PUBLIC HEALTH AND THE PREVENTION OF JUVENILE CRIMINAL VIOLENCE

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This article reviews the role that public health currently plays in preventing juvenile criminal violence and explores how the law-and-order approach—the dominant response to juvenile criminal violence—can benefit from the involvement of the health community. It finds that an increasingly punitive response to juvenile criminal violence in the United States represents an unsustainable approach to the problem. One approach to addressing the problem of juvenile violence that has garnered much attention and support over the past 2 decades, especially in the United States, is a public health approach. Although it emphasizes primary prevention, views violence as a threat to community health rather than community order, and adheres to scientific principles, it should be seen as not so much a challenge to law and order but rather as a complement to it—part of an effort to create a more balanced, comprehensive, and sustainable strategy in preventing and reducing juvenile criminal violence.

Keywords: public health; juvenile violence; violence prevention; sustainable crime control; juvenile justice system

Faced with any type of social ill, society often has numerous approaches at its disposal to try to ameliorate or eliminate the problem at hand. Aside from doing nothing, which is hardly a viable alternative, approaches can range from the humane to the draconian. However, not all approaches can be considered sustainable: producing desirable results today, but not at the expense of burdening society in future years. The world is rife with examples of unsustainable approaches to social, economic, health, and other problems that have, in many cases, exacerbated the very problems that they were set out to remedy (see e.g., Forrant, Pyle, Lazonick, & Levenstein, 2001). In the case of criminal violence perpetrated by young people—a serious problem that faces all societies (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002) and one that presents an immediate and long-lasting threat to the sustainability of cities and communities (through the victimization, fear, urban decay, and other negative impacts that it engenders)—the approach that is taken has important implications for a sustainable society.

A society that relies solely on punishing—in the form of incarceration—its young people who have come in conflict with the law cannot be said to be contributing to a sustain-
able future for its young people or the population at large. If, on the other hand, punishment resulted in lower reoffending rates, did not cause some juvenile offenders to become more violent, did not exacerbate emotional trauma (e.g., depression from past abuse) often suffered by juvenile offenders, among other iatrogenic results that punishment can produce, then there may be fewer objections to expanding its already widespread use. However, this is not the case at all. Studies abound on the iatrogenic effects of incarceration (see MacKenzie, 2002; McCord, Widom, & Crowell, 2001; Spohn & Holleran, 2002), and there is little empirical evidence or professional consensus on the ability of prisons to substantially reduce recidivism rates and improve public safety over the long term (see MacKenzie, 2002; Petersilia, 2003; Zimring & Hawkins, 1995). In the U.S. juvenile justice system, these circumstances are magnified because secure confinement is to be a measure of last resort. All other available measures, such as probation, house arrest, or residential community treatment (e.g., group homes) are to be exhausted prior to consideration of a sentence of secure confinement. Yet juvenile incarceration rates in the United States tell a very different story (see below).

It is the position of this article that the juvenile justice system in the United States, as it presently functions, represents an unsustainable approach in the prevention of juvenile violence (and juvenile crime in general). This is not to suggest that the juvenile justice system is wholly ineffective and is a complete waste of taxpayer dollars and thus should be disbanded. Rather, it is government’s reliance on a law-and-order approach, and its increasingly punitive nature in recent years, in dealing with juvenile violence that are at the heart of the problem. Public health represents an important alternative to a law-and-order response to juvenile violence and is deserving of further exploration.

The public health approach to addressing juvenile violence has garnered much attention and support during the past 3 decades, mostly in the United States. It is seen not so much as a challenge to law and order but rather as a complement to it (Moore, 1995)—part of an effort to create a more balanced and comprehensive strategy in reducing juvenile violence. Public health brings a focus on primary prevention; that is, prevention in the first instance, well before a young person has committed a violent act. According to the International Centre for Sustainable Cities (1994), it is this focus on prevention that is the foundation of a more sustainable approach to crime and violence:

A sustainable approach to the control of crime in urban places must reorient governmental policies to focus on crime prevention. This must include reallocation of resources and shifting decision making closer to the community. It must also involve a reorientation of traditional criminal justice agencies to enable them, in concert with other social and governmental organizations, to focus on crime prevention. While the traditional criminal justice system will continue to be needed to incapacitate violent and incorrigible offenders, commitment of resources beyond certain levels to reactive justice is not cost-effective. A wholly reactionary criminal justice system is unsustainable. (p. 12)

This article has two main aims: first, to review the role that public health currently plays in preventing juvenile criminal violence, with a major emphasis on the U.S. experience, and, second, to explore how the law-and-order approach—the dominant response to juvenile criminal violence—can benefit from the involvement of the health community. It begins with a look at the nature and extent of juvenile criminal violence in the United States and discusses how juvenile violence represents a threat to the sustainability of cities, towns, and communities. In the next part, the U.S. juvenile justice system is profiled in the context
of how it contributes to the prevention of juvenile violence. The next two parts of the article
describe the public health approach to the prevention of violence and the present status of
this approach to preventing juvenile violence cross-nationally, with a particular focus on
the United States. The final part of the article presents a discussion and some concluding
comments.

Young People, Criminal Violence,
and Threats to Sustainability

This article is concerned with criminal violence perpetrated by young people. It
adopts the definition of criminal violence of the National Research Council’s Panel on the
Understanding and Control of Violent Behavior: “behaviors by individuals that intention-
ally threaten, attempt, or inflict physical harm on others” (Reiss & Roth, 1993, p. 2). In this
definition, violence is interpersonal in nature and includes the Federal Bureau of Investiga-
tion’s (FBI) Part I or index offenses of murder and non-negligent manslaughter, forcible
rape, robbery, and aggravated assault, as well as some Part II offenses, such as school fights
and gang activity. Political or terrorist violence is not addressed here. Suicide, a form of
intrapersonal violence, is also not addressed. For the current purposes, young people or
juveniles are those younger than age 18 years, which typically means between the ages of
10 and 17 years (Snyder, 2002).

The consequences of juvenile violence can be destructive and wide reaching, affect-
ing individual victims, their families, and society as a whole. Death, physical injury, psy-
chological trauma, and reduced quality of life are some of the very real impacts that can be
carried out in Western industrialized countries that follow samples of, typically, boys from their early childhood experiences to the peak of their involve-
ment in criminal activity and beyond consistently show that the frequency of offending
reaches a peak in the teenage years and then declines in the 20s (Farrington, 1998). Violent
crime arrests peak at around age 18, and property crime arrests peak at around age 16 (FBI,
2001). Age-level crime rates decline substantially after these years, and by the mid-20s vio-

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41% lower than its peak in 1994, dropping from 527 to 309 arrests for every 100,000 persons age 10 to 17 years. From 1993 (the peak year) to 2000, the juvenile homicide arrest rate dropped by 74%, from 14.4 to 3.8 (Snyder, 2002). Juvenile violence was not alone in its substantial decline. The juvenile property crime arrest rate in 2000 also showed a substantial reduction (37%) from its highest point in 1994, dropping from 2,546 to 1,615 arrests for every 100,000 persons age 10 to 17 years (Snyder, 2002).

Despite these recent declines, juvenile criminal violence continues to present a very real threat to the sustainability of cities, towns, and communities. The impact of violence on sustainability has many sources. According to the International Centre for Sustainable Cities (1994), violence (and crime in general) undermines the sustainability of cities, because it may discourage investment, employment and financial activity. Abandonment of cities because of fear of crime can result in physical deterioration of neighborhoods and loss of employment to groups which may be most vulnerable precisely because they are least equipped to follow changing job opportunities. There may then appear a tendency toward concentration of social problems including mental disorder, suicide, prostitution, and drug and alcohol addiction which underlie some criminal behaviour. (p. 11)

One study estimated the financial loss to American cities because of property and violent crime at $50 billion per year (Mandel, Magnusson, Ellis, DeGeorge, & Alexander, 1993). Lost jobs, store closings, fewer people on the streets at night, a declining tax base because of urban flight—residents moving to the suburbs—all contribute to what can be described as urban decay. Juvenile violent crime may account for as much as $7.5 billion of this total.1

Juvenile Justice and Violence Prevention

The juvenile justice system provides young people with a further set of legal and social protections that are not available in the adult justice system, such as not being allowed to be identified in the press and a higher level of parental involvement throughout the proceedings. At the heart of these extra safeguards is the belief that the primary purpose of the juvenile system is protection and treatment, whereas in the adult system it is punishment of the guilty.

The prevention of criminal violence by young people is one of the chief concerns of the juvenile system. From a public health perspective, a justice system response is considered largely a form of tertiary prevention. This response is not about preventing violence in the first instance (before the onset of violent offending), for example, through early childhood programs (primary prevention). Nor is this response about intervening with young people who are at higher levels of risk for involvement in violence because of, for example, their association with antisocial peers or the use of illicit substances (secondary prevention). Rather, a justice response to violence involves dealing with the young person after the fact, that is, when an offense has been committed, when someone has been victimized. One exception to the justice system being solely a form of tertiary prevention is when the police intervene with high-risk young people by way of giving them a warning or participating in various violence prevention programs in schools, public housing communities, and other
settings (see Rosenfeld & Decker, 1993, for a discussion of law enforcement and public health). However, when violent offending is the subject a justice response has come to be known as interventions on the part of courts and corrections: interventions of last resort.

A More Punitive System

The juvenile justice system has become increasingly punitive, especially toward violent juvenile offenders (McCord et al., 2001). This has involved juvenile courts delivering harsher sentences, more juvenile offenders being transferred to adult court, a greater reliance on the use of confinement than rehabilitation (Howell, 1997), and a growing number of juvenile offenders serving time in prison. According to the Office of Juvenile Justice and Delinquency Prevention’s Census of Juveniles in Residential Placement, the juvenile incarceration rate for violent offenses grew by 5% between 1997 and 1999, from 123 to 129 per 100,000 juveniles (Sickmund & Wan, 2001). This increased punitiveness has lead many scholars to argue that the treatment and protection aims of the juvenile system have become more a matter of the abstract than of reality. According to Feld (1998):

Evaluations of juvenile court sentencing practices, treatment effectiveness, and conditions of confinement reveal increasingly punitive juvenile court and corrections systems. These various indicators strongly suggest that despite juvenile courts’ persisting rehabilitative rhetoric, the reality of treating juveniles closely resembles punishing adult criminals. (p. 222)

Focusing just on violent juvenile offenders, Hagan and Foster (2001) added: “American public policy is increasingly focused on restricting or eliminating protections based on adolescent status. Thus, a growing policy of ‘recriminalization’ is reducing the ages at which youth charged with violent acts are waived or transferred to adult courts” (p. 874).

In addition to being the target of increasingly punitive policies, juvenile offenders, especially those sentenced to correctional facilities, must often endure harsh conditions. In their assessment of the conditions of juvenile facilities and their effects on juvenile offenders, the National Research Council Panel on Juvenile Crime (McCord et al., 2001) concluded:

Detained and incarcerated juveniles have higher rates of physical injury, mental health problems, and suicide attempts and have poorer educational outcomes than do their counterparts who are treated in the community. Detention and incarceration also cause severe and long-term problems with future employment, leaving ex-offenders with few economic alternatives to crime. (p. 223)

To many, this increased punitiveness in dealing with juvenile offenders, whether they be violent, and the many problems experienced by incarcerated juveniles, makes the juvenile justice system seem less appealing as a vehicle for preventing crime. On the other hand, critics of this position charge that if a more punitive approach works, and especially for violent juveniles, there may be a great deal of merit in continuing it (see Gest, 2001, pp. 83-108, for a recent history of the federal government’s responses to juvenile violence). So what does the research evidence have to say?
Punishment and Juvenile Violence

In a study on recidivism of incarcerated offenders (adults and juveniles) in 15 states, it was found that, of 816 juveniles (age 14 to 17 years at release), 82% or 669 offenders were rearrested within 3 years (Langan & Levin, 2002). In the same 3-year period, 56% were reconvicted, 39% were returned to prison with a new prison sentence, and 57% were returned to prison with or without a new prison sentence (includes technical violations; Langan & Levin, 2002). This age group, the youngest in the study, had the highest rate of recidivism for all four measures (Langan & Levin, 2002). Among the juvenile offenders serving time for a violent offense \((n = 188; 23\% \text{ of 816 juveniles})\), 62% or 117 offenders were rearrested within 3 years after release. The rearrest rates for juvenile property and drug offenders were slightly higher at 74% and 67%, respectively.²

Few studies have investigated the effects of criminal sanctions on juvenile violent crime rates. A study evaluated the effects of a 1997 law in Washington State that granted judges more discretion to sentence juvenile offenders to confinement (Aos, 2002). According to Aos (2002), the law resulted in a small reduction in recidivism: “a 10 percent increase in the detention admission rate (the number of admissions per 1,000 juveniles 10 to 17 years old) leads to about a 2 to 4 percent reduction in juvenile violent and property arrest rates” (p. 4).

Some smaller-scale, experimental studies designed to test the efficacy of juvenile correctional treatment programs in prisons compared to usual services provided to juveniles in these settings (e.g., drug counseling) demonstrate that a focus on treatment can produce modest to substantial reductions in recidivism rates. In a meta-analysis involving 83 evaluation studies of these types of programs and focused on serious and violent juvenile offenders, it was found that treatment for institutionalized juveniles, compared to the usual services, reduced recidivism rates by about 9% (Lipsey & Wilson, 1998). The most effective of treatment programs for institutionalized juveniles, compared to the usual services, reduced recidivism rates by as much as 40% (Lipsey & Wilson, 1998).

Just locking up violent juvenile offenders seemingly pays few dividends to society. When incarceration is required, treatment programs, some types more than others, can improve the life chances of juveniles on return to the community. Correctional facilities with a special focus on treatment may also be creating a safer and healthier environment for juvenile offenders. Still, however, incarceration is an after-the-fact response, the last resort to dealing with juvenile violence. Is there a more effective, humane, and sustainable approach? In the next two sections, the role of public health in preventing juvenile criminal violence is explored.

Public Health and Violence Prevention: Part 1

Public health can mean many different things to many different people. As Krug et al. (2002) noted, by addressing diseases and conditions and problems affecting health, public health’s focus is not on individual patients per se but rather on entire populations, with the aim “to provide the maximum benefit for the largest number of people” (p. 3).³ The public health approach to criminal violence has some of the following characteristics:

- Criminal violence is viewed as a threat to community health rather than community order (Moore, 1995). “Violent crimes are viewed as intentional injuries within the
wider context of health problems such as illnesses and accidental injuries. What all of these problems share is that they contribute to the morbidity and mortality of the population” (Gabor, Welsh, & Antonowicz, 1996, p. 324).

- The foundation of the public health model is primary prevention: the prevention of violence before it occurs. This involves targeting risk factors associated with becoming involved in violent behavior or being a victim. Some of the key risk factors for involvement in delinquency and later violent offending include childhood disruptive behavior (e.g., opposition, aggression), poor child-rearing methods, parental discord, and growing up in poor, disorganized neighborhoods (Tremblay & Craig, 1995).

- Criminal violence “is seen as resulting from a complex system of causes: It cannot be understood from offender motivation alone. These factors can be structural (e.g., economic inequality), situational (arising from disputes), and pertain to commodities such as guns or alcohol. Attention is also paid to the role of the media and other social institutions in cultivating a culture of violence” (Gabor et al., 1996, p. 324).

- “Public health problems are tackled through a systematic approach involving health event surveillance, epidemiological analysis, intervention design, and evaluation focused on a single, unambiguous outcome—the prevention of a particular illness or injury” (Gabor et al., 1996, p. 324).

- Public health acknowledges that it alone cannot solve the violence problem: “Solving the problem of violence will require an interdisciplinary approach. Professionals from sociology, criminology, economics, law, public policy, psychology, anthropology, and public health must work together to understand the causes and develop the solutions” (Rosenberg & Mercy, 1991, p. 11).

An Interest in Juvenile Criminal Violence

Why has the health community shown an interest in juvenile criminal violence? One of the first reasons for this interest is that public health perceives juvenile criminal violence as more of a social rather than juvenile justice problem. In part, this is because the majority of juvenile-perpetrated criminal violence and resulting deaths and injuries occurs among family members and acquaintances (Bureau of Justice Statistics, 2003). Intentional criminal violence on the part of juveniles is also seen by public health as more of a social problem because of the social circumstances in which some of this violence takes place (e.g., dating violence, fights at school; Elliott, Hamburg, & Williams, 1998; Silverman, Raj, Mucci, & Hathaway, 2001). These are problems that are, in many ways, beyond the reach of the juvenile justice system working alone (Galant, 2003; Rosenberg, O’Carroll, & Powell, 1992).

Another reason for public health’s interest in juvenile criminal violence is that, as noted above, young people are heavily overrepresented as offenders (and as victims). This is the case not just in the United States but in other countries as well. According to the World Health Organization’s (WHO) first World Report on Violence and Health (Krug et al., 2002), in 2000, there were about 200,000 youth-perpetrated homicides across the world, for a global rate of 9.2 per 100,000 young people. (The WHO report defines young people as being between age 10 and 29 years.) This translates into a daily average of 565 deaths of children, adolescents, and young adults. Victims of criminal violence are also relevant here, because in the United States the majority of victims of juvenile criminal violence are young people (Bureau of Justice Statistics, 2003). The WHO report also estimated that for each youth-perpetrated homicide, there are about 20 to 40 victims of nonfatal youth violence that receive hospital treatment.
In the United States, where the interest of public health in criminal violence in general has been the strongest (see below for a comparison with other industrialized countries), public health’s interest in juvenile violence has also been marked by homicide becoming a leading cause of death among young people in the past 2 decades. In 1999, homicide was the second leading cause of death among young people between age 15 and 24 years; for African Americans in this group and in the age 25-to-34 year group, homicide was the leading cause of death (Centers for Disease Control and Prevention, 2002a, 2002b).

Medical expenditures relating to juvenile criminal violence have also been a cause for concern. One study estimated that direct medical expenditures (e.g., payments for hospital and physician care, emergency medical transport) from treating victims of violent crime perpetrated by juveniles cost the United States $5.9 billion each year (Children’s Safety Network Economics and Insurance Resource Center, 2000). In another study that measured the costs of juvenile violence in the Commonwealth of Pennsylvania in 1993, medical care costs for victims of juvenile criminal violence were estimated at $95 million (Miller, Fisher, et al., 2001).

Public Health and Violence Prevention: Part 2

Before examining how public health’s interest in juvenile criminal violence has been translated into action it is useful to first take stock of how this interest stands today in the United States and in other parts of the world. During the years, international and regional health organizations, notably WHO and the Pan American Health Organization (PAHO), have lead the charge in raising awareness of the impact of juvenile violence on public health as well as the role that public health providers can play in its prevention. With a full chapter devoted to youth violence and its prevention (Mercy, Butchart, Farrington, & Cerdá, 2002), WHO’s *World Report on Violence and Health* (Krug et al., 2002) has garnered much attention and has made some progress in increasing awareness of juvenile criminal violence as a global public health problem (see World Health Organization, 2003). Although it is too early to say whether the report and its associated regional campaigns to spread its message will lead to concrete action, particularly at the local level, it marks an important first step. This is best reflected in the words of WHO’s former director general, Dr. Gro Harlem Brundtland (2002),

The Report is not an end in itself. It changes our way of thinking about how violence permeates our societies and how it can be prevented. It helps us recognise the scale of this problem, and encourages us to respond and offers practical means to do so. (p. 2)


At a country level, the United States is by far the most advanced in its recognition of juvenile criminal violence as a public health problem and in its mobilization of public health resources to address this problem. This is evident on a number of fronts. Since 1983, a per-
manent branch has existed at the Centers for Disease Control and Prevention (CDC) to carry out research and fund programs to prevent intentional violence, including juvenile criminal violence. At present, juvenile violence is the mandate of the Division of Violence Prevention under the National Center for Injury Prevention and Control. Recent activities of this division have included basic research on the reduction of injuries from firearms and school violence, and evaluation research of school- and community-based youth violence prevention programs (Potter & Saltzman, 2000).

In 2001, the former U.S. surgeon general, Dr. David Satcher, released the first-ever report on youth violence from this office: *Youth Violence: A Report of the Surgeon General* (U.S. Department of Health and Human Services [USDHHS], 2001). The report brings together leading research on the magnitude, causes, and prevention of juvenile violence and sets out a course of action for policy makers, researchers, service and treatment providers, juvenile justice personnel, and citizens. Some of the recommendations include the following: improving understanding of the decision making of youths to use firearms in violent encounters; providing more intervention opportunities for young people in conflict with the law instead of relying on punitive approaches; and improving training for intervention personnel (USDHHS, 2001).

In the two other countries examined for the current research (Canada and the United Kingdom), public health seemingly plays a comparatively small role as part of government policy on the prevention of juvenile criminal violence. In Canada, emergency physicians and other health-care providers are engaged in research and various other capacities to reduce the criminal use of firearms by young people (Canadian Public Health Association, 1994); however, unlike the United States, there is no government infrastructure that supports or advocates for public health’s involvement in addressing this problem. The same can be said about the United Kingdom. A similar search of the relevant central government departments that are involved in addressing juvenile criminal violence (e.g., Home Office, Department of Health) did not reveal any infrastructure or policy that embraced public health providers let alone the public health approach.

One other piece of evidence that points to the scant attention that has been accorded so far in Canada and the United Kingdom to the potential contribution of the health community in addressing juvenile criminal violence is the limited input by academia, as measured by publishing in medical journals. In a 15-year review (1987 to 2001) of the flagship journals of the Canadian Medical Association (*Canadian Medical Association Journal* [CMAJ]), British Medical Association (*British Medical Journal* [BMJ]), and the American Medical Association (*Journal of the American Medical Association* [JAMA]), the average number of published articles on interpersonal violence in BMJ was lower than JAMA and CMAJ was substantially lower than JAMA. The difference was even more pronounced for published articles focused only on juvenile criminal violence, with many of these articles in JAMA being on school violence, dating violence, and firearms.

*From Interest to Action*

In an article titled “Murder and Medicine,” Harris, Thomas, Fisher, and Hirsch (2002) found that advances in emergency medical technology and care (e.g., development of 911 call systems and trauma units at hospitals, improved training for medical technicians) during the past 4 decades in the United States have played an important role in increasing the chances that a victim of a violent criminal assault will not end up dying. They estimated that the lethality of violent assaults (i.e., assaults resulting in homicides) decreased over this
time period by 2.5% to 4.5% per year (Harris et al., 2002). This is just one example of the
many contributions that the health community has made to a safer, more sustainable soci-
ety. What follows are a number of primary and secondary prevention measures that public
health providers are engaged in to specifically reduce juvenile criminal violence.

Primary prevention. This involves efforts to prevent violent behavior before it
occurs; that is, before any signs of it become evident. It aims positively to influence the
eyearly risk factors or root causes for delinquency or violent behavior. Some of the major risk
factors that health-care providers can help to address include early childhood behavior
problems (e.g., aggressiveness toward parents, acting out in school), poor child-rearing
methods (e.g., poor parental supervision, harsh or inconsistent discipline), low socioeco-
nomic status, and poor school performance or school failure (Rivara & Farrington, 1995).
Pediatricians, family physicians, and health nurses, are among the many health-care provid-
ers that are involved in primary prevention.

According to Rivara and Farrington (1995), pediatricians can play a particularly
important role in primary prevention approaches, because they

are likely to be the professionals who have the most contact with the greatest number of
young children and their families. Few children and their parents at that stage have con-
tact with helpful social service agencies and many of those at greatest risk have few
effective advocates other than their physician. (p. 422)

Much of the pediatrician’s role in helping to address some of the above risk factors involves
(a) gauging the level of risk through a detailed family history and regular screening for spe-
cific problems and (b) providing advice and educational information, such as parenting tips
and links to community resources.

Slaby and Stringham (1994) acknowledged the importance of these roles in the lives
of at-risk children and families but also emphasized the need for pediatricians to provide
“follow-up support for the changes they make” and “engag[e] in community outreach activ-
ities designed to change community norms about violence” (p. 614). This latter role can
involve public information campaigns to address misconceptions about juvenile violence
and effective responses and promoting prosocial alternatives to violence (Wilson-Brewer &
Spivak, 1994). This role also stresses a key element of the public health approach to prevent
juvenile violence: the need to collaborate with other professionals.

Health nurses can also play a key role in primary prevention approaches. One way is
through the provision of family support for new mothers and their children in the form of
home visits. The only home visitation program with a long-term follow-up of juvenile crim-
inal violence is the Prenatal/Early Infancy Project (PEIP), which was started in Elmira,
N.Y., in the early 1980s. The program targeted first-time mothers-to-be who had at least
one of the following high-risk characteristics prone to health and developmental problems
in infancy: younger than age 19 years, unmarried, or low socioeconomic status. One of the
aims of the program was to prevent child abuse and neglect. Based on past research (e.g.,
Widom, 1989), the PEIP researchers speculated that preventing child abuse and neglect by
the mothers would translate into less involvement in violent criminal activity on the part of
the children when they reached adolescence. In all, 400 women were enrolled in the pro-
gram. The mothers-to-be received home visits from health nurses during pregnancy and
during the first 2 years of the child’s life. Each home visit lasted about 1½ hours, and the
mothers were visited on average every 2 weeks. The nurses gave advice to the mothers
about care of the child, infant development, and the importance of proper nutrition and avoiding smoking and drinking during pregnancy.

A randomized experimental design was used to evaluate the program’s impact on a number of outcomes. At the completion of the program, a substantial reduction in child abuse and neglect was found for high-risk program mothers compared to their control counterparts (4% vs. 19%; see Olds, Henderson, Chamberlin, & Tatelbaum, 1986). Thirteen years after the completion of the program, fewer experimental compared to control mothers in the total sample were identified as perpetrators of child abuse and neglect (29% vs. 54%; Olds, Eckenrode, et al., 1997). At the age of 15, children of the mothers (in the total sample) who received the program committed fewer violent and other major delinquent acts than their control counterparts (a mean of 3.02 compared to 3.57). It was also found that the experimental children, compared to the controls, had fewer convictions and violations of probation, were less likely to run away from home, and were less likely to drink alcohol (Olds, Henderson, Cole, et al., 1998). A cost-benefit analysis of the program found it to have been a worthwhile use of taxpayer dollars (Greenwood et al., 2001; see also Welsh & Farrington, 2000).

Secondary prevention. This level of prevention is distinguished from primary prevention by its targeted interventions at older children and adolescents who show signs of involvement in antisocial behavior or possess related risk factors (e.g., using illicit substances, carrying firearms, associating with delinquent peers). The above example of advances in emergency medical care that helped to improve the life chances of victims of violent assaults is a form of secondary prevention. As noted by Prothrow-Stith (1992), “Emergency room workers must resort to secondary intervention strategies because they are faced with a person at considerable risk for future morbidity or mortality resulting from violence” (p. 202). However, this is not limited to dealing with the physical and emotional trauma suffered by victims of violence. According to Prothrow-Stith (1992), medical professionals also need to work with victims of violence to prevent an escalation of violence:

Instead of merely stitching up the victims and discharging them—which only leads to retaliation and additional bloodshed—hospital emergency departments should attempt to evaluate the circumstances leading up to the injury-related incident. Diagnostic and service intervention protocols should automatically be instituted for victims of street and family violence, just as they are for victims of other forms of intentional injury such as child abuse, sexual assault, or attempted suicide. (p. 202)

Preventing firearm injuries is one of the most important elements of the public health approach to preventing juvenile criminal violence. The contribution of public health on this front has been largely “to advance the scientific understanding of ways in which firearm injuries can be prevented” (Mercy, Rosenberg, Powell, Broome, & Roper, 1993, p. 17). This contribution has paid dividends. As noted by Gabor et al. (1996), “Some of the best and most influential research bearing on the firearms/public safety issue over the last ten years has been conducted by specialists in emergency medicine, epidemiology, pediatrics, and psychiatry” (p. 319). This has involved research showing a strong link between firearm availability and homicide in the home (Sloan et al., 1988), the risk that firearm ownership presents to firearm-related deaths and injuries in the home (Kellermann et al., 1993), and underlying patterns of firearm-related violence, including the distribution of gun violence being highly concentrated in space, subgroups of the population are at higher risk of firearm
violence, a subset of firearms is disproportionately involved, and a small, concentrated
group of individuals perpetrate criminal violence involving firearms (Wintemute, 2000; see
also Braga, Cook, Kennedy, & Moore, 2002).

This epidemiological knowledge is being acted on to reduce juvenile gun violence
in the United States. The Boston Gun Project (also known as Operation Ceasefire) is one
example. The program included a direct law enforcement focus on illicit firearms traffick-
ers who supply youth with guns and a strong deterrent threat to gang violence by youths
(Braga, Kennedy, Waring, & Piehl, 2001). A wide range of measures were used to reduce
the flow of guns to young people, including pooling the resources of local, state, and federal
justice authorities to track and seize illegal guns, and targeting traffickers of guns most used
by gang members. The response to youth gang violence was to pull every deterrence lever
available, including shutting down drug markets, serving warrants, enforcing probation
restrictions, and making disorder arrests (Kennedy, 1997). A before-and-after evaluation of
the program showed a 63% reduction in the mean monthly number of youth homicide vic-
tims across the city. In a comparison with the 39 largest cities in the United States (the
majority of which also experienced a reduction in youth homicide rates over the same
period) and 29 large New England cities, it was found that the significant reduction in youth
homicides in Boston was associated with the program (Braga, Kennedy, et al., 2001). Of
great interest is the replication of this program in an area of Los Angeles that suffers from
high rates of juvenile violence, with results of an impact evaluation expected in the near
future (Tita, Riley, & Greenwood, 2003).

Another example of the utilization of research by public-health professionals to
reduce youth gun violence is the Office of Juvenile Justice and Delinquency Prevention’s
Partnerships to Reduce Juvenile Gun Violence Program. Implemented in the highest gun-
crime areas of three cities across the country (Baton Rouge, LA; Oakland, CA; and Syra-
cuse, NY), the program involves suppression (e.g., targeted gun sweeps by police, tracing
of illegal guns), intervention (e.g., conflict resolution training, job training and placement),
and prevention (e.g., gun violence education programs in schools, mentoring) components
(Sheppard, Grant, Rowe, & Jacobs, 2000). An evaluation of the effectiveness of the pro-
gram in reducing juvenile gun violence is under way (Lizotte & Sheppard, 2001).

Schools are a particularly important setting in which health-care providers are often
directly involved in secondary prevention efforts to reduce juvenile criminal violence.
These efforts almost always involve collaborations with teachers or school counselors and
focus on, but are not limited to, students who have been involved in fights or bullying at
school or suspended from school. Some schools employ mental health clinicians to help
students who exhibit symptoms of post-traumatic stress disorder (PTSD) from having per-
sonally witnessed or directly experienced interpersonal violence. In a randomized con-
trolled experiment to test the efficacy of one such program with sixth-grade students in Los
Angeles, which used a short-term cognitive-behavioral therapy intervention, it was found
that after 3 months the intervention group compared with a no-intervention control group
had significantly lower scores on symptoms of PTSD, depression, and psychosocial dys-
function (Stein et al., 2003).

Violence prevention curricula as part of health education classes is one type of pro-
gram that has received much attention in the United States. However, very few rigorous
evaluations of these programs or other instructional-based violence prevention programs in
schools have assessed effects on violent behavior (Gottfredson, Wilson, & Najaka, 2002).
One of these evaluations of a violence prevention curriculum introduced in health education
classes showed a “marginally significant main effect of treatment for fighting in the past
week” among the young people who attended the sessions compared to a control group that did not receive the curriculum (Wilson-Brewer, Cohen, O’Donnell, & Goodman, 1991, p. 48). This program was implemented in a number of urban high schools across the country. The curriculum was designed to do five main things over the course of 10 sessions: (a) provide statistical information on adolescent violence and homicide; (b) present anger as a normal, potentially constructive emotion; (c) create a need in the students for alternatives to fighting by discussing the potential gains and losses from fighting; (d) have students analyze the precursors to a fight and practice avoiding fights using role-play and videotape; and (e) create a classroom ethos that is nonviolent and values violence prevention behavior (Larson, 1994). More evaluations of violence prevention programs in schools are needed.

**Discussion and Conclusion**

This article had two main aims: (a) to review the role that public health currently plays in preventing juvenile criminal violence, with a major emphasis on the U.S. experience and (b) to explore how the law-and-order approach—the dominant response to juvenile criminal violence—can benefit from the involvement of the health community.

Despite public health’s emphasis on prevention and the many benefits this has to offer, not to mention the limitations of punitive measures, the public health approach should be seen neither as a replacement to the law-and-order approach nor as a panacea to dealing with juvenile criminal violence. On the former, Prothrow-Stith (1992) reminded us that the public health approach to the prevention of adolescent violence complements the existing criminal justice approach. Whereas the latter concentrates on incarceration or other punishment for crimes already committed against society, the former seeks to avert those crimes by changing the perception of violence as glamorous and successful and by applying behavior modification techniques to children and teenagers exhibiting high-risk behavior. (p. 207)

Each approach surely has its own strengths and limitations. Recognizing this and drawing on the experience of the other is important. In doing so, and by emphasizing to a much greater degree a public health approach, the makings of a more effective and sustainable approach to preventing juvenile criminal violence can be realized. However, even so, similar to the law-and-order approach, the public health model is ill equipped to ameliorate the social conditions, such as poverty, joblessness, and racism, that are at the root of violent criminal behavior. Ruttenberg (1994) contended that “the public health model promises to be much more effective in reducing the lethality of violent behavior (by addressing the lethality of firearms) than in preventing that behavior” (p. 1888).

Public health is very clear on these points. It is not a panacea to the problem of juvenile criminal violence. It recognizes the complex causes of violence. It emphasizes preventive interventions in collaboration with other key stakeholders to tackle proximal and distal causes of juvenile violence. It is very much about working to change behavior to prevent juvenile violence, either directly through violence prevention curricula in high schools or community outreach activities, or indirectly through home visitation services for new mothers or by providing families with advice and information on effective child-rearing methods. Public health goes a long way toward improving society’s response to preventing and reducing juvenile criminal violence.
NOTES

1. This is based on a rough calculation that includes the finding that the cost of violent crime (not including drunk driving) accounts for 94% of total costs of property and violent crime (Miller, Cohen, & Wiersema, 1996) and that juveniles account for 16% of all violent crime arrests (FBI, 2001): $50 billion × .94 × .16 = $7.5 billion.

2. These figures were not reported by Langan and Levin (2002) but were derived from extrapolations from the full sample of offenders in the study (N = 272,111). It is possible that the rearrest rates for these juvenile offenders may be slightly higher or lower than for the full sample, which is largely made up of adult offenders.

3. In contrast, it is the medical model that is concerned with the “diagnosis, treatment, and mechanisms of specific illnesses in individual patients” (U.S. Department of Health and Human Services, 2001, p. 4).

4. This takes into account that JAMA is published twice as often (weekly) as BMJ and CMAJ (both biweekly). Over this 15-year period, the average number of published articles per year on interpersonal violence were: for JAMA, 3.7; for BMJ, 3.1; and for CMAJ, 1.7.

5. The major delinquent acts were the following: hurt someone who needed bandages, stole something worth more than $50, stole something worth less than $50, trespassed, damaged property on purpose, hit someone because he or she said, carried a weapon, set fire on purpose, and been in fight with gang members (Olds, Henderson, Cole, et al., 1998, p. 1242, Table 4).

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