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## **HOW CITIES CAN COMBAT ILLEGAL GUNS AND GUN VIOLENCE**

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## **I. How to Reduce Illegal Gun Trafficking**

### **A. Identify Traffickers**

#### 1. Develop a Gun Trace Database

Crime gun trace data are a vital tool for identifying potential gun traffickers. Cities should request that the Bureau of Alcohol, Tobacco, Firearms and Explosives (BATFE) trace all firearms recovered from criminals, and provide the cities with electronic data files of previous trace results from 1997 to the present. Law enforcement agencies can submit and receive crime gun trace requests electronically, significantly reducing errors and saving time.

#### 2. Combine Data from Different Jurisdictions

Crime gun trace data from different jurisdictions should be consolidated so that regional patterns can be detected. Our analyses of BATFE trace data demonstrate that some gun stores sell unusually large numbers of guns that are subsequently recovered from criminals in several different cities. Johns Hopkins Center for Gun Policy and Research can work with police departments to develop standard protocols for collecting trace data, so that an integrated database can be created. The database would be accessible to law enforcement officials and to researchers with safeguards to protect the confidentiality of the data.

#### 3. Supplement Database with Information from Police Investigations

For the vast majority of cases, BATFE trace data only provide information up to the first retail purchase of the gun. The value of the data can be greatly enhanced by the inclusion of information collected in follow-up investigations. Additional intelligence about illegal gun suppliers can be collected through routine debriefing of criminal suspects, particularly if incentives are offered, and merged with crime gun databases. Special gun units charged with identifying and arresting traffickers have been particularly effective in New York and other cities.

#### 4. Link Trace Database With Other Databases Where Available

Data from the trace database should be linked with other databases where possible. In states that collect detailed data on firearm purchase applications, gun stores can be ranked based on the number of guns recovered from criminals per 100 guns sold.<sup>1</sup> Dealers that are “outliers” – that is, dealers having an unusually high probability that a gun they sell will be recovered from a criminal – can be identified in this way. Firearm registration information (available in some states) and criminal history data can also be linked to the trace database.

#### 5. Develop and Use Indicators of Gun Trafficking to Prioritize Cases

Trafficking indicators have been developed to prioritize cases that warrant follow-up. These include:

- a) Recovery of a firearm in a state with strict gun laws and sale in a state with weak gun laws;
- b) A brief interval between retail sale of the gun and its recovery from a criminal;
- c) Inexpensive handguns purchased as part of a multiple sale;
- d) A purchaser connected to other crime guns, especially if these occur in multiple jurisdictions;
- e) A purchaser who by-passes gun stores closer to his residence to purchase from a gun dealer with many crime-gun traces;
- f) No dealer record of sale; and
- g) A gun dealer connected to many out-of-state crime guns.

Johns Hopkins can help develop and test the utility of these trafficking indicators in collaboration with law enforcement.

## **B. Prevent Gun Dealers from Diverting Guns to Criminals**

### 1. Undercover Stings of Gun Dealers

Recent research by Johns Hopkins indicates that undercover stings of suspect gun dealers, coupled with prosecutions and publicity about the effort, can lead to substantial reductions in the number of new guns diverted to criminals. Using this strategy, Chicago reduced the supply of new guns from Illinois gun dealers by 62%.<sup>2</sup> In one case, we found a gun dealer that had been a major supplier of guns to criminals and changed sales practices to address the problem. This change led to a 70% reduction in the number of guns sold by the store that were subsequently recovered from criminals and a 44% reduction in new trafficked guns citywide.<sup>3</sup>

### 2. Increase Oversight and Inspection of Gun Dealers

Cities can enact local laws (if not preempted by state law) and also advocate for state laws that would enhance oversight of gun dealers. Model legislation can be developed requiring firearm dealers to:

- a) Be licensed either by the state or local government following a thorough background check of dealers and employees;
- b) Create and maintain records for all firearms purchased and sold;
- c) Be inspected at least annually to check compliance of firearms sales laws; and
- d) Use theft protection devices and immediately report any stolen weapons.<sup>4</sup>

Our research shows that states that have these comprehensive regulations and enforce them have fewer guns sold by in-state gun stores that are later recovered from criminals.<sup>5</sup>

### 3. Revoke the Licenses of Problem Gun Dealers

Requiring gun dealers to be licensed by the state or local government enables states or cities to revoke or deny renewal of licenses of non-compliant dealers. Under current federal laws and enforcement practices, gun dealers typically lose their license only after there have been many years of repeated violations sometimes numbering in the thousands. Requiring local licenses provides cities with the ability to revoke the licenses of problem gun dealers soon after violations are identified. Cities may even be able to convince law enforcement agencies in states where a small number of dealers serve as suppliers to interstate gun traffickers to revoke or suspend the licenses of problem dealers if violations and the harm done can be documented.

### 4. Engage in Innovative Litigation

A recent federal law makes it much harder to use litigation to curtail gun dealer practices that enable criminals to obtain firearms. However, there are circumstances under which lawsuits against gun dealers remain viable. For example, a gun dealer may be cited for numerous violations for having no accurate sales records for guns that were once in its inventory. If one of these guns is used to harm a victim, the gun dealer could be sued if his “knowingly” criminal behavior contributed to the harm. Crime gun trace data can aid in this effort by identifying violent crimes in which a gun was used but the retail seller could provide no sales record.

In another creative use of litigation, New York City’s lawsuit has been allowed to proceed because, in part, the State’s public nuisance law has been interpreted as a criminal law applicable to the sale of firearms – fitting an exception to the Protection of Lawful Commerce in Arms Act (PLCAA). Potential lawsuits that fit this and other exceptions to PLCAA should be explored.

### **C. Strategic Anti-Gun-Trafficking Enforcement**

Boston police, in collaboration with ATF, used crime gun trace data, trafficking indicators, and debriefing suspects about illegal gun suppliers in ways described above and follow-up investigations of individuals suspected of trafficking guns to gangs. An evaluation of this effort found that this multi-component strategy led to a significant reduction in the diversion of guns to criminals.<sup>6</sup>

### **D. Advocate for Laws that Increase the Costs of Gun Trafficking**

Many laws can make illegal gun trafficking more costly and riskier for traffickers. The biggest loophole in federal gun laws and in most states is the failure to require background checks for firearms sales by private individuals. In states with this loophole, gun shows provide a convenient venue for traffickers and other criminals to purchase large quantities of firearms from sellers, some of whom advertise “No background check necessary.”<sup>7</sup> Requiring background checks for all firearms sales, especially if coupled with mandatory reporting of gun thefts,<sup>8</sup> provides law enforcement with the tools to convict traffickers and deter illegal sales. Restricting gun purchases to no more than one per month can reduce interstate trafficking.<sup>9</sup>

Many criminals obtain guns through theft. One way to reduce gun theft is to require gun owners to lock up their guns by enacting child access prevention (CAP) laws. CAP laws reduce teen suicides and have been enacted in states often resistant to gun restrictions (e.g., Texas and North Carolina).<sup>10</sup>

Some of the legislative options mentioned above can be enacted by local governments in some states. State laws preempting local firearms laws, however, are a barrier in many other states. Because cities are disproportionately affected by gun violence and urban residents are more supportive of restrictions on guns, cities should work to undo state preemption laws.<sup>11</sup>

### **E. Evaluate Anti-Trafficking Interventions**

The cities involved in the mayors’ initiative to combat illegal guns will vary in the nature of their illegal gun problems and in the countermeasures they adopt. It is critical that law enforcement leaders and policymakers have accurate data to determine the impact of their efforts. Information derived from evaluations should be shared among cities so that informed choices can be made about intervention options. Johns Hopkins researchers have expertise in evaluating a wide array of gun laws and enforcement initiatives,<sup>2, 3, 4, 7, 12, 13, 14</sup> and can work with cities to conduct additional evaluations that are scientifically rigorous and informative for policymakers.

## **II. Reduce Illegal Gun Carrying**

Many shootings result from spontaneous conflicts in which an individual is illegally carrying a gun on his person or in his vehicle. Cities should deploy special police units to detect and deter illegal gun carrying at times and places where shootings are common. This strategy has reduced shootings in several cities by 30% to 70% without the violence spilling over to nearby areas.<sup>15, 16, 17</sup>

Boston’s Operation Ceasefire provides another promising strategy for reducing gun violence. Offenders in target areas with the most violent criminal histories that are on parole or probation are instructed to show up at a “call in” meeting. Local and federal law enforcement officials tell

offenders at these meetings that they will be under surveillance and will face federal prosecution if they are involved in any violence or firearm offenses. At these same meetings, offenders are offered assistance ranging from substance abuse treatment to job training to help them change their lifestyles. This strategy has been found to be effective in Boston, Indianapolis, and Chicago.<sup>18</sup>

### **III. Use Technology to Prevent Gun Violence**

#### **A. Personalized Guns**

##### 1. Educate Policy-Makers and the Public

Cities can work with researchers and advocates to educate policy-makers and the public about the benefits of personalized guns. A personalized gun is one that can only be operated by an authorized user.<sup>19</sup> This can be accomplished through technologies, such as fingerprint recognition devices, built into the gun to recognize authorized users, or more simple locking mechanisms requiring the use of a personal code. Requiring all new handguns to be personalized has the potential to prevent many kinds of gun deaths, including accidents,<sup>20</sup> youth suicides, and assaults with stolen firearms. If all guns were personalized, it could also be much easier to regulate the illegal secondary market for firearms.<sup>21</sup>

##### 2. Disseminate Model Legislation

In 2002, New Jersey enacted a law requiring that, three years after the first personalized gun becomes commercially available for sale, all new handguns sold in the state must be personalized. That law was based, in part, on model legislation developed by the Johns Hopkins Center for Gun Policy and Research. Model legislation can be updated to incorporate information about the latest technologies and approaches. The model legislation should be broadly disseminated to organizations such as the National Conference of Mayor and the National Conference of State Legislators.

#### **B. Ballistics Technology**

##### 1. Encourage Use of BATFE's NIBIN System

Effective deterrence depends upon the ability of law enforcement to identify and arrest those who break the law. Investigators routinely use the ATF's National Integrated Ballistic Information Network (NIBIN) system to efficiently match ballistic evidence from crime scenes or match recovered firearms with crime scene evidence, leading to numerous arrests. In fact, offenders are aware of these practices and avoid purchasing used firearms, particularly from strangers, out of fear of being linked to prior crimes.<sup>22</sup>

##### 2. Require Gun Manufacturers to "Micro-Stamp" Their Guns

Microstamping is a new technology that would make ballistics matching far more accurate and efficient than existing systems.<sup>23</sup> Using lasers, engineers have been able to insert microscopic codes on multiple surfaces of the firing chamber of a gun. These codes can identify the gun's manufacturer, model, caliber, and serial number. Once decoded, law enforcement could use this information to identify the retail purchaser of the guns just as they do with current crime gun tracing. Because the codes are microscopic and would be engraved on multiple surfaces, it will be extremely difficult for criminals to defeat the system.<sup>19</sup> If a few states pass laws requiring microstamping of new firearms sold in the state, manufacturers may find it more economical to use microstamping for all the guns that they sell, thus providing an incredible tool for law enforcement and a strong deterrent to gun violence.

### *About the Johns Hopkins Center for Gun Policy and Research*

The Johns Hopkins Center for Gun Policy and Research is dedicated to reducing gun-related injuries and deaths through the application of public health principles and sound research. Its faculty have pioneered innovative strategies for reducing gun violence, and are nationally known for their high-quality, policy-relevant work. The Center serves as an objective source of information for policymakers, violence prevention practitioners, advocacy groups, and the media.

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## References

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- <sup>1</sup> Wintemute GJ, Cook PJ, Wright MA. Risk factors among handgun retailers for frequent and disproportionate sales of guns used in violent and firearm related crimes. *Injury Prevention* 2005; 11:357-63.
- <sup>2</sup> Webster DW, Bulzacchelli MT, Zeoli AM, Vernick JS. Effects of undercover police stings of gun dealers on the supply of new guns to criminals. *Injury Prevention*.2006; 12:225-230
- <sup>3</sup> Webster DW, Vernick JS, Bulzacchelli MT. Effects of a gun dealer's change in sales practices on the supply of guns to criminals. *Journal of Urban Health* 2006; 83:778-787.
- <sup>4</sup> Vernick JS, Webster DW, Bulzacchelli MT. Regulating firearms dealers in the United States: an analysis of state law and opportunities for improvement. *Journal of Law, Medicine, and Ethics*, in press.
- <sup>5</sup> Webster DW, Vernick JS, Bulzacchelli MT. The association between state regulation of gun dealers, law enforcement practices, and the supply of guns to criminals – preliminary findings. Johns Hopkins Center for Gun Policy and Research, Baltimore, MD, 2006. See also Webster DW, Vernick JS, Hepburn LM. The relationship between licensing, registration and other state gun sales laws and the source state of crime guns. *Injury Prevention* 2001;7:184-189.
- <sup>6</sup> Braga AA, Pierce GL. Disrupting illegal firearms markets in Boston: The effects Operation Ceasefire on the supply of new handguns to criminals. *Criminology & Public Policy* 2005;4(4):717-748.
- <sup>7</sup> Wintemute GJ. Bad Guy Magnets: Gun Dealers, Gun Shows, and Illicit Gun Commerce. Presented to the Firearms Committee, International Association of Chiefs of Police, 113th Annual Conference, Boston, MA. October 16, 2006.
- <sup>8</sup> Johns Hopkins Center for Gun Policy and Research. Fact Sheet: Stolen Guns. Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, February 2003.
- <sup>9</sup> Weil DS, Knox RC. Effects of limiting handgun purchases on the interstate transfer of firearms. *JAMA* 1996; 275:1759-1761.
- <sup>10</sup> Webster DW, Vernick JS, Zeoli AM, Manganello JA. Effects of youth-focused firearm laws on youth suicides. *JAMA* 2004; 292:594-601.
- <sup>11</sup> Teret SP, DeFrancesco S, Bailey LA. Gun deaths and home rule: a case for local regulation of a local public health problem. *Am J Prev Med* 1993;9(3)(Suppl):44-46.
- <sup>12</sup> Webster DW, Vernick JS, Hepburn LM. Effects of Maryland's law banning Saturday night special handguns on homicides. *American Journal of Epidemiology* 2002;155:406-412.
- <sup>13</sup> Vernick JS, Webster DW, Hepburn LM. Effects of Maryland's law banning Saturday night special handguns on crime guns. *Injury Prevention* 1999;5:259-263.
- <sup>14</sup> Webster DW, Starnes M. Reexamining the association between child access prevention gun laws and unintentional firearm deaths among children, *Pediatrics*, 2000;106:1466-1469.
- <sup>15</sup> Sherman LW, Rogan DP. Effects of handgun seizures on gun violence: "hot spots" patrol in Kansas City. *Justice Quarterly* 1995;12:673-693.

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- <sup>16</sup> McGarrell EF, Chermak S, Weis A, Wilson J. Reducing firearm violence through directed police patrol. *Criminology and Public Policy* 2001;1:119-148.
- <sup>17</sup> Cohen J, Ludwig J. Policing crime guns. Pages 217-239 in *Evaluating Gun Policy: Effects on Crime and Gun Violence*. Washington, DC: Brookings Institution Press, 2003.
- <sup>18</sup> Braga AA, Kennedy DM, Waring EJ, Piehl AM. (2001) Problem-oriented policing, deterrence, and youth violence: an evaluation of Boston's Operation Ceasefire. *Journal of Research in Crime and Delinquency* 38:195-225. McGarrell EF, Chermak S. (2004) Strategic Approaches to Reducing Firearms Violence: Final Report on the Indianapolis Violence Reduction Partnership. Final report submitted to the National Institute of Justice. Papachristos AV, Mears TL, Fagan J. (2005) Attention Felons: Evaluating Project Safe Neighborhoods in Chicago. John M. Olin Law & Economics Working Paper No. 269. Chicago: The University of Chicago.
- <sup>19</sup> Teret SP, Lewin NL. Policy and technology for safer guns: an update. *Annals of Emergency Medicine*. 2003;41:32-34.
- <sup>20</sup> Vernick JS, O'Brien M, Hepburn LM, Johnson SB, Webster DW, Hargarten SW. Unintentional and undetermined firearm-related deaths: a preventable death analysis for three safety devices. *Injury Prevention* 2003;9:307-311.
- <sup>21</sup> Cook PJ, Leitzel JA "Smart" guns: a technological fix for regulating the secondary market. *Contemporary Economic Policy*. 2002; 20(1):38-49.
- <sup>22</sup> Webster DW, Freed LH, Frattaroli S, Wilson MH. How delinquent youth acquire guns: Initial versus most recent gun acquisitions. *Journal of Urban Health* 2002;79:60-69.
- <sup>23</sup> The Educational Fund to Stop Gun Violence. *Cracking the Case: The Crime Solving Potential of Ballistics Identification*. Washington, DC, July 2004.

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