth. These programs usually combine a number of educational strategies that can best be classified as: firearm safety courses, public information campaigns, counseling, classroom education, peer education and mentoring, and crisis intervention. Educational strategies are widely used because they are persuasive rather than coercive. Given the difficulty of controlling handgun availability through legal and technological countermeasures, education about firearm injuries may be a critical first step toward a comprehensive approach to preventing them.

Legal countermeasures, which limit the number and types of people eligible to own firearms or the types of firearms that can be owned and carried, are usually designed to affect all individuals, not just minority youth. There are thousands of federal, state, and local laws dealing with the sale, distribution, nature, possession, and use of firearms. This paper attempts to summarize the many types of local, state, and federal legislation, discuss constitutional issues, and present evidence of the effectiveness of existing legal interventions. To control the availability of firearms at the state and local level, Baker, Teret, and Dietz suggest intervening at four different points in time: (1) when the gun is used, (2) the period of possession, (3) the time of sale or transfer, and (4) the time of manufacture or importation. Currently, regulations are most strict at the point of use and are weakest regarding manufacture and importation. In the future, laws may have more impact if they are most stringently regulated at the point of manufacture. However, in the absence of uniform national laws, many of these local or state gun control laws may not be particularly effective. Criminals may simply go out of state to buy large quantities of weapons, which they may, in turn, sell. The role of the federal government in gun control is viewed by some as crucial because it can provide the coordinating framework for the myriad of state and local laws. The current federal legislation is limited and recent efforts to change it have been unsuccessful. Despite the proliferation of gun control laws in the U.S., there still remains some uncertainty about the effectiveness of previous legislative attempts to restrict availability and use of firearms.

Existing technological and environmental measures are based on the premise that automatic protections are generally more effective than those that require repetitive action. These interventions include modifications to weapons (especially firearms), ammunition, and the environments in which weapons are used. To date, there is very little evaluation data on the effectiveness of technological and environmental interventions aimed at reducing weapons violence. However, given the success of past technological and environmental strategies aimed at reducing other types of injury, additional strategies should be explored.

Given what we know about existing interventions and what we know about injury prevention, we believe that there are several interventions that require further exploration and expansion. Potential educational/behavioral change interventions include educating students and their communities,

legislators and policymakers, the media, and patients in clinical settings about the dangers inherent in carrying or possessing firearms. Potential legal interventions include firearm legislation assessment, changing pre-emption laws, monitoring voting records and lobbying, product liability litigation, taxation, stricter licensing and registration policies, and bans on selected types of firearms. Potential technological/environmental interventions include designing safer weapons, eliminating ammunition types, modifying the environment in which weapons are used or carried (including building positive school environments and reducing poverty).

There is much evidence from the field of public health, especially injury prevention, to show us that these strategies have the potential to prevent weapons misuse among minority youth. It is not enough to focus solely on the technological or environmental measures or on getting rid of firearms. We must use a combination of preventive strategies–educational/behavioral, legal, and technological/environmental–aimed at weapons injury prevention. And each strategy plays a particular role. However, before interventions can be discussed, professionals must address a few issues. These include: the inadequacy of information on which to base firearms policy and practice, how local communities can play a role in the prevention of firearm injuries and deaths in minority youth, and the ethical and philosophical issues associated with the use of particular interventions such as metal detectors.

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I. INTRODUCTION

In violent altercations, increasing numbers of our nation's youth are dying or being disabled by weapons, especially firearms. Homicide rates for persons aged 15 to 24 have been 40 to 50 percent higher than the population average, with a still wider gap (to over 60 percent) emerging in 1986 and 1987.[1] In Washington, D.C., penetration injuries, especially from handguns, among children seen at Children's Hospital have increased 1,500 percent since 1986.[2] And among the young, minorities suffer disproportionately. In fact, homicide by firearm is the number-one cause of death for young African American men. Handguns, in particular, account for most of these injuries and deaths: about one in 32 urban African American males from 16 through 24 years old is a handgun crime victim.[3]

Because firearm injuries typically affect young males and are more severe than other types of injuries, they exact a great financial toll. They represent a productivity loss of $370,706 per person—the most costly cause per injury death—and cost society an estimated $14.4 billion (1985 dollars).[4] These costs burden not only the injured but also families, employers, the community, and society. The psychological burden of firearm injuries is substantial, but difficult to calculate. Consider the mother who is afraid to let her children walk home from school alone or go out after dark because of the proliferation of guns and drug use in her neighborhood.

However, it is important to note that violence with weapons does not occur in a vacuum. Most of the homicides among youth occur in the context of an argument and are committed by someone known to the victim.[5] Moreover, victims are re-victimized and in the case of firearm homicide, especially among those involved in intimate relationships, there has often been a long history of abuse and violence.[6] In these cases, weapons become the tools by which aggression and violence turn fatal. If that weapon happens to be a gun, then the chances of the anger becoming fatal increase. Additional factors such as exposure to violence on television and in the motion pictures and playing with toy weapons as children shape our culture and attitudes about violence and weapons. Economic disparity and poverty may also be legitimate predictors of violence. Although the relationships among race, socioeconomic status, and violence are complex and often confused, one conclusion is clear: When socioeconomic status is considered, the disparity between African Americans and the general population as both victims and perpetrators becomes quite small.[7] Thus, socioeconomic status is a more accurate predictor of violence than race. And finally, while we may not understand how drug use makes individuals physiologically more prone to violent behavior, we do know that drugs are associated with many homicides and nonfatal assaults. In some large cities, most homicides are related to drug use and drug dealing, and firearms play an important role in the drug trade.[8]

Although firearms and other weapons are only part of the violence problem, they are the part that makes so much aggression lethal. However, as Phil Cook states, "the widespread involvement of firearms in personal violence is not just an incidental detail, but, rather, has an important influence on the patterns and lethality of this violence."[9] Each gun injury is five times more likely to result in death than an injury from the next most deadly weapon, a knife.[10] Although the question of restricting firearm ownership and usage is a contentious political issue, few would argue that youth, particularly adolescents, should have unsupervised access to firearms or other lethal weapons at school or on city streets. Yet such weapons are routinely confiscated by police or school officials across the nation. In California, from July 1, 1988 until June 30, 1989, schools confiscated 10,569 weapons, an increase of 21 percent over the past year.[11] In Baltimore, a court study found that of 390 high school students polled, 64 percent knew someone who had carried a handgun to school in the preceding months; 60 percent knew someone who had been shot, threatened or robbed at gunpoint in school and almost all of the males said they carried a handgun to school at least once.[12] Although knives are the most common weapon found in schools, more

sophisticated firearms are available to students, increasing the chances for serious injury or death.[13] Schools and communities across the United States have only begun to address the problem with a handful of programs and interventions that target weapons and youth violence. These essentially aim to educate people about the dangers inherent in possessing weapons, especially firearms; restrict firearm availability and accessibility; and reduce the potential lethality of weapons.

II. EXISTING INTERVENTIONS

The following sections of this paper describes strategies designed to reduce weapon misuse by youth. No intervention was designed specifically for minority youth, yet each has minority youth as a target audience. And few were designed to address weapon misuse other than guns, yet each is believed to have an impact beyond gun use. There is near unanimity among professionals that any gun-specific program should be conducted within the context of a broader, more comprehensive violence prevention program. Further, in the opinion of some, anti-weapon programs, and even violence prevention programs, are merely addressing symptoms of far deeper problems of poverty and disparity.

Interventions have been categorized into three broad types: educational/behavioral, legal, and technological/environmental. Intervening successfully against weapon use may involve education of the population at large or targeting groups to alter specific weapon-related behaviors, passage and enforcement of new laws or enforcement of existing laws, or changes in the design of weapons, their accessories, or the environment. These are not mutually exclusive categories. The approaches can often be combined effectively.

These broad intervention types are then subcategorized by the nature of the intervention. This categorization allows us to examine the effectiveness of specific modes of intervention rather than programs that are made up of various component interventions. The different educational, legal, and technological interventions we list have different theoretical basis. The aim of this paper is to describe these interventions in such a way as to make explicit the rationale for their use as strategies to prevent weapon-related violence and injury.

EDUCATIONAL/BEHAVIORAL INTERVENTIONS

Education/behavior change strategies respond to the fact that weapon-related violence results from both environmental and behavioral causes. They are designed to affect people's knowledge, attitudes, and behaviors around weapons and essentially carry the same message: there are inherent dangers in possessing weapons, especially firearms; and young people, in particular, are at great risk of injury and death if they carry them.

Currently, there are very few educational programs designed to prevent weapons misuse by youth— especially minority youth. These programs usually combine a number of educational strategies which can best be classified as: firearm safety courses, public information campaigns, counseling, classroom education, peer education and mentoring, and crisis intervention.

FIREARM SAFETY COURSES

Programs aimed at the general public have traditionally been firearm safety courses that seek to teach individuals how to safely handle, use, maintain, and store firearms. The National Rifle Association (NRA), the country's largest and most powerful pro-gun organization, supports this

type of educational strategy. For years, it has provided education to the general public, all in the context of safe use of guns. Yet, the effects of these courses on firearm injury rates is unknown. An important research question is whether the safety benefits of such courses are outweighed by their ability to promote an interest in firearms, an interest that increases the numbers of firearms in circulation and the potential for both intentional and unintentional injuries. Such programs should be monitored and carefully evaluated.[14]

PUBLIC INFORMATION CAMPAIGNS

Public information campaigns are designed to raise awareness about the dangers of carrying a weapon. The underlying assumption: by educating people that having a gun—in the home or on the person—can be dangerous and does not afford them the protection they expect, they may be less likely to carry a gun or bring one into their homes.

The Center to Prevent Handgun Violence (formerly Handgun Information Center) adopts this approach by attempting to change people's knowledge, attitudes, and behaviors about the protection they believe firearms offer. In 1985, the center, in conjunction with the Police Executive Research Forum, developed a model program on handgun safety. The emphasis of the Charlotte, North Carolina-based awareness campaign was prevention of unintentional shootings among children. But administrators felt it may have had an effect on *intentional* violence because of the impulsive use of handguns in the home during heated arguments. (Firearms are often acquired to provide protection against crime. Yet they are far more likely to kill a household member than they are to kill an intruder.[15]) The Charlotte Police Department implemented the program with the center and research forum, offering technical assistance and funding. The police department developed safety guidelines, disseminated brochures, developed print and broadcast media messages, made community presentations, and held safety demonstrations. An evaluation, conducted by two University of North Carolina at Charlotte researchers, showed that 46 percent of individuals surveyed were aware of the campaign (conducted during a Handgun Safety Month) and 54 percent said they were not. The evaluation concluded that the campaign significantly affected only one of its objectives: individual handgun owners who were exposed to the campaign were more likely to lock up their handguns. No significant results were found on any other objectives (i.e., improved storage of guns and ammunition, instructing children about handgun safety, checking firearms before cleaning them, and monitoring possible increased handgun purchases because of the campaign). The evaluation further noted

> ... This does not suggest that the program was unsuccessful relative to its goals or that the dissemination of handgun safety information had no impact on community members. For example, it may be hypothesized that when an individual securely locks away a handgun, the perceived need of keeping the firearm unloaded or stored separately from the ammunition is significantly reduced ... Nevertheless, the need for empirical verification and further research is evident.[16]

The Center to Prevent Handgun Violence also helped the Baltimore County Police Department develop a 33-month educational program that targets handgun owners, potential owners, and non-owners. The program is not anti-handgun and does not emphasize gun control legislation or mention banning handguns. Rather, for handgun owners, the program focus is safe usage, maintenance and storage in the home, along with suggestions for "childproofing" handguns. Legal issues and liability issues around ownership are covered. For potential owners, the risks and responsibility of handgun ownership are targeted, in addition to legal, psychological, and practical issues of ownership. For non-owners, the program emphasizes the dangers from misuse of handguns and provides information on "gunproofing" children through education.[17] The program involves media outreach, advertisements, public service announcements, pamphlets, brochures, and police presentations. To date, there are no formal evaluation materials.

Two years ago, the Youth Advisory Council of the Detroit City Council, in conjunction with the Educational Fund to End Handgun Violence, launched an anti-violence campaign directed at youth. One of the major objectives was to heighten young people's awareness about the realistic outcomes of violence. The awareness campaign included graphic posters. One, a photograph of a morgue, contains the caption, "Let's be honest. Not all kids who carry guns go to jail." The other, of pallbearers carrying a casket out of a church, has the caption, "This family portrait was brought to you by a teenager with a gun." No evaluation or monitoring system is in place.

The Baltimore City School District has instituted an awareness campaign as part of its multi-pronged program against weapons in schools. The program targets middle and high school youth (80 percent of whom are African American, 18 percent white, and 2 percent other). The awareness campaign, "Guns Kill," consists of posters. The posters picture a gun pointing out at the viewer with the caption, "Guns Kill. Keep them out of School. Call School Police." According to Douglas Nielson, school system director of communications, some elementary and middle school students were frightened by the graphic image of the gun barrel. The school system is considering revamping the visual content to a more passive approach.

It is important to recognize that the use of scare tactics to persuade young people to adopt healthy behaviors has been questioned. One report authored by DeJong and Winsten suggests that fear tactics will backfire and recommends that public health professionals use a wider variety of strategies in mass media, such as event sponsorship or message placement in prime-time television programming. According to authors, many mass media campaigns in the health arena fail due to flawed design and execution. They offer 20 recommendations for practice.[18]

Another organization that has adopted this public information approach is Save Our Sons and Daughters (SOSAD). SOSAD is a Detroit, Michigan, community-based organization whose major goals are to stop violence among children and to provide support to the families of victims of violence. Although the program aims to stop all kinds of violence, it essentially tries to stop firearms violence and many of the program's activities reflect this emphasis. For example, SOSAD organizes weekly CEASE FIRE marches to raise awareness in the community and takes a strong stand on gun control; they lobby hard for the elimination of handguns and other types of firearms. Within the community, it provides support to families whose children have been killed in violent conflict, educates the Detroit community about local and national issues of violence, and organizes and mobilizes community members around some of these issues.

So far, SOSAD has taken major steps in increasing awareness of the problem in the community at-large. It has been in the forefront of the "Stop the Violence" movement in Detroit. Since the program's inception three years ago, the number of shootings in Detroit has gone down each year. Whether that reduction can be attributed solely to the efforts of SOSAD is debatable. However, it is likely that its efforts played an instrumental role in the reduction.

Despite its success, SOSAD has had to overcome several barriers. Like many other community-based programs, it has had to fend off surges of apathy and disunity. Because SOSAD depends heavily on the combined efforts of many organizations and individuals, these two conditions can create major barriers. A third barrier, says Clementine Barfield, the program's director, is fear. This is a fear of getting involved and a fear of the problem. She says that, "people put themselves under house arrest. The only way to change the things that are going on in the streets is to get out on the streets and change it."

Although this program has not been evaluated, it may have some merit. Much like Mothers Against Drunk Driving (MADD), this program was founded on the philosophy that grief can be channeled into constructive measures to bring about change. Also like MADD, this program has done much grassroots organizing, lobbying, and public education.

COUNSELING PROGRAMS

Counseling programs are designed to reduce the numbers of students who carry weapons to school. These programs focus on self-discipline and self-image, rules, respect, avoiding unnecessary conflicts, and career planning. Students learn how to avoid situations they feel necessitate weapons use, and they learn how to deal with conflicts in ways that don't depend on confrontations or threats. Such programs exist in Buffalo, New York, and Boston, Massachusetts. The Boston program is described below.

The Barron Assessment and Counseling Center in Boston is a school-based initiative funded by the Massachusetts Department of Education. It targets elementary, middle, and high school students in the Boston public school system who are caught with weapons on or near school property. The Barron Center can accommodate 30 students, though its numbers fluctuate. Most of the students who pass through the Barron program are young African American males. Many have been caught with firearms. And according to program director Franklin Tucker, those students who are caught with knives may also have a firearm at home. He says that most of the young people who go through the center have not used the weapons they have been carrying; they are usually frightened and say they need the weapons for protection.

Students typically participate in the Barron Center program for one or two weeks, although some have attended for more than a month. (Young people with serious firearms violations are usually at the center longer and go to an alternative program before entering the school system.) During that time, they undergo psychological, sociological, and educational assessments; take lessons in violence prevention and awareness; participate in individual and group counseling; and attend regular class. In addition, they visit the Charles Street Jail and area juvenile detention facilities and meet representatives from the Juvenile Justice Department. After leaving the center, the students either return to their original school, are transferred to another, or are sent to one of several area educational centers for troubled youth. They also receive assistance through the Boston Youth Development Program, a nonprofit community-based organization in Boston's Dorchester neighborhood; the Department of Mental Health; and, if the director's plans come to fruition, students and their families may soon attend counseling sessions at the nearby Roxbury Comprehensive Community Health Center on a long-term basis.

The program employs two administrators and one guidance counselor. In addition, graduate students from Boston University provide job-related counseling, and individuals from the business and educational communities who have "made it" come to speak to the students. The Barron Center program has an annual operating budget of $450,000; however, recent budget cuts and facility relocation necessitated the layoff of the center's assistant director.

The program offers potential and real benefits because it gives youth a "time-out" period to reflect on their actions. It is an intensive program that teaches young people to deal with the problems that arise in a nonviolent manner. Only 4 percent of the students who go through the program are caught with weapons again, and to date none caught with firearms have been repeat offenders. However, the center does not keep formal records of program completers who are caught outside of the school system with weapons. Nor does it report on completers who injure someone with a weapon or fall victim to an armed assault in the community. Director Tucker keeps an informal record of these kinds of activities and acknowledges that weapons in the school are just part of the problem. He believes that the proliferation of weapons in the community also supports the need for a long-term treatment and counseling center for the young people who are caught carrying them.

CLASSROOM EDUCATION

Much like the firearm safety programs aimed at the general public, classroom education also seeks to teach students how to act safely around firearms. However, the meaning of "safety" varies. In some curricula, "safety" refers to handling guns properly and in others it means avoiding them.

For example, the NRA has developed two curricula. One for kindergarten through grade 2 features a cartoon character, Eddie the Eagle. A coloring book and poster portray two young children coming across a gun on a table in their home. The program has the message from Eddie, "Stop–Don't Touch. Leave the Area. Tell an Adult." The second program, for grades 3 through 6, includes gun safety instructional guidelines and activity sheets. The NRA also publishes guidelines, "Gun Safety and Shooting Education in Schools." The materials have met with much opposition because of their intimation that it is normal for guns to be about the house, and because children are given no information about why guns are dangerous. This program was rejected in Dade County, Florida, in favor of one prepared by the Center to Prevent Handgun Violence, based in Washington, D.C.

Dade County Public Schools, the Center to Prevent Handgun Violence, and Youth Crime Watch of Dade jointly developed *Kids + Guns = A Deadly Equation*, the nation's first pre-K-12 curriculum on guns. It is designed to teach students about the dangers of playing with or carrying guns. The educational program is intended to supplement a health or safety curriculum. Program literature reads, "Classroom and general assembly activities for all grades and a video for grades 7 through 12 provide students with help in recognizing unsafe situations, suggestions on how to react when encountering guns, how to resist peer pressure to play with or carry guns, and how to distinguish between real-life and TV violence." The program includes a parent education component with a brochure and video.

Development and distribution of the videos and guide cost $40,000 to $50,000. The program received criticism from the NRA and parents who felt the contents might be too graphic, and thus, traumatic. Program evaluation, currently under design, will be conducted in 1991. In the first six months of the program (January-June 1990), a third fewer youths in Dade County died from gunshot injury, but program representatives are quick to say that any number of factors could have brought about the reduction. Initial measures of awareness were "extraordinarily positive," according to Dennis Smith, director of public education at the Center to Prevent Handgun Violence.

The Southeastern Michigan Spinal Cord Injury System, one of 13 federally designated centers involved in patient care, research, education, and injury prevention, has also developed a program for the classroom. Its 25-minute video, "Wasted Dreams," focuses on six gunshot victims who describe how a permanent and paralyzing injury has forever changed their lives and how to avoid high-risk people and places where gun-play may occur. The program seeks to provide firearm violence prevention in classrooms through awareness and problem-solving skills in an easily accessible, affordable, and easy-to-implement program. The video, which was originally targeted to students in southeastern Michigan, has been circulated around the country. The accompanying materials offer teachers some explanation of the video, how to use it, and some guidelines for discussion.

The program has never been formally evaluated, aside from a pre- and post-test questionnaire to assess participant satisfaction and awareness. Thus it is difficult to prove effectiveness in increasing awareness. Informal feedback reveals that the program's original target audience–senior high school students–was too old, and their behavior patterns less flexible. An intervention such as this one needs to start earlier. Some of the potential benefits include greater awareness among students and teachers about the consequences, fatal and nonfatal, of gunshot wounds. However, there is little evidence of long-term effects.

Professionals outside the K-12 schools, such as pediatricians, graduate school instructors, and home health aides also have key roles to play in reducing weapon-related violence. A few anti-weapons programs have been developed for their settings.

Educating Professionals in Injury Control (EPIC), a program developed by Education Development Center, Inc. and the Johns Hopkins Injury Prevention Center, is targeted at graduate nursing, public health, and medical students. Aiming to introduce them to the overall principles and practice of injury prevention, the program has a separate section on firearms injuries. Materials include lecture notes and slides and are designed to be adaptable to settings outside the classroom.

PEER EDUCATION AND MENTORING

Peer education and mentoring programs are designed to train students at risk for violence and for dropping out of school to be health advocates in violence prevention–particularly firearms–to their peers and younger students. Through this process, such programs enable at-risk students to gain self-respect and to participate in improving the quality of their own life and the lives of those around them. Training students is the first step to mobilizing the school population, families, and the community to be new voices on the unexpected impact of guns on people's lives. Additional program goals include training young people to recommend policy changes for violence prevention to policymakers and to keep the issue of violence as a health problem in the media.

This kind of program is an outgrowth of the health advocacy movement. One such program, Teens on Target (TNT), grew from the Oakland Safety Task Force in California, a coalition of elected officials, parents, and school and community agency representatives. It was set up in 1988 after two consecutive shootings of junior high students and based on the assumption that young people might be able to do a better job than adults at tackling the youth violence problem. Another driving assumption was that youth who feel oppressed have no way to participate in a socially approved way. Constructive alternatives were needed to what is readily available to young people–guns, drugs, and gangs. Preventive efforts were needed before low self-esteem and violence became a way of life. Young people needed to know that they were resources and that they could participate in changing things around them.

The program trains a selected group of high school students from different racial and ethnic backgrounds as violence prevention advocates. Through an intensive summer program conducted by an Oakland mentor media teacher and a San Francisco Trauma Foundation staff member, the students acquire leadership skills, practice public speaking, and learn about three areas of violence prevention: guns, drugs (including alcohol), and family violence. When they complete this training, they become violence prevention advocates, with a focus on firearms. The Oakland mentor teacher provides ongoing guidance and supervision to TNT members, and a Trauma Foundation staff member is still actively involved as a resource person.

As paid violence prevention advocates, TNT members serve as peer educators to other high school students and mentors to younger students in middle and elementary school. Their objectives are to: (1) discuss violence in a health context and (2) elicit from other students recommendations for violence prevention that will contribute to eliminating guns and violence from the schools. These recommendations could be an individual school project, such as a play or mural; a joint school and neighborhood project, such as establishing a gun- and drug-free zone, which would benefit both the school and the community; a media event to call attention to the youth violence problem; or policy recommendations to prevent gun violence to take to policymakers. It is hoped that there will be a core group of TNT students in every high school in Oakland. That way, its multiplier effect to peers and younger children will give every Oakland child an opportunity to participate in resolving the deadly gun problem.

The original group of eight violence prevention advocates has grown to 20 students. These advocates have been to five conferences in Los Angeles and San Francisco and have been in ten schools, thus bringing the number of program participants to more than a thousand. The initial group of students in TNT in Oakland successfully presented a "Teens Preventing Violence" conference. Participants developed an action agenda for violence to present to schools and policymakers.

Program evaluation is ongoing. An intern at the Trauma Foundation recently developed pre- and post-assessment instruments. The questionnaire asks about school performance, knowledge and attitudes about violence, violent behavior, knowledge and attitudes about guns and behaviors associated with guns and gun violence, comfort in being an advocate (e.g., perceived comfort in public speaking and being a role model), and participation in planning violence prevention programs. Young people who have been trained as peer advocates answer the questionnaire before and after training. Students who have not been through the training but have participated in classroom presentations by peer advocates also complete a pre- and post-questionnaire. Their questionnaire is similar to the one described above without the final questions about being an advocate.

While the formal evaluation is pending, program staff has kept records of informal feedback. The initial group of eight peer educators attest to feeling more confident, having less interest in violence-related activities, and feeling like they have a way out. Many had friends who have been shot; some had been shot at themselves. It is hoped the skills that they have learned as health advocates will be useful to them in further study or for paid employment. The program has received extensive media coverage and handles weekly requests from all over the country regarding replication. Currently, the program has plans to expand into eight cities.

Despite its success, TNT still must surpass certain obstacles. Because the program primarily serves young African American men, it needs to recruit staff and find trainers from this group. However, identifying the right adult role models for the program has been difficult. Second, working within at-risk school districts has been awkward because staff turnover is high. Each year TNT members go into the schools, they are working with an almost entirely new faculty and staff. Third, the program itself requires a great deal of patience. Program Coordinator Deane Calhoun says that "the kids with which we are working have never been given much responsibility. We have to be patient and take the necessary time to work with these kids. We are using kids to carry a message, and it takes a lot of time to prepare the kids to do that. Initially, we did not allow enough time for the kids to do this."

CRISIS INTERVENTION

These are educational/behavioral strategies that aim to get weapons out of the schools and keep them out. Hotlines, searches, and expulsion or suspension policies are examples of crisis interventions. These efforts are usually considered necessary last resorts when the primary prevention approaches fail to reach certain students or are not in place.

Hotlines, like the ones employed by the Baltimore City School District and the Detroit Youth Anti-Violence Campaign, enable youth to report someone who is illegally carrying a gun. In Detroit there are two anonymous hotline telephone numbers; one is at the police department and the other is within the school. In Baltimore, where the hotline is connected to the school police number, it is impossible to tell how many reports of guns are sparked by the corresponding awareness campaign. (Last year, the hotline received 72 calls; 66 of these were dismissed upon investigation.)

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Schools frequently resort to a variety of sweeps and searches to confiscate weapons. For example, at Grover Cleveland High School in Queens, New York, police conducted a search for weapons and found a stockpile of brass knuckles, knives, and a rifle. School officials in Pinellas County, Florida, also instituted random searches of students at Pinellas Park High School following the shooting death of the assistant principal in 1988.[19]

Many schools require immediate suspension or expulsion for students caught with weapons at school. The premise behind this measure is that the negative reinforcement will deter some students from carrying weapons to school. In St. Louis, Missouri, for example, the possession or use of weapons or dangerous instruments results in the immediate removal of the student from the school, a hearing, and a recommendation for expulsion from the St. Louis Public Schools System. In Providence, Rhode Island, a student caught with a weapon is automatically suspended for 60 days.[20]

However, suspension and expulsion do not offer a complete solution to the weapons problem. Expulsion may solve the school district's immediate problems, but it is not an effective long-term solution to the larger community problem. John Burton of California's San Bernardino Public School System says that "to remove students who have weapons from school and put them on the street with their weapon is to put out the fire at school but in the process spread it into the street."[21]

EFFECTIVENESS

Educational strategies are widely used because they are persuasive rather than coercive. Yet, we know little about the effectiveness of educational efforts concerning firearms and other weapons; education alone may not lead to changes in practice among large numbers of people. However, education about injury risk and the importance of risk-reduction behaviors is a gradual process. The effects of educational campaigns may not be seen for a year or more. Further studies are needed to evaluate the longer-term benefit of educational programs and how these approaches can be combined with others to accelerate behavioral change related to weapons and violence. Given the difficulty of controlling handgun availability through legal and technological countermeasures, education about firearm injuries may be a critical first step toward a comprehensive approach to preventing them.

LEGAL INTERVENTIONS

Legal countermeasures—commonly known as "gun control"—limit the number and types of people eligible to own firearms or the types of firearms that can be owned and carried. Usually, these kinds of interventions are designed to affect all individuals, not just minority youth. The rationale is that if we limit the numbers of weapons in circulation or in adult hands, we limit the number of weapons available to young people.

Ironically, the United States, well known for its firearms leniency and lack of significant national controls, has more gun control laws than any other nation.[22] There are thousands of federal, state, and local laws dealing with the sale, distribution, nature, possession, and use of firearms. The discussion that follows attempts to summarize the many types of state and local legislation, federal legislation, constitutional issues, and the effectiveness of existing legal interventions. We draw heavily upon the work of Christoffel[23] and Zimring,[24] who have been instrumental in organizing and summarizing the strengths and limitations of existing legislation.

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STATE AND LOCAL

Baker, Teret, and Dietz offer an organizing framework for existing gun control laws that focuses on the different stages in the life history of a gun at which prevention can be approached. To control the availability of firearms, they suggest intervening at four different points in time: (1) when the gun is used, (2) the period of possession, (3) the time of sale or transfer, and (4) the time of manufacture or importation.[25] Currently, regulations are most strict at the point of use and are weakest regarding manufacture and importation. In the future, laws may have greater effect if they are most stringently regulated at the point of manufacture and importation.

REGULATE WHEN THE GUN IS USED

In all states, firing a gun in a manner that is likely to injure a person is a criminal act. More than half of the states have laws that distinguish between crimes committed with or without guns, establishing, for example, more severe penalties for those who commit crimes with guns–armed robbery versus robbery, assault versus aggravated assault. Michigan and California, for example, add a mandatory prison term for anyone possessing a firearm during commission of crime. And the NRA supports laws that require *stiffer penalties for people who use guns to commit crimes.*

However, there is little evidence to support the effectiveness of this approach in reducing violence with weapons. Will a potential criminal who is not deterred by existing penalties for robbery, rape, etc., be hindered by stiffer penalties for use of a gun in such a crime? Generally, no differences in sentencing patterns are observed between crimes committed with and without firearms.[26]

Place and manner restrictions prohibit high-risk use. These restrictions prohibit the discharge of firearms in populated areas or the carrying of firearms within city limits, in motor vehicles, or concealed upon the person; or they require a license to carry firearms in one or more of these ways. For example, Massachusetts' 1975 Bartley-Fox Act mandates prison terms for individuals carrying an unlicensed firearm. This law reduced the incidence of gun assaults by 13.5 percent over a two-year period. Gun robberies and criminal homicide also declined.[27] However, the authors speculate that the strong publicity accompanying the law's introduction also helped produce the positive results.

These types of place and manner restrictions are probably the most common type of gun control law. There are two major problems with such laws. First, they do nothing to reduce the number of guns available. While there is evidence from several studies to support the assertion that the number of available guns is associated with firearm injury rates,[28] there are problems in interpreting these results. As Cook states: "Assessing the effects of gun availability on personal violence is made difficult by problems in defining and measuring availability as well as by the usual problems in interpreting results generated from nonexperimental data."[29] However, given that firearms are so lethal, "greater use of guns in assaults and robberies is likely to increase the death rates from these types of violence. If an increase in gun availability produces an increase in the fraction of violent acts committed with a gun, then the end result will be more deaths."[30] Second, place and manner restrictions are difficult to enforce because it is very hard for the police to discover violations without instituting frequent stop-and-search operations. Thus only a limited amount of gun misuse is deterred by place and manner restrictions.

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REGULATE DURING THE PERIOD OF POSSESSION

Laws *regulating storage* are primarily designed to reduce access by minors to firearms. In Florida, for example, the state legislature recently passed laws requiring gun owners to keep guns stored or locked in a manner that deters accessibility to minors. Individuals found in violation of the law are subject to criminal penalties. There are, however, weaknesses inherent in this law. While this law may encourage some firearm owners to make their guns less accessible, the implication of this bill is that the responsibility rests with the gun owner who can, at will, prevent firearm tragedy. In addition, laws like this one may have a minimal effect on *intentional* shootings. Rather, they are designed to prevent unintentional shootings by very young children.

A more stringent approach to firearms regulation is a *ban*. Bans prohibit the possession of a particular type of firearm, for example, machine guns, other automatic and semi-automatic weapons, sawed-off shotguns, Saturday Night Specials, or all handguns. Such laws also define the circumstances under which an individual may be exempted from the ban. How large or small these exempted categories are can vary. In recent years, three Illinois communities—Morton Grove, Evanston, and Oak Park—have passed ordinances that ban the private possession of handguns. There are, however, some logistical problems with this approach; namely, how to go about removing guns already in circulation.

REGULATE AT THE TIME OF SALE OR TRANSFER

Prohibiting high-risk groups from owning guns means defining certain categories of potentially dangerous individuals (e.g., persons with criminal records, the mentally ill, drug addicts, alcoholics, the young) and prohibiting them from having guns. In Delaware, for example, it is illegal to sell or transfer a gun to anyone under the age of 16.

The restriction applies to both buyer and seller. However, the only deterrent to a person in a prohibited group wishing to obtain a gun is the threat of getting caught and being punished.

As Christoffel surmises, there are several problems with this approach: (1) it is hard to enforce without some sort of licensing requirements, (2) most members of these high-risk groups will not misuse guns, (3) most firearm misuse involves people who are not members of these high-risk groups [but may be members of other high-risk groups], and (4) the prohibition is backed up only by the threat of punishment if a violation independently comes to the attention of the authorities. "Thus while high-risk group restrictions may seem sensible—and certainly are better than relying on stiffer penalties for people who use guns to commit crimes, since the restriction is a before-the-fact preventive requirement—the utility of such restrictions is very limited."[31]

Permissive licensing is more stringent than the former in that people must obtain some sort of government permission to purchase a firearm. Permissive licensing is intended to keep firearms out of the hands of individuals who may use them in injurious ways. Unlike the prohibition on high-risk groups where the burden is on the buyer and the seller of firearms, permissive licensing places the burden on the licensing agency to effectively screen out those individuals for whom gun ownership is prohibited.

Permissive licensing laws appear to be politically acceptable. A total of 23 states require a waiting period and a police background check before a handgun permit is issued. Only two states have a similar requirement for purchase of a long gun. Waiting periods before firearm purchase are useful because they allow the local police to check their resources; both federal and state criminal justice system files contain information on felony indictments, convictions, and fugitives from justice.

Because many homicides are preceded by other types of assaultive behavior, background checks may prove effective at keeping firearms out of the hands of those most likely to use them for criminal purposes.

However, this approach is limited. First, the utility of a permissive licensing system depends largely on the nature of the information available for the background check—most of which comes from the applicant—and the length of time the police have to carry out a check or review applications. For example, it is difficult to determine who has been involuntarily committed to a mental institution, who has a history of drug abuse, or who has misspelled their name on the application to avoid identification. Second, permissive licensure doesn't reach person-to-person transactions (legal or illegal) and does little to stop the total number of guns currently in circulation (for handguns upward of 35 million). Third, police data systems are often so basic that even cross checking to verify whether an applicant has indeed never been convicted of a felony may prove problematic. And fourth, most homicides are committed by persons who meet licensing requirements.

Restrictive licensing prohibits the possession of handguns by any but those with a clearly demonstrated need. Under restrictive licensing, an individual wishing to purchase a firearm must apply for a license, which is granted only after an investigation by a law enforcement agency. The investigation determines whether the person should be prohibited from possessing a firearm by virtue of a previous felony conviction, an adjudication of mental incompetence, or a history of substance abuse. Thus, restrictive licensing places the burden of the licensure system on the individual rather than the licensing agency. Only New York and Massachusetts use this approach.

It has been suggested that an additional requirement be added to restrictive licensing: the applicant should provide a specific reason for possessing the firearm as is done in some jurisdictions that license the carrying of concealed weapons. For long guns, this need includes target shooting and hunting. For handguns, need means employment by a law enforcement or security organization, or the routine carrying of large quantities of cash or valuables for business purposes. With this addition, the nature of the restrictive licensing approach would change significantly. Such an approach could be as restrictive as a ban on possession, since most bans contain exemptions for certain categories of people, like police officers. Unlike permissive licensure, restrictive licensure has the potential to reduce the total number of firearms in circulation. Currently, no state laws go this far.

REGULATE AT THE TIME OF MANUFACTURE OR IMPORTATION

Design requirements, such as requiring built-in trigger locks or minimum force requirements for triggers, are much like bans in that sales of firearms not meeting the design requirements are prohibited. This kind of intervention combines both legislative and technological strategies. For example, a recent California bill requiring new firearms to be sold with trigger locks was passed by the legislature but vetoed by the governor. The new Maryland law is also exemplary of legislation that attempts to regulate at the time of manufacture and importation. A board appointed by that state's governor has the task of determining which guns can be legally manufactured and sold in the state, based on design and performance standards. This legislation was an attempt to ban the sale, manufacture, and distribution of Saturday Night Specials—small, lightweight handguns used frequently in crime. As a result of this law, there are now more than one-hundred models of handguns that cannot legally be sold in Maryland.

Product liability litigation is another legal approach aimed at gun manufacturers. This approach is based on the premise that manufacturers of handguns should be aware of the growing body of literature that describes the negative health effects wrought by firearms, particularly handguns.

The argument follows, then, that manufacturers, being able to foresee the damage caused by their products, should be held accountable for their dangerous products. As Teret and Wintemute state:

> When the risks of handguns are balanced against their benefits, using population-based data, the result is a clear demonstration that handguns are unreasonably dangerous to society as a whole, and to their owners. These data form a body of relevant and compelling evidence available to the plaintiff's trial lawyer in a handgun product liability lawsuit. Such lawsuits, which will impose the same level of responsibility on handgun manufacturers as is imposed on other product manufacturers, can lead to a reduction in handgun fatalities.[32]

A product liability lawsuit involving a handgun has been successful already in Maryland. It caused one manufacturer to go out of business.

FEDERAL

In the absence of uniform national laws, many of these local or state gun control laws will not be particularly effective. Criminals may simply go out of state to buy large quantities of weapons, which they may, in turn, sell. The Federal Bureau of Alcohol, Tobacco, and Firearms recently reported that most guns used in crime are purchased in states with unrestricted gun sales.[33] However, it is important to note that half of the homicides that occurred in the 1980s were committed by people who obtained guns from burglarizing homes, or more often, factories, stores, or warehouses, according to the FBI Uniform Crime Reports.[34] The percentage of out-of-state purchases of firearms was found to be directly proportional to the strength of the local firearms regulations. The regulations were effective in limiting sale and transfer locally.[35]

The role of the federal government in gun control is viewed by some as crucial because it can provide the coordinating framework for the myriad of state and local laws. The federal government also has the responsibility for regulating interstate commerce. Currently, gun laws involve several levels of government, with localities particularly concerned with place and manner laws and states (and some cities) involved in licensing and registration. To date, gun legislation on the federal level is limited, dating from the 1930s and consisting primarily of only a handful of laws.

Public concern over criminal violence in the 1920s and early 1930s led to the passage of the National Firearms Act of 1934, a tax measure aimed at limiting civilian ownership of machine guns, sawed-off shotguns, silencers, and other weapons favored by organized crime. The impact of this law is unclear, since there were several other factors that brought about the downfall of the gangster era. Additional legislation passed in 1938 regulated interstate shipment and receipt of firearms. This law required dealers to keep records and prohibited firearms sales to people convicted of certain crimes. After the assassinations of Robert Kennedy and Martin Luther King, Jr., Congress passed the Gun Control Act of 1968, which established the following restrictions:

- prohibited minors, felons, and other high-risk groups from owning any firearms

- outlawed the private ownership of bazookas, submachine guns, and other "destructive devices"

- prohibited the importation of Saturday Night Specials

- prohibited the sale of firearms in any state to persons who resided in other states

- required that persons selling more than a very few guns obtain a federal license and meet federal record-keeping requirements

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The 1968 law falls short in two ways. First, it does not create a federal registration system and database. Second, it does not prohibit the sale of handguns when the sale would violate the laws of the municipality in which the buyer resided (thereby getting at the problem of city residents traveling to suburbs or rural areas with less restrictive gun laws).

In 1986, the NRA and other pro-gun forces won a big victory when Congress diluted the impact of the 1968 Gun Control Act, although they failed to achieve their major objective—the repeal of the federal ban on the interstate sale of handguns. The Gun Control Act Amendments of 1986 repealed the ban on interstate sales of rifles and shotguns (but not handguns), restricted agents to only one unannounced inspection of gun dealer premises each year, and eased dealer record-keeping requirements. At the same time, the importation of parts for Saturday Night Specials was banned, as was sale of conversion kits to make automatic weapons. And sales of machine guns were banned.

Efforts to enact a national seven-day waiting period for handgun purchases have been repeatedly defeated and prospects are not much better for Senate passage of a bill to ban assault-style weapons. Congress did enact a plastic handgun ban that outlaws any all-plastic handguns manufactured in the future, but the law focuses on electronic detectability rather than appearance.

Recently, the Department of Justice explored two approaches to permissive licensing at the federal level: a computerized system that would allow a gun dealer to make an immediate check of national criminal record files, or a firearm owner's identification card good for three years. There is one drawback, however. The two approaches avoid a waiting period, which will please most gun dealers because most firearm purchases are impulsive ones.

CONSTITUTIONALITY

There has been a back-and-forth conversation between pro- and anti-gun control groups for some time on the constitutionality of gun control. The Second Amendment to the Constitution states: "A well regulated militia, being necessary to the security of a free State, the right of the people to keep and bear arms, shall not be infringed." Opponents of gun control argue that gun ownership is protected by the Second Amendment and that it offers protection against the intrusion of a totalitarian government. They say that firearms have important legitimate recreational uses, primarily hunting and target shooting. Gun control advocates argue that historically weapon ownership has had no bearing on the potential for totalitarianism and that the health consequences of firearms far outweigh the benefits of their recreational use. Courts have uniformly held that the Second Amendment does not give individuals the right to possess any firearms they wish. Instead, the amendment protects the right to maintain a militia.[36]

EFFECTIVENESS

Despite the proliferation of gun control laws in the United States, there still remains some uncertainty about the effectiveness of previous legislative attempts to restrict availability and use of firearms. Much of the literature and data on the effects of legal interventions is controversial and inconclusive. Thus, evaluation of policies now in place is a major research need. The danger inherent in introducing or implementing unevaluated countermeasures is choosing inappropriate programs to emphasize. This could lead to dissipated funds, time, and public concern that might have been applied to more effective measures. Some important evaluation questions include

- What is the law intended to do?

- What are relevant measures of success?

- How do we handle confounding factors such as socioeconomic status and cultural environment?

- How do we handle the patchwork of many different gun control laws, especially when they overlap jurisdictions?

- How do we factor in the reasons the laws were passed?[37]

Some strides have been made, however, to evaluate existing legislation in New York City, South Carolina, and Massachusetts. The Sullivan Law in New York City requires handgun registration and establishes a strict permit system: the applicant must establish a definite need to own a handgun. A 1973 evaluation showed the law to be effective locally. Of the guns involved in New York City crime, only 4 percent came from New York state. However, the law has no jurisdiction in neighboring states; thus, the importation of guns from these states goes unchecked.[38] In 1975, South Carolina passed a fairly strict law banning the sale of Saturday Night Specials, requiring extensive certification for other handgun purchase, and mandating a seven-year prison sentence for use of a firearm in a crime. One study found that from 1974 to 1976, there was a 28 percent reduction in homicides, with handguns accounting for 94 percent of the total reduction. During the same period, there was only an 8 percent reduction in homicides in neighboring states.[39] In that same year, Massachusetts enacted the Bartley-Fox Act, which mandated a one-year jail term for anyone convicted of violating the firearm licensing and registration laws. Prior to enactment of this law, death from firearms had increased 71 percent from 1965 to 1975.[40] The next year the total number of homicides dropped from 271 to 209, and the percentage of homicides in which firearms were involved decreased from 52 percent to 46 percent.

TECHNOLOGICAL/ENVIRONMENTAL INTERVENTIONS

Technological and environmental measures are based on the premise that automatic protections are generally more effective than those that require repetitive action. The firearm, like the motor vehicle, is a consumer product and is marketed as such. Unlike many other products, however, firearms are manufactured without regulatory standards. Existing modifications to weapons (especially firearms), ammunition, and the environments in which weapons are used are relatively new and have been somewhat helpful in reducing violent injury and death.

MODIFY THE WEAPON

Some guns are manufactured so that they are less likely to be discharged unintentionally. Modification of the safety catch—a feature that some guns have and others do not—would ensure that the catch is "automatically and always engaged unless held in a disengaged position by users."[41] A similar feature is included in some guns and is called a "grip safety"; it must be squeezed in order for the gun to fire.

In addition, it is possible to design guns so that on casual inspection, you can tell whether it is loaded. Guns with this feature are manufactured and on the market. Their usefulness in prevention is, however, limited to unintentional injury.

MODIFY AMMUNITION

Modifications to ammunition have the potential of reducing injury severity in both intentional and unintentional shootings. Because different types of ammunition can produce different types of wounds, bullet shape and composition help determine injury type. For example, Teflon-coated

bullets tend to be more dangerous than other bullets. When fired, they can pierce protective vests worn by police officers. In 1986, Congress passed a bill that outlawed Teflon-coated and other armor piercing bullets. However, the bill exempted taget shooting and sporting ammunition.

Interventions that aim to reduce weapons violence by modifying ammunition have not been thoroughly evaluated. However, they do show promise and require further exploration (see "Potential Interventions" below).

MODIFY THE ENVIRONMENT

Several schools have adopted strategies for preventing weapons violence by modifying the school environment. Two popular modifications include dress codes and metal detectors.

DRESS CODES

At the beginning of the last school year, the Baltimore City School District instituted a dress code. The dress code, for middle and high schools, excluded, for example, sweatpants with elastic around the ankles. (Several provisions of the code include theft prevention efforts such as the ban on metal jewelry and leather clothing, and some schools' decision to require uniforms.) These efforts, backed up with penalties (e.g., expulsion if found to be carrying a weapon) have contributed to a lower incidence of firearm and weapon-related incidents, according to the school system. Last year, there were 28 firearm-related incidents; the year before that there were 35; the previous year 55.

METAL DETECTORS

In New York City, where 1,500 to 2,000 weapons are confiscated every school year,[42] a two-year-old metal detector program has met largely with success. School security staff, wielding hand-held metal detectors, randomly search students in the lobbies of 16 high schools at the start of school days. Portal metal detectors, such as those used in airports, were judged to be more expensive and time-consuming (ushering thousands of students through one doorway can delay school start-up for several hours). Searches are conducted once a week, unannounced, in each of the schools. The program requires a mobile staff of 120. Schools chosen were the sites where the highest numbers of weapons were being found.

The program's impact: Aside from removing more than 2,000 weapons (the most common item is a razor-blade box cutter) weapon-related incidents of all types has decreased in 13 of 15 schools (the 16th was added late to the program), and incidence in one school went up. Attendance improved in 11 of 15 schools, and anecdotal outcomes include many students' expression of an increased sense of security. Program cost: $300,000 per school per year. (City officials point out that similar programs may not cost as much in other settings because cost factors in New York are unique.)

A key to the program's success, the director of security says, was the multi-layered orientation program. The orientations among school administration, staff, students, and parents involved both meetings and demonstrations of the equipment. This groundwork, he believes, is what has allowed the program to proceed without legal suits, political controversy, or community distress. The detector program is conducted in the context of a broader violence prevention program in the schools, which includes curricula, peer mediation programs, and crisis intervention teams.

The Los Angeles school system has decided that, while weapons in schools are a growing problem, metal detectors are not a desirable or practical option. Because schools are in use–but not protected–well beyond traditional school hours (for after-school activities, night meetings, etc.), persons who want to get a weapon inside the school can do so. Further, the district believes the greater threat of weapon-related violence is from non-students, and that any new security measures will deal with intensifying a buffer there. Portal metal detectors also have been rejected as too time consuming.

For many, a rejection of metal detectors is founded more on philosophy than practicality. Many see it as an image-creating attempt to demonstrate concern about students' safety. Others advocate a human approach rather than a mechanical one. Many see detectors as a repressive technology that gives a negative message about the school. While advocates might say, "If they prevent one death, aren't they worth it?" opponents might say, "No," because of the harm done to others along the way.

EFFECTIVENESS

Technological/environmental strategies often foster heated political discussion. Because they are not dependent upon the volition of individuals, these measures often are seen as excessive or an infringement on personal freedoms. For this and other reasons, several technological and environmental strategies have gone untried; only a few currently exist. To date, there is very little evaluation data on the effectiveness of technological and environmental interventions aimed at reducing weapons violence. However, given the success of past technological and environmental strategies aimed at reducing other types of injury, additional strategies should be explored.

A more recent study comparing homicide rates and gun laws in two very similar cities–Vancouver, British Columbia, and Seattle, Washington–found that Vancouver's significantly lower homicide rate may be a consequence of the city's restrictive licensing policy.[43] The rate of homicide by knives and other weapons (excluding firearms) in Seattle was found to be almost identical to that in Vancouver (relative risks, 1.08; 95 percent confidence interval, 0.89 to 1.32). Nearly all of the increased risk of death from homicide in Seattle was attributed to a rate more than fivefold higher than that of homicide by firearms. Handguns, which accounted for roughly 85 percent of the homicides involving firearms in both communities, were 4.8 times as likely to be used in Seattle as in Vancouver.

III. POTENTIAL INTERVENTIONS

When considering potential interventions to prevent weapons violence among minority youth, we might think about some of the things minority youth say about the problem. In 1989 a group of Oakland, California, teenagers presented a conference entitled "Teens Preventing Violence." Conference participants developed an action agenda for violence prevention to present to schools and to policymakers. Essentially this multi-racial group of young people suggested limiting access to guns; turning anger into the creative energy of caring and saving lives; working together to stop the killing; standing up to the NRA, which works to make guns look good; and providing more jobs and training for teenagers. The group of teenagers also pointed to the government's role in preventing firearm violence:

> . . . any work on gun control is almost impossible because it is in the government's interest to have minority groups shooting each other–the government has to help stop the shootings first by stopping guns at their source . . . [44]

These teenagers may not be alone in their sentiments and frustration. State, local, and federal governments could be doing more in the way of preventing violent injury. There are educational, technological, and legal interventions that have not been tried and some that require further exploration and expansion. Given what we know about the countermeasures discussed–their strengths and weaknesses–and what we know about injury prevention, we believe that the following interventions hold some promise. However, we believe that the most effective programs should be comprehensive and combine educational, technological, and legislative strategies.

POTENTIAL EDUCATIONAL/BEHAVIORAL CHANGE INTERVENTIONS

EDUCATING STUDENTS AND THEIR COMMUNITIES

The Center for Handgun Violence recently launched a statewide campaign in North Carolina based on public opinion polls and focus group review of television spots. The program, which involves six chiefs of police, will target both gun owners and non-owners about safety and responsibility around gun ownership. For non-owners, emphasis is on caution about friends and relatives' homes where guns may be stored.

The center is developing a national curriculum, based on the Dade County program and written by a national panel of educators. It is expected to be field-tested in spring of 1991, with critical review and approval in the summer of 1991. Wider distribution is planned for fall 1991.

The center is also working with the American Academy of Pediatrics to develop an educational program for prospective parents. The package would include a brochure for pediatricians to inform them about the extent of the problem (the focus will be on accidental shootings) and materials to distribute to parents. Similar materials may be developed for parents of adolescents that will focus on suicide and intentional injury as well.

The Educational Fund to End Handgun Violence, in Washington, D.C., along with the American Youth Work Center, in Detroit, Michigan, is planning an "Anti-Violence Youth Education and Media Campaign" in Detroit. The program would have two components, an Anti-Violence Youth Education Conference and an Anti-Violence Media Outreach Project that includes a resource manual and an anti-violence videotape. The conference will be held in a public high school and will involve students at all levels, including a student journalist panel. The media part of the project will include publication of a resource manual on anti-violence and a video will be created from this event. Evaluation will measure students' attitudes before and after the conference. Attendance at the conference, media coverage and use of the manual and video will be monitored.

Professionals in education also recommend that graduate schools offer expanded education programs that prepare future teachers to deal with problems in the classroom, drug abuse, gang activity, and weapons.[45]

EDUCATING LEGISLATORS AND POLICYMAKERS

By focusing on the magnitude of the problem, the lethality of guns, the escalation of violence, and prevention strategies that have worked, schools and communities can collaborate with policymakers. While some argue that the difficulty in establishing stricter gun control measures stems from a public aversion to gun control, others assert that the major difficulty is the success of a well-funded and sophisticated lobbying group–the National Rifle Association–"whose power far outweighs the number of people it actually represents."[46] To counter the efforts of the NRA, several organizations have mounted campaigns directed at policymakers.

TARGETING THE MEDIA

The media is one major source of learning about violent behavior and firearm use, especially for the young. In public debate, much of the opposition to regulations on firearms, particularly handguns, has centered on three ideas: the protection afforded by guns, the constitutional right to possess guns, and the argument that "guns don't kill people, people kill people." By shifting media attention away from a constitutional battle to a health-related battle, the public health community can control the symbolic values of the debate. This same strategy was employed by anti-smoking advocates and is encouraged among individuals concerned with the firearm problem. One researcher, in her paper "Guns: In Whose Hands?" states:

> Firearm regulation advocates may learn from the anti-smoking campaign: to dramatize differences between various sectors of gun owners and the NRA; to make the gun and not the gun-owner the problem to be overcome; to reframe the symbols of the debate so that we are fighting for life and not against the Constitution.[47]

EDUCATING PATIENTS

A number of medical professionals have recently initiated programs that aim to introduce violence prevention to the clinical setting, mainly through pediatricians' use of anticipatory guidance. Two pediatric researchers note: "Anticipatory guidance for a wide range of child health issues is an accepted, if not universally practiced, element of routine health care, but the literature is lacking in directives about the prevention of adolescent violence."[48] Boston's Violence Prevention Project, for example, worked with Education Development Center to develop a protocol to guide health care providers in asking their young patients about violence history, fight avoidance, anger, weapons, and anger. The protocol, while receiving broad support, was weakened by the absence of community referral agencies for youth who need follow-up services.[49]

POTENTIAL LEGAL INTERVENTIONS

FIREARM LEGISLATION ASSESSMENT

Before actively supporting any legislative effort, the public health community should assess any firearm legislation's potential to reduce deaths and injuries. The Florida bill, for example, requires guns to be stored and locked so that children cannot reach them. This kind of legislation may not prove useful in reducing the firearm death toll among minority youth. Instead, it may prevent unintentional shootings by small children. While the Florida bill may prove important in reducing shootings of children by children, this type of legislation does not go far enough to eliminate the problem of youth violence.

CHANGING PREEMPTION LAWS

Recently, the NRA and other pro-gun groups have been successful in influencing states to pass laws that preempt the right of local jurisdictions to pass laws that regulate the manufacture, sale, or possession of weapons. Their purpose is to prevent the local jurisdictions from passing laws that are more stringent than state laws. Changing preemption laws also means shifting the emphasis from a uniform, national approach to a more local one. Thus, there is a great need to reposition the firearm debate to the local level where there is greater opportunity for community participation and input from ethnic groups in policy development.

MONITORING VOTING RECORDS AND LOBBYING

Legislators should be held accountable for every one of their votes on gun-related issues. Because elected officials cast the votes that put gun control legislation in place, their voting records on firearm-related legislation should be made public along with a record of donations received from the NRA. Coordinated lobbying at the national, state, or local level can increase the likelihood of more stringent gun control laws. For example, Alameda County Supervisor Don Perata, who initiated the effort for California's assault gun legislation, led an effort for voters to sign pledge cards to support candidates who are strong on gun control. Using this NRA strategy for controlling firearms, Perata generated a great deal of media attention, and gathered several thousand signatures over the course of two weeks.[50]

PRODUCT LIABILITY LITIGATION

As the epidemiologic evidence begins to stack up against firearms, especially handguns, this strategy becomes a useful means of intervening at the point of manufacture. Product liability litigation requires no change in existing legislation and manages to reach the gun industry in its most vulnerable area—profits. In addition, these kinds of suits attract the media, they are precedent setting, and they further promote the message that firearms are lethal.

TAX POLICIES

Because firearms exact such a high toll in terms of direct and indirect costs, some have suggested instituting a tax policy that raises revenue to cover these costs. This way the financial responsibility for the costs of care could be shifted to the firearm manufacturers, distributors, and owners of firearms.

Another suggestion is to impose an excise tax on firearm owners. The argument goes that if guns were a little more expensive and if owners had to pay a yearly tax on the guns, then they would be deterred from buying them. Whether or not the increase in cost would have any effect is debatable. Some would argue that this type of law is discriminatory against those with lower incomes. However, there is evidence from other health areas, particularly alcohol and cigarettes, to show that price and tax increases can work. Relatively small increases in the price of distilled spirits reduces consumption and death rates from liver cirrhosis and automobile crashes.[51] Researchers also estimate that highter retail prices for beer would reduce not only the number of young people who drink, but also the incidence of heavy drinking and of frequent drinking.[52] In addition, states with highter excise taxes on beer have lower death rates from motor vehicle accidents for young people ages 15 to 24.[53] For cigarettes, the results are most dramatic for teenagers. Teenage smoking decreased by 14 percent when the federal excise tax on a pack of cigarettes increased in 1983.[54]

LICENSING AND REGISTRATION

Licensing and registration of firearms should parallel policies for motor vehicles. Essentially, we need to expand the categories of what eliminates a person from owning a handgun. Individuals wishing to purchase and own a gun would have to take a test to prove ability, register their firearm, hold a picture license, and suffer punishment for violation. In addition, there would be a databank of product and person. This databank might be more useful than one that lists only criminals or people who are declared mentally incompetent. The latter is limited in several ways. It is

expensive. It does not include felons who are still being processed. It does not include the types of people who usually shoot each other: teenagers without a record, people involved in family fights and fights over jobs and money, and people who are sad or depressed.

BANS ON SELECTED TYPES OF FIREARMS

Following in the footsteps of states like Maryland and communities like Oak Park and Morton Grove, Illinois, states and localities can institute bans on certain types of firearms. When put to referendum, the people of Maryland, for example, voted to uphold the state law designating a board to ban certain types of weapons. They did this despite a very costly opposition campaign funded by the NRA.

POTENTIAL TECHNOLOGICAL/ENVIRONMENTAL INTERVENTIONS

DESIGNING "SAFER" WEAPONS

By making guns less easy to conceal, we may reduce the likelihood that they will be used for criminal purposes. Many argue that small, cheap, lightweight guns, commonly called Saturday Night Specials, are used mostly for criminal purposes rather than for self-protection. Some handguns are made to be so portable they can be concealed easily.

Another gun modification that shows some promise includes a personalized combination lock on the safety. This feature makes the gun less likely to be discharged because the owner should be the only one to know the combination. Also, if guns with this feature are stolen, it will be very difficult for the thief to use them.

ELIMINATING AMMUNITION TYPES

Such modifications include those that would prevent guns from shooting as fast or with as many bullets. President Bush, for example, proposed legislation that would ban magazines (the compartment in some firearms in which cartridges are held to be fed into the firing chamber) that fire more than 15 rounds of ammunition. This is a combined strategy of legal and technological countermeasures.

Different types of ammunition can produce different types of wounds. With spherical bullets, the amount of surface contact would not increase as the bullet twisted in the body, thus lowering the likelihood of fatal injury.[55] Bullet material, construction, and consistency can affect penetration and wounding potential: wax and plastic bullets, as compared to metal, are far less lethal.[56] Ammunition options that require further investigation are those that would use electric current or shoot tranquilizers, anesthetic, or other drugs in the bullets. More research is needed in this area.

A ban on selected types of ammunition, ideally for guns that are in wide circulation, needs exploration.

MODIFYING THE ENVIRONMENT

These modifications would change the environment in which the firearm is used. Some examples that have already been tried include: installing bullet-proof glass or barriers, and requiring bullet-proof vests for police officers and security guards. Now, individual entrepreneurs have designed

jackets for young people that are lined with bulletproof material. The garments, apparently designed for protection against gun-carrying rivals, have nevertheless prompted police to change their tactics—aiming for the head if a suspect does not fall after being shot in the chest.[57]

Other more comprehensive environmental modifications that require further exploration include: maintaining or building a positive school climate and reducing poverty and socioeconomic disparities in the United States. Changing these factors will require a more comprehensive focus.

IV. KNOWLEDGE ABOUT RELATED INTERVENTIONS

There is much evidence from the field of public health, especially injury prevention, to show us which strategies have the most potential to prevent weapons misuse among minority youth. The public health approach to weapon-related injury is multidisciplinary and takes into account a variety of contributing factors. This approach recognizes the significance of relationships between victim and offender, the agent or vehicle of injury, and the wider context or environment in which injury occurs. Past work in injury prevention has shown us that the very risk factors that lead to injurious behaviors with guns—alcohol use, poor impulse control, and young age, for example—make sole reliance on behavior change difficult.[58]

We also know that it is not always necessary to know the sequence of events or cause of an injury in order to intervene. Preventing firearm injuries, for example, might be accomplished most quickly by decreasing availability of firearms and ammunition. Such prevention might be true despite early childhood experience, culturally derived notions of male dominance, poverty, unemployment, or mental illness. Therefore, it has become routine to single out and focus interventions on the vehicle of injury (e.g., automobiles, weapons) in addition to the behavioral, psychosocial, or economic factors that contribute to the injury event. However, we can not solely implement the technological or environmental strategies, nor can we focus on taking guns away. We must use a combination of preventive strategies: educational/behavioral, legal, and technological/environmental countermeasures aimed at weapons injury prevention. Each strategy plays a particular role in the prevention process.

Behavioral science has much to offer in preventing weapons misuse among minority youth, in understanding the determinants of weapon-related behavior, and in developing effective strategies for behavior change. For example, behavioral research on motivating safety belt use suggests several promising techniques on which interventions can be based:

- Contracts that ask participants for a written or verbal commitment to wearing safety belts can provide motivation to do so.[59]

- Positive reinforcement or rewards increase the likelihood that an individual will change his or her behavior.[60]

- Behavioral feedback, such as visible cues placed on the road or in the automobile have been successful in reminding people to fasten their seat belts and reduce speeding.[61]

- Adults and children can learn safety belt and child safety seat behaviors by modeling or observing someone performing these actions.[62]

Because application of these techniques to injury prevention is new, further research is necessary to determine their long-term effects.

Public awareness campaigns have also been somewhat successful. Education may increase public receptivity to legislative and technological changes. Dr. Murray Katcher, a Wisconsin pediatrician, provides a compelling example. After witnessing many tap-water scald burns among his pediatric patients, Dr. Katcher decided to take steps to prevent these injuries. He educated other health professionals about the problem and built a lobbying group of nurses, physicians, and advocacy groups that ultimately was able to persuade the Wisconsin legislature to pass a bill requiring manufacturers to preset hot-water heaters at 125 degrees Fahrenheit or lower.

There is additional evidence from the anti-smoking movement to show that information campaigns can be successful in changing peoples attitudes and behaviors. "In the last 20 years, anti-smoking advocates have successfully used the media to effect a massive shift in public opinion towards smoking. They have redefined the issues regarding cigarettes and smoking and now control the symbolic values of the debate."[63]

However, education alone has rarely proved to be an adequate prevention approach.[64] The limited success of educational/behavioral change interventions in modifying injury prevention behavior to date may in part be a result of the failure to understand the behavioral causes of injuries and to apply what is known to the development of effective interventions. The application of current behavioral theory to injury control has the potential for improving our understanding of injury and for furthering the development of effective prevention strategies.

Legal countermeasures have played a significant role in the implementation of injury prevention approaches, whether they have taken the form of regulations or bans on the manufacture or sale of certain products, laws requiring certain behaviors, such as seat belt and helmet use, or suits against manufacturers of dangerous products.

Regulation has resulted in automatic protection for large numbers of people and has proved effective in many instances. The children's sleepwear standard, for example, has resulted in a marked decline in sleepwear-related burn injuries.[65] Other examples of regulation have included automobile safety standards such as laminated windshields, collapsible steering assemblies, dashboard padding, improved door locks, and dual braking systems, as established by the National Highway Traffic Safety Administration.

Legislation requiring individuals, manufacturers, or governments to comply with safe practices has also been somewhat effective. As the Institute of Medicine/National Research Council study notes:

> Individual behavior change to prevent injuries has been more successful when the behavior was easily observable and required by law. For example, in the absence of laws requiring the use of protective helmets, only about 50 percent of motorcyclists voluntarily wear them, but helmet-use laws result in almost 100 percent use. Laws mandating individual behavior are clearly more effective than education and protect more members of society. Many laws, however, have limitations; for example, even with intensive enforcement, many motorists violate speed limits and ignore laws on seatbelt use and child-restraint use.[66]

However, it is important to note that increased enforcement may enhance the effects of some laws. Motor vehicle occupancy death rates for toddlers and infants declined after intensive enforcement of the Child Passenger Safety Act (1980) in Tennessee. As the number of citations increased, the number of traffic deaths to this age group decreased.[67]

Product liability litigation has encouraged manufacturers to remove dangerous products from the market or make them safer. The guiding rationale has been that suits, if successful, may over time, encourage manufacturers to consider safety rather than risk repeated large damage awards. Consider the following example:

In 1983, a suit was brought on behalf of Rebecca Burgess who, at the age of 18, was a front seat passenger in a Ford Pinto struck by another car, and was rendered a severely brain-damaged quadriplegic as a result of the crash. She sued Ford Motor Company for failing to have provided an airbag in the car, a failing that made her injuries more severe. After 10 days of trail, Ford settled the case for $1.8 million, a settlement that received wide publicity both within professional circles and among the public generally. This publicity, in turn, spawned more air bag cases; and in November 1985, Ford announced that it would offer airbags as optional equipment on some 1987 models. Many other car makers now have followed suit.[68]

Litigation is best pursued when legislation attempts to prevent injuries are inadequate, that is, when legislative bodies are unable to agree upon safety measures or when the measures they pass offer insufficient protection.

Technological or environmental interventions or product modifications have been especially successful because they offer automatic protections from injury. The likelihood that protection from injury will result is inversely related to the frequency of the action required and the amount of effort required.[69] An example of an automatic protection is airbags, which inflate automatically on impact, versus safety belts, which must be buckled up each time the driver or occupant enters the car. Similarly, installing a hot water heater with a maximum water temperature of 125 degrees Fahrenheit is more likely to prevent childhood scalds than actions that must be repeated, such as lowering the thermostat setting or watching the child.

However, automatic measures have often met with opposition in the public sector because they have been viewed as an infringement on personal freedoms. Without efforts to educate the public and decision makers about their effectiveness, technological and environmental measures are likely to go untried.

Thus, past work in injury prevention has shown us that legal and technological countermeasures have the potential to reach and protect the greatest number of persons, and they should be employed whenever feasible. Education of both policymakers and the general population is often an antecedent of action. It is also necessary for public acceptance of new legal measures and as a means of increasing compliance with the law. Further, education is a primary way of redressing user rejection of misuse of injury prevention technologies.

V. CONCLUSIONS

Despite the magnitude of the weapons problem and its association with youth violence, there are few current preventive strategies specifically aimed at weapons misuse. As noted by Mercy and Houk in their editorial work on firearms, "The time has come for us to address this problem in the manner in which we have addressed and dealt successfully with other threats to public health."[70] However, before interventions can be discussed, professionals must address a few issues. These include: the inadequacy of information on which to base firearms policy and practice, how local communities can play a role in the prevention of firearm injuries in minority youth, and the ethical and philosophical issues associated with the use of particular interventions such as metal detectors.

Further research in a number of areas would enhance our understanding of weapons and personal violence and advise the policy debate on how to handle this urgent problem. As one author points out:

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The published literature is more noteworthy for what it does *not* show than for what it does. There is, it appears, scarcely a single finding in the literature that could be said to have been indisputably established. In part, this reflects the highly politicized nature of research in this area, but perhaps more importantly, it results from a near-total absence of sound and nationally generalizable data from which reliable information about weapons, crime, and violence might be extracted.[71]

Priorities for research in the area of firearms injuries include the following topics:

- magnitude, characteristics, and costs of the morbidity and disability caused by firearms and other weapons, and the types of firearms and other weapons that inflict these injuries

- number, type, and distribution of firearms and other weapons in the United States

- epidemiologic investigations focusing on quantifying the risks of injuries associated with the possession of firearms and other weapons and factors that may modify the risks

- evaluations of regulations and other interventions that affect the risk of firearm injury[72]

Another author recommends that a number of additional, fundamental questions be considered.

- What effect would the complete absence of guns have on violence and crime?

- Would gun control laws, even if enforced, reduce crimes by those who are the greatest threat to society?

- If only some firearms were less available, would criminals turn to other, unrestricted weapons?

- If deprived of guns, would assailants use another type of weapon and do as much damage?[73]

Second, there needs to be more discussion of the role of communities and localities in the prevention of firearm injuries among minority youth. Many of the interventions for firearm injury have been national in scope; for years the efforts focused on changing the existing national policy on gun control. Now, more and more groups are shifting their attention to local communities where they are, for example, implementing educational campaigns to change people's attitudes about gun use, enlisting local students and community groups in the fight against weapon misuse, and lobbying for local policy changes.

Third, there are certain ethical and philosophical issues associated with the use of some interventions in schools. There has been much debate around the use of metal detectors, locker searches, and dogs to find weapons on students. One side argues that school officials have the right to search their own property and the other sees these actions as violations of civil liberties.

And finally, by intervening against the agent of injury (the firearm, for example), we may see more immediate effects than we do with interventions that seek to change human behavior or cultural and socioeconomic factors. Nevertheless, we cannot ignore contextual factors such as poverty and economic disparity. We must consider them legitimate predictors of weapons violence. Interventions focused on the firearm must account for these factors as part of a comprehensive preventive approach in the public health community.

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ENDNOTES

[1]Cook, P.J. Forthcoming. "The Technology of Personal Violence." In N. Morris and M. Tonry, eds. *Crime and Justice: An Annual Review of Research*, 12. Chicago: University of Chicago Press.

[2]Dr. Beverly Coleman-Miller, personal communication.

[3]Bureau of Justice Statistics. June 1990. "Handgun Crime Victims." Washington, D.C.: U.S. Department of Justice.

[4]Rice, D.P., MacKenzie, E.J., and Associates. 1989. *Cost of Injury in the United States: A Report to Congress.* San Francisco, Calif.: Institute for Health and Aging, University of California and Injury Prevention Center, Johns Hopkins University.

[5]O'Carroll, P.W., and Smith, J.C. 1988. "Suicide and Homicide." In Wallace, H.M., Ryan, G., and Oglesby, A.C. eds., *Maternal and Child Health Practices*, Third Edition. Oakland, Calif.: Third Party Publishing Company.

[6]Hawkins, D. 1989. "Intentional Injury: Are There No Solutions?" *Law Medicine and Health Care*, 17: 32-41.

[7]Centerwall, B.S. 1984. "Race, Socioeconomic Status, and Domestic Homicide, Atlanta, 1971-72." *American Journal of Public Health*, 74: 813-815; Loftin, C., and Hill, R.H. 1974. "Regional Subcultures and Homicide: An Examination of the Gastil-Hackney Thesis." *American Sociological Review*, 39: 714-24; Williams, K.R. 1984. "Economic Sources of Homicides: Reestimating the Effects of Poverty and Inequality." *American Sociological Review*, 49: 283-289.

[8]National Committee for Injury Prevention and Control. 1989. *Injury Prevention: Meeting the Challenge.* New York: Oxford University Press, 198 and 206.

[9]Cook, 177.

[10]Zimring, F.E. 1968. "Is Gun Control Likely to Reduce Violent Killing." *University of Chicago Law Review*, 35: 721-37.

[11]National School Safety Center. June 1990. "Weapons in Schools." Washington, D.C.: Office of Juvenile Justice and Delinquency Prevention.

[12]Hackett, G. January 11, 1988. "Kids: Deadly Force." *Newsweek*, 18.

[13]Office of Juvenile Justice and Delinquency Prevention. October 1989. "Weapons in Schools." *Juvenile Justice Bulletin*.

[14]National Committee for Injury Prevention and Control. 1989. *Injury Prevention: Meeting the Challenge.* New York: Oxford University Press, 266.

[15]Kellermann, A.L., and Reay, D.T. 1986. "Protection or Peril? An Analysis of Firearm-Related Deaths in the Home." *New England Journal of Medicine*, 314: 1557-60.

[16]Vogel, R.E., and Charles, D. 1986. "The Effectiveness of a Handgun Safety Education Program." *Journal of Police Science and Administration*, 14(3): 248.

[17]Supenski, L.J. September 1987. Baltimore County Police Department Handgun Violence Reduction Program. Information '87. Baltimore County Chamber of Commerce.

[18]DeJong, W., and Winsten, J.A. November, 1989. "Recommendations for Future Mass Media Campaigns to Prevent Preteen and Adolescent Substance Abuse. Special Report." Boston: Center for Health Communication, Harvard School of Public Health.

[19]National School Safety Center, 6.

[20]National School Safety Center, 6.

[21]National School Safety Center, 7.

[22]Christoffel, T. 1990. "Current Federal, State, and Local Regulations and Legislation." *Report of a Forum on Firearms and Children, August 30-September 1, 1989.* Elk Grove Village, Ill.: American Academy of Pediatrics.

[23]Ibid.

[24]See Zimring, F.E. 1968. "Is Gun Control Likely to Reduce Violent Killing?" *University of Chicago Law Review*, 35: 721-37; Zimring, F.E. 1975. "Firearms and Federal Law: The Gun Control Act of 1968." *Journal of Legal Studies*, 4:133-98; and Zimring, F.E., and Hawkins, G. 1987. *The Citizen's Guide to Gun Control.* New York: MacMillan.

[25]Baker, S.P., Teret, S.P., and Dietz, P.E. 1980. "Firearms and the Public Health." *Journal of Public Health Policy*, 1: 224-229.

[26]Christoffel, 86.

[27]Pierce, G.L., and Bowers, W.J. 1981. "The Bartley-Fox Gun Law's Short Term Impact on Crime in Boston." *Annals of the American Academy of Political and Social Science*, 455: 120-37.

[28]Sloan, J.H., Kellerman, A.L., Reay, D.T., Ferris, J.A., Koepsell, T., Rivara, F.P., Rice, C., Gray, L., and

Gerfo, J. 1988. "Handgun Regulations, Crime, Assaults, and Homicide. A Tale of Two Cities." *New England Journal of Medicine*, 319: 1256-62; Phillips, L., Votey, H.L., and Howell, J. 1976. "Handguns and Homicide: Minimizing Losses and the Cost of Control." *Journal of Legal Studies*, 5: 463-78; and, Maggadino, J.P., and Medoff, M.H. 1984. "An Empirical Analysis of Federal and State Firearm Control Laws." In D. Kates, Jr., ed. *Firearms and Violence: Issues of Public Policy.* Cambridge, Mass.: Ballinger.

[29]Cook (forthcoming), 194; see also Cook, P.J. 1980. "Research in Criminal Deterrence: Laying the Groundwork for the Second Decade." In N. Morris and M. Tonry, eds. *Crime and Justice: An Annual Review of Research*, 2. Chicago: University of Chicago Press.

[30]Cook (forthcoming), 194.

[31]Christoffel, 86-87.

[32]Teret, S.P., and Wintemute, G.J. 1983. "Handgun Injuries: The Epidemiologic Evidence for Assessing Legal Responsibility." *The Hamline Law Review*, 6: 350.

[33]Bureau of Alcohol, Tobacco and Firearms. 1976. *Project Identification: A Study of Handguns Used in Crime.* Washington, D.C.: U.S. Department of Treasury.

[34]Federal Bureau of Investigation. 1989. *Crime in the United States, 1988.* Washington, D.C.: U.S. Government Printing Office.

[35]Bureau of Alcohol, Tobacco, and Firearms.

[36]*United States v. Cruickshank*, 92 U.S. 542 (1876); *Presser v. Illinois*, 116 U.S. 252 (1886); *United States v. Miller*, 307 U.S. 174 (1939); *Quilici v. Village of Morton Grove*, 695 F. 2d 261 (7th Cir. 1982) Cert. denied, 104 S. Ct. 194 (1983); *Kalodimos v. Village of Morton Grove*, 103 Ill. 2d 483, 470 N.E. 2d 266 (1984).

[37]Christoffel, 98.

[38]Murray, D. 1975. "Handguns, Gun Control Laws, and Firearm Violence." *Social Problems*, 23: 81-92.

[39]Fields, S. 1979. "Handgun Prohibition and Social Necessity." *St. Louis University Law Journal*, 23: 35-61.

[40]Mabler, A.J., and Fielding, J.E. 1977. "Firearms and Gun Control: A Public Health Concern." *New England Journal of Medicine*, 297: 556-58.

[41]Wintemute, G.J., Teret, S.P., Kraus, J.F., Wright, M.A., and Bradfield, M.S. 1987. "When Children Shoot Children: 88 Unintended Deaths in California." *Journal of the American Medical Association*, 257: 3107-9.

[42]National School Safety Center, 4.

[43]Sloan, J.H., Kellermann, A.L., Reay, D.T., Ferris, J.A., Koepsell, T., Rivara, F.P., Rice, C., Gray, L., and Gerfo, J. 1988. "Handgun Regulations, Crime, Assaults, and Homicide: A Tale of Two Cities." *New England Journal of Medicine*, 319: 1256-62.

[44]Calhoun, D. Winter 1989-90. "From Controversy to Prevention: Building Effective Firearm Policies." *Injury Prevention Network Newsletter*, 7. San Francisco, Calif.: Center for Injury Prevention, 19.

[45]Office of Juvenile Justice and Delinquency Prevention. October 1989. "Weapons in Schools," 4.

[46]National Committee for Injury Prevention and Control. 1989. *Injury Prevention in America: Meeting the Challenge.* New York: Oxford University Press, 263.

[47]Eisen, A. Winter 1989-90. "Guns: In Whose Hands? A Portrait of Gunowners and Their Culture." Injury Prevention Network Newsletter, Volume 7. Center for Injury Prevention, San Francisco, Calif., 10.

[48]Stringham, P., and Weitzman, M. 1988. "Violence Counseling in the Routine Health Care of Adolescents." *Journal of Adolescent Health Care*, 9: 389.

[49]Wright, S.M. October 1989. "Report on the Pilot Test of the Protocol for Health Care Providers Addressing Adolescent Acquaintance Violence During Routine Health Care Visits." Newton, Mass.: Education Development Center, Inc.

[50]Calhoun, 14.

[51]Cook, P. 1981. "The Effect of Liquor Taxes on Drinking, Cirrhosis and Auto Accidents." In Moore, M., and Gerstein D., eds. *Alcohol and Public Policy: Beyond the Shadow of Prohibition.* Washington, D.C.: National Academy Press, 255-85; Cook, P., and Tauchen, G. 1982. "The Effect of Liquor Taxes on Heavy Drinking." *Bell Journal of Economics*, 13: 379-90.

[52]Grossman, M., Coute, D., and Arluck, G.M. 1987. "Price Sensitivity of Alcoholic Beverages: Youth Alcohol Use and Motor Vehicle Mortality." In H. Holder, HD, ed. *Control Issues in Alcohol Abuse Prevention: Strategies for States and Communities.* Greenwich, Conn.: JAI Press Inc.

[53]Saffer, H., and Grossman, M. 1985. "Effects of Beer Prices and Legal Drinking Ages on Youth Motor Vehicle Fatalities." Unpublished Manuscript. New York: National Bureau of Economic Research.

[54]Mcreno, J.D. and Bayer, R. 1985. "The Limits of the Ledger in Public Health Promotion." *Hastings Center Report*, 37-41; see also Warren, K. June 1983. "The Benefits and Costs of Anti-smoking Policies." Unpublished

report to the National Center for Health Services Research, Chapter IX.

[55]Hemenway, D., and Weil, D. 1990. "Phasers on Stun: The Case for Less Lethal Weapons." *Journal of Policy Analysis and Management*, 9(1): 94-98.

[56]Ibid., 95.

[57]"A Vested Interest." May 21, 1990. *Time*, 33.

[58]Rosenberg, M.L., Stark, E., and Zahn, M.A. 1986. "Interpersonal Violence: Homicide and Spouse Abuse." In J.M. Last, ed. *Public Health and Preventive Medicine, Twelfth Edition*. Norwalk, Conn.: Appleton-Century-Crofts, 1399-1426.

[59]Cope, J.D., Grossnickle, W.F., and Geller, E.S. 1986. "An Evaluation of Three Corporate Strategies for Safety Belt Use Promotion." *Accident Anaylsis and Prevention*, 18: 243-51; Geller, E.S., Rudd, J.R., Kalsher, F.M., Streff, F.M., and Lehman, G.R. 1987. "Employer-based Programs to Motivate Safety Belt Use: A Review of Short- and Long-term Effects." *Journal of Safety Research*, 18: 1-17.

[60]Campbell, B.J., Hunter, W.W., and Stutts, J.C. 1984. "The Use of Economic Incentives and Education to Modify Safety Belt Use Behavior of High School Students." *Health Education*, 15: 30-33; Geller, E.S. 1984. "Motivating Safety Belt Use with Incentives: A Critical Review of the Past and a Look to the Future." In *Advances in Belt Restraint Systems: Design, Performance, and Usage*. Warendale, Penn.: Society of Automotive Engineers, 127-32; and Roberts, M.C., Fanurik, D., and Wilson, D. 1988. "A Community Program to Reward Children's Use of Seat Belts." *American Journal of Community Psychology*, 16: 396-407.

[61]Van Houten, R., and Nau, P. "A Study to Assess the Effects of Feedback Signs on Driving Speed." Ottawa, Road Safety Branch, Transport Canada, 1982; Weinstein, N.D., Grubb, P.D., and Vautier, J.S. 1986. "Increasing Seat Belt Use: An Intervention Emphasizing Risk Susceptibility." *Journal of Applied Psychology*, 71: 285-90.

[62]Geller, E.S., Elder, J.P., Hovell, M.F., and Sleet, D.A. In press. "Behavioral Approaches to Drinking-Driving Interventions." In W. Ward, ed. *Advances in Health Education and Promotion* Greenwich, Conn.: JAI Press; Geller, E.S. In press. "Preventing Injuries and Death from Vehicle Crashes: Encouraging Belts and Discouraging Booze." In J. Edwards, R.S. Tindale, L. Heath, and E. Posavac, eds. *Social Influence Processes and Prevention*. New York: Plenum Press.

[63]Eisen, 10

[64]National Research Council. 1985. *Injury In America: A Continuing Public Health Problem*. Washington, D.C.: National Academy Press, 39.

[65]McLoughlin, E.N., Clark, N., Stahl, K., and Crawford, J.D. 1977. "One Pediatric Burn Unit's Experience with Sleepwear-related Injuries." *Pediatrics*, 60: 405-9.

[66]National Research Council. 1985. *Injury In America: A Continuing Public Health Problem*. Washington, DC: National Academy Press, 39.

[67]Williams, A.F., Wells, J.K. 1981. "The Tennessee Child Restraint Law in Its Third Year." *American Journal of Public Health*, 71: 163-65.

[68]Teret, S.P., and Jacobs, M. 1989. "Prevention and Torts: The Role of Litigation in Injury Control." *Law Medicine and Health Care*, 17: 18.

[69]Baker, S.P. September 1981. "Childhood Injuries: The Community Approach to Prevention." *Journal of Public Health Policy*, 235-46.

[70]Mercy, J., and Houk, V. 1988. "Firearm Injuries: A Call for Science." *New England Journal of Medicine*, 1283-84.

[71]Wright, J., and Rossi, P. 1981. "Weapons, Crime, and Violence in America: Executive Summary." Washington, D.C.: National Institute of Justice, U.S. Department of Justice.

[72]Mercy, J., and Houk, V. 1988. "Firearm Injuries: A Call for Science." *New England Journal of Medicine*, 319(19): 1283-4; and The National Committee for Injury Prevention and Control. 1989. *Injury Prevention: Meeting the Challenge*. New York: Oxford University Press.

[73]Kaplan, J. 1986. "Gun Control (foreword)." *Law and Contemporary Problems*, 49: 1-3.

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APPENDIX

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Oakland, CA 94606
(415) 273-2239
Bruce Kennedy, Director

The Center for Injury Prevention
San Francisco Trauma Foundation
Building One, Room 306
San Francisco, CA 94410
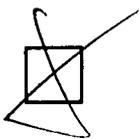(415) 821-8209
Deane Calhoun, Program Coordinator

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