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# PUBLIC HEALTH POLICY FOR PREVENTING VIOLENCE

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**Prologue:** *In October 1985 Surgeon General C. Everett Koop convened his Workshop on Violence and Public Health, which signaled public health's entry into the field of violence prevention. Koop called on public health professionals to "repond constructively to the ugly facts of interpersonal violence." During the past decade the involvement of the Department of Health and Human Services in violence prevention research and programs has expanded, culminating in the formation of the National Center for Injury Prevention and Control in 1991 as part of the Centers for Disease Control and Prevention (CDC). Despite much progress, however, stark reminders surface daily in the news media that much remains to be done. President Clinton, introducing his health reform plan to Congress 22 September 1992, invoked "the outrageous costs of violence in this country" as an area his administration is committed to addressing. "The problem of violence in America did not appear overnight," this paper states, "nor will it disappear suddenly. A sustained and coordinated effort . . . will be necessary at all levels of society to address this complex and deeply rooted problem." The authors either are or have been affiliated with the new National Center for Injury Prevention and Control in Atlanta. James Mercy is acting director of the center's Division of Violence Prevention. Mark Rosenberg is acting associate director for public health practice at the center. Ken Powell is acting associate director for science in the Division of Violence Prevention and leads the division's Youth Violence Prevention Team. At the time this paper was written, Claire Broome was acting director of the center. William Roper, who was director of the CDC when the violence prevention program achieved national prominence, is now president of the Prudential Center for Health Care Research.*

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**Abstract:** The current epidemic of violence in America threatens not only our physical health but also the integrity of basic social institutions such as the family, the communities in which we live, and our health care system. Public health brings a new vision of how Americans can work together to prevent violence. This new vision places emphasis on preventing violence before it occurs, making science integral to identifying effective policies and programs, and integrating the efforts of diverse scientific disciplines, organizations, and communities. A sustained effort at all levels of society will be required to successfully address this complex and deeply rooted problem.

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**A** new vision for how Americans can work together to prevent the epidemic of violence now raging in our society has emerged from the public health community. This vision arises from the recognition that, by any measure, violence is a major contributor to premature death, disability, and injury. Fundamental to this vision is a shift in the way our society addresses violence, from a focus limited to reacting to violence to a focus on changing the social, behavioral, and environmental factors that cause violence. From a public health perspective, effective policies for preventing violence must be firmly grounded in science and attentive to unique community perceptions and conditions. Scientific research provides information essential to developing such policies and prevention strategies and methods for testing their effectiveness. Equally critical is the full participation of communities to engender a sense of ownership of this problem and its solutions. Public health seeks to empower people and their communities to see violence not as an inevitable consequence of modern life but as a problem that can be understood and changed.

In this paper we discuss the new vision for violence prevention embodied in the public health approach. We begin by presenting epidemiologic documentation of the full scope of this health problem and its impact on specific subgroups in our society. Next we discuss public health contributions to violence prevention that address deficits in our society's current response to this problem. We then present priorities for public health analysis and action. We conclude by advancing some principles, based on the public health vision, that are intended to serve as guidelines for forming and implementing public policy.

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### Impact Of Interpersonal Violence On The Public's Health

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Interpersonal violence can be defined as threatened or actual use of physical force against a person or a group that either results or is likely to result in injury or death. Public health approaches violence as a health issue and consequently uses injuries—both fatal and nonfatal, psychological and physical—to quantify the impact of violence.

On an average day in the United States, sixty-five people die from and more than 6,000 people are physically injured by interpersonal violence.<sup>1</sup>

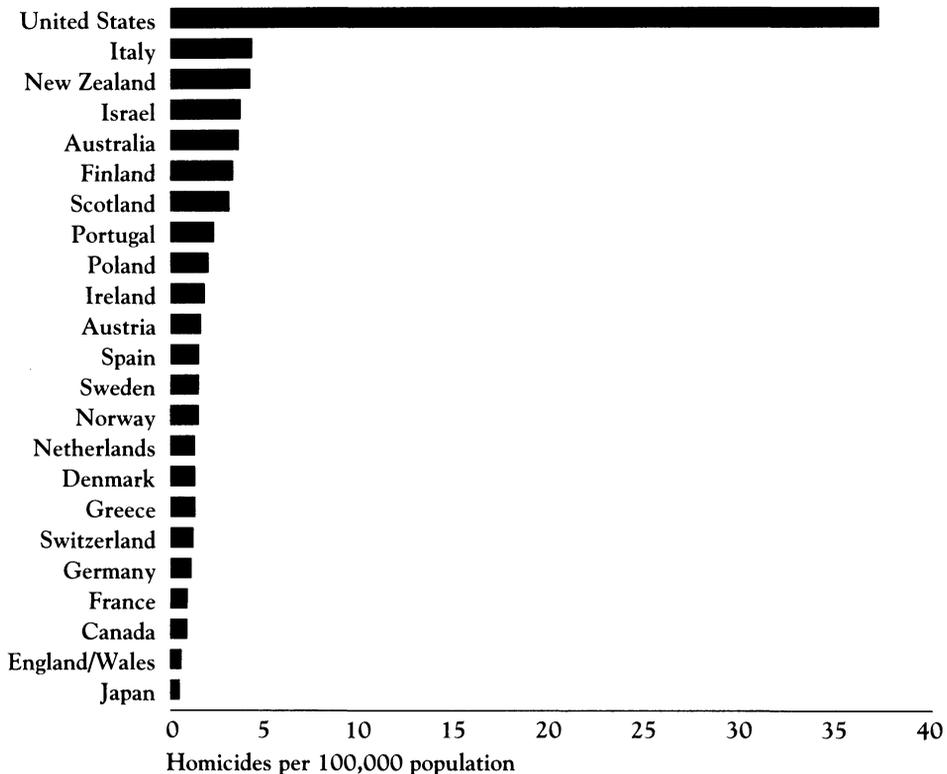
The violent acts appear to be occurring with greater frequency and severity in our society. In fact, the 1980s were arguably the most violent decade of this century, if not in U.S. history. More than 215,000 people died and twenty million more suffered nonfatal physical injuries from violence.<sup>2</sup> Violence also exacts a huge economic toll. The average annual financial costs of medical and mental health treatment, emergency response, productivity losses, and administration of health insurance and disability payments for the victims of assaultive injuries occurring from 1987 to 1990 were estimated at \$34 billion, with lost quality of life costing another \$145 billion.<sup>3</sup> These grim statistics obscure the disproportionate impact of violence on specific subgroups within our society—most notably, young men, women and children, and the poor.

**Youth and violence.** Young people are disproportionately represented among the perpetrators of violence. Arrest rates for homicide, rape, robbery, and aggravated assault in the United States peak among older adolescents and young adults.<sup>4</sup> During the 1980s more than 48,000 people were murdered by youths ages twelve to twenty-four.<sup>5</sup> Interviews with assault victims indicate that offenders in this age range committed almost half of the estimated 6.4 million nonfatal crimes of violence in 1991.<sup>6</sup>

Adolescents and young adults also face an extraordinarily high risk of death and injury from violence. Homicide is the second leading cause of death for Americans ages fifteen to thirty-four and is the leading cause of death for young African Americans.<sup>7</sup> Homicide rates among young American men are vastly higher than in other Western industrialized nations (Exhibit 1).<sup>8</sup> In addition, persons ages twelve to twenty-four face the highest risk of nonfatal assault of any age group in our society.<sup>9</sup> The average age of both violent offenders and victims has been growing younger and younger in recent years.<sup>10</sup>

**Violence against women and children.** Women are frequent targets of physical and sexual assault by partners and acquaintances. Many of these assaults are fatal. In 1990, 5,328 women died as the result of homicide.<sup>11</sup> Six of every ten of these women were murdered by someone they knew, about half of them by a spouse or an intimate acquaintance.<sup>12</sup> In addition, homicide is the leading cause of death for women in the workplace, accounting for 41 percent of all occupational injury deaths among women during the 1980s.<sup>13</sup> More than 99 percent of assaults on women, however, result not in death but rather in physical injury and severe emotional distress. In 1985 an estimated 1.8 million women were physically assaulted by male partners or cohabitants.<sup>14</sup> In addition, it has been estimated that 1,871 women are forcibly raped each day in the United States.<sup>15</sup> The consequences for women include an increased risk of attempted suicide, abusing alcohol and other drugs, depression, and abusing their own children.<sup>16</sup>

**Exhibit 1**  
**International Variation In Homicide Rates For Males Ages Fifteen To Twenty-Four, 1988–1991**



Sources: National Center for Health Statistics, *Vital Statistics*, 1990; and World Health Organization Statistics Annuals, 1990 and 1991.

Children also are all too frequently the targets of abuse in our society. In 1988 an estimated 1,016 to 2,026 children died from abuse and neglect in the United States.<sup>17</sup> In 1986 a minimum of 1.6 million children experienced some form of nonfatal abuse or neglect.<sup>18</sup> The long-term consequences for abused children include an increased likelihood of depression, poor self-esteem, alcohol and substance abuse, self-destructive behavior, and aggression.<sup>19</sup> These patterns often persist through adolescence and into adulthood. Some, but not all, adults who were abused as children are more likely than other adults to abuse their children and intimate partners and to be arrested for violent crime.<sup>20</sup>

**The impact of violence on the poor.** The evidence is consistent and compelling that poor people bear a disproportionate share of the public health burden of violence in our society. Homicide victimization rates consistently have been found to be highest in those parts of cities where poverty is most prevalent.<sup>21</sup> In 1991 the risk of becoming a victim of a

nonfatal violent assault in the United States was three times greater for persons from families with incomes below \$7,500 than for those with family incomes above \$50,000.<sup>22</sup>

**The contribution of firearms.** Firearms play a central role in interpersonal violence. In 1990 alone, firearms were used to commit more than 16,000 homicides; an additional 239,400 persons were nonfatally injured during assaults with firearms.<sup>23</sup> Further, firearms were involved in more than 18,000 suicides, approximately 1,500 unintentional deaths, and an undetermined number of suicide attempts and nonfatal accidents.<sup>24</sup> The lifetime cost of all firearm-related injuries occurring in 1990 was estimated to be \$20.4 billion.<sup>25</sup> Firearm-related death rates for women, teenage boys, and young adults are higher now than they ever have been.<sup>26</sup> For young people ages ten to thirty-four, firearms are the second leading cause of death, and one out of five deaths to U.S. teens is due to firearms.<sup>27</sup> In fact, in 1990 more U.S. teenagers died from firearm-related injuries than from all natural diseases combined.<sup>28</sup>

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## Public Health Contributions To Violence Prevention

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Despite the magnitude of this problem, daily reminders in the media, and the imprisonment of an unprecedented proportion of our population, this American tragedy continues largely unabated. We need new solutions. Public health's contributions include placing prevention at the forefront of our efforts, making science integral to identifying and developing effective policies and programs, and integrating the efforts of diverse scientific disciplines, organizations, and communities. Each of these contributions speaks to an existing deficit in our society's response to this problem.

**Focus on prevention.** The public health approach brings a strong emphasis and commitment to identifying policies and programs aimed at preventing violent behavior, injuries, and deaths. America's predominant response to violence has been a reactive one—to pour resources into deterring and incapacitating violent offenders by apprehending, arresting, adjudicating, and incarcerating them through the criminal justice system.

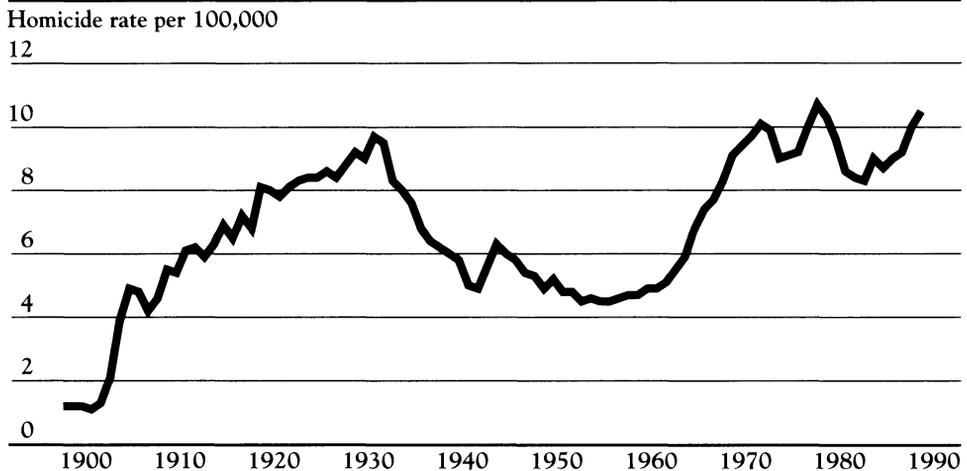
This approach, however, has not made an appreciable difference. Although the average prison time served for a violent crime in the United States tripled between 1975 and 1989, there was no concomitant decrease in the level of violent crimes. Removing violent offenders from society by tripling the average sentence for a violent crime, on the other hand, may have prevented 10 to 15 percent of the violent offenses that would have been committed had these prisoners been on the streets.<sup>29</sup> One can only conclude that other forces must be driving the violent crime rate upward. We can either continue to apply increasingly severe penalties and hope to

hold our own, or search for additional preventive methods. Even within the criminal justice community there is a movement toward looking for new approaches through community- or problem-oriented policing.<sup>30</sup>

Underlying the public health approach is the strong conviction that violence can be prevented. The wide variation in the homicide rate among developed nations supports this stance. The rate of homicide among males ages fifteen to twenty-four living in developed nations with accurate vital statistics data was more than eight times higher in the United States than in the next-highest country, Italy (37.2 versus 4.3 homicides per 100,000 population in 1988–1991). Even the rate for young white males in the United States—a group more comparable with young Italian males—was more than three times the rate in Italy.<sup>31</sup> The relatively high rates of violence in the United States, therefore, are not an inevitable consequence of economic development. The potential for much lower rates of violence than we are now experiencing also is evident in our own history. Within the United States the homicide rate has varied more than twofold since 1950, ranging from a high of 10.7 per 100,000 in 1980 to a low of 4.5 in 1956 (Exhibit 2).<sup>32</sup>

Perhaps most importantly, although most violence prevention efforts have not been adequately evaluated, at least a few show promise of being successful. Regular visits to the homes of unmarried, poor, teenage mothers by health practitioners have been shown to reduce the incidence of child abuse in a controlled random trial.<sup>33</sup> Providing training in communication, negotiation, and problem solving to middle school youth with behavioral

**Exhibit 2**  
**Homicide Rate By Year, United States, 1900–1991**



Source: National Center for Health Statistics, National Vital Statistics System.

Note: Homicide rate for 1991 is a provisional estimate.

problems has reduced the number of suspensions attributed to violence.<sup>34</sup> The Perry Preschool Project, an educational program directed at the intellectual and social development of preschool children, has been credited with reducing the cost of delinquency and crime, including violence, by approximately \$2,400 per child.<sup>35</sup> Laws that prohibit carrying guns in public and that impose a mandatory sentence for crimes perpetrated with a firearm have been found to have small but positive effects on reducing firearm homicides.<sup>36</sup> After passage of the 1977 Washington, D.C., restrictive licensing law that prohibited handgun ownership by everyone but police officers, security guards, and previous gun owners, firearm suicides and homicides declined by 25 percent.<sup>37</sup> Homicide rates remain high and have increased in Washington, D.C., however, indicating that other actions besides restricting handgun ownership are necessary. Thus, despite the fact that we have a great deal more to learn about how to prevent violence, epidemiologic patterns and preliminary evaluation research clearly indicate that it can be prevented.

There exists a broad array of potentially effective intervention strategies through which violence might be prevented. Exhibit 3 presents a listing of examples of these interventions grouped by whether their primary goal is to change knowledge, skills, or attitudes; the social environment; or the physical environment. The efficacy of most of these interventions has not been demonstrated. Nevertheless, they are among the many options to be considered as part of a broad-based, sustained strategy to prevent violence. Among these options, strong emphasis must be placed on addressing the role of social and economic deprivation in causing violence. Recent research points to numerous dimensions of poverty that are related to high community rates of violence: high concentrations of poverty, transiency of the population, family disruption, crowded housing, weak local social structure (for example, low organizational participation in community life, weak intergenerational ties in families and communities, and low density of friends and acquaintances), and the presence of dangerous commodities or opportunities associated with violence (for example, gun availability and drug distribution networks).<sup>38</sup> If we are to be successful in preventing violence, these fundamental social and economic factors must be addressed.

**Public health science in action.** Although many scientific disciplines have advanced our understanding of violence, the scientific basis for developing effective prevention policies and programs remains rudimentary. Public health brings something that has been missing from this field: a multidisciplinary scientific approach that is explicitly directed toward identifying effective approaches to prevention.

This approach starts with defining the problem and progresses to identifying associated risk factors and causes, developing and evaluating interven-

**Exhibit 3**  
**Strategies For Preventing Violence And Its Consequences**

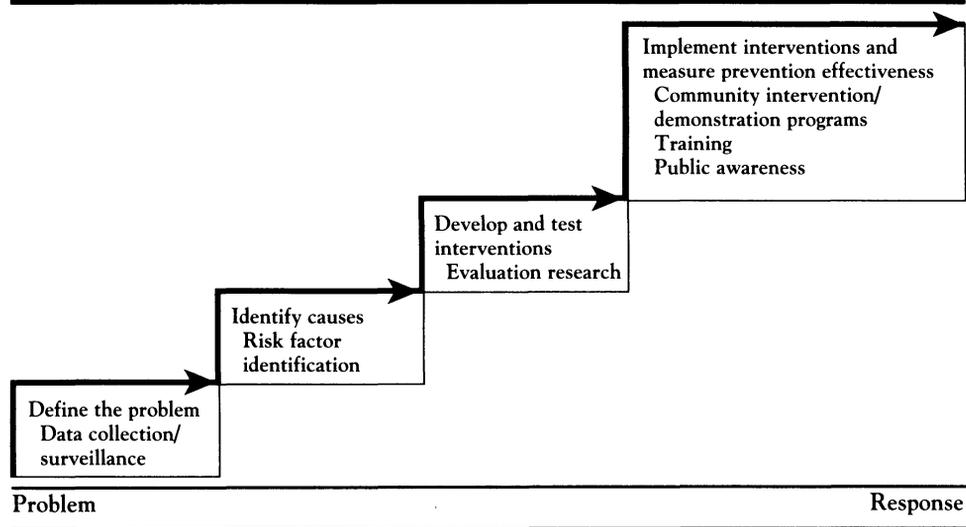
Strategy type	Description	Intervention examples
Change individual knowledge, skills, or attitudes	Deliver information to individuals to Develop prosocial attitudes and beliefs Increase knowledge Impart social, marketable, or professional skills Deter criminal actions	Conflict resolution education Social skills training Job skills training Public information and education campaigns Training of health care professionals in identification and referral of family violence victims Parenting education Mandatory sentences for crimes with guns
Change social environment	Alter the way people interact by improving their social or economic circumstances	Adult mentoring of youth Job creation programs Respite day care Battered women's shelters Economic incentives for family stability Antidiscrimination laws enforced Deconcentrated lower-income housing
Change physical environment	Modify the design, use, or availability of Dangerous commodities Structures or space we move through	Restrictive licensing of handguns Prohibition or control of alcohol sales at events Increased visibility of high-risk areas Disruption of illegal gun markets Metal detectors in schools

**Note:** See Exhibit 5 for a detailed description of strategies for preventing firearm injuries.

tions, and implementing interventions in programs (Exhibit 4). Although the exhibit suggests a linear progression from the first step to the last, in reality many of these steps are likely to occur simultaneously. Information systems used to define the problem also may be useful in evaluating programs. Similarly, information gained in program evaluation and implementation may lead to new and promising interventions.

The first step, defining the problem, includes delineating related mortality and morbidity and goes beyond simply counting cases. This step includes obtaining information on the demographic characteristics of the persons involved, the temporal and geographic characteristics of the incident, the victim/perpetrator relationship, and the severity and cost of the injury. These additional variables may be important in defining discrete subsets of injuries for which different interventions may be appropriate. For example, prevention of violence between intimate acquaintances is likely to require

**Exhibit 4**  
**Public Health Model Of A Scientific Approach To Prevention**



a different approach than prevention of violence among strangers.

The second step in the public health approach involves identifying risk factors for and causes of injuries. Whereas the first step looks at “who, when, where, what, and how,” the second step looks at “why.” This step also may be used to define populations at high risk for injury and to suggest specific interventions. Risk factors can be identified by a variety of epidemiologic studies, including rate calculations, cohort studies, and case-control studies.

The next step is to develop interventions based in large part upon information obtained from the previous steps and to test these interventions. Methods for testing include prospective randomized controlled trials, controlled comparisons of populations for occurrence of health outcomes, time series analyses of trends in multiple areas, and observational studies such as case-control studies.

The final stage is to implement interventions that have been proved or are highly likely to be effective. In both instances it is important that data be collected to evaluate the program’s effectiveness, particularly since an intervention that has been found effective in a clinical trial or an academic study may perform differently at the community or state level. Another important component is determining the cost-effectiveness of such programs. Balancing the costs of a program against the cases prevented by the intervention can be helpful to policymakers in determining optimal public health practices.

The public health model for a scientific approach to prevention has been applied to a wide range of noninfectious as well as infectious public health

problems, with a remarkable record of success. Smallpox has been eradicated, smoking rates have been drastically reduced, and the number of people who die in car crashes has been reduced by tens of thousands. We believe that this time-tested, goal-oriented approach will yield similar benefits in the area of violence prevention.

**Integrating the efforts of diverse disciplines, organizations, and communities.** Public health brings a tradition of integrative leadership, by which we can organize a broad array of scientific disciplines, organizations, and communities to work together creatively on solving the problem of violence. This approach is in direct contrast with our society's traditional response to violence, which has been fragmented along disciplinary lines and narrowly focused in the criminal justice sector. In addition, communities have not been given a voice in fashioning and implementing prevention policies and programs. We have, in effect, severely limited our ability to address violence.

These problems are solvable, but we need to combine our diverse perspectives and resources to be successful. First, by unifying the various scientific disciplines pertinent to violence prevention, public health can provide policymakers with comprehensive knowledge that will be more helpful to them than the separate, discipline-specific parcels of information they now receive.<sup>39</sup> Second, public health is establishing links with each of the sectors that figures in violence prevention: education, labor, public housing, media, business, medicine, and criminal justice. They are being encouraged to organize and coordinate their involvement in federal, state, and local prevention programs. Finally, public health is working hard to fully involve communities in policy and program development as well as to stimulate a greater sense of community ownership for this problem.<sup>40</sup>

A further concern is that our response to violence has been fragmented along racial and ethnic lines, a problem that is demonstrated by the widely held belief that violence is just a minority problem. This notion is wrong and impedes an effective response to violence in several ways. First, it stigmatizes minority groups by lending support to the false stereotype that minorities are inherently violent. In fact, there is no scientific evidence of a genetic link between race or ethnicity and violence.<sup>41</sup> The preponderance of existing research indicates that race or ethnic status per se has little to do with an individual's propensity for violence. Rather, racial or ethnic status is associated with many other factors, such as poverty, that do influence violent behavior.<sup>42</sup> Second, this belief allows the majority of our population to deny their own problems of violence and dissociate themselves from solving the problem. Violence should be characterized as an American problem; to maximize our effectiveness, we must convince the public that all Americans must work together for a solution.

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## Priorities For Public Health Analysis And Action

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Public health priorities for violence prevention include preventing injuries from firearms, interrupting the “cycle of violence,” developing and evaluating community approaches to violence prevention, and changing public attitudes and beliefs toward violence. It is believed that attention to these areas offers the greatest chance of saving lives, preventing injuries, and reducing the overall impact of violence on our society.

**Preventing firearm injuries.** Public health has come to see the need for preventing firearm injuries as central to preventing violence, for several reasons. First, firearms are involved in a high proportion of deaths associated with interpersonal violence. In 1990, 65 percent of the more than 24,000 homicides that occurred involved firearms. Further, firearms are involved in approximately 20,000 deaths associated with suicide and unintentional injury each year.<sup>43</sup> Second, studies indicate that firearms have played a key role in the increasing rates of violent death, particularly among youth. For example, recent increases in youth homicide and suicide are almost entirely attributable to increases in homicides and suicides involving firearms.<sup>44</sup> Third, scientific evidence clearly indicates that the presence of a gun in a violent interaction dramatically increases the likelihood that one or more of the participants will be killed; the implication here is that guns are more lethal than other weapons.<sup>45</sup> Fourth, scientific evidence is mounting that access to firearms poses significant risks to owners and their families. For example, in a well-designed study that controlled for other known risk factors, the presence of a gun in a household was found to increase the risk of suicide almost fivefold and the risk of homicide almost threefold.<sup>46</sup> Finally, as previously noted, evaluation research suggests that certain regulatory approaches can prevent deaths involving firearms.

Public health’s major contribution in this area has been to advance the scientific understanding of ways in which firearm injuries can be prevented. In fact, public health scientists have been credited with bringing about a “sea-change” in firearm injury research over the past ten years.<sup>47</sup> This scientific approach has spanned the first three stages of the public health model outlined in Exhibit 4. To define the problem, public health scientists have used existing surveillance data to assess the magnitude, characteristics, and impact of the problem on a national, state, and local basis.<sup>48</sup> They are exploring ways to improve the national surveillance of fatal and nonfatal firearm injuries and the monitoring of risky behavior associated with firearm injuries, such as weapon carrying among youth.<sup>49</sup> State and local public health agencies also are developing city- and statewide systems for collecting data on firearm injuries. Public health scientists have helped to identify risk factors by quantifying the risks of gun ownership, looking not only at

the risks from guns in the hands of criminals, but also at the risks to gun owners and their families. This research has shown, for example, that for every time a gun kept in the home is used to kill someone in self-defense, it is used forty-three times to kill someone in a criminal homicide, suicide, or unintentional shooting; and if a gun is used in an incident of domestic violence, then the likelihood of one of the two disputants' being murdered is twelve times greater than if another type of weapon were used.<sup>50</sup>

Public health scientists also have been involved in carrying out the third stage of the public health model: testing the effectiveness of interventions. For example, a Detroit ordinance prohibiting the carrying of firearms in public was evaluated and found to have a dampening effect on increases in firearm homicides occurring outside the home.<sup>51</sup> In another example, researchers examining the impact of more restrictive policies toward handgun ownership in Canada found that between 1980 and 1986 the rate of homicide in Seattle, Washington, was 65 percent higher than in Vancouver, British Columbia, and that virtually all of this difference was due to an almost fivefold higher rate of handgun homicide in Seattle. They concluded that a regulatory policy that restricts access to handguns may reduce the rate of homicide in a community.<sup>52</sup>

Although our understanding of the role of firearms in violence has advanced substantially, many questions remain: How frequently are guns used to successfully ward off potentially violent attacks? Do the risks and benefits of firearm possession vary, depending on whether one lives in a rich or poor neighborhood or whether one has children? How do adolescents get guns, and why do they want them? In addition, few interventions to prevent firearm injuries have been evaluated. There is a critical need to assess the value of the numerous intervention strategies that can be, and in some cases are being, adopted. Exhibit 5 lists interventions that focus solely on firearms, grouped by four major prevention strategies.

Addressing firearm-related injuries from a public health perspective helps to reshape the public discussion on firearms in several ways. First, with a firm scientific understanding of the role of firearms in violence, public discussion shifts from a criminal justice debate on "gun control" to a public health discussion of "preventing firearm injuries." The gun-control debate has become so polarized that neither side really seeks to understand the other. As a result, there is no middle ground and very little constructive dialogue. By reframing the debate, public health can help to engage many more people in this critically important issue. Second, if scientific information on the health risks of firearms is developed and disseminated, people are empowered to take responsibility and make decisions to reduce the risks for themselves, their families, and their communities.

A third element in reframing the issue of firearm injuries is shifting the

**Exhibit 5**  
**Strategies For Preventing Firearm Injuries**

Strategy	Intervention
Change how guns are used/stored	Restriction of gun carrying in public Mandatory sentences for gun use in crimes Owner liability for damage by guns Metal detectors in vulnerable places Safety education
Affect who has guns	Permissive licensing (for example, all but felons, minors, mentally ill, and so on) Waiting periods Forbid sales to high-risk purchasers Disrupt illegal gun markets Combination/electronic locks on guns
Reduce lethality of guns	Protective clothing Reduce barrel length/bore size Reduce magazine size Ban dangerous ammunition
Reduce number of guns	Restrictive licensing (for example, only police, military, guards, and so on) Buy back guns Increase taxes on guns Restrict imports Prohibit ownership

**Source:** Adapted from A.J. Reiss Jr. and J.A. Roth, eds., *Understanding and Preventing Violence* (Washington: National Academy Press, 1993), 272–273.

focus from an “all-or-none” solution to a broad array of diverse strategies and policies. The remarkable success of public health in preventing motor vehicle injuries exemplifies this approach. Over the past thirty years the United States has invested more than \$250 million to discover ways to create safer cars, safer roadways, and safer drivers. Because of this effort cars now have steering wheels that protect the driver, front ends that crush to absorb impact, safety belts, and air bags; also, many highway systems have eliminated unsafe intersections. All drivers must pass licensing examinations, and we have made great progress in removing drunken drivers from the roads. As a result, the highway driving death rate has decreased markedly, saving more than 243,000 lives.<sup>53</sup> Firearm injuries can be reduced similarly without banning all guns. As with motor vehicle safety, progress can be made by using a variety of approaches that include changes in behavior and environmental modification.

**Interrupting the cycle of violence.** It is clear that violence is a learned behavior and that older generations influence the knowledge, attitudes, and behavior of younger generations. Thus we should be able to intervene at various points in the cycle to change knowledge, attitudes, and behavior

conducive to violence.

Several points follow from this notion of a cycle of violence. First, interventions might be targeted at a variety of ages and groups to reduce violence in future generations. For example, programs targeted to parents can affect children through parents' teaching and shaping their children's behavior, and programs targeted at very young children can have a lifelong impact. Second, because persons are susceptible to a wide range of influences over their lifetime, efforts to promote prosocial knowledge, attitudes, and behavior must be sustained and reinforced over time. This maintenance may require new and changing input at various points. Third, intervention early in life may prevent many different types of violence. The same principles of nonviolence that may keep persons from resorting to violence when they are young may prevent domestic violence after they marry, child abuse after the birth of their children, and elder abuse when their parents become old.

Research into the cycle of violence within the family has shown that children who are physically abused or neglected are more likely than others to grow up to abuse their own children.<sup>54</sup> Abused children as well as children who witness parental violence also are more likely to use physical violence against others when they get older.<sup>55</sup> As interpersonal violence becomes more prevalent, increasingly larger numbers of children are likely to witness violence firsthand in public. This exposure also may increase the likelihood of violent behavior.

The importance of early intervention to interrupt the cycle of violence is clear, and the potential effectiveness of these interventions has been demonstrated for prototype Head Start and home visitation programs.<sup>56</sup> However, early interventions such as these take a long time to demonstrate effectiveness because they target children who will not enter the periods of highest risk for violent behavior for many years. These programs are the hardest to initiate, support, and evaluate, but they may ultimately be the most effective. Long-term institutional support for such programs clearly is needed.

Because exposure to violence in the family is a pivotal influence on the transmission of violence across generations, public health is giving high priority to the prevention of violence among family members and intimates. In particular, the Centers for Disease Control and Prevention (CDC) is implementing an initiative to prevent violence against women. This initiative has five broad goals: (1) to improve the ability to describe and monitor the problem systematically and on a continuing basis at the national, state, and local levels; (2) to increase our knowledge of modifiable factors associated with violence against women and the consequences of such violence; (3) to demonstrate and evaluate ways to prevent violence

against women that can be implemented in communities, workplaces, schools, and other settings; (4) to conduct a national communications effort to change attitudes and beliefs that condone violence against women and to train health care providers and social service professionals; and (5) to develop a nationwide network of prevention and support services, with the aim of strengthening and coordinating the system for delivering prevention programs and giving direction to a national prevention effort.

The American Medical Association (AMA) has undertaken another important initiative to prevent family violence. The primary goal of this initiative is to mobilize physicians by heightening their awareness and knowledge regarding the diagnosis, treatment, and prevention of child, partner, and elder abuse. Toward this end, the AMA has launched a major media campaign, a national coalition of physicians against violence, and a medical resource center to collect, evaluate, and disseminate information about family violence. Given that physicians are on the front lines in dealing with the consequences of violence, this initiative holds great promise for improving their ability to prevent family violence.<sup>57</sup>

**Developing and evaluating community approaches.** The prevention of violence will require the work of a broad spectrum of community leaders and organizations, including governmental, business, and grass-roots organizations. The communities that these leaders and organizations serve should determine and be responsible for local violence prevention efforts. This approach is justified and necessitated by several factors. First, the complexity of violent behavior defies a single simple solution. Multiple complementary activities are required, and they will demand the involvement of a broad spectrum of participants, including local citizens, officials, businesses, and a variety of governmental agencies, including justice, education, and health. Second, the approach has been successful in other health promotion efforts to change individual behavior. Community-based health promotion programs have reduced teenage pregnancy rates, reduced smoking among adolescents, and improved dietary habits.<sup>58</sup> Third, programs administered above the community level are meeting with increasing suspicion and resistance, particularly within minority communities. Fourth, the uniqueness of communities precludes a blanket prescription for all locales. Finally, in the end, the community must assume responsibility for ongoing activities. To do so, residents must have the desire and the skills to continue the program, which is much more likely if the community is committed to the program from the beginning.

The urgency of the problem, the absence of ready solutions, and the requirement for community participation create a dilemma. Ideally, communities should be able to select from an array of proven interventions those activities best suited to them. Unfortunately, of the many seemingly

good ideas about how to prevent violence, several of which are being widely advocated and implemented, few have been scientifically proven to work.<sup>59</sup> Cost-effectiveness information is available for none. The tension between the demand at all levels to act now and the absence of proven interventions is a critical aspect of the challenge facing public health. We must be aware of this constant tension and develop programs from which we can learn as we go.<sup>60</sup>

The CDC is moving ahead on three fronts simultaneously. First, we are compiling and disseminating descriptions of exemplary violence prevention programs together with information on how to start a violence prevention program at the community level.<sup>61</sup> Second, we are rigorously evaluating discrete interventions. Third, we are supporting community-based demonstration projects to see which combinations of interventions are most effective in reducing violence and to learn how best to deliver programs at the community level. A variety of interventions is needed including interventions to change individual knowledge, skills, and attitudes and to change the social and physical environments in which we live (Exhibit 3).

Many different organizations are supporting the development, implementation, and evaluation of community-based violence prevention programs. Within the Department of Health and Human Services (HHS), the CDC, the National Institutes of Health, the Health Resources and Services Administration, the Substance Abuse and Mental Health Services Administration, the Indian Health Service, the Public Health Service Office of Minority Health, and the Administration on Children and Families each support community-based violence prevention projects or projects that have direct relevance to violence prevention in communities (for example, substance abuse prevention programs). The Departments of Justice, Education, and Housing and Urban Development also have a strong interest in this area and in some cases support community-based projects. Outside of government, some foundations have become actively involved. For example, The California Wellness Foundation has launched a five-year, \$24 million violence prevention initiative that focuses on decreasing youth violence through community health promotion. To learn from and fully capitalize on these ongoing prevention experiences, federal agencies, foundations, and communities will need to significantly improve their ability to share information and coordinate activities.

**Changing public attitudes and beliefs.** Recent experience with public health information and education campaigns for reducing smoking and cardiovascular disease and preventing acquired immunodeficiency syndrome (AIDS) suggests that similar efforts can be important parts of the public health approach to preventing violence. Within the field of injury control, there has been a long-standing debate over the effectiveness of

educational efforts to prevent injuries. Early in the history of injury control, many people felt that injuries could be prevented just by telling people to “be careful.” Soon, however, critics showed that it was much more effective to change the environment than it was to try to change individual behavior. As a result, many injury-control advocates felt that behavioral change was an ineffective way to prevent injuries. It is clear now, however, that effective injury-control programs—and preventing injuries from violence is no exception—take advantage of both behavioral changes and changes in the environment. For example, to realize the benefits of child safety seats, parents must purchase them and use them correctly.

Public health has now become much more sophisticated in the use of marketing techniques to bring about change. We know that we need to formulate precise objectives, identify target audiences, carefully develop culturally competent messages, and then measure the impact of these marketing efforts on the outcomes of interest. Public health information campaigns for violence prevention must achieve a number of goals. First, they must make people aware of the magnitude and characteristics of the problem of violence today. Second, they must give hope to individuals and communities, informing them that there are things that work and things that people and communities can do to prevent violence. Third, they must mobilize individuals, organizations, and communities to act. Fourth, they must provide information about what works and how to conduct effective prevention programs. And fifth, they must be designed so that we can measure their effectiveness and use that information to constantly improve them.

Most recent attention to violence and the media has been limited to the negative impact of violence in the movies and on television. This has had at least two adverse results. First, opportunities to develop positive uses of the media through social marketing have not been adequately considered. Second, false expectations have been raised about the potential of reducing violence in life by reducing violence in the media.

Popular movies and television contain high levels of violence, and large organizations such as the American Psychological Association and the American Academy of Pediatrics have publicly stated their conviction that violence in the media causes acts of violence in real life.<sup>62</sup> Research has shown that viewing violence on television or in the movies can make children more aggressive and irritable.<sup>63</sup> Researchers have suggested that children today see so much violence on television that they are desensitized to it and may even be encouraged to commit violent acts because of their viewing.<sup>64</sup> There seems little doubt that violence in the media contributes to violence in society. Violence in the media, however, is but one segment, of uncertain size, of the full scope of influences that produce violence in our

society. Efforts to reduce media violence should be part of a larger effort to change the many factors contributing to frequent violent behavior in American society.

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### Implications Of The Public Health Approach

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The public health vision for violence prevention has important implications for policy development. Based on this vision, we advance the following principles as guidance for the development of a national policy to prevent violence.

**Invest in prevention.** The history of public health has shown repeatedly that the search for prevention policies and programs pays off. For example, Americans suffer far less now than in the past from infectious diseases, motor vehicle injuries, and chronic diseases associated with smoking because of substantial investments in and commitments to prevention in each of these areas. A similar commitment to and investment in the prevention of violence is absolutely necessary if we are to make measurable progress. Special emphasis should be placed on primary prevention, which aims to prevent violence from occurring rather than trying to identify people who have already perpetrated violence or been victimized by it. This means that the target audience for injury prevention programs is much broader than just the group of already victimized persons. Primary prevention efforts likely will have an impact on preventing all forms of violence and will help to generate a larger constituency than will programs that deliver services to victims. Primary prevention aims to save the lives of potential perpetrators as well as potential victims.

**Address the root causes.** Economic and social problems such as poverty, joblessness, and racism are inextricably linked to violence in our society. In the final analysis, if violence is to be prevented, these fundamental societal issues must be addressed at the same time that we take whatever immediate actions possible to prevent violence. This parallel approach offers the best opportunity for both short- and long-term success in reducing the toll of violence.<sup>65</sup>

**Adopt a learn-as-we-go approach.** We must act now to prevent violence, but we must learn from these actions to refine and shape future public policies. Progress in learning what works depends on rigorous evaluation of specific policy innovations. An approach that emphasizes sound evaluations of violence interventions, policies, and programs will advance not only our understanding of prevention but also our basic understanding of the etiology of violence.<sup>66</sup> We are an experimenting society; we must be sure to learn from our experiments and be willing to alter our course as our scientific understanding of violence and its prevention evolves.

**Emphasize coordinated action.** Interest in violence prevention has grown dramatically in recent years. This interest is shared by a broad range of federal departments, state agencies, foundations, and organizations. New prevention initiatives and programs will be emerging from almost every sector of society. We must attempt to coordinate these activities for two reasons. First, we should take advantage of the synergistic benefits of cooperation across the various entities sponsoring these activities. For example, community-based efforts that draw on the combined resources and perspectives of public health, criminal justice, education, labor, and housing agencies will have a great advantage in tackling this problem. Second, we need to learn from these diverse prevention efforts and share that knowledge broadly. The more coordinated these disparate initiatives and programs are, the easier it will be to ensure adequate evaluation and to derive and share prevention knowledge from those activities.

**Intervene early.** The most effective interventions in the long run may well be those that begin with very young children, to shape attitudes, knowledge, and behavior while the subjects are still open to positive influences. The impact of early intervention may be felt over the course of a lifetime and be passed on to successive generations.

**Work with the community.** We must listen to the communities that are affected and understand what they consider to be the best approaches to preventing violence among their residents, given their resources and the patterns of violence that occur. The success of a program is likely to hinge as much on the community environment and the connection of a program to the community as on the nature of the program itself.

The development and implementation of public policies that lead to violence prevention is a formidable challenge. The problem of violence in America did not appear overnight; nor will it disappear suddenly. A sustained and coordinated effort to prevent violence will be necessary at all levels of society to address this complex and deeply rooted problem. We believe, however, that the new vision for violence prevention put forth by the public health community provides reason for optimism.

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