# Chapter 15 Gun Buyback Programs in the United States



Sandra Carpenter, Kevin Borrup, and Brendan T. Campbell

#### Introduction

## Defining a Gun Buyback Program

Gun buyback programs involve the government or a private group providing incentives for the voluntary surrender of firearms. These programs are typically short term, local in scale, and held in accessible and safe locations, such as community centers, police stations, or houses of worship. The incentive may be cash, a gift card, product voucher, or merchandise, and is usually adjusted according to the type of firearm that is turned in. To promote participation by high-risk individuals, such as criminals, those with mental illness, and minors, these programs often allow firearms to be turned in with "no questions asked." The recovered guns are sometimes traced by law enforcement and then, in most cases, stored or destroyed.

S. Carpenter

University of Connecticut School of Medicine, Farmington, CT, USA e-mail: carpenter@uchc.edu

K. Borrup

University of Connecticut School of Medicine, Farmington, CT, USA

Injury Prevention Center, Connecticut Children's Medical Center, Hartford, CT, USA e-mail: kborrup@connecticutchildrens.org

B. T. Campbell (⊠)

University of Connecticut School of Medicine, Farmington, CT, USA

Injury Prevention Center, Connecticut Children's Medical Center, Hartford, CT, USA

Department of Pediatric Surgery, Connecticut Children's Medical Center, Hartford, CT, USA e-mail: bcampbell@connecticutchildrens.org

## Aims of Gun Buyback Programs

The principal aim of gun buyback programs is to reduce the prevalence of firearms in the community to curtail both intentional and unintentional gun violence. Additional goals include educating the public about the prevention of firearm violence, safe gun storage, and fostering alliances within communities to support a multi-pronged public health campaign to lessen gun violence.

## **History of Gun Buyback Programs**

## Operation PASS: The First US Gun Buyback Program

Gun buyback programs have existed in the United States since the late nineteenth century [1]. The first described buyback program was held in 1974 in Baltimore, Maryland. This program, Operation PASS (People Against Senseless Shootings), was created by the city's police commissioner after three officers were shot and killed. Operation PASS was a 2-month gun "bounty" that collected 13,500 firearms at a significant financial cost to the city [2]. Following the implementation of this program, firearm homicide rates in Baltimore increased by 50% and gun assaults increased by more than 100% [3]. Police were unable to explain why gunrelated crime increased after thousands of firearms had been removed from the community.

Operation PASS was cut short when the federal Law Enforcement Assistance Administration denied funding to continue the program on suspicion of encouraging economic exploitation through the exchange of cheap handguns rather than collecting the firearms that were used to commit crimes [4]. Despite strong criticism against its design and outcome, the Baltimore buyback prompted many American cities to implement similar programs [2]. Since 1974, hundreds of gun buyback programs have been conducted throughout the United States.

## Gun Buyback Programs at Home and Abroad

Despite an absence of evidence that buyback program implementation lowered the incidence of gun violence, this first buyback program created an impetus for other municipalities to implement more of them [2]. Buyback programs thrived in the early 1990s when violent crimes peaked due to an upsurge in gun homicides among urban youth [5, 6]. Since 1988, approximately 550 programs have been held in 37 states, often following high-profile mass shootings.

In April 2000, President Clinton unveiled plans to fund a gun buyback program in Washington D.C. in response to a shooting at the National Zoo [7]. This buyback

was the largest program to join "BuyBack America," a 15-million-dollar national gun buyback program that had begun a year earlier and was sponsored by the Department of Housing and Urban Development [8]. Buyback America provided funding to 85 participating communities to enable public housing authorities and local law enforcement agencies to conduct local gun buyback programs [9]. The initiative encountered intense pushback from gun policy experts and Congress [10, 11]. In July 2001, the Bush administration terminated the program, declaring it an ineffective strategy to combat gun violence in America [12].

In the last 30 years, both the United Kingdom and Australia passed laws that substantially reduced the availability of specific firearm types. In 1996, the United Kingdom banned the private ownership of handguns in the aftermath of the Dunblane school shooting where 16 Scottish children were killed. A large-scale gun buyback program was arranged to safely collect and compensate individuals for banned weapons in private ownership [13]. There is no evidence that these firearm prohibitions and buyback programs lowered the rates of gun violence in the United Kingdom [14].

Australia similarly implemented stricter firearm regulations in response to the 1996 mass shooting in Port Arthur, Tasmania, during which an individual used a semiautomatic rifle to kill 35 people [14]. This incident was one of several mass homicide events in the country that spurred Australia's federal and state governments to pass the National Firearms Agreement (NFA) in 1997. Under the NFA, it became illegal to sell, import, or possess magazine-fed semi-automatic firearms [14]. The Australian government also organized a national buyback that removed about one-fifth of the country's total firearms.

The Australian gun buyback represents the greatest reduction of civilian firearms—in any country—between 1991 and 2006 [15]. Several studies have evaluated the NFA's effect on Australian firearm deaths, and their findings suggest that it accounted for a significant decrease in gun suicide and homicide rates [15–17]. Importantly, firearm deaths dropped significantly in states where more firearms were bought back. No mass shootings occurred in the decade after the NFA was passed [17]. The authors of the longest and most rigorous analysis of the NFA believe that strengthening and enforcing gun ownership legislation, in combination with firearm prohibitions, caused the decrease in firearm-related death rates observed in Australia during this period [15].

The results from the Australian gun buyback are often cited as evidence that gun buybacks are an effective measure to lower the incidence of gun violence. However, it must be appreciated that the way firearms are sold and regulated in the United States differs significantly from that in Australia. American gun buyback programs have been small scale and voluntary, while the Australian buyback after the NFA was expansive and mandatory. Moreover, the NFA prohibitions were bolstered by the absence of domestic gun manufacturers and strict enforcement of restrictions on firearm imports [15]. In the United States, the average gun buyback program removes about 1000 firearms from circulation. This amounts to less than 2% of the total firearms held by a typical American community [18], and retail firearm sales

are continuously adding firearms back into civilian circulation in all 50 US states. While the Australian experience and evidence of impact is promising for those looking to address firearm deaths, the policies that might support a broader gun buyback program in the United States are differently bounded. Firearm ownership is a right protected by the second amendment of the US constitution under the D.C. v. Heller ruling [19]. Any discussion of comparisons would be incomplete if it did not recognize this important difference.

## Disadvantages of Gun Buyback Programs

Many American communities affected by firearm violence endorse gun buyback programs as a harm reduction strategy. In the aftermath of gun-related tragedy, buyback programs enjoy broad public support while avoiding the controversy generated by legislation that imposes greater restrictions on firearm ownership. The theoretical premise is straightforward and compelling: by limiting the prevalence of firearms in a community, the rates of violent crime and suicide will decrease. However, there are three assumptions that need to be met if gun buyback programs are to be cost-effective public health interventions. First, firearms surrendered during buyback programs must be comparable to guns used in homicides and suicides. Second, the buyback program must remove these firearms from individuals at significant risk of firearm injury. Third, cost-effectiveness of the buyback must be acceptable. Research on gun buyback programs in the

Table 15.1 Advantages and disadvantages of US gun buyback programs

Advantages	Disadvantages
Voluntary nature promotes broad public support	Voluntary nature fails to attract criminals
Typical participants are at high risk of firearm suicide	Typical participants are at low risk of firearm homicide
Provides accessible, safe means for disposing of unwanted firearms	Many participants own multiple firearms
Provides opportunity to educate community members about safe firearm storage and lethal means safety	"No questions asked" policy may limit data collection and follow-up
Decreases prevalence of firearms in a community by removing and destroying firearms	Increases prevalence of firearms in a community by encouraging replacement purchases
Targeted advertising to high-risk populations	Most programs have limited advertising resources
Individual activism	Small-scale intervention
Promotes public–private partnerships and mobilizes communities	Law enforcement involvement may dissuade participation by some community members
Exchanged guns may match fatality-related firearms	Exchanged guns may not match fatality-related firearms
Can be a supportive element of a broader public health campaign against firearm violence	No demonstrated gun violence reduction as an isolated intervention

Priorities	Pitfalls
Targeting high-risk firearm types that are used in suicides and homicides, specifically handguns	Not having enough gift cards on hand during buyback events
Developing a strong partnership with local law enforcement to assure event safety and the legal destruction of collected guns	Buying back low-risk or inoperable firearms
Engaging community stakeholders to broaden the impact and scope of the program	Not having a plan to manage protestors or individuals who attempt to buy guns outside the event

Table 15.2 Priorities and pitfalls in gun buyback program implementation

United States has shown that many of them do not meet these assumptions which impede their ability to lower rates of gun violence in the communities where they are held.

Firearms turned in at some buyback programs have been shown to differ from those commonly used in homicides and suicides (Table 15.1). Specifically, many of the guns turned in are older and inoperable [13, 20, 21]. Removing outdated and inoperable guns from the community is not likely to decrease the rates of suicide and homicide because the risk of these types of events is inversely related to a firearm's age [21, 22]. The exchange of predominantly low-risk firearms also raises the concern that buybacks facilitate the replacement of outdated guns with newer ones. A 2001 economic market analysis predicted that long-term or recurrent gun buyback programs will actually increase the quantity of guns in a community, the opposite of their intended effect [23]. Therefore, organizers of buyback programs must prudently set trade-in prices to discourage firearm upgrading while promoting participation from target groups. Contemporary evaluations of gun buyback programs report that typical participants are at low risk for committing violent crime [13, 24-27]. Furthermore, the majority of buyback participants possess firearms in addition to those they are turning in, which are often improperly stored [13, 26, 27]. The challenges of successfully targeting the high-risk youth demographic underscores a major flaw in current buyback design.

Compared to international programs such as the U.K. and Australian buybacks, the small scale of US buyback programs presents a challenge when attempting to demonstrate causal reductions in gun violence (Table 15.2). The number of firearms bought back in a typical program is negligible in magnitude to the numbers remaining in civilian hands and the numbers of guns sold each year [25]. It follows that a powerful criticism of buyback programs is that they may draw limited resources away from other more evidence-based crime reduction strategies.

# Advantages of Gun Buyback Programs

One putative advantage of gun buyback programs is that they provide a safe method of removing unwanted firearms from a community. Anonymous and safe venues for firearm disposal may be important to communities because even marginal

reductions in the availability of guns may have direct and indirect benefits as part of a broader strategy to prevent firearm injuries and deaths.

A wealth of research shows that removal of firearms from the home lowers the risk of homicide and suicide for those living there [18]. Decreasing the overall prevalence of firearms within homes and communities may impede firearm acquisition by high-risk individuals. However, this ripple effect is very difficult to prove. While typical buyback participants are at low risk of committing firearm homicide, they are at higher risk of committing firearm suicide [25, 28]. Gun buyback programs, therefore, may have greater potential to lower the rates of firearm suicide than that of firearm homicide, although this hypothesis is unproven. Several recent buyback programs have employed strategies such as targeted advertising and graded incentives to increase the return of high-risk firearms, namely, handguns and assault weapons [26, 29]. These are important issues from an epidemiological standpoint, since gun buyback programs should focus their resources on high-risk populations and those firearms most likely to be used in homicides and suicides for maximal effect.

The most salient advantage of gun buybacks (Table 15.1) is their universal support, making them much more feasible to implement than legislative or regulatory measures. Buyback programs are often championed with the mantra "every gun bought back is a potential life saved." These programs engage both groups and individuals to become actively involved in prevention efforts. Voluntary participation and ease of implementation are strong drivers of buyback popularity, particularly in communities desperate to take action. Moreover, buybacks forge partnerships between community stakeholders, such as trauma centers, law enforcement, schools, and other agencies. These alliances raise awareness about gun violence prevention and firearm safety (Table 15.2). When integrated into a multi-faceted public health model for firearm injury prevention, buyback programs are considered worthwhile interventions.

# **Assessing Gun Buyback Program Efficacy**

# Conflicting Evidence

Systematic evaluation of buyback efficacy has consistently assessed three measures: firearm injuries and fatalities over time, characteristics of exchanged firearms, and participant demographics and views. In this section, we will describe the findings of three moderately strong studies and several smaller, less rigorous ones. Taken together, these studies present mixed evidence for the utility of gun buyback programs as a method of reducing gun violence in the United States.

The first program evaluations examined buybacks held in St. Louis, Missouri, and Seattle, Washington, during the mid-1990s [24, 30]. In these studies, researchers sought to isolate the short-term, temporary effects of each buyback program by

comparing monthly frequencies of gun homicide and assault. Both concluded that there was no reduction in firearm violence, and the Seattle study even reported an increase in gun-related deaths. Two smaller studies published in 1998 and 2002 evaluated buybacks in Sacramento, California, and Milwaukee, Wisconsin [13, 21]. The authors reported on the exchanged firearm characteristics and demographics of buyback participants. They identified critical limitations of buyback programs, such as their failure to target high-risk populations and their tendency to collect low-risk firearms.

Following these studies, academic discussion on buyback efficacy became increasingly critical; yet the number of programs steadily grew. In 2001, a prominent review of gun policy research cited the St. Louis and Seattle evaluations to show that gun buyback programs are counterproductive [31]. The author criticized federal policymakers for ignoring these data, which had been included in two separate reports to Congress, and for moving forward with the BuyBack America initiative. In 2005, the National Committee to Improve Research Information and Data on Firearms similarly concluded that the theory underlying buyback programs was flawed and that their failure to influence firearm injury rates was well-documented in the literature [18].

Recent papers further support their assessment. A 2012 meta-analysis that investigated the relative efficacy of firearm violence prevention efforts found that buyback programs have no empirical relationship with gun violence and have performed poorly in reducing gun crime compared to other measures [32]. Another time-series analysis of a 5-year buyback program in Buffalo, New York, also reported no significant decrease in gun-related crime [33]. Echoing past criticisms, the authors call buyback programs instant solutions for satisfying public expectations without producing meaningful change.

Modest evidence from a long-term buyback program held annually in Worcester, Massachusetts, demonstrated a small benefit [26]. The researchers reported a downward trend in firearm mortality and a decrease in firearm injuries over the 7-year life of the program compared to other Massachusetts counties where buybacks were not held. These studies do not report statistically significant trends, however. It is, therefore, unlikely that the effects of a small-scale buyback can be determined from variations in county-wide death rates. Still, the Worcester buyback program experience highlights how private and public partnerships can foster civic engagement, provide safe gun disposal venues, and support a low-cost component of a broader gun safety campaign [27, 34].

In 2013, researchers examined two buyback programs held 12 years apart in Boston, Massachusetts [29]. They describe how deliberate programmatic modifications in buyback design led to the return of significantly more crime-related firearms. The new changes were increased incentives for working handguns, proof of Boston residency, multiple drop-off locations, and streamlined advertising to urban youth. The authors noted a significant decrease in gun violence in the years following the second buyback. They did not attribute this decrease to the buyback alone, however. Two other violence reduction programs directly changed gun violence behaviors by high-risk youth rather than solely limiting firearm access. The authors,

who had criticized buyback programs in previous reports, reversed their opinion in this short piece. They argued instead that altering the design of a buyback program can improve its potential effectiveness as a violence prevention measure by affecting the nature of firearms that are recovered.

Another promising study from Hartford, Connecticut, showed that graded incentives encouraged buyback participants to preferentially turn in handguns. In contrast to previous buyback evaluations, this study found that the recovered firearms were all operational and generally similar to firearms used in crimes in the city during the same year [25]. Additionally, the typical buyback participant matched the demographic most at risk for suicide, informing potential new roles for buyback programs in addressing mental health and suicide prevention [28].

Although buyback programs are both promising in theory and popular in practice, the epidemiological evidence demonstrating their effectiveness is conflicting. The lack of a demonstrable reduction in gun violence after buyback program implementation does not necessarily invalidate their potential as a prevention strategy. Rather, it calls for more structured buyback design with a rigorous evaluation of their local effects. For example, the Worcester, Boston, and Hartford buyback programs improved upon earlier programs by attracting high-risk individuals and netting high-risk firearms. Though modest, their findings are notable in that they provide insight for designing better buyback programs and selecting more appropriate outcome measures for program evaluation.

New research suggests that gun buyback programs may be beneficial when they are implemented with additional public health efforts. Buyback programs are intended to serve other goals beyond reducing gun-related death, injury, and crime. These goals are less tangible, and include community mobilization, social cohesion, heightened awareness, and cultural shift. Buybacks may have greater potential to achieve these other public health interests than producing measurable reductions in gun violence rates.

# Gaps in Research and Future Directions

Opposition to investing prevention resources in gun buyback programs is supported by the observation that these small-scale interventions have not been demonstrated to decrease the incidence of firearm suicides, homicides, and unintentional shootings. However, recent studies present evidence that buyback programs can be designed to increase the likelihood that high-risk guns are turned in by high-risk individuals in a community. This has yet to be systematically assessed, creating possibilities for future research.

One fundamental area of future research should be to determine effective methods of targeting individuals who would confer the greatest benefit to a community by surrendering their firearms, such as minority youth in cities, older males, and individuals suffering from dementia. This requires a more complete understanding of the demographics at high risk for firearm violence in the community, the

demographics most likely to participate in a buyback program, and the types of firearms owned by both. Mismatch between these populations should be used to inform the design of future buyback programs, as well as other community-based gun violence prevention efforts.

A second crucial area of research will be redefining buyback efficacy within a public health model. Researchers should periodically analyze process measures in addition to health outcome measures, such as macro death rate data. Process measures are under the control of the interventionist and are more sensitive to change than outcome measures [35]. With respect to gun buyback programs, process measures may include firearm characteristics, participant homicide and suicide risk, participant knowledge, attitudes, and beliefs, number and age of persons residing in the home, number of firearms remaining in the home, and the accessibility of remaining firearms. Process measures may be better indicators of buyback efficacy for several reasons: they can be compared between program iterations; they can be directly related to programmatic changes in buyback design; and they can demonstrate the program's effect on individual persons or families, which is relevant to community-based injury prevention efforts. Most importantly, these measures can provide more information about how well a buyback program is relating resources to risk factors when it is implemented alongside other violence prevention measures. Research of this nature will help community stakeholders decide if a buyback program is a cost-effective strategy or if their resources should be reallocated to other prevention measures.

## **Outline for Conducting a Gun Buyback Program**

## Designing the Gun Buyback Program

- I. Define program goals.
  - A. Characterize burden of firearm violence in the host community.
    - 1. Use public health frameworks for injury prevention measures, such as logic or causal models and conceptual planning models.
    - 2. Use research to identify high-risk demographics and barriers to fire-arm safety.
  - B. Define the target demographic and the target firearms.
    - 1. The target demographic and target firearms should be specific to the host community.
    - The target demographic and target firearms may change based on the host community, trends in firearm violence, program timing, and funding.
  - C. Leverage reinforcing factors within the host community.

1. Reinforcing factors include education and awareness programs, law enforcement programs, and changing regulations and laws.

- Pursue collaboration with community stakeholders, such as medical organizations, law enforcement, judicial systems, education systems, local businesses, community centers, community organizations, and media agencies.
- 3. Characterize the relationship and level of cooperation among community stakeholders.
- D. Work with community stakeholders to generate a list of short-term and long-term program objectives.
  - 1. Stakeholders include the program implementers, community leaders, and representatives from the target population.
  - 2. Plan a coherent public health strategy.
  - 3. Involve community stakeholders early in the evaluation planning process.
  - 4. Program objectives should be well-defined and target measurable short-term and long-term outcomes to be evaluated.
  - Measures should include both outcome measures, such as communitywide injury and death rates, and process measures, such as firearm and participant characteristics.

#### II. Choose program elements.

- A. Structure trade-in prices.
  - 1. Grade incentives to maximize the return of target firearms.
  - 2. Choose incentives that will encourage participation by the target demographic.
  - 3. Gift cards, product vouchers, or merchandise specific to the interests of the target demographic are preferred over cash.
  - 4. Allow the disposal of old, malfunctioning, or non-target firearms, but do not provide incentives for them.
- B. Choose the event location.
  - 1. Select a location that is accessible and tailored to the target demographic, such as a youth center or a senior center.
  - 2. Community centers are preferred over police stations.
- C. Set the event date and timing.
  - 1. Select an appropriate date and length of time for the event.
  - 2. Select multiple times that will accommodate the schedules of the target demographic.
- D. Conduct a streamlined advertising campaign.
  - 1. Plan for ample time to advertise the event.

- 2. Clearly articulate incentives in all communications.
- 3. Clearly state procedures for turning in a firearm: unloaded, in a clear bag inside a brown paper bag, and ammunition to be carried in a separate bag.
- 4. Use earned media to gain free coverage (i.e., press conference a week or days before the event).
- 5. Advertise directly to the target demographic and promote the return of target firearms. Distribute flyers to businesses and at community centers; arrange for articles in community newspapers; work with local clergy to spread the word; encourage partners to provide interview to local radio, community television, and social media.

#### III. Conduct the buyback program.

#### A. Secure the location.

- 1. Involve a covert police force to monitor the event and respond in case of an emergency.
- 2. Decrease police visibility as much as possible to encourage participation by high-risk individuals.
- 3. Establish additional, safe locations for anonymous firearm disposal.
- B. Ensure participant anonymity.
- C. Ensure participant residency in the host community before exchange.
- D. Award the appropriate incentive.
  - Involve consultants to assess each firearm and determine the appropriate incentive.
  - 2. Consultants other than law enforcement personnel are recommended.

#### E. Secure exchanged firearms.

- Involve law enforcement to remove firearms from the site for storage or destruction.
- 2. In advance determine whether metal from destroyed firearms can be used in community art projects.
- F. Provide on-site education for high-risk participants.
  - 1. Involve medical professionals to provide education and/or counseling tailored to the target demographic.
- G. Administer on-site surveys for ongoing evaluation of process measures.

## Evaluating the Gun Buyback Program

- I. Establish or clarify program effectiveness.
  - A. Determine how to best evaluate process measures and outcome measures.

 Determine how best to evaluate less tangible outcome measures such as community mobilization, social cohesion, heightened awareness, and cultural shift.

- 2. Periodically assess both process and outcome measures for ideal program implementation.
- 3. Administer on-site anonymous surveys with optional follow-up surveys to assess participant risk of intentional and unintentional firearm violence.

#### II. Evaluate firearm characteristics.

- A. Characteristics may include the following:
  - 1. Type of firearm
  - 2. Condition of firearm
  - 3. Status as lost or stolen
  - 4. Missing serial number

#### B. Compare to the following:

- 1. Predefined target firearms
- 2. Crime-related firearms in that same year

#### III. Evaluate participant demographics.

- A. Demographics may include the following:
  - 1. Age, race, ethnicity, gender
  - 2. Income level, zip code, living situation
  - 3. Number of minors living in the home
  - 4. Number of seniors living in the home

#### B. Compare to the following:

- 1. Predefined target demographic
- 2. County, city, or nationwide demographics at risk for firearm violence

#### IV. Evaluate participant risk for firearm-related homicide or suicide.

- A. Assessment may involve the following:
  - 1. History of firearm violence, criminal history, history of mental illness, mental health screening
  - 2. Number of remaining firearms in the home
  - 3. Number of remaining firearms improperly stored
  - 4. Number of remaining firearms properly stored

#### V. Evaluate participant views and behaviors.

- A. Assessment may involve the following:
  - 1. How the participant learned about the program
  - 2. Reasons for disposing of firearms

- 3. Knowledge, attitudes, beliefs, barriers, self-efficacy, and stages of change regarding firearm safety
- VI. Evaluate community views and behaviors.
  - A. Assessment may involve the following:
    - 1. Public awareness and approval of the program
    - 2. Knowledge, attitudes, beliefs, barriers, self-efficacy, and stages of change regarding firearm safety

#### VII. Improve program implementation.

- A. Begin process evaluation early to identify problems and enable modifications and adjustments in resources.
- B. Compare data between program iterations and make adjustments accordingly.
- C. Evaluate the efficacy of specific changes between program iterations.
- D. Periodically perform cost benefit, cost-effectiveness, and cost utility analyses using both process measures and health outcome measures.

#### References

- Kleck G. Gun buy-back programs: nothing succeeds like failure. In: Plotkin MR, editor. Under fire: gun buy-backs, exchanges and amnesty programs. Washington, DC: Police Executive Research Forum; 1996. p. 29–54.
- 2. Parry R. Guns of Baltimore: why did bounty stop? The blade Toledo, Ohio, sec. B, p. 2. 1974, December 8.
- 3. Mokrzycki M. Buybacks: the answer or merely false hope? Tennessee Democrat, sec. B, p 1. 1994, May 22.
- Department of Justice, Legal Opinions of the Office of General Counsel of the Law Enforcement Assistance Administration United States Department of Justice, A. 1975–20531 (D.C. Apr. 15, 1976).
- 5. Fox JA. Trends in juvenile violence: a report to the United States attorney general on current and future rates of juvenile offending. Washington, DC: Bureau of Justice Statistics; 1996.
- Wintemute GJ. The future of firearm violence prevention: building on success. J Am Med Assoc. 1999;282(5):475–8.
- 7. Carter GL, editor. Guns in American society: an encyclopedia of history, politics, culture, and the law, vol. 1. Santa Barbara: ABC-CLIO; 2002.
- 8. Schmitt E. President unveils new gun buyback plan. The New York Times. 1999, September 10.
- 9. BuyBack America [Brochure]. Washington, DC: U.S. Department of Housing and Urban Development; 1999.
- 10. Dao J. Clinton defies republicans on buyback of weapons. The New York Times. 2000, July 30.
- 11. Dorning M. Gun buybacks fail to cut crime, killings. Chicago Tribune. 2000, June 9.
- 12. Senate votes down money for gun buyback. The New York Times. 2001, August 3.
- 13. Romero MP, Wintemute GJ, Veronica JS. Characteristics of a gun exchange program and an assessment of potential benefits. Inj Prev. 1998;4(3):206–10.
- Reuter P, Mouzos J. Australia: a massive buyback of low-risk guns. In: Ludwig J, Cook PJ, editors. Evaluating gun policy: effects on crime and violence. Washington, DC: Brookings Institution; 2004. p. 121–56.

15. Leigh A, Neill C. Do gun buybacks save lives? Evidence from panel data. Am Law Econ Rev. 2010;12(2):509–57.

- 16. Baker J, McPhedran S. Gun laws and sudden death: did the Australian firearms legislation of 1996 make a difference? Br J Criminol. 2007;47(3):455–69.
- 17. Chapman S, Alpers P, Agho K, Jones M. Australia's 1996 gun law reforms: faster falls in firearm deaths, firearm suicides, and a decade without mass shootings. Inj Prev. 2006;12(6):365–72.
- National Research Council. Firearms and violence: a critical review. Washington, DC: The National Academies Press; 2005.
- 19. District of Columbia et al. v. Dick Anthony Heller, No. 07-290. 2008, June 25.
- 20. Kennedy DM, Piehl AM, Braga AA. Gun buy-backs: where do we stand and where do we go? In: Plotkin MR, editor. Under fire: gun buy-backs, exchanges and amnesty programs. Washington, DC: Police Executive Research Forum; 1996. p. 141–74.
- Kuhn EM, Nie CL, Withers RL, Wintemute GJ, Hargarten SW. Missing the target: a comparison of buyback and fatality related guns. Inj Prev. 2002;8(2):143–6.
- 22. Wintemute GJ, Parham CA, Beaumont JJ, Wright M, Drake C. Mortality among recent purchasers of handguns. N Engl J Med. 1999;341(21):1583–9.
- 23. Mullin WP. Will gun buyback programs increase the quantity of guns? Int Rev Law Econ. 2001;21(1):87–102.
- 24. Callahan CM, Rivera FP, Koepsell TD. Money for guns: evaluation of the Seattle gun buy-back program. Public Health Rep. 1994;109(4):472–7.
- 25. Marinelli LW, Thaker S, Borrup K, Shapiro DS, Bentley GC, Saleheen H, Campbell BT. Hartford's gun buy-back program: are we on target? Conn Med. 2013;77(8):453–9.
- 26. McGuire M, Manno M, Rook A, Maranda L, Renaud E, DeRoss A, Hirsh M. Good for guns: the use of a gun buyback as an injury prevention/community education tool. J Trauma Acute Care Surg. 2011;71(5):S537–40.
- 27. Violano P, Driscoll C, Chaudhary N, Davis KM, Borer E, Winters JK, Hirsh MP. Gun buyback programs: a venue to eliminate unwanted guns in the community. J Trauma Acute Care Surg. 2014;77(3):S46–50.
- 28. Baumann L, Clinton H, Berntsson R, Williams SS, Rovella JC, Shapiro D, Campbell BT. Suicide, guns, and buyback programs: an epidemiological analysis of firearm-related deaths in Connecticut. J Trauma Acute Care Surg. 2017;83(6):1195–9.
- 29. Braga AA, Wintemute GJ. Improving the potential effectiveness of gun buyback programs. Am J Prev Med. 2013;45(5):668–71.
- Rosenfeld R. Gun buy-backs: crime control or community mobilization? In: Plotkin MR, editor. Under fire: gun buy-backs, exchanges and amnesty programs. Washington, DC: Police Executive Research Forum; 1996. p. 1–28.
- 31. Sherman LW. Reducing gun violence: what works, what doesn't, what's promising. Crim Justice. 2001;1(1):11–25.
- 32. Makarios MD, Pratt TC. The effectiveness of policies and programs that attempt to reduce firearm violence: a meta-analysis. Crime Delinq. 2012;58(2):222–44.
- 33. Philips SW, Kim DY, Sobol JJ. An evaluation of a multiyear gun buy-back programme: reexamining the impact on violent crimes. Int J Police Sci Manag. 2013;15(3):246–61.
- 34. Green J, Damle RN, Kasper RE, Violano P, Manno M, Nazarey PP, Hirsh MP. Are "goods for guns" good for the community? An update of a community gun buyback program. J Trauma Acute Care Surg. 2017;83(2):284–8.
- 35. Rivera FP, Cummings P, Koepsell TD, Grossman DC, Maier RV, editors. Injury control: a guide to research and program evaluation. Cambridge: Cambridge University Press; 2001.