Prevention of Juvenile Violence: The Role of Public Health

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Faced with any type of social ill, society often has numerous approaches or strategies 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. But not all approaches can be considered sustainable. The world is ripe 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. In the case of criminal violence perpetrated by young people, a serious problem that faces all societies (Krug et al., 2002) and one that poses an immediate and long-lasting threat to the sustainability of communities, cities, and regions -- 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 sustainable future for its young people or the population at large. If, on the other hand, punishment resulted in lower reoffending rates, did not increase the likelihood of offenders becoming more violent, did not exacerbate physical and emotional trauma often suffered by offenders, among other harmful results that punishment can produce, then many of us might have few objections to expanding its already widespread use. But this is not the case at all. Studies abound on the iatrogenic effects of incarceration and there remains little empirical evidence or professional consensus on the ability of prisons to substantially reduce reoffending rates and improve public safety.

In the American juvenile justice system these circumstances are magnified, because secure confinement (or prison) is to be a measure of last resort. All other available measures, such as diversion, probation, or court-ordered treatment, are to be exhausted prior to consideration of a sentence of secure confinement. Yet, juvenile incarceration rates in the U.S. tell a very different story.

It is the position of this paper that the juvenile justice system in the U.S., as it presently functions, represents an unsustainable approach to 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. The justice system stands as a reactive system, one that is waiting to deal with young people who violate the law and to try to prevent the reoccurrence of law violating behavior, largely through the control and management of the offender population. These are necessary and important functions, but they are far from enough to turn the tide on juvenile crime in the U.S., let alone the more acute problem of juvenile violence.

One approach to addressing the problem of juvenile violence that has garnered much attention and support over the last two decades, mostly in the U.S., is a public health approach. This approach is seen not so much as a challenger to law and order, but rather as a complement to it -- 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. And, according to the International Centre for Sustainable Cities (1994, p. 12), it is this focus on prevention that is the
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.

This paper 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.

This paper begins with a look at the nature and extent of juvenile criminal violence in the U.S. today and over recent years, and discusses how juvenile violence represents a threat to the sustainability of communities, cities, and regions. 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 paper 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 U.S. The final part of the paper presents a discussion and concluding comments on future directions for the prevention of juvenile violence.

**Young People, Criminal Violence, and Threats to Sustainability**

This paper 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 intentionally threaten, attempt, or inflict physical harm on others” (Reiss & Roth, 1993, p. 2, emphasis in original). In this definition violence is interpersonal in nature and includes the Federal Bureau of Investigation’s (FBI) Part I or index offenses of murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault, as well as some Part II offenses, such as school fights and gang activity. It is important to note that there are differences between some types of criminal violence perpetrated by youths and adults, such as assaults, which for youths comprise more slaps and pushes than acts resulting in physical injury. In some references to violence in this paper juvenile violence is not the sole focus and the term “violence” is used instead. Political or terrorist violence are not addressed here. Suicide, a form of intrapersonal violence, is also not addressed. For the present purposes, young people or juveniles are those below 18 years of age, which typically means between the ages of 10 and 17.

The consequences of juvenile violence can be destructive and wide-reaching, affecting individual victims, their families, and society as a whole. Death, physical injury, psychological trauma, fear of repeat victimization, and reduced quality of life are some of the very real impacts that can be caused by violence. Rosenberg and Mercy (1991a, pp. 38-39) describe some of the impacts on quality of life associated with violent victimization:

An assault may result in only a minor physical injury but may have a devastating
impact upon the victim’s life in terms of fear, anxiety, and subsequent restrictions in activities and movements. Victims of actual attacks and victims of fear may become quite isolated, and the changes they make in job, home, or patterns of activities may markedly constrict their freedom and lower the quality of their lives. The changes they make in their jobs or homes to increase the sense of personal security constantly remind them of the new fears and restrictions that have become part of their lives. Homicide can have a crippling effect on surviving family members that affects several generations.

Young people are disproportionately involved in criminal activity. In 2000, young people under the age of 18 made up about eight percent of the U.S. population, but they were responsible for about 16 percent of the violent crime arrests and about one-third (32 percent) of the property crime arrests (FBI, 2001, p. 226). Juveniles accounted for nine percent of all murder arrests, 16 percent of all arrests for rape, 25 percent of all robbery arrests, and 14 percent of all aggravated assault arrests (FBI, 2001, p. 226).

Longitudinal studies carried out in Western industrialized countries that follow samples of, typically, boys from their early childhood experiences to the peak of their involvement in criminal activity and beyond consistently show that the frequency of offending reaches a peak in the teenage years and then declines in the twenties (Farrington, 1998). Violent crime arrests peak at around age 18 and property crime arrests peak at around age 16. Age-level crime rates decline substantially after these years, and by the mid-twenties violent crime arrests are about two-thirds and property crime arrests are about one-third of what they were at their peak.

While juvenile violence and juvenile crime in general remain a pressing problem in the U.S., juvenile crime rates have decreased substantially in recent years. This has corresponded with substantial declines in crime rates overall (juvenile and adult combined) (see Blumstein and Wallman, 2000). The juvenile violent crime arrest rate in 2000 was 41 percent lower than its peak in 1994, dropping from 527 to 309 arrests for every 100,000 persons ages 10 to 17. From 1993 (the peak year) to 2000, the juvenile homicide arrest rate dropped by 74 percent, 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 ages 10 to 17 (Snyder, 2002).

Despite these recent declines, juvenile criminal violence continues to present a very real threat to the sustainability of communities, cities, and regions.1 The impact of violence on sustainability has many sources. According to the International Centre for Sustainable Cities (1994, p. 11), 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.

One study put the financial loss to American cities due to crime and violence at $50 billion per year (Mandel et al., 1993). Lost jobs, store closings, fewer people on the streets at
night, a declining tax base due to urban flight -- residents moving to the suburbs -- all contribute to what is described as urban decay. While juvenile violence makes up part of this financial cost, it is not clear how much it accounts for.

The economic costs of juvenile violence are immense. One study estimates that juvenile violence, not including urban decay, costs the United States $158 billion each year (Children’s Safety Network Economics and Insurance Resource Center, 2000). Just less than one-fifth ($30 billion) of this total includes some of the costs incurred by federal, state, and local governments to assist victims of juvenile violence, such as medical treatment for injuries and various forms of counseling and support services for victims. The remaining $128 billion comes from losses suffered by victims and their families, such as lost wages, pain, suffering, and reduced quality of life. Also not included in the total estimate are the costs of society’s response to juvenile violence, which include early prevention programs, services for juveniles, and the juvenile justice system. These costs are unknown.

### Juvenile Justice and Violence Prevention

The juvenile justice system is comprised of three main components: law enforcement, the courts, and corrections, which can also include probation and parole or aftercare. This is the same for the criminal justice system, which deals with adult offenders and youthful offenders who have been transferred from juvenile court. 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, while in the adult system it is punishment of the guilty (Siegel et al., 2003, p. 379).

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 neither about preventing violence in the first instance (before the onset of violent offending), for example, through early childhood programs (primary prevention) nor 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, once an offense has been committed, once someone has been victimized. The 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.) But, when violent offending is the subject, as it is here, a justice response has come to be known as interventions on the part of courts and corrections: interventions of the last resort.

### A More Punitive System

In recent years, 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, p. 87), and a growing
number of juvenile offenders serving time in prison. (In 1999, there were 108,931 juvenile
offenders behind bars, and between 1997 and 1999, the juvenile incarceration rate for violent
offenses grew by five percent, 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:

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. (1998, p. 222, emphasis in original)

Focusing just on violent juvenile offenders, Hagan and Foster add:

... 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. (2001, 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 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. (McCord et al.,
2001, p. 223)

To many, this increased punitiveness in dealing with juvenile offenders, whether they be
violent or not, 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. So what does the research evidence
have to say?

**Correctional Intervention and Juvenile Violence**

In a recent study on recidivism of incarcerated offenders (adults and juveniles) in 15
states, it was found that, of 816 juveniles (ages 14-17 at release), 82 percent or 669 offenders
were rearrested within three years. In the same three-year period, 56 percent were reconvicted,
39 percent were returned to prison with a new prison sentence, and 57 percent were returned to
prison with or without a new prison sentence (includes technical violations). This age group, the
youngest in the study, had the highest rate of recidivism for all four measures (Langan & Levin,
2002, p. 7). Among the juvenile offenders serving time for a violent offense (n=188; 23 percent
of 816 juveniles), 62 percent or 117 offenders were rearrested within three years after release.
The rearrest rates for juvenile property and drug offenders were slightly higher at 74 percent and
67 percent, respectively.²

Other studies confirm these high recidivism rates among juvenile offenders who have
been released to the community following a period of incarceration. In Minnesota, recidivism rates ranged from 53 to 77 percent for youths released from state correctional and private facilities between 1985 and 1991 (Feld, 1998, p. 237). A recent study in Virginia found that 73 percent of incarcerated juvenile offenders were rearrested within three years of release (Howell, 1997, p. 197).

Few studies have investigated the effects of criminal sanctions on juvenile crime rates. A recent study that assessed a 1997 law in Washington State that granted judges more discretion to sentence juvenile offenders to confinement showed 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” (Aos, 2002, 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 nine percent. The most effective of treatment programs for institutionalized juveniles, compared to the usual services, reduced recidivism rates by as much as 40 percent (Lipsey & Wilson, 1998, p. 333).

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 upon 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 I

Public health can mean many different things to many different people. As Krug et al. (2002, p. 3) note, by addressing diseases and conditions and problems affecting health, its 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.”

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. 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 et al., 1996, p. 324).
- As noted above, 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, p. 158).  

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, 1991b, p. 11).

**An Interest in Criminal Violence**

Why has the health community shown an interest in criminal violence and, specifically, juvenile criminal violence? One of the first reasons for this interest is that the “study of mortality and injury is an obvious concern of public health specialists, even where injuries are inflicted deliberately” (Gabor et al., 1996, p. 318). Also, public health perceives intentional criminal violence as more of a “social” rather than “criminal justice” problem. This is because the majority of criminal violence and resulting deaths and injuries take place among family members or acquaintances (e.g., domestic violence, dating violence, school fights). These are problems that are in many ways beyond the reach of the criminal justice system working alone (Rosenberg et al., 1992, p. 3071).

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 U.S., but in other industrialized countries as well. According to the World Health Organization’s (WHO) first *World Report on Violence and Health* (Krug et al., 2002, p. 25), in 2000, there was just under 200,000 youth-perpetrated homicides across the world, for a global rate of 9.2 per 100,000 young people. This translates into a daily average of 565 deaths of children, adolescents, and young adults. The WHO report also estimates that for each youth-perpetrated homicide, there are about 20 to 40 victims of nonfatal youth violence that receive hospital treatment (p. 27).

In the U.S., where the interest of public health in criminal violence has been the strongest (see below for a comparison with other industrialized countries), public health’s interest has also been marked by homicide becoming a leading cause of death in the last two decades. In 1999, homicide was the second leading cause of death among young people between the ages of 15 and 24; for African Americans in this age group and in the 25 to 34 age group, it was the leading cause of death (Centers for Disease Control and Prevention, 2002a, b).

Medical expenditures relating to criminal violence has also been a cause for concern. One study estimated that direct medical expenditures from violent crime (e.g., payments for
hospital and physician care, emergency medical transport, coroner’s costs, funeral expenses) costs the U.S. $13 billion each year (Miller et al., 1996). This works out to about three percent of total annual medical spending and about 14 percent of annual injury-related medical spending. Mental health care services for victims of violent crime costs Americans an additional $5 billion a year (Miller et al., 1996). In the U.S., firearms injuries alone produce $2.3 billion in lifetime medical costs (Cook et al., 1999).

**Public Health and Violence Prevention: Part II**

Before examining how public health’s interest in criminal violence has been translated into action, in the form of preventing juvenile criminal violence, which is discussed next, it is useful to first take stock of how this interest stands today in the U.S. and in other parts of the world.

Over 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. The recent release of WHO’s first World Report on Violence and Health (Krug et al., 2002), with a full chapter devoted to youth violence and its prevention (Mercy et al., 2002), has garnered much attention and will likely increase awareness of juvenile violence as a global public health problem. Although it is too early to say whether the report and its associated regional campaigns to spread its message will lead to action, particularly at the local level, it marks an important first step. This is best reflected in the words of WHO’s Director General, Dr. Gro Harlem Brundtland, “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 recognize the scale of this problem, and encourages us to respond and offers practical means to do so” (2002, p. 2).

In the Americas, PAHO’s efforts on this front date back to 1994 with its sponsorship of the “Inter-American Conference on Society, Violence, and Health”, convened in Washington, D.C. The conference’s “Declaration” called for greater national, regional, and international commitment to the prevention of juvenile criminal violence and violence generally (PAHO, 1994). More recently, PAHO (2000) published an important report, titled *Juvenile Violence in the Americas: Innovative Studies in Research, Diagnosis, and Prevention*.

At a country level, the U.S. is by far the most advanced in its recognition of juvenile violence as a public health problem and in its mobilization of public health resources to address juvenile violence. This is evident on a number of fronts. Since 1983, a permanent branch has existed at the Centers for Disease Control and Prevention (CDC) to carry out research on and fund programs to prevent intentional violence, including juvenile criminal violence; presently, juvenile violence is the mandate of the Youth Violence and Suicide Prevention Team (YVSPT) of the Division of Violence Prevention. Recent activities of CDC’s YVSPT 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, p. 4).

Last year, the 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, 2001). The report brings together leading research
on the magnitude, causes, and prevention of juvenile violence, and sets out a course of action for policymakers, researchers, service and treatment providers, juvenile justice personnel, and citizens. Some of the recommendations include: 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 (U.S. Department of Health and Human Services, 2001, pp. 154-56).

In the two other countries examined for the present 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), but unlike the U.S., 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 (1987-2001) 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 CMAJ and BMJ was substantially lower compared to 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 a recent article titled “Murder and Medicine”, Harris and his colleagues (2002) found that advances in emergency medical technology and care (e.g., development of 911 call system and trauma units at hospitals, improved training for medical technicians) over the last four decades in the U.S. 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 percent per year (Harris et al., 2002, p. 155). This is just one example of the many contributions that the health community has made to a safer, more sustainable society. What follows are a number of primary and secondary prevention measures that public health providers are engaged in to reduce juvenile criminal violence.

Primary Prevention

Primary prevention involves efforts to prevent violent behavior before it occurs; that is, before any signs of it become evident. It aims positively to influence the early risk factors or “root causes” of later 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 towards parents, acting out in school), poor child rearing methods (e.g., poor parental supervision, harsh or inconsistent discipline), low socioeconomic status, and poor school performance or school failure (Rivara & Farrington, 1995). Pediatricians, family physicians, and health nurses, are among the many health care providers that are involved in primary prevention.

According to Rivara and Farrington (1995, p. 422), 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 contact with helpful social service agencies and many of those at greatest risk have few effective advocates other than their physician.” Much of the pediatrician’s role in helping to address some of the above risk factors involves: first, gauging the level of risk through a detailed family history and regular screening for specific problems; and, second, through the provision of advice and educational information, such as parenting tips and links to community resources.

Slaby and Stringham (1994, p. 614) acknowledge the importance of these roles in the lives of at-risk children and families, but also emphasize the need for pediatricians to provide “follow-up support for the changes they make” and “engage[e] in community outreach activities designed to change community norms about violence.” 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, p. 629). This role also stresses a key element of the public health approach to preventing 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 offending is the Prenatal/Early Infancy Project (PEIP), which was started in Elmira, New York, 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: under 19 years of age, unmarried, or low socioeconomic status. In all, 400 women were enrolled in the program. The mothers-to-be received home visits from health nurses during pregnancy and during the first two years of the child’s life. Each home visit lasted about one and one-quarter hours, and the mothers were visited on average every two 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. Fifteen years after the program started, children of the mothers who received home visits had half as many arrests as their control counterparts who did not receive home visits. 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 et al., 1998). Mothers also benefitted from the home visits. Compared to the controls, mothers who received the program had lower rates of child abuse and neglect, police arrests, and substance use, as well as less reliance on welfare and social services (Olds et al., 1998).
Secondary Prevention

Secondary 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., use of 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, p. 202), “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.” But this is not limited to dealing with the physical and emotional trauma suffered by victims of violence. 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. (Prothrow-Stith, 1992, 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 et al., 1993, p. 17). This contribution has paid dividends. As noted by Gabor et al. (1996, p. 319), “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.” 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 possess 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 is “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, p. 70).

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. Violence prevention curriculum as part of health education classes is one type of program that has received much attention in recent years in the U.S. In one program that 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 ten sessions: (1) provide statistical information on adolescent violence and homicide; (2) present anger as a normal, potentially constructive emotion; (3) create a need in the students for alternatives to fighting by discussing the potential gains and losses from fighting; (4) have students analyze the precursors to a fight and practice avoiding fights using role-play and videotape; and (5) create a classroom ethos that is nonviolent
and values violence prevention behavior. An evaluation of the program showed that fighting had been significantly reduced among the young people who attended the sessions compared to a control group that did not receive the curriculum (Larson, 1994).

**Discussion and Conclusion**

This paper had 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.

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, p. 207) reminds 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.

Each approach has its own strengths and limitations. Recognizing this and drawing upon the experience of the other is really what is needed. However, it is important to emphasize that the limitations of the law and order approach far exceed the limitations of the public health approach.

Like the law and order approach, the public health model is ill-equipped to ameliorate the social conditions, like poverty, joblessness, and racism, that are at the root of violent criminal behavior. And some have 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” (Ruttenberg 1994, p. 1888, emphasis in original).

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 and emphasizes preventive interventions in collaboration with others to tackle proximal and distal causes of violence. It is also very much about working to change behavior, either directly through home visitation services for at-risk mothers or violence prevention curriculum for high school students, or indirectly by providing families with advice and information on effective child rearing methods or understanding the benefits of day care.
Author’s Note

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References


Notes

1. While juvenile violence has historically been and continues to be largely an urban or big city problem, recent events, such as the shooting deaths at Columbine highschool in suburban Littleton, Colorado, and trends, such as an increased prevalence of gang activity and violence in smaller towns and rural communities (see Egley and Arjunan, 2002), provide evidence of the widespread nature of juvenile violence in contemporary America.

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. 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. The WHO report defines youths as people between the ages of 10 and 29 years.

5. Victims of criminal violence are also relevant here, because the majority of victims of youth violence are young people.

6. 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.