

Cure Violence: A Public Health Model to Reduce Gun Violence

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Abstract

Scholars and practitioners alike in recent years have suggested that real and lasting progress in the fight against gun violence requires changing the social norms and attitudes that perpetuate violence and the use of guns. The Cure Violence model is a public health approach to gun violence reduction that seeks to change individual and community attitudes and norms about gun violence. It considers gun violence to be analogous to a communicable disease that passes from person to person when left untreated. Cure Violence operates independently of, while hopefully not undermining, law enforcement. In this article, we describe the theoretical basis for the program, review existing program evaluations, identify several challenges facing evaluators, and offer directions for future research.

INTRODUCTION

Communities throughout the United States and around the world are experimenting with various methods to prevent and reduce violence, especially gun violence. Numerous strategies appear to be promising, but the most celebrated models in the United States are usually led by law enforcement and rely on the influence of suppression, deterrence, or both. Suppression models attempt to extinguish violent behavior with aggressive law enforcement alone. The deterrence approach is designed to create deeper effects by deterring the offender (i.e., specific deterrence) as well as by setting an example that persuades others in the community to avoid illegal behavior (i.e., general deterrence). Both approaches depend heavily on the power of the state to punish criminal behavior.

Enforcement-based violence reduction approaches can generate immediate results, but they require the continued coordination of complex bureaucracies that must be supported and sustained to have a lasting impact on violence. Furthermore, these models do not necessarily lead to deeper social change. Scholars and practitioners alike in recent years have suggested that real and lasting progress in the fight against gun violence requires changing the social norms that perpetuate violence and the use of guns (2, 5, 6). Such strategies are consistent with the public health approach to violence reduction.

This article focuses on a particular violence reduction strategy inspired by the public health approach. Cure Violence (formerly known as Chicago CeaseFire) seeks to create individual-level and community-level change in communities where it is a norm for young people to carry a gun and—for some—to use a gun to settle various forms of conflict. The Cure Violence (CV) model attempts to stop the transmission of violence in a manner similar to that of public health interventions designed to curtail epidemics or to reduce the impact of harmful behavior such as smoking and overeating. The CV model identifies the individuals most at risk of spreading gun violence, and it intervenes to change their behavior and attitudes. Next, it tries to demonstrate to those individuals, and to the broader community, that there are more acceptable and less harmful ways to resolve personal conflicts and disputes.

The CV model does not involve the use of force or the threat of punishment. It presumes that violent behavior—like all behavior—responds to structures, incentives, and norms. It is designed to introduce at-risk individuals to alternative models of conflict resolution that, in turn, may spread to the larger community—essentially “denormalizing” the harmful behavior (1). CV operates independently of, while hopefully not undermining, law enforcement. In this article, we describe the theory and practice of CV and review the literature on its strengths and limitations. We conclude with directions for future research and evaluation.

THE CURE VIOLENCE MODEL

The CV model was developed by physician Gary Slutkin at the University of Illinois at Chicago and is still managed there by Dr. Slutkin and his colleagues. The CV program relies on three key elements to stop the transmission of violent behavior: interrupting transmission directly, identifying and changing the thinking of potential transmitters (i.e., those at highest risk of perpetrating violence), and changing group norms regarding violence. The interruption of violence occurs by preventing retaliatory shootings, mediating ongoing conflicts, and continuing to follow up to keep the conflicts “cool.” Identifying and treating those at highest risk occur through carefully structured enrollment criteria relied on by staff to recruit high-risk youth and young adults and to engage with them to change their behaviors. Participants recruited to receive the treatment of CV must meet at least four of seven criteria: (a) gang-involved, (b) major player in a drug or

street organization, (c) violent criminal history, (d) recent incarceration, (e) reputation of carrying a gun, (f) recent victim of a shooting, and (g) being between 16 and 25 years of age. Changing group norms involves public education efforts and events designed to convey the message to the community that violence is harmful to everyone, that it is unacceptable behavior, and that it can be stopped. The CV model focuses much of its efforts on preventing violence among the most high-risk individuals, but it works simultaneously to instill anticonflict and antiviolence norms throughout the community.

The mix of staff members in the CV model reflects the balance of program components. Some staff members are hired to stop violent incidents through direct intervention. These individuals, known as violence interrupters (VIs), are selected for their own experiences with crime and violence. They are hired for their ability to establish relationships with the most high-risk young people in the community, usually young men between the ages of 15 and 30. The VIs form relationships with high-risk youth and monitor ongoing disputes to learn about potential acts of retaliation before they happen. When someone is injured or shot, the victim's friends and associates are likely to seek revenge. The VIs from CV seek out those associates and try to "talk them down" or persuade them that there are other ways to negotiate the conflict without engaging in more violence that could risk their liberty and their own lives.

VIs must be carefully recruited. They need to be seen as credible messengers by the most high-risk young people in the community. Many VIs are former high-level or popular gang members who have changed their lives—often after a stint in prison. They need to know about the daily routines of people who are involved in criminal lifestyles. They cannot be judgmental or be perceived as outsiders, and they cannot be seen as police informants. Ideally, they should come from the same communities in which they are working, and they should demonstrate in their own lives and personal conduct that it is possible to be both law-abiding and respected in the neighborhood.

Another key position in the CV model is the outreach worker (OW). Outreach workers are similar to case managers. Like the VIs, the OWs need to have trusting relationships with the most high-risk individuals in the community, and it helps if the OWs have also had prior involvement with the justice system. Both the VIs and the OWs need to be seen as credible by young people living high-risk lives. The daily tasks of OWs, however, are not as focused as those of the VIs on monitoring threats of violence and intervening directly. Instead, OWs use their relationships with program participants to help connect high-risk individuals to positive opportunities and resources in the community, including employment, housing, recreational activities, and education. OWs carry caseloads of up to 15 participants. The central goal of an OW is to facilitate the process by which potentially violent individuals learn to think differently about violence and to change their behavior accordingly.

OWs and VIs work in teams along with their supervisors and program directors. They meet on a regular basis—often daily—to review their interactions around the neighborhood and to discuss individuals who are thought to present the greatest current risk of violence. They compare notes on potential incidents of violence and assess the needs and interests of program participants to match participants with resources and opportunities that may draw them out of a violent lifestyle. Regular observations from all the workers in a CV site are organized in case-planning sessions, and much of the information is recorded in a continually updated database with minimal identifying information. Individual participants in CV programs are described in meetings using pseudonyms (e.g., Individual A, Individual B) to preserve their anonymity and their cooperation.

While the VIs and OWs focus their efforts on young people who are most at risk of transmitting violence, they and other CV staff work collaboratively with neighborhood partners to pursue the other key element of the CV model: changing social norms. The program does this using various

activities, including media campaigns, signs and billboards, and public events such as antiviolence marches and postshooting vigils. The CV program supports a wide range of activities that expose the community to effective antiviolence messages to build a general social consensus against violence. In this way, the CV model works at both ends of the spectrum of behavioral transmission: to both the senders and the receivers of social messages related to violence and the acceptance of violence. The program conducts outreach to faith-based organizations, neighborhood associations, tenant councils, and other community-based organizations in an effort to gain community support and facilitate an understanding of program goals. In addition, the program model includes building a relationship with law enforcement to assist with access to strategic information on crime patterns and to involve the police in the hiring of OWs and VIs.

EXISTING RESEARCH EVIDENCE

Several studies have evaluated the CV model by monitoring implementation and outcomes associated with the program. Researchers have studied Cure Violence in Chicago, Illinois (a program known locally as Chicago-CeaseFire); Baltimore, Maryland (the Safe Streets program); Brooklyn, New York City (Save Our Streets); Phoenix, Arizona (the TRUCE program); and Pittsburgh, Pennsylvania (One Vision One Life).

Chicago-CeaseFire (Chicago, Illinois)

In the first rigorous study of the CV approach, funded by the research arm of the US Department of Justice, researchers worked with numerous neighborhood sites in Chicago to conduct both process and impact evaluations (10). Process measures focused on issues such as site selection, staff training, service receipt by participants, and the capabilities and quality of the host organization, among other features of implementation. The impact analysis was designed to assess neighborhood-level change in gun violence. It examined the program's impact on shootings and killings in a subset of 7 evaluation sites, but the overall evaluation included 21 neighborhoods.

Using interrupted time series analysis with 16 years of shooting and attempted shooting data, the evaluation found that the introduction of the program significantly decreased shootings in five of the seven sites and that trends in these areas generally outperformed those in neighborhoods matched to the program sites on various factors. One neighborhood's comparison area experienced a similar significant decline in shootings, however, and the researchers concluded that in only four of the seven sites could they reliably claim that the decline was due to the program. The impact evaluation also conducted social network analyses to assess changes in gang involvement in homicide, retaliatory gang killings, and gang violence density. These analyses found some positive changes in some sites, but not in others. Essentially, findings for the three network-related outcomes varied widely, and without an ethnographic or strong qualitative evaluation component, the authors could not interpret why the findings varied. In sum, the findings were mixed.

The Chicago study noted that the program sites faced implementation obstacles almost immediately. Obstacles included difficulties in creating new programs in neighborhoods with severely high levels of disorganization and a dearth of community leaders willing to serve as hosts for violence-reduction work; early limited resident/community buy-in; inconsistent program funding; and the somewhat expected complications related to the hiring of high-risk individuals as program staff members. Sites were not always fully staffed, and some did not have VIs for extended periods of time during the study. Even with a full complement of staff, the sites struggled with high turnover. It is also important to note that Chicago implemented CV in such a large number

of neighborhoods that it hampered rigorous intracity comparisons of change in community-level processes (i.e., it was extremely difficult to identify adequate comparison neighborhoods).

The evaluation report also recorded numerous successes in Chicago's implementation of the CV model. A survey of participants, for example, indicated that the program successfully reached its intended population of high-risk clients. More than four out of every five (82%) clients had been arrested previously. Nearly half (45%) had five or more prior arrests, and more than half (56%) reported at least some previous incarceration. Historically, violence reduction efforts have failed because programs—those aimed at both individual-level change and aggregate-level change—have not been able to reach the high-risk individuals actually involved in a community's violence problem (8).

Participants in Chicago also appeared to believe the program was "very important" despite the large number of obstacles and pressures they faced in their day-to-day lives (10). They viewed the program's VI staff, in particular, as essential to the program and supported the efforts of the VIs to convey the program's antiviolence message. The study results suggested that VIs were critical in defusing the very type of violent confrontations that often lead to retaliatory shootings. The personal networks of VIs often crossed geographic boundaries, and the evaluation suggested that VI collaborations across neighborhoods may have actually helped to uncover brewing conflicts in neighboring areas that would have been missed by an exclusive focus on one neighborhood.

Safe Streets (Baltimore, Maryland)

In the summer of 2007 the Baltimore City Health Department began implementation of Safe Streets in the East Baltimore neighborhood of McElderry Park. Two additional sites were opened in bordering neighborhoods the following winter (Ellwood Park and Madison-Eastend), and a third site (Cherry Hill) opened in fall 2008 on the south side of the city. These four neighborhoods had the highest number of homicides and nonfatal shootings in Baltimore (12). A fifth site was opened in the Union Square neighborhood, but it experienced significant implementation difficulties and was closed in July 2008. Each site received training from the CV national office. The staff maintained records of program activities, which were reported monthly to the Baltimore City Health Department.

An impact evaluation conducted by Johns Hopkins University used a difference-in-differences approach with monthly panel data to assess whether the intervention had an effect on homicides and nonfatal shootings. Data from the intervention areas were compared with those of adjacent communities and other high-violence neighborhoods; comparison neighborhoods were chosen on the basis of monthly shootings from the period 2003–2006. The analysis controlled for the potential effects of other law enforcement activities as well as trends in crime and weapons offenses.¹

The results of the models showed that only one neighborhood saw significant positive effects with regard to both homicides and nonfatal shootings (13). The most successful site was located in South Baltimore in Cherry Hill, which saw a 56% reduction in homicides and a 34% reduction in nonfatal shootings. Bordering communities saw a 48% reduction in homicides. The McElderry Park site saw a 26% decrease in homicide incidents, but a 22% increase in nonfatal shootings. The researchers noted that there were periods of time in which staff from this site had to attend to an uptick in gang violence in the Madison-Eastend community, and after accounting for those time periods, the program was associated with a 53% reduction in homicides and a nonsignificant

¹The regression models included controls for hot-spot policing tactics, Project Exile call-ins, and annual and monthly time trends, and they clustered the standard errors by police precinct.

change in shooting incidents. Ellwood Park saw no significant change in homicides, but a 34% reduction in shootings. Madison–Eastend homicide incidents grew 2.7 times, but nonfatal shooting incidents decreased 44%. Thus, as in Chicago, the findings were mixed.

To examine possible attitude change by high-risk youth, the evaluation included a two-wave neighborhood-based convenience survey of high-risk males between the ages of 18 and 24. Using trained men from the selected neighborhoods to recruit individuals to take the survey in public areas such as parks or on the street, the researchers conducted surveys in three neighborhoods to establish a baseline (two intervention neighborhoods, McElderry Park and Union Square, and one comparable nonintervention neighborhood, Oliver) in fall 2007. The second wave of the survey, using a newly recruited sample of respondents, was conducted in spring 2009, after program implementation. Because one of the neighborhoods initially included in the baseline survey had closed its programs, researchers did not recruit a second wave of respondents in that area. The surveys were self-administered in print form (an audio version was also available) with 174 respondents in the first wave (45% response rate) and 120 in the second wave (71% response rate). The surveys included items to assess a respondent's level of risk for violence in order to control for differences in respondents across groups.

The surveys presented hypothetical scenarios and asked respondents whether they thought it was okay to “either threaten with a gun or shoot the antagonist in these scenarios” and then presented the scenarios again and asked how they thought their friends would respond (13, p. 26). Response options were “no,” “yes,” or “maybe.” Using standard methods of comparing associations among categorical variables (Chi-Square tests) to assess equivalence of treatment and comparison neighborhoods, there were no significant associations between the intervention neighborhoods and the comparison neighborhood on baseline risk factors (been arrested, been shot or shot at, had a sibling shot or shot at). However, there were significant differences between the neighborhoods in the second wave of the surveys: Respondents in the intervention site were more likely to have had a sibling be shot or shot at and to have been arrested.

The survey results also indicated that the respondents in the nonintervention site had some exposure to the intervention; 20% reported that they had received help from program workers, and 31% reported that they had observed program workers successfully mediate a conflict. Respondents in the intervention sites were less likely to express attitudes in support of gun violence at both baseline and follow-up compared with the nonintervention neighborhood. Support for using gun violence remained consistent between the first and second waves in the intervention neighborhoods, but support for gun violence increased in the comparison site. When researchers controlled for other potential confounders in modeling the level of support for using gun violence (little, moderate, strong), they concluded that the intervention did not significantly affect moderate levels of support, but it significantly reduced the likelihood of strong support (as compared with little/no support) for use of violence.

As with the Chicago evaluation, the Safe Streets evaluators suggested that implementation difficulties varied widely by neighborhood, complicating the evaluation and making it difficult to interpret the results. One site in particular, Union Square, may have never fully implemented the program, and another had to be operated by staff from a different site who stepped in during part of the implementation period.

Save Our Streets (Brooklyn, New York, New York)

In the New York City borough of Brooklyn, the CV model was implemented through the program Save Our Streets (SOS). The SOS program was launched by the Crown Heights Community Mediation Center and the Center for Court Innovation from January 2010 through May 2012

(9). During that time, SOS OWs recruited 96 participants, most of whom (68%) were considered high risk. OWs were assigned caseloads of 5–15 participants each, and they performed additional duties as the VIs for the program, mediating more than 100 potentially violent situations involving more than one thousand individuals (9). The impact evaluation used a difference-in-differences, quasi-experimental design (9) and found that gun violence decreased in the program neighborhood while increasing in proximate comparison neighborhoods, although the size of the reduction itself was not statistically significant. The reversal of the trend in gun crime compared with other neighborhoods was seen as possible evidence for the program’s effectiveness.

As in the Baltimore study, the New York evaluation included an effort to collect survey data to assess program awareness and potential attitude change. The New York evaluators did not expressly target participants or high-risk youth, but instead surveyed average residents on the street. A convenience sample was recruited in public areas (parks, street corners, etc.) shortly after implementation of the program and again one year after implementation. The first wave resulted in 112 completed surveys, and the second wave produced 104 completed surveys. The survey included numerous questions about the respondents’ awareness of the SOS program, their knowledge of and possible attendance at community events, and their perceptions of general safety in their community. The survey also measured responses to two questions about gun use: “(1) In this neighborhood, it is sometimes necessary for people to carry a gun to protect themselves or their family; and (2) In this neighborhood, it is sometimes necessary for people to join a gang to protect themselves or their family” (9, p. 30). Each response was measured on a four-point scale, ranging from “strongly disagree” to “strongly agree.”

The survey results showed increased awareness of the community’s mobilization against gun violence; 27% of respondents in the first wave and 73% of those in the second wave reported awareness of SOS (i.e., CV) activities. Respondents also reported greater confidence in the SOS program: 55% in the second wave of surveys compared with 29% in the first wave. However, the survey results also indicated that community residents did not feel any safer, and postintervention survey respondents still supported the right to carry a gun if they had witnessed a gun-related crime in the past (9).

TRUCE Project (Phoenix, Arizona)

The TRUCE project, implemented in the Phoenix, Arizona, Hermoso Park neighborhood beginning in 2010, was based on the CV model (4). Before implementation, the staff in Phoenix received training from the Chicago-based CV staff. Process and impact evaluations of the program were conducted by researchers at Arizona State University from June 2010 through December 2011. Implementation of the model appeared to be successful with a few caveats, including a lack of involvement from faith-based community organizations and an overall lack of community embeddedness (4).

The impact evaluation tracked outcome variables created from incident-report data maintained by the Phoenix Police Department from 2007 through 2011. The study examined trends in homicides, shootings (calls for shootings or shots fired), assaults, and other types of violent crime (robbery, misuse of weapon, and purse snatching). Owing to the overall low rate of homicides, these data were later grouped into the other violent crime category. The researchers used data from “calls-for-service,” officer reports, and callbacks to determine the level and frequency of crime incidents (4). The evaluation created comparison areas by analyzing data in the intervention area as well as in other Phoenix neighborhoods matched on characteristics such as per capita income and crime rates. However, investigators were unable to identify a comparison area that matched the intervention area with regard to racial composition.

Using time series analysis, the study measured changes in crime in each area after controlling for monthly time trends. As with other studies, the results were mixed. The evaluation found that the CV-inspired intervention was associated with an overall decrease in violent events, an average of 16 fewer per month. However, the overall decline was driven by a decrease in assaults. TRUCE implementation was actually associated with an increase in shootings, an average of 3.2 calls for shootings or shots fired per month in the target area.

One Vision One Life (Pittsburgh, Pennsylvania)

The Pittsburgh community launched its One Vision One Life program in 2004 in response to an uptick in youth homicides the previous year. It ceased operations in 2012. One Vision was modeled, in part, on the CV model, but it included other elements adapted from strategies such as the Boston Gun Project and the concepts of focused deterrence (7). The One Vision program included a six-point plan to (a) mediate conflicts, (b) use outreach to provide alternatives to at-risk individuals, (c) develop community coalitions, (d) send a unified “no shooting” message to the community, (e) provide immediate response to shootings in the program area, and (f) provide programming for at-risk youth (16).

The Pittsburgh program had another component similar to that of the Boston Gun Project’s TenPoint Coalition: a “group of activist Black clergy that also tried to link youths with social services and worked with law enforcement to resolve disputes” (15, p. 997). Coordinating mediation and intervention of conflicts with law enforcement varied by site, however, and some were more likely to resort to utilizing police intervention than were others. In general, coordination between the One Vision program and the police was relatively low (only 13% of conflicts resulted in police contact, and those were most often related to the retrieval of weapons). The evaluation found that police in Pittsburgh had little knowledge about the operations of the program (16).

One Vision operated in five communities, although the core evaluation of the program took place in only three: the Northside, Hill District, and Southside neighborhoods of Pittsburgh. The Northside and Hill District neighborhoods are large areas of Pittsburgh and are distinct from other areas in terms of population density, the proportion of African American residents, the number of households on public assistance, per capita homicides, and various indicators of social disorganization. Although the Southside neighborhood did not have a higher per capita homicide rate than did the rest of the city, it was selected for intervention owing to its high levels of drug dealing and other illegal activity (16).

The evaluation of the One Vision intervention, conducted by Michigan State University and the RAND Corporation, and published in 2011 (15), used quasi-experimental statistical techniques to examine changes in violence at the neighborhood level. The outcome measures, based on Pittsburgh Police data, were reports of aggravated assaults and aggravated assaults with a gun. These measures were used as a proxy variable for gun violence because the police department did not provide shooting data. The study used propensity score matching techniques to weight comparison neighborhoods on the basis of their similarity to the intervention areas on various socioeconomic and demographic characteristics. They analyzed whether the introduction of the program produced a significant change in their outcomes using a difference-in-differences approach. The Poisson regression model controlled for neighborhood characteristics such as population density and percent employed, and it also controlled for monthly and yearly time trends by including indicator variables for each month and year in the model.

The models did not find a significant association between the introduction of One Vision and a reduction in the homicide rate per 100,000 residents in Pittsburgh, but the program appeared to be associated with an increase in rates of monthly aggravated assaults and gun assaults in the

Northside (~25 and 9 more per 100,000 residents, respectively, per month over comparison neighborhoods) and Southside neighborhoods (~25 and 5 more per month, respectively). The Hill District saw a significant increase in monthly gun assaults (~8 more per month) but saw no significant increase in aggravated assaults. The results of the One Vision evaluation suggest that the program had no effect on homicides and other measures of violence; it may even have had a deleterious effect.

The authors acknowledged that the One Vision One Life program deviated in key ways from both the CV model and the Boston Gun Project's focused deterrence model. One Vision did not implement its program using methods promulgated by the CV national office. It did not document its activities consistently, did not include staff whose sole function was to interrupt conflicts and prevent potential retaliatory shootings, and did not respond to key violence threats systematically (15). In the end, the Pittsburgh study could not be called an evaluation of CV, but rather an evaluation of a locally developed program that was partly inspired by CV.

EVALUATION CHALLENGES AND LIMITATIONS

As the discussion above shows, the evaluation evidence in support of the CV model to date is mixed at best. Credible evaluations of the CV model tend to find some effects in some intervention neighborhoods but not in others. Or, they find possible effects on one type of violence but not on others. In every study, evaluation researchers also identify implementation obstacles that hinder the program and most likely limit its efficacy. Yet, interest remains strong in the potential of gun violence reduction programs that do not involve suppression and punishment and that do not rely on the relatively expensive resources of law enforcement and the formal justice system. If the CV model is to be a core component in public safety policy and a vigorous expression of the public health approach to violence reduction, then researchers, practitioners, and policy makers must be guided by the research literature and develop practices that ensure fidelity to the theoretical model and they must utilize data, evaluation tools, and methods that support a rigorous test of the intervention.

Fidelity to the model and measurement of fidelity to the model are particularly important for numerous reasons. Unfaithful replications that prove to be ineffective or even detrimental unjustifiably undermine the program's credibility. Faithful replications will help the field build the needed evidence base, identify the essential program components, and provide guidance on the transferability of programs to different neighborhoods and jurisdictions.

Evaluations of complex interventions targeted toward neighborhood change are rife with challenges. Implementing and measuring the effects of gun violence reduction strategies designed to generate community-level change from individual-level program efforts encounter inherent difficulties. When measuring community- or neighborhood-level change, few research designs can control for the many types of confounding factors that influence violence apart from whichever intervention is being studied. A small number of evaluations in the field of gun violence have used experimental designs, but most have relied on weaker techniques. Because the ultimate outcome in the CV model is a reduction in neighborhood shootings and gun homicides, evaluations need to assess program effects at the neighborhood level. Ideally, an evaluation that can withstand criticism about confounding effects would involve random assignment of neighborhoods and would require more than a handful of neighborhoods and quite possibly as many as 15 or 20 in each condition, perhaps more. Assuming that evaluation researchers could overcome opposition from policy makers, funders, and the communities themselves, there would remain numerous hurdles that make random assignment impractical. It would be expensive to maintain over several years an evaluation design that involves rigorous program implementation in more than a handful of

treatment and control areas, and researchers would still have to measure fidelity to the model in all program areas (and monitor whether any contamination issues arose in control sites). Furthermore (and happily), few cities have enough neighborhoods with sufficient numbers of shootings to reliably measure change over time. Moreover, data quality and data availability issues always complicate the estimation of effect size.

Even a clustered random assignment approach (with closely matched pairs) is impractical. The most similar neighborhoods are most often contiguous, but assigning contiguous neighborhoods to different treatment conditions would be challenging given the boundary-spanning tendencies of the intervention model. In addition, the need for a large sample of neighborhoods to achieve sufficient statistical power makes it unlikely that a local government or funder could support (or would be willing to support) the cost of implementing the CV model in more than a handful of sites. Law enforcement agencies, who may have originally promised to conduct only business as usual in control sites, would likely lose patience over time if violence surged or community pressure was placed on city leaders for additional supports or new efforts to reduce upticks in violence.

Putting aside experimental designs, other issues contribute to the complexity of CV evaluations. None of the aforementioned studies was designed to measure or describe the full range of causal mechanisms the CV purports to leverage in reducing community violence. At its most basic level, the CV model is developed to change both individuals and communities, but none of the evaluations included a focused examination of participant (i.e., individual-level) change.

Indeed, several critically important questions about the strategy remain unanswered.

- Do program effects accrue to the community only after a large number of individuals are directly influenced by the program to stop shooting, or are community residents in general affected by hearing or seeing the program's message?
- How many conflict mediations are sufficient to effect change? Does the composition of those involved in the mediations (i.e., those who attend the mediations—whether it is high-risk program participants, high-risk nonparticipants, or random bystanders) matter?
- Does the expected change in social norms related to violence spread from high-risk participants directly to the rest of the community, or is the primary causal pathway to the larger community from individual participants through social networks of other high-risk individuals?
- What is the timeframe for the transmission of new social norms, and how pervasive do antiviolence norms have to be before they can be reliably measured at the community level?
- How important are the collateral services and supports often provided by CV staff (occupational, legal, educational, etc.)? Can the strategy operate successfully without offering social services or other supports to individual participants?
- Can the model achieve results without the involvement of all the collaborative partners specified by the model, particularly law enforcement and the faith-based community?

The evaluations reviewed in this synthesis do not include in-depth qualitative examinations of the change process, nor has one been conducted. Ethnographic analyses within a larger quantitative component to examine changes in norms and attitudes would be of great value to the field of public safety. Furthermore, although some of the evaluation findings have been promising, none of the existing evaluations assessed the cost-benefit ratio. Is the CV strategy cost-beneficial? Policy makers and researchers lament the lack of cost-effectiveness research associated with these and other violence reduction strategies, and they stress that the lack thereof hampers expansion and replication of innovative strategies (11). The public health approach pursued by CV is different from that of most violence reduction models. CV attempts to shape behavior by relying on the normative power of the social environment rather than on the coercive power of law enforcement

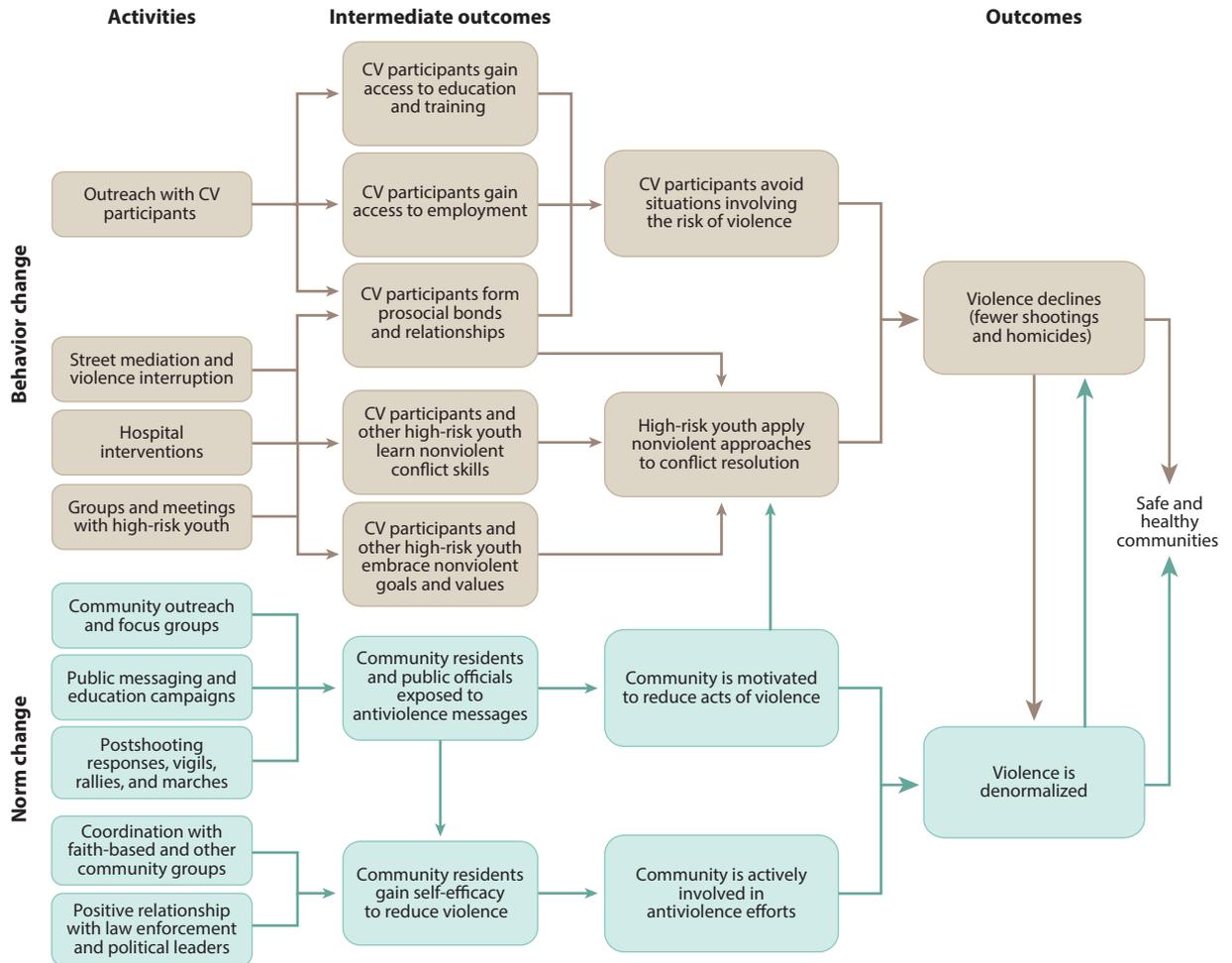


Figure 1
Cure Violence theory of change and evaluation framework.

and prosecution. It also has the potential to be more cost-effective. Whereas law enforcement-oriented models require at least the availability—if not always the action—of the bureaucracies of justice (police, prosecutors, prisons), the CV model requires only a small group of semiprofessional staff working in their own neighborhoods.

IMPROVING THE FUTURE EVIDENCE BASE

To facilitate rigorous evaluations of CV programs that are implemented with fidelity, two authors of this review article developed a detailed logic model or theoretical framework, shown in **Figure 1**, to express the theory of change implied by the CV program (3). The logic model was created after two years of study and interviews with the developers, leaders, and staff of CV. The authors also observed operations of CV in three cities—New York, Philadelphia, and Chicago—and then discussed the model with several researchers responsible for previous evaluations of CV.

The theoretical framework portrays the two principal pathways of the CV program's hypothesized effects on community violence. The brown-colored path (the upper half of **Figure 1**) depicts how program activities lead to changes in individual behavior, both among CV program participants as well as among other high-risk youth from the same neighborhoods. The aqua-colored path (the lower half of **Figure 1**) portrays how the CV model is hypothesized to denormalize violence across the community by changing the broader social norms that perpetuate violence. Activities pursued by CV programs are designed to focus on both of these causal pathways. Staff work actively with the individuals most at risk of violence in a community to prevent ongoing violence, and they concurrently participate in public education campaigns, postshooting vigils, and other public demonstrations to denormalize violence more broadly. The challenge facing evaluators of CV is how to measure both of these causal pathways using data collection methods that are sufficiently targeted on key variables, that are feasible in terms of cost and protection of human subjects, and that respect the integrity of the CV program model itself.

Following this logic model and based on the likelihood that communities could not support random assignment methods for evaluation, we make a number of recommendations below for future evaluators who will employ quasi-experimental designs.

- Implementation measures should encompass regular recording of all program activities, guided by the logic model, to include, but not limited to, conflict mediations, outreach contacts, participant support and referrals, hospital-based contacts, all forms of community events, and public education efforts.
- Evaluators should be willing to utilize the resources of the CV national office, where internal researchers have developed checklists for implementation that help to ensure fidelity to the model and can provide data on average outputs for key measures for Chicago sites that have been operational for more than a decade.
- Continued communication with the CV national office can provide motivation and regular support for the staff on the street, particularly with regard to the regular data recording required by the staff. Sites should commit to biweekly phone calls to discuss implementation status and challenges.
- Establishing baseline measures is particularly important because, too often, program evaluations begin after the treatment has been implemented, hampering true measurement of preintervention outcomes. Jurisdictions thinking about implementing the CV model should be simultaneously thinking about evaluation.
- Neighborhoods selected for evaluation should have an average population size of 10,000 residents and report at least 40 shootings per year. Chicago target neighborhoods are police beats, of which there are roughly 270, and the average beat population is 9,980 (all ages).
- The CV model is designed to affect not only the behavior and attitudes of program participants but also the behavior and attitudes of individuals in their social networks. Any sampling design for interviews and surveys may need to distinguish at least three types of research subjects: program participants, other high-risk individuals who are known to and socially networked with program participants, and the broader resident populations of high-risk communities. Surveying or interviewing each of these three groups could be valuable for an evaluation, but each would present different issues related to complexity and cost and each group would likely require different recruitment strategies.
- Before evaluation commences, researchers should ensure that the local police department is willing to share crime incident data that capture fatal and nonfatal shootings at the address level. Further disaggregation of shootings by motive would be highly desirable, as would be any data on police patrol resources that show changes in neighborhood-level police enforcement over time by local law enforcement.

- Ideally, an evaluation would have access to police shooting data at least 60 months prior to and 30 months after CV implementation. These data would allow for interrupted time series analyses as well as difference-in-differences evaluation methods.

CONCLUSION

All previous studies of CV have faced common challenges: The principal outcomes of interest were changes in aggregate rates of violence and/or shootings measured at the neighborhood level, and they took place during a time when violent crimes (most serious crimes, in fact) have been declining nationwide. As cities continue to implement the CV approach to preventing and reducing gun violence, it is essential that researchers collaborate with public officials and community leaders to document and evaluate the effectiveness of the model. Any sound evaluation requires a thorough understanding of the program's key components, an effective strategy for data collection and an appropriate model of the counterfactual (program versus no program). As noted above, the findings of the most prominent studies of CV to date are generally mixed. Each evaluation revealed at least some evidence in support of the approach at the level of jurisdictions or communities, but none of the studies could clearly disentangle the results from national and regional trends in violent crime; in addition, there were always confounding effects from factors related to sample design, selection of comparison neighborhoods, and variations in implementation. Of course, this same criticism could be (and is) leveled at the evaluations of other comprehensive violence reduction programs, even those widely perceived as successful.

As described in the US Department of Justice's CrimeSolutions.gov database (<https://www.crimesolutions.gov/>)—the website that chronicles and synthesizes evidence on criminal justice prevention and intervention programs—the public health approach of CV currently merits the label “promising” rather than “effective.” CV, however, offers something to communities that other well-known violence reduction models cannot: It is potentially very cost-efficient, and it places less demand on the political and administrative resources of law enforcement and the larger criminal justice system. For this reason alone, the model deserves additional investment and investigation. Sustained collaborations between the criminal justice and public health sectors could be valuable for public safety. Effective programs could help communities to focus on the primary goal of preventing violence before it occurs, on the continued selection and treatment of at-risk individuals as a measure of secondary prevention, and on tertiary prevention to minimize violence in high-risk communities. Focusing on these primary, secondary, and tertiary prevention strategies has been formalized in the recent development of several Academic Centers for Excellence (ACE) for youth violence (14). To underscore the public health influence, the ACE sites are run and maintained by the US Centers for Disease Control and Prevention and have four main goals: (a) build necessary scientific infrastructure to support the application of widespread youth violence interventions, (b) promote interdisciplinary strategies to address the problem of youth violence, (c) foster collaboration between academic researchers and communities, and (d) empower communities to address the problem of youth violence.

CV and the public health approach in general are not inherently incompatible with law enforcement strategies and the larger justice system. A community trying to reduce gun violence might reasonably choose to implement more than one approach in a comprehensive strategy. Currently, however, public officials are not likely to see all models as equals. Policy makers are more likely to invest in law enforcement—not necessarily because enforcement is the best strategy for the problem, but because enforcement is familiar. Violence reduction models that rely on public health concepts, social services, and nonprofessional staff do not fit as easily into traditional policy

frameworks. When a program staff involves former gang members and previously incarcerated offenders, it will be much more difficult for public officials to embrace it.

But no police officer or prosecutor would claim that they alone can stop all gun crime. Everyone recognizes that there are broad cultural, economic, and political forces at work in America's epidemic of gun violence. Prevention is also universally recognized as an important policy goal. Nobody believes that punishment after the fact is a completely adequate response to crime and violence. Thus, the public health model is in nearly every conversation about the nation's problem with firearms, and CV is one of the most well-known programs to fit within a public health approach. The research literature on CV, however, remains inadequate. Building a stronger base of evaluation information is a critical task for the future of CV and the public health approach to violence reduction.

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