

Where the Guns Come From: The Gun Industry and Gun Commerce

Garen J. Wintemute

SUMMARY

Under federal law, it is illegal for youth under age 18 to purchase rifles or shotguns, and for those under age 21 to purchase handguns. However, fatality and injury statistics clearly show that guns are finding their way into young people's hands. Many of these youth obtain guns through illegal gun markets.

This article focuses on how guns in the United States are manufactured, marketed, and sold. The article shows how the legal and illegal gun markets are intimately connected and make guns easily accessible to youth.

- ▶ Although the domestic gun manufacturing industry is relatively small and has experienced declining sales in recent years, it has significant political clout and a large market for its products, and has engaged in aggressive marketing to youth.
- ▶ Lax oversight of licensed firearms dealers,

combined with little or no regulation of private sales between gun owners, mean that guns can quickly move from the legal gun market into the illegal market, where they can be acquired by young people.

- ▶ Certain guns, especially inexpensive, poorly made small handguns, are particularly attractive to criminals and youth.

The author observes that several policy innovations—including increased regulation of licensed firearms dealers, intensified screening of prospective buyers, regulation of private sales, gun licensing and registration, and bans on some types of weapons—hold promise for decreasing the flow of guns into the hands of youth.

Garen J. Wintemute, M.D., M.P.H., is director, Violence Prevention Research Program, at University of California at Davis.

America's children and youth remain in the grip of an epidemic of gun violence. In 1999, some 40% of all gun homicide victims, and 15% of all gun suicides, were children or youth under age 25.¹ That same year, 43% of all "crime guns"—guns seized from criminals—were taken from children or youth.²

Beginning in the mid-1980s, medical and public health practitioners became increasingly involved in gun violence prevention. They argued that gun violence could be attacked using the same basic strategies that had proven effective in fighting diseases. They believed that guns, like germs, had what amounted to a life cycle; accordingly, weak links in the chain of events that led from a gun's manufacture to its use in crime could be identified and broken. The events in that life cycle were largely unknown at the time, so these pioneers aggregated information on instances of gun violence to seek underlying patterns. Their work coincided with an increasing interest on the part of criminologists and criminal justice practitioners in applying the lessons learned from such patterns—the "big picture"—at the street level.

The big picture emerged with unexpected clarity. A subset of guns, from specific manufacturers, was disproportionately involved in gun violence. These guns moved rapidly into the hands of those who misused them, including youth, often following predictable pathways.

This article provides an overview of how the gun industry and gun markets operate in the United States—and how those operations make guns easily accessible to children. The article begins with a discussion of how the gun industry operates: who manufactures guns, who owns guns, and how the gun industry actively promotes the use of guns by young people. The next section of the article reviews the complex workings of gun markets, and discusses how both legal and illegal systems of commerce allow guns to fall into the hands of children and youth.

Fortunately, increasing knowledge of gun commerce has created new opportunities for violence prevention. The article concludes with a discussion of regulatory, law enforcement, and other strategies that show early promise in changing the way gun markets operate and in reducing youth access to guns.

The Gun Industry

Gun manufacturing in the United States is a relatively small industry, and sales fell in the 1990s. However, as this section of the article makes clear, the industry retains a powerful political presence, with a significant domestic market for its products. The gun industry is working actively to increase demand for its products through marketing aimed at children and youth.

Making Guns

The gun industry is small in relation to the effect that its products have on health and social conditions in the United States and the political power that it wields. The 1997 Census of Manufacturers, conducted by the U.S. Census Bureau, recorded 191 gun manufacturers in the United States, with total sales of just \$1.2 billion and fewer than 10,000 employees. Cigarette manufacturers, by comparison, produced \$28.3 billion worth of product that year; the alcoholic beverage industry produced \$27.7 billion.³

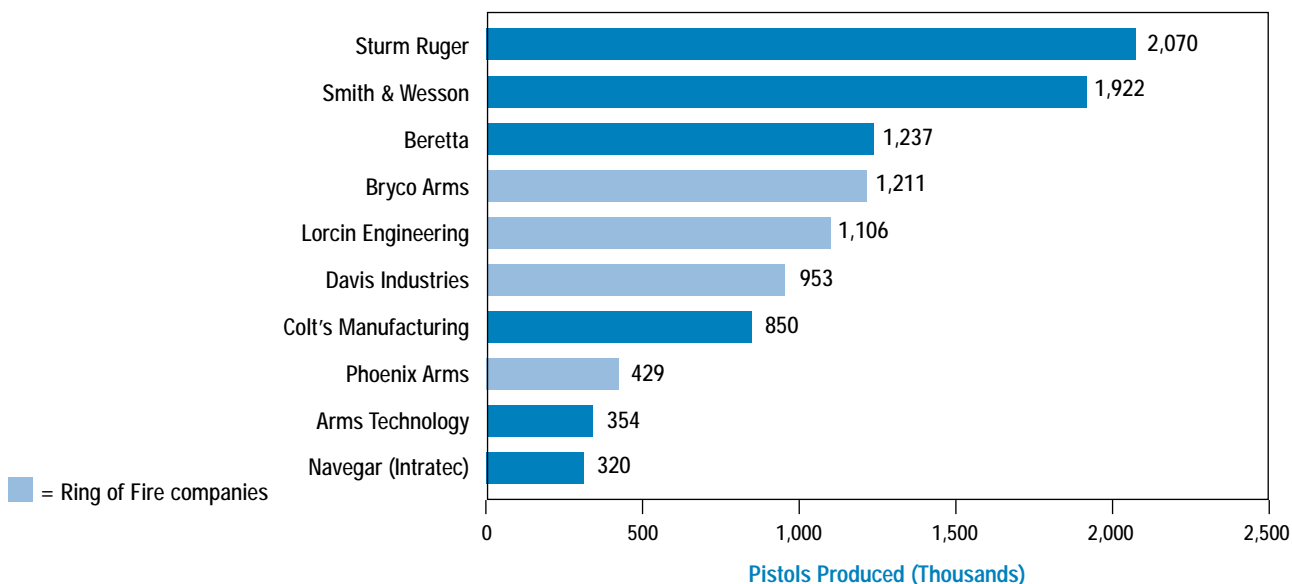
A few gun manufacturers dominate the market. In 1999, for example, the top 10 producers of semiautomatic pistols accounted for 77% of all domestic manufacture; 5 revolver manufacturers accounted for 98% of all revolver production.⁴ In the early 1990s, some 80% of inexpensive, easily concealable "Saturday night special" handguns were produced by 5 manufacturers surrounding Los Angeles, dubbed the "Ring of Fire."⁵ Figure 1 lists the leading manufacturers of semiautomatic pistols during the 1990s. Four of them were part of the Ring of Fire.

Recently, domestic gun manufacturers have struggled as gun sales in the United States have fallen. As Figure 2 shows, domestic rifle and shotgun manufacture declined until the mid-1980s and has remained relatively stable since then. Handgun manufacture rose rapidly to peaks in 1982 and again in 1993, but declined precipitously after both peaks.

These trends in handgun manufacture coincided closely with trends in gun violence. Crime rates have fallen substantially since 1993; homicide arrests of persons under age 18 decreased 56% between 1995 and 1999.⁶ (See the article by Blumstein in this journal issue.) Demand for guns has fallen in tandem, as potential buyers feel less need for protection; annual

Figure 1

Top 10 Producers of Semiautomatic Pistols in the United States, 1990–1999



Source: Bureau of Alcohol, Tobacco and Firearms. *Annual report of firearm manufacture and exportation*. Washington, DC: ATF, 1990–1999 editions.

production of semiautomatic pistols in the United States fell by 56% between 1993 and 1999. As domestic producers have struggled, imported handguns have taken an increasing share of the U.S. market.

A recent flood of imports notwithstanding, the American gun industry has long enjoyed special protections provided by Congress and many state legislatures. For example, except for prohibitions on the manufacture of machine guns, short-barreled shotguns, and similar weapons for the civilian market, essentially no restrictions were placed on the design or performance of firearms manufactured in the United States until 1994.

By contrast, since 1968 Congress has required that imported guns be “particularly suitable for or readily adaptable to sporting purposes.” This had the intended effect of halting the importation of cheap, poorly made Saturday night specials. But Congress chose not to extend those standards to guns made in the United

States—creating a double standard that led directly to the creation of America’s Saturday night special industry.

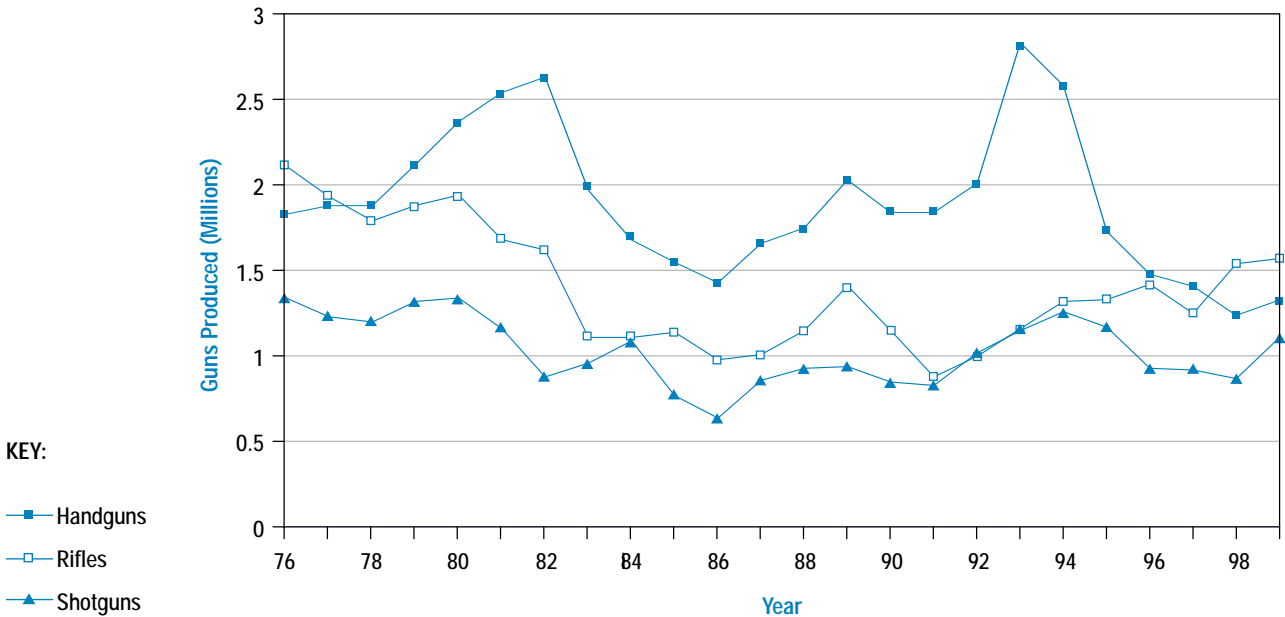
Like their foreign predecessors, America’s Saturday night specials are “junky and not reliable.”⁷ The former chief of the Firearms Technology Branch at the U.S. Bureau of Alcohol, Tobacco and Firearms (ATF) said of the leading American manufacturers of these guns, “They don’t do any more to them than they have to to make them work.”⁸ He later added, “If someone gave me one as a gift, I’d throw it away.”⁷

Yet ATF has only limited authority to oversee gun manufacturers. It has no power to identify, let alone regulate, defective or unnecessarily hazardous guns. The U.S. Consumer Product Safety Commission is forbidden by law from addressing firearms or ammunition. (See the article by Teret and Culross in this journal issue.)

At least 16 state legislatures have provided gun manufacturers with special immunity from lawsuits, even

Figure 2

Gun Production in the United States, 1976–1999



Source: Bureau of Alcohol, Tobacco and Firearms. *Annual report of firearm manufacture and exportation*. Washington, DC: ATF, 1990–1999 editions.

those filed by their own cities and counties. At least 35 states also have passed so-called preemption laws that prohibit local jurisdictions from regulating gun manufacturing and other aspects of gun commerce.

These laws were enacted with relatively little lobbying effort by the gun industry itself. Until the early 1990s, the industry had essentially no organized presence in Washington, D.C., let alone at the state level; advocacy organizations such as the National Rifle Association (NRA) were so effective that the industry felt little need to participate directly. That changed during the 1990s as regulatory proposals multiplied and were joined by the threat of more sophisticated litigation. Several interconnected industry organizations, including the National Shooting Sports Foundation and the Hunting and Shooting Sports Heritage Fund, now promote gun industry interests. The industry also subsidizes the NRA and other advocacy organizations through advertising fees.

The Market for Guns in the United States

Although gun sales have declined in recent years, domestic gun manufacturers still enjoy a large market for their products. Americans owned approximately 192 million guns in 1994, of which 65 million were handguns.⁹ An average of 4.7 million new guns are added to that stock each year through domestic manufacture and importation. Approximately 35% to 40% of American households have guns, and as many as 25% have handguns.^{9–12} There has been a long-term decline in the overall prevalence of gun ownership since the early 1970s, when nearly one-half of American households kept firearms. The decline is limited to rifle and shotgun ownership, and may reflect increasing urbanization and a declining interest in hunting. Handgun ownership has increased slightly during that time.¹²

Gun ownership is strongly influenced by demographic and social factors. Men are much more likely than

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women to own guns (42% and 10%, respectively). Gun ownership is relatively uncommon in the Northeast (14%), and progressively more common in the Midwest (24%), West (26%), and South (32%). Married persons are much more likely to own guns (32%) than are those who are divorced (21%), widowed (16%), never married (15%), or separated (13%). Gun ownership generally increases with increasing socioeconomic status.¹²

Guns are consumer products, and different types have different uses. Therefore, most gun-owning households have more than one firearm; 48% owned three or more in 1994.⁹ But at least 60% of handguns are acquired primarily for protection,^{9,12} and their owners presumably want these guns to be easily accessible in emergencies. It is consonant with this that one-third of handguns in the United States—perhaps 20 million guns—are stored loaded and not locked away. These handguns are obviously ready and accessible for other than their intended purposes.

Gun ownership is common in homes with children; in one multistate study, 37% of parents reported keeping guns in the home, and 17% owned handguns.¹¹ Although homes with children are less likely than other households to contain guns that are both loaded and not locked away, it appears that 9% to 14% of homes with children and guns (approximately 1.5 million households, with 2.6 million children) store at least one firearm loaded and unlocked.^{10,13}

Some parents resist changing gun ownership and storage patterns that put children at risk. For example, in a long-term study of severely depressed adolescents at risk of suicide, just 27% of parents who had guns in the home agreed to remove their guns, despite vigorous and repeated urging to do so. Compounding the problem, parents who refused to remove their guns were more likely than others to store the guns loaded. Of families without guns at the time the study began, 17% acquired them over the next two years.¹⁴

Marketing Guns to Young People

The gun industry's traditional customer base is in long-term decline. As American society has become more

urbanized, hunting has become steadily less popular; one government official predicted that “hunting could end in this country as early as the year 2020.”¹⁵ Furthermore, adults who do not use guns themselves will not introduce their children to guns. “Grandpa or dad isn't taking the kid out into the field to teach him to shoot any more,” lamented one industry executive.¹⁵

The industry is working to recruit future customers among America's children and youth, through advertising campaigns and even video games. It would be misleading to say that the industry directly promotes gun purchases by children, which would be illegal. Persons under age 18 cannot own rifles or shotguns; those under age 21 cannot own handguns. But the industry and related gun advocacy groups strongly encourage gun use by children and encourage parents and other adults to purchase guns for them. Advertisements from gun manufacturers frequently model children using guns. National Shooting Sports Foundation promotional materials argue that any child old enough to be left alone in the house for two or three hours or sent to the grocery store with a list and a \$20 bill is old enough to own a gun.¹⁵

The NRA is investing \$100 million in a campaign to bring together children and guns. Former NRA president Marion Hammer has declared that the organization is in “an old-fashioned wrestling match for the hearts and minds of our children, and we'd better engage our adversaries with no holds barred.”¹⁶ In his monthly column in *Guns & Ammo* magazine, NRA president Charlton Heston has exhorted gun owners to “consider how you can help preserve freedom for future Americans by introducing a young person to the fun and satisfaction of shooting.... [Take] your daughter, nephew, neighbor or family friend out for an afternoon of plinking, hunting or clay target excitement.”¹⁷

Major manufacturers, including Colt's, Browning, and Remington, have begun to use video games as marketing tools. Their strategy was expressed by Scott Farrell, editor of *Guns Magazine*: “What we need is a computer game which combines the use of the real handgun...with state-of-the-art graphics and an exciting story...a game

like that would be an extremely effective vehicle to introduce safe recreational shooting to the video games generation.”¹⁸ As of late 2001, however, the games were selling poorly—paradoxically, they were not violent enough—and some had been taken off the market.¹⁹ Criticism by gun control advocacy groups, notably the Violence Policy Center, has caused at least two manufacturers to request that their guns not be used in more violent games produced by other companies.

Selling Guns: How Do They End Up in the Hands of Youth?

The gun industry operates in such a way as to make guns readily accessible to young people, criminals, and others who are prohibited from possessing them. Robert Hass, Smith & Wesson’s former senior vice president of marketing and sales, has made this clear:

The company and the industry as a whole are fully aware of the extent of the criminal misuse of firearms...that the black market in firearms is...due to the seepage of guns into the illicit market from multiple thousands of unsupervised federal firearms licensees. In spite of their knowledge, however, the industry’s position has consistently been to take no independent action to insure responsible distribution practices [and] to maintain that the present minimal federal regulation...is adequate.²⁰

An overview of the major features of the gun markets, as presented below, reveals that guns can quickly move from the regulated, legal market into the illegal market, through corrupt retailers, bulk transactions and “straw” (surrogate) purchasing, sales on the unregulated secondary market, or theft. Certain guns, especially inexpensive and high-powered semiautomatic pistols, are particularly attractive to criminals and youth.

Legal and Illegal Markets for Guns

The market for guns in the United States is complex enough that it is helpful to think in terms of several interdependent gun markets. There are both legal and illegal retail markets in guns. Until fairly recently, it was believed that theft was the main source of guns for the illegal market, but new evidence demonstrates that the legal market

is the chief source of supply for the illegal market’s crime guns. The intentional diversion of guns from the legal to the illegal market, a process known as “trafficking,” has been the subject of intense research and intervention.

The legal gun market is divided into a primary market, comprising all transfers of guns by mainstream sources such as federally licensed retailers (gun dealers and pawnbrokers), and a secondary market, consisting of transfers involving less formal sources such as private parties, collectors, and unlicensed vendors at gun shows.²¹ The split between primary market sales by licensed retailers and secondary market sales by other sources is approximately 60/40.^{9,21}

Lack of regulation and oversight of the primary market’s licensed retailers has contributed greatly to the availability of guns for criminal use. Practices such as bulk retail transactions and surrogate or straw purchasing make it easy for gun traffickers—sometimes with the cooperation of corrupt licensed gun dealers—to buy guns and then resell them on the secondary market, where sales are not subject to federal regulations such as background checks.

In the early 1990s, the United States had more gun retailers than gas stations.²² No mechanism existed, at either the federal or state level, for ensuring that licensed retailers were actually engaged in the legitimate business of selling guns or that they complied with state and local laws regarding the operation of such a business. As Box 1 shows, retailers often are sources of crime guns, both directly and through traffickers and other intermediaries.

Bulk retail transactions, also called multiple purchases, are another important source of crime guns. In 1999, some 22% of all crime guns had first been sold in a multiple purchase.² Youth frequently engage in multiple purchases (although not always from licensed retailers). Among correctional inmates under age 18, for example, one in five stated in a 1993 survey that they had gone out of state to buy guns in quantity, and 45% of these had “bought, sold, or traded a *lot* of guns” (italics in original).²³

Straw purchasers—persons who buy guns from licensed retailers on behalf of others who are prohibited from doing so—are another important source of crime guns.

Box 1

Licensed Firearms Dealers as Sources of Guns Used in Crime

These examples, taken from case files kept by the U.S. Bureau of Alcohol, Tobacco and Firearms, illustrate how some licensed dealers act as sources for guns used in crimes:

- ▶ From August 1993 to March 1996, a Kansas City dealer illegally sold 1,357 guns, many from his van. More than 200 of these guns were later recovered from crime scenes in Kansas City. The firearms were primarily Lorcin and Bryco handguns. The dealer pleaded guilty on multiple counts and was sentenced to 71 months in prison.
- ▶ In March 1996, a gun recovered from a Washington, D.C., youth was traced after ATF's national laboratory successfully raised

its obliterated serial number. The trail led to a licensed gun dealer in Missouri and later to a Nashville, Tennessee, gun trafficker who sold 200 to 300 guns on the streets of the nation's capital. To date, 138 semiautomatic firearms originally sold by the Missouri dealer have been recovered in crimes in the Washington, D.C., area—crimes that include murder, kidnapping, robbery, and armed assault. In June 1997, the Nashville gun trafficker pleaded guilty to federal charges. He was sentenced to 60 months' imprisonment. During sentencing, the judge referred to the trafficker as a "dealer in death."

Source: U.S. Bureau of Alcohol, Tobacco and Firearms. *Following the gun: Enforcing federal laws against firearms traffickers*. Washington, DC: ATF, 2000.

This may be particularly true for young people: In the 1993 survey mentioned above, 32% of student-age inmates and, perhaps even more surprisingly, 18% of inner-city high school students, had asked someone to purchase a gun for them from a retail outlet.²³

Compelling evidence of the complicity of corrupt licensed retailers in these purchases comes from Chicago, where undercover police officers conducted sting operations in 1998. In a dozen cases, storefront gun retailers in Chicago suburbs—selected because of the frequency with which guns they sold were used in Chicago crimes—willingly participated in straw purchases and other sales that they knew to be illegal.²⁴

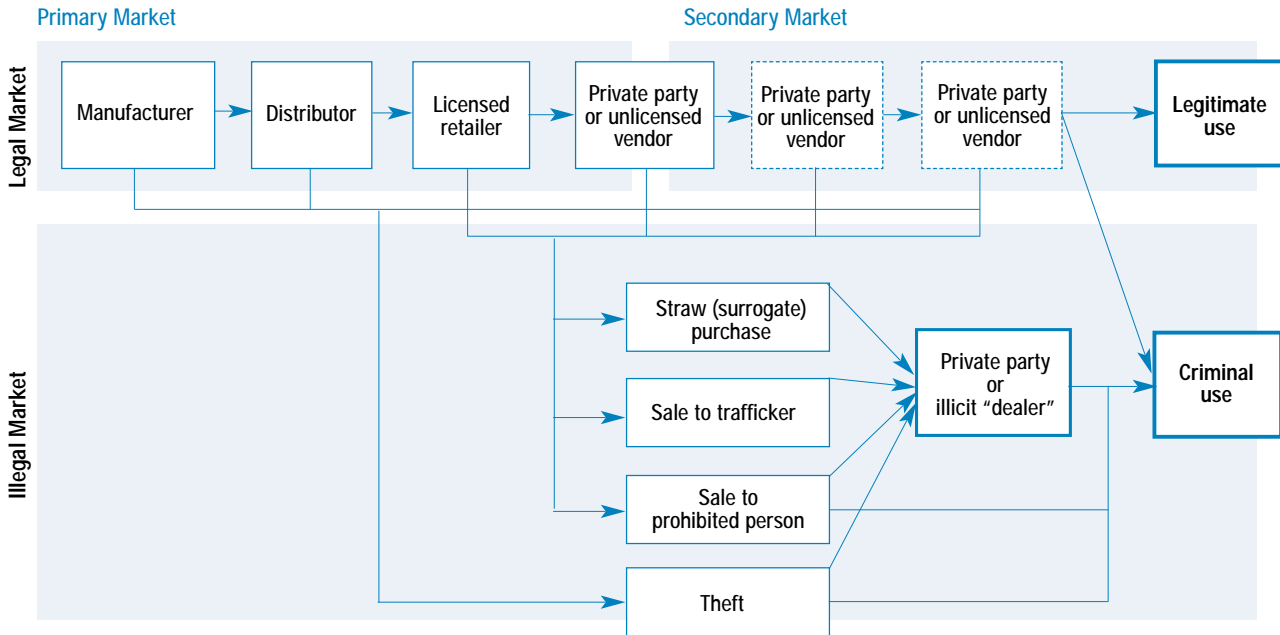
Despite cases like these, licensed retailers in the primary gun market make up the most regulated, and probably also the cleanest, segment of the retail gun market. Congress has created a double standard for gun sellers. Federal law requires those who are "engaged in the business" of selling guns to be licensed. But the law is deliberately ambiguous as to what "engaged in the business" means. As a result, unlicensed vendors in the secondary gun market can buy and sell dozens or hundreds of guns each year and still claim that they are pursuing a hobby.

This has divided the primary and secondary retail gun markets into two parallel systems for gun distribution, with clear implications for efforts to prevent the flow of guns into the illegal market. Licensed retailers are required to comply with federal, state, and local laws (although enforcement is problematic). They are obligated to identify prospective purchasers. They cannot transfer guns to prohibited persons, and they are required to observe waiting periods and submit purchaser information for background checks. They must keep records of all acquisitions and dispositions of guns, and report all multiple sales. The secondary market's unlicensed gun sellers, by contrast, can legally ignore the identification requirement and waiting period, cannot conduct background checks, and are not required to report multiple sales or keep records.

The problem is most visible (although probably not most extensive) at gun shows and flea markets. There are more than 4,000 gun shows in the United States each year, averaging 2,000 to 5,000 attendees each. ATF summarizes the situation: "Under current law, large numbers of firearms at these public markets are sold anonymously....there is virtually no way to trace

Figure 3

A Simplified View of Gun Markets:
How Legal Guns Enter Illegal Commerce and Reach Criminals



them.”²⁵ As a result, “too often the shows provide a ready supply of firearms to prohibited persons, gangs, violent criminals, and illegal firearms traffickers.”²⁵ Unlicensed vendors, who make up 25% to 50% of all persons selling guns at gun shows, sometimes even advertise their exemption from the regulations that apply to licensed retailers. At one show, a vendor posted a sign stating, “No background checks required; we only need to know where you live and how old you are.”²⁵ Because purchasers are not even required to show identification, such vendors clearly are an important potential source of guns for children and youth.

Thus, guns may be diverted directly from the legal to the illegal market through several channels. As shown in Figure 3, firearms can be furnished directly by a corrupt licensed retailer, bought from a licensed retailer by a straw purchaser, or sold, with almost no questions

asked, in the unregulated secondary market.

Under these circumstances, reports that even serious criminals often buy rather than steal their guns have gained widespread credibility. A nationwide survey of inmates in state prisons in 1991 found that those incarcerated for a handgun offense were nearly as likely to have gotten the gun they used from a “retail outlet” (27%) as from the “black market, a drug dealer, or a fence” (28%); just 9% said that they had stolen it.²⁶

Theft remains a source of potential crime guns; about 500,000 guns are stolen each year.⁹ But the importance of theft to the supply of crime guns has been overestimated. This may be because theft does not yield desirable guns. Guns stolen from residences, at least, tend to be older revolvers, not the semiautomatic pistols that have become the weapons of choice for criminal use.²⁷

Crime Guns

This section describes features of guns that are commonly used in crime. Popular crime guns tend to be powerful, new semiautomatic pistols, many of which are inexpensive and thus particularly attractive to youth. Crime guns also tend to change hands often, and to be bought in the state where they are used to commit crimes.

Increased Firepower in the Weapons of Choice

As semiautomatic pistols have replaced revolvers among street firearms, the severity of gun violence in America has increased. Pistols hold more ammunition than revolvers, which typically carry six rounds. In the “double-stack” magazine configuration that was very common until 1994—and remains available today—conventional 9 mm pistols carry as many as 20 rounds of ammunition. Special “after-market” magazines hold even more.²⁸ In the transition from revolvers to pistols, caliber increased along with ammunition capacity. Gun caliber, a rough measure of “stopping power,” is an independent determinant of gun lethality in civilian settings.²⁹

Medical studies have documented the consequences, which have been particularly severe for young people. Pistols were used in 5% of gang homicides in Los Angeles County in 1986, but 44% in 1994. By then, gang-related homicides made up 43% of all homicides there, and one-half of all victims of these gang-related homicides were under age 21.³⁰ In Chicago, almost the entire increase in handgun homicides during the late 1980s and early 1990s was attributable to semiautomatic pistols.³¹ Nationwide, it is estimated that more homicides were committed with 9 mm pistols in 1992 alone than in the entire decade of the 1980s.¹⁵

The close relationship between trends in gun production and gun use in crime is emphasized by the fact that nearly the entire increase in handgun production from the mid-1980s through 1993 involved the specific medium- and large-caliber pistols that became weapons of choice for criminal use, as shown in Figure 4. Tom Diaz, a former senior staff member for the House Judiciary Committee’s Subcommittee on Crime, has argued that the gun industry knowingly marketed increasingly lethal pistols to promote repeat sales to a customer base that was already saturated with less powerful guns.¹⁵

It is therefore particularly important that inexpensive, relatively high-capacity, medium-caliber semiautomatic pistols became widely available for the first time in the late 1980s. Almost all of these pistols, which typically sell new at retail for \$100 to \$150, have been produced by Ring of Fire manufacturers: Bryco Arms, Lorcin Engineering, and Davis Industries.⁵ Their low price makes these guns particularly accessible to young people.

By 1999, semiautomatic pistols accounted for one-half of all recovered crime guns; 9 mm pistols alone made up 23% of crime guns. As Table 1 shows, 7 of the top 10 crime guns recovered from persons under age 18 in 1999, and 5 of the top 10 crime guns recovered from those ages 18 to 24, were inexpensive semiautomatic pistols made by Ring of Fire companies.²

Certain firearms have predominated in gun crime year after year, as Table 2 shows. The salient example is the Lorcin Engineering .380-caliber pistol, a Ring of Fire gun. The Lorcin .380 was first manufactured in 1992. By 1993, the gun ranked among the most frequently identified crime guns in the United States, a status it has maintained ever since.

Crime Guns Are New Guns That Have Changed Hands Rapidly

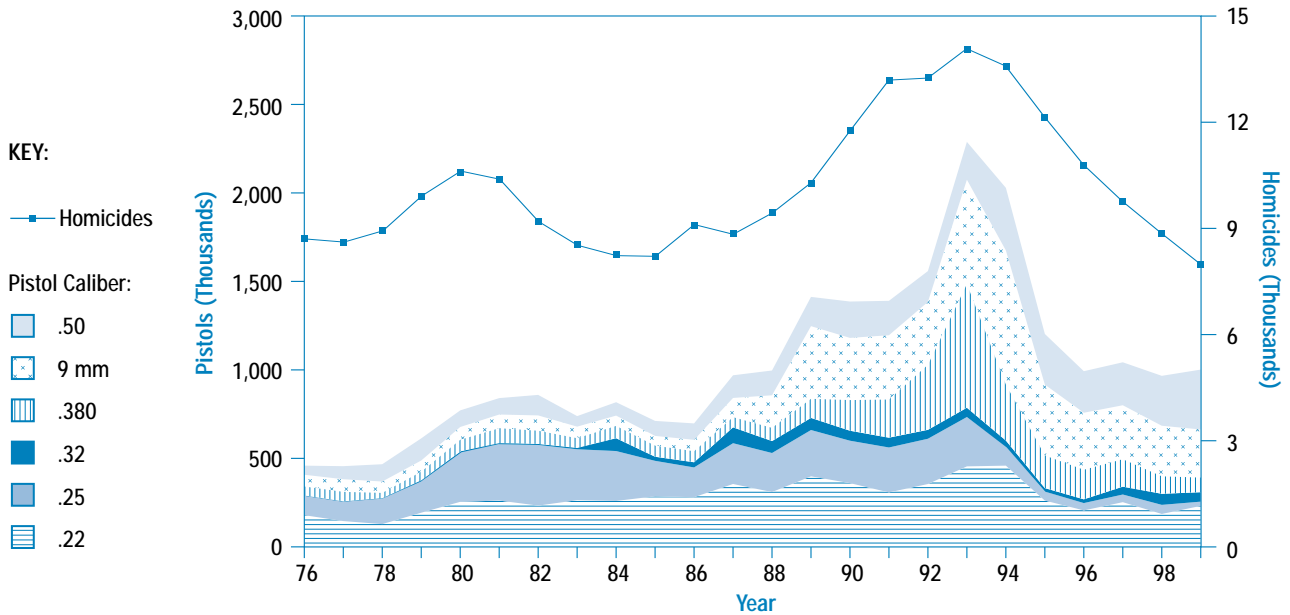
In 1999, guns that were less than six years old made up just 17% of all guns estimated to be in civilian hands, but accounted for more than one-half of all recovered crime guns. Of all crime guns recovered in 1999, some 15% had been in circulation for less than a year.²

This “time to crime,” as it is known, is shortest for the most popular crime guns. Of the top 10 crime guns recovered from persons under age 18 in 1999, 5 had a median time to crime of 4 years or less; and 2, the Bryco Arms and Lorcin Engineering 9 mm pistols, each had a median time to crime of just 1.6 years. Among the top 10 crime guns recovered from persons ages 18 to 24, Bryco Arms 9 mm pistols had a median time to crime of just 1.2 years, and Bryco Arms .380 pistols had a median time to crime of 2.0 years.²

In 1999, only 11% of recovered crime guns were possessed by the people who had first purchased them from a licensed gun retailer.² Coupled with the finding that time to crime is often very short, this suggests that crime

Figure 4

Handgun Homicide and Semiautomatic Pistol Production by Caliber, United States, 1976–1999



Source: Bureau of Alcohol, Tobacco and Firearms. *Annual report of firearm manufacture and exportation*. Washington, DC: ATF, 1990–1999 editions; Fox, J., and Zawitz, M. *Homicide trends in the United States*. Washington, DC: Bureau of Justice Statistics. Available online at <http://www.ojp.usdoj.gov/bjs/>.

guns are frequently purchased from retailers for criminal purposes and move rapidly into the illegal market.

Crime Guns Are Usually of Local Origin

Most crime guns in 1999, including 53% of guns recovered from persons under age 18, were first sold by licensed dealers in the state in which they were recovered. Thirty percent of guns recovered from persons under age 18 were first sold in the county in which they were recovered or in an immediately adjoining county.²

But several interstate trafficking pathways are also well documented. These begin in states where gun sales are loosely regulated and end where guns are more difficult to acquire. The “Iron Pipeline” transports guns purchased in the Southeast for resale in the Middle Atlantic states and New England. A second pathway brings guns bought in the Central South to the Upper Midwest, particularly to Chicago.

Strategies to Reform the Gun Markets and Decrease Youth Access to Guns

As the intersection between gun markets and crime has become better understood, violence prevention practitioners at the federal, state, and local levels, from a wide array of backgrounds, including law enforcement, public policy, law, and health care, have worked to develop new strategies for combating the gun violence epidemic. Many of these interventions—such as tracing crime guns, strengthening regulation of licensed dealers, and screening prospective buyers—have already been implemented to some extent nationwide and have shown early promise in decreasing youth access to guns in the legal and illegal markets. Other strategies—such as limiting gun sales, regulating the secondary market, registering guns and licensing owners, and banning some types of weapons—are being tried in a

number of states and may also be effective in reducing youth access to guns.

Tracing the Ownership of Crime Guns

Since the early 1970s, ATF has helped solve gun crimes by tracking the ownership of recovered crime guns from their manufacture through their first retail sale, a process known as “tracing.” In 1994, law enforcement agencies began to provide ATF with more complete information on recovered crime guns, including the identity of the gun’s possessor and of any associates, the date on which the gun was confiscated, and the nature of the crime involved. As ATF merged end-user information with the results of its own tracing investigations, patterns began to emerge. Specific persons

were identified as frequent first purchasers of guns later recovered in crime, sometimes over large regions of the country. They could be investigated as potential straw purchasers and could provide links to gun traffickers and corrupt retailers. This was particularly important for identifying the channels that furnished crime guns to persons under age 21, who could not purchase guns for themselves.

In 1996, ATF launched a comprehensive crime gun tracing program as part of its Youth Crime Gun Interdiction Initiative. Participating cities submit tracing requests to ATF for all recovered crime guns. This both helps to solve individual cases and yields a much clearer picture of the dynamics of the illegal gun market.

Table 1

The 10 Firearms Most Frequently Recovered from Juveniles (Persons under Age 18) and Youth (Persons Ages 18 to 24) and Traced by the Bureau of Alcohol, Tobacco and Firearms, 1999^a

Juveniles		Youth	
Gun	Time to Crime ^b (years)	Gun	Time to Crime (years)
Lorcin .380	3.5	Lorcin .380	3.6
S&W .38	15.3	Ruger 9 mm	2.2
Raven .25	12.1	S&W .38	13.1
Davis .380	6.0	S&W 9 mm	4.3
Bryco .380	2.8	Bryco 9 mm	1.2
Bryco 9 mm	1.6	Bryco .380	2.0
Lorcin .25	6.2	Davis .380	5.2
S&W 9 mm	6.1	Raven .25	12.2
Ruger 9 mm	4.0	S&W .357	13.4
Lorcin 9 mm	1.6	Mossberg 12 g ^c	4.3

^a Caliber is given in decimal fractions of an inch unless millimeters (mm) or gauge (g) is specified. Some entries represent more than one specific firearm. For example, Smith & Wesson produces many different .38-caliber revolvers, and ATF groups them together in its annual list of the top 10 most frequently traced crime guns. Lorcin Engineering, on the other hand, produced just one type of .380-caliber pistol until it went out of business in late 1999. Inexpensive pistols manufactured by the Southern California “Ring of Fire” companies are indicated in **bold type**.

^b Time to crime indicates the length of time between the first sale of a gun by a licensed retailer and its use in commission of a crime.

^c Shotgun

Source: Bureau of Alcohol, Tobacco and Firearms. *Crime gun trace reports (1999): National Report*. Washington, DC: ATF, 2000.

Table 2

The 10 Firearms Most Frequently Traced by the Bureau of Alcohol, Tobacco and Firearms, 1995–1999^a

1995	1996	1997	1998	1999
S&W .38	S&W .38	S&W .38	S&W .38	S&W .38
Lorcin .380	Lorcin .380	Lorcin .380	Lorcin .380	Ruger 9 mm
Raven .25	Raven .25	Raven .25	Ruger 9 mm	Lorcin .380
Davis .380	S&W .357	Ruger 9 mm	Raven .25	Mossberg 12 g ^b
Norinco 7.62 mm ^c	Davis .380	S&W .357	Norinco 7.62 mm ^c	S&W 9 mm
S&W .357	Norinco 7.62 mm ^c	Davis .380	Mossberg 12 g ^b	S&W .357
Ruger 9 mm	Ruger 9 mm	S&W .357	S&W 9 mm	Raven .25
Mossberg 12 g ^b	S&W 9 mm	Norinco 7.62 mm ^c	S&W .357	Ruger .22
S&W 9 mm	Mossberg 12 g ^b	Mossberg 12 g ^b	Davis .380	Norinco 7.62 mm ^c
Bryco .380	Marlin .22 ^c	Marlin .22 ^c	Marlin .22 ^c	Colt .38

^a Caliber is given in decimal fractions of an inch unless millimeters (mm) or gauge (g) is specified. Some entries represent more than one specific firearm. For example, Smith & Wesson produces many different .38-caliber revolvers, and ATF groups them together in its annual list of the top 10 most frequently traced crime guns. Lorcin Engineering, on the other hand, produced just one type of .380-caliber pistol until it went out of business in late 1999. Inexpensive pistols manufactured by the Southern California ‘Ring of Fire’ companies are indicated in **bold type**.

^b Shotgun

^c Rifle

Source: Bureau of Alcohol, Tobacco and Firearms. *Crime gun trace reports (1999): National Report*. Washington, DC: ATF, 2000.

Several states require that data on all recovered crime guns be submitted to ATF.

Regulating Licensed Retailers

One way to decrease the flow of guns to the illegal market is to strengthen oversight of licensed dealers at the federal, state, and local levels. Beginning in 1993, ATF undertook a long-term effort to ensure that federally licensed gun retailers are actively engaged in the legitimate business of selling guns.³² Inspections increased, and interviews were required for all new applications and selected renewals. These actions were reinforced by the 1993 Federal Firearms Licensee Reform Act, which improved background checks, increased licensing fees, and required new applicants to submit a photograph and fingerprints, and by the 1994 Violent Crime Control and

Law Enforcement Act, which required license holders to certify that they were in compliance with state and local laws and regulations. The total number of federal firearms license holders (dealers, pawnbrokers, and manufacturers) fell from a peak of 287,000 in 1993 to 86,180 by October 1999, a 70% drop.³³ It is still falling.

Because licensed retailers have been an important source of crime guns for children, youth, and others, a selective reduction in the number of retailers may lead to a decrease in the flow of guns into the illegal market. However, anecdotal reports from gun show observers suggest that some previously licensed retailers who regularly participated at gun shows have continued to do so as unlicensed vendors. If true, this is a disturbing and unintended effect of ATF’s program,

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because under federal law, sales by unlicensed vendors are not subject to criminal background checks.

By 1999, statutes or executive orders in 31 states expanded on federal regulation of licensed gun retailers. The statutes typically include a requirement for state and local licensure, and compliance with such laws is a precondition for obtaining a federal firearms license.³⁴ States are using these statutes to help eliminate illegitimate retailers. North Carolina found in 1993 that only 26% of federally licensed retailers also possessed its required state license. Those in violation included large retail outlets such as Wal-Mart and Kmart. Noncomplying retailers were required either to obtain a state license or forfeit their federal license.²¹ In California, retailers without required state licenses are being jointly investigated by agents of ATF and the state's Department of Justice.

Many local jurisdictions have gone further. The Oakland, California, police department worked with ATF to enforce a requirement that all holders of federal firearms licenses have a local police permit. Obtaining a permit involved a screening and background check. The number of federally licensed retailers fell from 57 before the program began to 7 in 1997.³⁵

A very small fraction of licensed retailers accounts for a very large share of ATF's recovered crime guns—perhaps fortunately, in that this will continue to focus intervention efforts. In 1998, just over 1% of licensees accounted for more than 57% of traceable crime guns.³⁶ As a result, ATF is conducting enhanced surveillance of licensees with 10 or more gun traces linked to them.

The gun industry has maintained that retailers with a large number of gun traces have a large sales volume and that their trace numbers are in line with expectations.³⁷ However, in California, retailers with more gun traces than would be predicted by their sales volumes—known as high-trace retailers—account for 33% of gun sales, but 83% of gun traces.³⁸

Future enforcement efforts are likely to focus on these retailers, who are disproportionately linked to crime

guns, and on retailers who report frequent thefts. The number of retailers also will probably continue to decrease; there are only 15,000 to 20,000 gun stores in the United States, still far less than the number of licensed retailers.^{39,40}

Screening Prospective Buyers and Preventing High-Risk Purchases

Federal law has long prohibited children, felons, persons under felony indictment, controlled substance users, and certain others from possessing firearms.⁴¹ Background checks and waiting periods can help ensure that these prohibited persons do not purchase guns from licensed firearm dealers.

In 1994, Congress enacted the Brady Handgun Violence Prevention Act, which required a five-day waiting period prior to handgun purchase, and initially also required state or local law enforcement to conduct a criminal record background check. States with preexisting (and generally more restrictive) programs, known as Brady alternative states, continued to operate as they had before.

Over the Brady Act's first five years, all states together screened a total of 12.7 million applications to purchase guns and issued 312,000 denials.⁴² In 1999, when checks on prospective purchasers of rifles and shotguns were added, some 204,000 persons—2.4% of those who applied—were denied the purchase.⁴³ Approximately 70% of denials are for felony convictions or indictments, 10% are for domestic violence misdemeanor convictions, 3% are for domestic violence restraining orders, and the remainder are for other reasons.

In 1998, both the waiting period and the background check were replaced by the National Instant Criminal Background Check System (NICS), administered by the Federal Bureau of Investigation (FBI). During NICS' first year of operation, nearly 90% of background checks were completed within two hours of application; 72% were completed within 30 seconds. Checks that are complicated by missing or incomplete data can take several days. The law, however, allows retailers to release

guns to purchasers after three business days, whether or not the background checks are completed. By the end of 1999, some 3,353 prohibited persons, most of them felons, had acquired firearms in this manner; just 442 had surrendered their guns. This problem would largely be eliminated if the waiting period for firearm purchases were lengthened for ambiguous cases.^{44,45}

Because many states do not operate under the Brady system, procedures for buying guns vary widely from state to state. Thirteen states have waiting periods for handgun purchase, and five have waiting periods for rifle or shotgun purchase. As of June 1999, waiting periods for handgun purchase ranged from as little as 2 days in Alabama, South Dakota, and Wisconsin, to 14 days in Connecticut and Hawaii. The waiting period in New York can be as long as 180 days if needed. In 24 states, gun retailers contact the FBI directly for all background checks. In 15 states, the state conducts all background checks to determine whether the gun sale would violate either state or federal law. In the remaining 11 states, a state or local agency conducts background checks on handgun purchases, and the FBI conducts checks on rifle or shotgun purchases. Altogether, more than 3,000 federal, state, and local agencies conduct background checks.³⁴

Screening prospective gun buyers and denying purchases by those who are at risk for future criminal activity has become a widely accepted violence prevention policy.

Denial reduces risk for later criminal activity among those whose purchases are denied. In a California study, felons whose handgun purchases were denied were compared with handgun buyers who had felony arrests but no convictions.⁴⁶ The felony arrestees—whose purchases were approved—were 21% more likely to be charged with a new gun offense, and 24% more likely to be charged with a new violent offense, than were the felons.

Many violence prevention advocates have argued that denying a gun purchase based on a prior felony conviction or indictment does not go far enough. The 1997 federal Omnibus Consolidated Appropriations Act banned the purchase or possession of guns by persons convicted of a misdemeanor domestic violence offense.⁴⁷ Persons subject to active domestic violence restraining orders have been prohibited from purchasing or possessing handguns since 1994. Some 17 states and the District of Columbia now deny guns to persons convicted of selected misdemeanors, typically crimes involving violence, alcohol, or drugs. New Jersey's statute is the most comprehensive, prohibiting the purchase of guns by "any person who has been convicted of a crime."⁴⁸

Limiting Gun Sales

Evidence that multiple-purchase guns are likely to be trafficked and used in crime has led Virginia, Maryland, and California to outlaw such purchases. Virginia's law, effective in July 1993, limited firearm purchases by per-

Regulating the secondary gun market—sales between private parties—is another way to reduce the number of guns sold to minors.

sons other than retailers to no more than one per month. Prior to that time, Virginia had been a major source state for the Iron Pipeline, responsible for 35% of crime guns recovered in New England. But Virginia accounted for just 16% of New England crime guns that were purchased after the new law took effect.⁴⁹ An evaluation of California's law is being conducted by the author and colleagues.

Regulating the Secondary Gun Market

Regulating the secondary gun market—sales between private parties—is another way to reduce the number of guns sold to minors. By 1999, 14 states regulated private sales, requiring that purchasers of guns sold by private parties obtain a permit or undergo a background check at the premises of a licensed retailer or law enforcement agency. Of these 14 states, 6 regulate all private sales of firearms, 1 regulates private sales of handguns and assault weapons, and 7 regulate handgun sales only. In November 2000, Colorado and Oregon adopted statutes regulating private sales of firearms at gun shows but not elsewhere.³⁴

California and Maryland are the only states with statutes that specifically regulate gun shows. California requires a show organizer to obtain a Certificate of Eligibility from the Department of Justice and to provide local law enforcement with a list of all sellers at the show. Maryland requires unlicensed sellers at gun shows to obtain temporary transfer permits and comply with the same restrictions imposed on licensed retailers.

Registering Guns and Licensing Owners

Requiring all gun owners to register their firearms and obtain licenses for their use also could cut down on the number of guns illegally transferred to young people. Proponents of this idea argue that a gun confiscated from a young person could be traced to its registered owner, who could then be held liable for transferring it illegally.

A new study suggests that licensing and registration laws may help to disrupt the illegal gun market. Researchers at The Johns Hopkins University examined ATF gun tracing data for cities in states that had both licensing and registration statutes, had one or the other, or had neither.

Just 33% of crime guns recovered in cities subject to both licensing and registration laws were originally purchased from in-state gun retailers. By contrast, 72% of crime guns were of in-state origin when only one of these laws was in force; 84% of crime guns came from within the state when neither licensing nor registration statutes had been enacted.⁵⁰

Banning Weapons of Choice

Reducing the availability of poorly made, inexpensive Saturday night special handguns is particularly important for preventing gun violence among children and youth, as the guns' low cost makes them more accessible to young persons. Several states have banned the sale of these types of guns.

In 1989, Maryland created a Handgun Roster Board to develop a list of handguns that could be manufactured or sold legally in the state. A preliminary evaluation of the impact of the Maryland law found that nonapproved guns accounted for a progressively smaller percentage of crime guns confiscated by law enforcement agencies.⁵¹ The ban appears to have had a beneficial effect on crime, producing a 9% decrease in Maryland's homicide rate from what would otherwise have been expected.⁵²

In California, more than 40 cities and counties sought to eliminate Saturday night specials by outlawing the manufacture and sale of guns that failed to meet a set of design and materials criteria. Intermediate results varied, apparently as a result of variable monitoring and enforcement.⁵³ California has since adopted a rigorous set of design and performance standards for all handguns manufactured or sold in the state that took effect on January 1, 2001. It is too soon to know whether the law will reduce gun violence rates.

The best available evidence suggests that comprehensive bans on handguns can be effective as well. In Washington, D.C., such a ban was enacted in the mid-1970s and was associated with a 25% decrease in gun homicide. Washington, D.C., did not experience a comparable decrease (or compensatory increase) in nongun homicide, and no changes in homicide rates were seen in neighboring Maryland or Virginia.⁵⁴

Conclusion

America's youth gun violence epidemic has been shaped and fueled by the ready availability of guns and by pro-gun public policies. Fortunately, researchers are rapidly learning how guns travel from a manufacturer's loading dock into the hands of young people. Straw purchasers, traffickers, unlicensed vendors, and some licensed firearm dealers play a role in helping youth obtain guns illegally. Many of these guns are later used in crimes.

To decrease youth access to gun markets, policymakers and law enforcement professionals are experimenting with new strategies to crack down on corrupt dealers, regulate the private secondary market, and ensure that everyone who buys a gun is legally entitled to do so. Although evaluation data are extremely limited, some of these strategies are showing promise in disrupting the illegal gun market. In the years to come, these strategies should be further refined, to ensure that young people no longer have access to a steady stream of guns from both legal and illegal sources.

ENDNOTES

- Hoyert, D.L., Arias, E., Smith, B.L., et al. Deaths: Final data for 1999. *National Vital Statistics Reports*. Vol. 49, no. 81. Hyattsville, MD: National Center for Health Statistics, 2000, pp. 1–114.
- Bureau of Alcohol, Tobacco and Firearms. *Crime gun trace reports (1999): National Report*. Washington, DC: ATF, 2000.
- Bureau of Alcohol, Tobacco and Firearms. *Commerce in firearms in the United States*. Washington, DC: ATF, 2000.
- Bureau of Alcohol, Tobacco and Firearms. *1999 production and exportation report*. Washington, DC: ATF, 2001.
- Wintemute, G.J. *Ring of Fire: The handgun makers of southern California*. Sacramento, CA: Violence Prevention Research Program, 1994.
- Federal Bureau of Investigation. *Crime in the United States*. Washington, DC: FBI, 1995–1999 editions.
- Mintz, J. Producing the handguns of choice is mostly a family affair. *Washington Post*. January 16, 1994, at H4.
- Freedman, A. Fire power: Behind the cheap guns flooding the cities is a California family. *The Wall Street Journal*. February 28, 1992, at A1.
- Cook, P.J., and Ludwig, J. *Guns in America: Results of a comprehensive national survey on firearms ownership and use*. Washington, DC: Police Foundation, 1996.
- Stennies, G., Ikeda, R., Leadbetter, S., et al. Firearm storage practices and children in the home, United States, 1994. *Archives of Pediatrics and Adolescent Medicine* (1999) 153(6):586–90.
- Senturia, Y.D., Christoffel, K.K., and Donovan, M. Children's household exposure to guns: A pediatric practice-based survey. *Pediatrics* (1994) 93(3):469–75.
- Smith, T.W. *1998 national gun policy survey of the National Opinion Research Center: Research findings*. Chicago: NORC, University of Chicago, 1999.
- Schuster, M.A., Franke, T.M., Bastian, A.M., et al. Firearm storage patterns in US homes with children. *American Journal of Public Health* (2000) 90(4):588–94.
- Brent, D.A., Baugher, M., Birmaher, B., et al. Compliance with recommendations to remove firearms in families participating in clinical trial for adolescent depression. *Journal of the American Academy of Child and Adolescent Psychiatry* (2000) 39(10):1220–26.
- Diaz, T. *Making a killing: The business of guns in America*. New York: New York Press, 1999.
- Violence Policy Center. *Start 'em young: Recruitment of kids to the gun culture*. Washington, DC: VPC, 1999.
- Heston, C. From the Capitol: Is freedom lost on the next generation? *Guns & Ammo* (2000) 40(12):47–48.
- Violence Policy Center. *From gun games to gun stores: Why the firearms industry wants their video games on your child's wish list*. Washington, DC: VPC, 2000.
- Sansoni, S. Trigger unhappy: Firearm makers remove name from video games due to poor response. *Forbes* (August 20, 2001), p. 46.
- Hass, R. *Affidavit before the United States District Court, Eastern District of New York, in Hamilton v. Accu-Tek, et al.* (1996).
- Cook, P.J., Molliconi, S., and Cole, T.B. Regulating gun markets. *Journal of Criminal Law and Criminology* (1995) 86(1):59–92.
- Sugarmann, J., and Rand, K. *More gun dealers than gas stations: A study of federally licensed firearm dealers in America*. Washington, DC: Violence Policy Center, 1992.

23. Sheley, J.F., and Wright, J.D. *Gun acquisition and possession in selected juvenile samples*. Washington, DC: National Institute of Justice, Office of Juvenile Justice and Delinquency Prevention, 1993; and Smith, M.D. Sources of firearm acquisition among a sample of inner-city youths: Research results and policy implications. *Journal of Criminal Justice* (1996) 24:361–67.
24. *City of Chicago and County of Cook v. Beretta USA Corp., et al.*, 1998 (City of Chicago).
25. Bureau of Alcohol, Tobacco and Firearms. *Gun shows: Brady checks and crime gun traces*. Washington, DC: ATF, 1999.
26. Beck, A., Gilliard, D.K., Greenfeld, L., et al. *Survey of state prison inmates 1991*. Washington, DC: Bureau of Justice Statistics, 1993.
27. Kennedy, D.M., Piehl, A.E., and Braga, A.A. Gun buy-backs: Where do we stand and where do we go? In *Under Fire: Gun buy-back, exchanges and amnesty programs*. M. Plotkin, ed. Washington, DC: Police Executive Research Forum, 1996.
28. Wintemute, G.J. The relationship between firearm design and firearm violence. *Journal of the American Medical Association* (1996) 27(22):1749–53.
29. Zimring, F.E. The medium is the message: Firearm caliber as a determinant of death from assault. *Journal of Legal Studies* (1972) 1(1):97–123.
30. Hutson, H.R., Anglin, D., Kyriacou, D., et al. The epidemic of gang-related homicides in Los Angeles County from 1979–1994. *Journal of the American Medical Association* (1995) 274(13):1031–36.
31. Block, C.R., and Martin, C. *Major trends in Chicago homicide: 1965–1995*. Chicago: Illinois Criminal Justice Information Authority, 1997.
32. General Accounting Office. *Gun control: Implementation of the Brady Handgun Violence Prevention Act*. Washington, DC: GAO, 1996.
33. Pierce, G.L., Briggs, L., and Carlson, D.A. *National report on firearm trace analysis for 1996–1997*. Boston: Northeastern University, 1998.
34. Bureau of Justice Statistics. *Survey of state procedures related to firearm sales, midyear 1999*. Washington, DC: BJS, 2000.
35. Veen, J., Dunbar, S., and Ruland, M.S. *The BJA firearms trafficking program: Demonstrating effective strategies to control violent crime*. Washington, DC: Bureau of Justice Assistance, 1997.
36. Bureau of Alcohol, Tobacco and Firearms. *Following the gun: Enforcing federal laws against firearms traffickers*. Washington, DC: ATF, 2000.
37. National Rifle Association. *White House plan nothing new, targets licensed, lawful dealers*. Washington, DC: NRA, 2000.
38. Wintemute, G.J. Relationship between illegal use of handguns and handgun sales volume (Research letter). *Journal of the American Medical Association* (2000) 284(5):566–67.
39. General Accounting Office. *Federal firearm licensees: Various factors have contributed to the decline in the number of dealers*. Washington, DC: GAO, 1996.
40. *Automated records checks of firearm purchasers: Issues and options*. Washington, DC: Government Printing Office, 1991.
41. Federal law and the laws of many states allow felons and others to petition for restoration of the privilege of gun ownership.
42. Manson, D.A., Gilliard, D.K., and Lauver, G. *Presale handgun checks, the Brady interim period, 1994–98*. Washington, DC: Bureau of Justice Statistics, 1999.
43. Bowling, M., Lauver, G., Gifford, S.L., and Adams, D.B. *Background checks for firearm transfers, 2000*. Washington, DC: Bureau of Justice Statistics, 2001.
44. *National Instant Criminal Background Check System (NICS): Operations report (November 30, 1998, December 31, 1999)*. Washington, DC: U.S. Department of Justice, Federal Bureau of Investigation, 2000.
45. General Accounting Office. *Implementation of the National Instant Criminal Background Check System*. Washington, DC: GAO, 2000.
46. Wright, M.A., Wintemute, G.J., and Rivara, F.P. Effectiveness of denial of handgun purchase to persons believed to be at high risk for firearm violence. *American Journal of Public Health* (1999) 89(1):88–90.
47. It is clear that, among those who purchase guns legally, misdemeanants are at substantially greater risk for committing crimes later. One study compared legal handgun purchasers who had at least one prior misdemeanor conviction to purchasers who had no prior criminal history. The misdemeanants were 6.1 times more likely than those with no prior criminal history to be charged with a new violent offense. See Wintemute, G.J., Drake, C.M., Beaumont, J.J., et al. Prior misdemeanor convictions as a risk factor for later violent and firearm-related criminal activity among authorized purchasers of handguns. *Journal of the American Medical Association* (1998) 280(24):2083–87. But as with felons, denying handgun purchases by violent misdemeanants appears to be effective, reducing their risk of committing new crimes involving guns or violence by 22% overall, and by 27% among young adults—the age group at highest risk. See Wintemute, G.J., Wright, M.A., Drake, C.M., et al. Subsequent criminal activity among violent misdemeanants who seek to purchase handguns. *Journal of the American Medical Association* (2001) 285(18):1019–26.
48. Bureau of Alcohol, Tobacco and Firearms. *State laws and published ordinances—firearms, 1998*. Washington, DC: ATF, 1998.
49. Weil, D.S., and Knox, R.C. Effects of limiting handgun purchase on interstate transfer of firearms. *Journal of the American Medical Association* (1996) 275(22):1759–61.
50. Webster, D.W., Vernick, J.S., and Hepburn, L.M. Relationship between licensing, registration, and other gun sales laws and the source state of crime guns. *Injury Prevention* (2001) 7:184–89.
51. Vernick, J.S., Webster, D.W., and Hepburn, L.M. Effects of Maryland’s law banning Saturday night special handguns on crime guns. *Injury Prevention* (1999) 5:259–63.
52. Webster, D.W., Vernick, J.S., and Hepburn, L.M. Effects of Maryland’s law banning “Saturday night special” handguns on homicides. *American Journal of Epidemiology* (March 1, 2002) 155(5):406–12.
53. In some cities, sales of banned guns fell rapidly to zero; in other cities, sales were not greatly affected. See Wintemute, G.J. *The effectiveness of local ordinances banning the sale of “Saturday night special” handguns: A preliminary study*. Sacramento, CA: Violence Prevention Research Program, 2000.
54. Loftin, C., McDowall, D., Wiersema, C.B., and Cottey, T.J. Effects of restrictive licensing of handguns on homicide and suicide in the District of Columbia. *New England Journal of Medicine* (1991) 325(23):1615–20.