59. Counseling to Prevent Youth Violence

RECOMMENDATION

There is insufficient evidence to recommend for or against clinician counseling of asymptomatic adolescents and adults to prevent morbidity and mortality from youth violence. Adolescent and adult patients should be screened for problem drinking (see Chapter 52). Clinicians should also be alert for symptoms and signs of drug abuse and dependence (see Chapter 53), the various presentations of family violence (see Chapter 51), and suicidal ideation in persons with established risk factors (see Chapter 50).

Burden of Suffering

Violence has enormous individual and public health consequences. Victims of violence suffer psychological trauma, physical injuries, disability, and death. The most serious manifestations of violent behavior are homicide and suicide (the latter is discussed in Chapter 50).[a] Homicide is the 10th leading cause of death in the U.S.,[1] and because of the young age of its victims is a leading cause of years of potential life lost.[2,3] More than 25,000 Americans (10.0/100,000 population) were murdered in 1992.[1] The age-adjusted homicide rate increased 25% between 1985 and 1991;[4] a decrease of 3.7% occurred between 1991 and 1992.[1] In the 1991 National Crime Victimization Survey, the rate of aggravated (i.e., involving a weapon) assault was 780/100,000 persons over 12 years of age, while the rate for all nonfatal crimes of violence (including attempted and completed rape, robbery, and assault) was 3,130/100,000.[5] In 1 year, aggravated assaults alone accounted for 355,000 hospitalizations, 4 million lost workdays, and $638 million in medical costs.[6]

Persons at greatest risk of violence victimization include young males, minorities (including non-Hispanic black, Hispanic, and Native Amer-

[a]Domestic violence, including spouse, child, and elder abuse, is an important cause of violent injury that is discussed in detail in Chapter 51 and will not be addressed directly in this chapter. It is recognized that interventions targeted toward reducing injuries from youth violence (e.g., reduced gun ownership, training in conflict resolution) also have the potential to reduce injuries due to domestic violence.

ican), persons with a history of delinquent or criminal behavior or of violence victimization, and persons living in poor urban communities.[1,6–15] Nearly half of all homicide victims in 1991 were males aged 15–34 years; most of the increase in homicide rates between 1985 and 1991 was attributable to increased rates in this age group.[4] Young African Americans are at especially high risk for violent injury. Homicide is the leading cause of death in black men and women aged 15–24.[1] In an urban African-American population, the average annual rate of interpersonal violence-related injuries resulting in emergency room visits or death was 3,930/100,000; this rate increased 42% between 1987 and 1990.[16] Interpersonal violence-related injury rates were highest for persons aged 10–39 years, with annual rates ranging from 4,780 to 9,290/100,000. In this study, 41% of 20–29-year-olds had at least one interpersonal intentional injury in the 4-year study period.

Risk factors for violence perpetration are similar to those for victimization, including young age, male sex, minority race, poverty and urbanization, and prior exposure to and victimization by violence.[7,17] These risk factors are highly correlated; for example, minority race is most likely a marker for other factors, such as low socioeconomic status and urban residence, that strongly influence violent behavior. Assailants risk injury to themselves, disrupted personal lives, damaging criminal records, extended imprisonment, and, in some cases, capital punishment. In 1992, 55% of those arrested for murder were under 25 years of age and 15% were under 18.[7] Between 1983 and 1992, the number of juveniles (less than 18 years of age) arrested for murder increased 128% compared to a 7% increase for adults, and the number arrested for aggravated assault (58,000) doubled, compared to a 69% increase in adults.[7]

Firearms, most often handguns, were used in 7 of every 10 murders committed in the U.S. in 1992, and in 25% of aggravated assaults.[7] Because firearm-related homicide rates have increased markedly among teenaged and young adult populations, years of potential life lost attributable to firearm-related homicide has increased by 16% since 1980.[18] Firearm-related assaults account for an estimated 22.4 nonfatal injuries requiring emergency department treatment per 100,000 population per year.[19] In a nationwide survey of high school students, 22% reported that they had carried a weapon and 8% reported carrying a gun during the 30 days preceding the survey.[20]

Efficacy of Risk Reduction

The etiology of youth violence is multifactorial, with complex interactions among personal, family, community, and societal problems.[21–23] While multifaceted community programs to address risk factors such as poverty,

unemployment, and poor schools are likely to be most effective in combating youth violence (see *Discussion*), several risk factors may be amenable to interventions by the individual clinician acting in the office setting. These risk factors include the ready availability of weapons, particularly handguns, that increase the lethality of violent behavior, and inadequate social problem-solving skills and abuse of alcohol and illicit drugs, which may increase the incidence of violent behavior.

Firearm-related violence typically results in more severe injury than violence involving other weapons or no weapons. Evidence that reducing gun availability might reduce the risk of violent injury and death comes primarily from ecologic and observational studies. In national and international comparisons, an increased concentration of firearms (as measured by gun permits issued, gun prevalence indices, new firearms for sale, or surveys of gun ownership) is associated with increased rates of firearm robbery, assault, and homicide, and increased overall rates of homicide and robbery-related homicide.[24–28] Several of these studies suggest a dose-response relationship between gun density and violent outcomes. It is difficult to determine from these types of comparisons what, if any, portion of the association is accounted for by social, cultural, and economic differences among populations. The results of several ecologic studies suggest that race and urbanization may modify the association between gun ownership and homicide.[24,29] This modification might be attributable to factors such as poverty, drugs, and other problems characteristic of urban environments, since in a population-based case-control study of homicides in the home, there were no racial differences in the association between homicide and gun ownership after control for other covariates.[30]

These findings in ecologic studies may have several explanations. People may own or carry guns due to an increased risk of violence victimization; if this were the case, gun ownership or carrying would necessarily be associated with higher rates of violent injury. Many persons give self-defense as one of the most important reasons for owning or carrying a gun, particularly a handgun.[31–34] There are no controlled studies evaluating the effect of youths' carrying guns outside the home on their risk of violence victimization, but several studies have evaluated the risks related to guns in the home. In a prospective case series of home invasion crimes, three victims (1.5%) employed a firearm in self-protection, while in one case (0.5%) the homeowner's gun was used against her; the total proportion of victims who kept guns in the home was not recorded, however.[35] In a case series of gunshot deaths (excluding suicides), guns kept in the home were 18 times more likely to be involved in the death of a household member than in the death of an intruder.[36] Stronger evidence for an adverse effect of gun ownership comes from a population-based case-control study, which demonstrated that keeping a gun in the home significantly in-

creased the risk for homicide after adjustment for other covariates.[30] Nearly 90% of the guns used in these homicides were handguns. No published studies have evaluated whether there is a reduced risk of assault or homicide when people voluntarily relinquish the firearms they own or carry.

While guns may predispose to violence, it also may be that those predisposed to violence are more likely to obtain a gun. In cross-sectional surveys and case-control studies among adolescents, gun possession has been associated with more violent attitudes, increased likelihood of being involved in and starting fights, and prior delinquent or illegal behavior.[37–41] A study of inner-city junior high school students reported significant associations between gun carrying and having been arrested, knowing more victims of violence, starting fights, and being willing to justify shooting someone, suggesting that gun-carrying may be a component of aggressive delinquency, rather than purely defensive behavior.[38] Among suburban youths, gun carrying was associated with having been threatened with a gun, but also with drug and violent criminal activities;[41] involvement in such activities is likely to increase the risk of receiving such threats. Reducing gun accessibility is unlikely to reduce the risk of violence among youth predisposed to violent behavior, but it has the potential to reduce the lethality of this behavior when it occurs.

Legislative approaches to reducing gun availability and use have yielded mixed effects on violent injury. A 1978 Government report on various handgun control laws found no evidence of decreased levels of violence because of gun control measures.[42] In one study, a law banning handguns in an urban area was associated with significantly decreased gun-related homicides and annual firearm homicide mortality rates compared to non-firearm-related cases, and to rates in surrounding suburbs without such a law.[43] This study did not assess other trends and differences between populations that might have contributed to the reported effect, however, nor were long-term effects evaluated. Additional studies are needed to replicate these results and determine their generalizability to other populations.

Increasing the punishment for crimes committed with firearms is another legislative prevention strategy. Multiple time series studies of mandatory sentencing for illegally carrying, concealing, or using a firearm have reported small decreases in firearm violence, generally without compensatory increases in non-firearm violence, although not all such series showed statistically significant effects.[44–46] This type of legislation is unlikely to have a large impact on mortality, however, because most homicides are not committed during the course of other criminal activities.

In 1992, almost half of murder victims were related to or acquainted with their assailants, and arguments, brawls, or other interpersonal conflict

caused at least one third of all murders.[7] Case-control, cross-sectional, and case series studies of homicide and assault victims suggest that interpersonal conflict with family and acquaintances increases the risk of violent injury.[30,47–49] In large cross-sectional surveys of middle and high school students, violent or aggressive attitudes and behaviors have been associated with an increased risk of being involved in physical fights.[37,50] For example, students previously involved in a physical fight were less likely to believe that apologizing or walking away was an effective way to avoid fights. Violent juvenile offenders have been reported to be more inclined to hold beliefs supporting aggression and to have less extensive skills in social problem-solving compared to control adolescents.[51] These data have led some experts to suggest that changing violent or aggressive attitudes and improving conflict resolution skills might reduce the risk of violent injuries.[52–54] Because attitudes toward violence, social behaviors, and interpersonal problem-solving strategies begin to develop in early childhood,[54] however, it is unclear whether skills training directed to adolescents or young adults will have important effects on their behavior. There have been no evaluations of conflict resolution skills training in the clinical setting, so the effectiveness of such interventions for reducing violent injuries remains unproven.

Case series in the U.S. and in other nations show that about half (range 22–60%) of homicide victims have positive blood alcohol levels at the time of death, and that there is also substantial alcohol involvement among perpetrators.[55–66] Most case-control and cross-sectional studies report that individuals who consume alcohol or who are problem drinkers are at greater risk of violence perpetration and victimization,[58,61,62,67–73] although many of these studies did not evaluate other variables that might confound this association. The strongest evidence in support of an association between alcohol and violence in adults comes from a large population-based prospective cohort study using multivariate analysis, in which heavy drinkers (≥6 drinks per day) were 7 times more likely to be homicide victims than were lifelong abstainers.[74] There was also a 4-fold greater risk in those consuming 3–5 drinks per day and a 2-fold greater risk in light drinkers, but these were not statistically significantly different from abstainers. There were insufficient numbers to assess the risk of homicide in ex-drinkers, although the risk for any unnatural death in ex-drinkers was similar to that of light drinkers and abstainers. Similar to gun owners versus non-owners, alcohol drinkers are likely to differ from nondrinkers in other ways, and a causal relationship between alcohol and violence is not established. Nevertheless, these data suggest that there may be a benefit of reducing alcohol intake in preventing violent injury.

Legislative interventions aimed at reducing alcohol intake in young persons by raising the legal drinking age have not reduced homicide

rates,[75,76] but appear to have had little effect on alcohol consumption in the targeted population.[75] In one evaluation of legal drinking age laws, homicide rates increased more than expected in the year drinking became legal, and increased (rather than decreased) as drinking experience increased.[76] Thus, a higher legal drinking age might delay the onset of heavy drinking and associated homicides, but reductions of earlier years may be more than offset by increased homicide rates once access to alcohol becomes legal.

Many victims of violence have evidence of other drugs besides alcohol on toxicologic testing, including cocaine (13–33%), barbiturates (8%), and heroin (3–5%).[15,57,77–79] Adolescent, young adult, and minority homicide victims are more likely to have positive drug screens at autopsy.[15,60,77,78] Evidence for a causal relationship with violence is more limited for illicit drugs than for alcohol. One case-control study found that homicide victims killed in their own home were more likely to have a history of individual or household use of illicit drugs compared with neighborhood matched controls.[30] Several large surveys of high school students have reported associations between illicit drug use and involvement (as victims or perpetrators) in violence.[11,47] In an epidemiologic analysis of homicides in Baltimore, drugs or drug trafficking was involved in 42% of homicides.[80] While it is reasonable to conclude that treatment and referral for substance abuse might contribute to reduced violence, this has not been studied.

Effectiveness of Counseling

Potential victims or perpetrators of violence can be counseled by the clinician in an attempt to prevent future injuries or killings. Specifically, patients can be advised about risk factors, such as possession of firearms and alcohol and substance abuse, that may increase the likelihood of intentional injuries. Persons identified as at increased risk of committing intentional injuries in the future might also be counseled (or referred for counseling) to learn nonviolent approaches to conflict resolution. The efficacy of these measures is largely unstudied, however, and the available evidence is inadequate to determine whether any one of these strategies is successful in preventing subsequent violent injury. An ongoing trial evaluating clinician counseling combined with referral to community resources for adolescent victims of violence (personal communication, D. Stone, June 1994) may provide useful information on the efficacy of clinical counseling to prevent violence.

There is limited evidence regarding the effectiveness of community- and school-based interventions for preventing violence.[81] A number of schools have begun conflict resolution skills curricula, but additional eval-

uation is needed to determine their effectiveness.[82] In one school-based program in inner-city schools, the program produced improvements in knowledge and some attitudes related to aggressive behavior; injury outcomes were not evaluated.[83] A 3-year community and school-based intervention in Central Harlem that targeted both intentional and unintentional injuries was associated with a significant decline in assault injuries in the targeted community, without a corresponding decrease in the control community.[84] There was little apparent effect of the intervention on overall injury rates because of declines in unintentional injuries in the control community.

Recommendations of Other Groups

The American Academy of Pediatrics (AAP) recommends that all clinicians promote the responsibility of the family to create a gun-safe home environment, including counseling patients, parents, and relatives on the dangers of having a gun in the home, and advising removal or secured storage of guns in the household[85] ". . . emphasis should be placed on high-risk homes—those with alcohol or drug-prone or drug-addicted individuals—and those with adolescent boys."[86] The AAP also supports attempts to identify adolescents at highest risk, including those with a history of violence victimization or family or peer violence, substance abuse, depression, or carrying of weapons.[85] The American Academy of Family Physicians (AAFP) recommends counseling adolescents about alcohol and other drug abuse, and counseling adolescents and young adults, especially males, on violent behavior and firearms.[87] The AAFP policy is under review. The American College of Physicians urges physicians to inform patients about the dangers of keeping firearms, particularly handguns, in the home and to advise them on ways to reduce the risk for injury.[88] The College further supports counseling patients to keep guns away from children and recommending the voluntary removal of the gun from the home. The 1985 Surgeon General's Workshop on Violence and Public Health Report recommended education on the association of alcohol with violence, and education of health professionals in identification, treatment, and/or referral of victims, perpetrators, and persons at high risk for interpersonal violence.[89] In 1992, the Assistant Secretary for Health, U.S. Public Health Service, recommended that clinicians offer counsel on the risks of firearms and on conflict resolution skills.[90]

Discussion

Violent injuries and death exact a terrible toll on adolescents and young adults in this country, yet there is surprisingly little evidence on effective in-

terventions. Although youth violence has been associated with alcohol and substance abuse, availability and ownership of guns, and interpersonal conflict, it is not clear whether these factors predispose to violence, or whether those already predisposed to violence are more likely to obtain a gun, use alcohol and illicit drugs, and become involved in conflict. Most evidence suggests a complex, multifactorial relationship among violent attitudes and behaviors, guns, substance abuse, and violent injury. The ability of clinician counseling to change these behaviors is largely unstudied, however.

There is fair evidence that keeping a gun in the home substantially increases the risk of homicide among those living in or visiting the home. Given that guns in the home are also associated with increased risks of suicide (see Chapter 50) and of unintentional injury deaths (see Chapter 58), removal or secured storage of guns in the home is likely to be an effective intervention for reducing injury-related mortality. Current evidence is insufficient to determine whether clinician advice will influence patients to remove or safely store guns, however.

Although the effectiveness of screening followed by brief counseling to reduce problem drinking has not been evaluated in adolescents and young adults, such screening can be recommended based on its proven efficacy in middle-aged adults (see Chapter 52), the limited adverse effects from such screening, and the large potential impact on both intentional and unintentional injuries, including youth violence, suicide (see Chapter 50), motor vehicle injuries (Chapter 57), and household and recreational injuries (Chapter 58).

As with domestic violence (see Chapter 51), the etiology of youth violence is multifactorial, related to social conditions, cultural attitudes, and personal and family characteristics that begin their influence early in childhood.[21–23] Therefore, the clinician acting alone in the medical setting will have difficulty in preventing violent injuries among adolescents and young adults. Comprehensive prevention programs that address multiple contributors to violence are more likely to be effective in combating morbidity and mortality from youth violence but are beyond the scope of this report. Evaluations of a number of multifaceted violence prevention interventions and programs, including several sponsored by the National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, are ongoing. These projects involve such diverse elements as adult mentoring, job training and placement, peer mediation training among “natural leaders” in schools, social skills training, parenting skills training for the parents of at-risk youths, training of neighborhood violence prevention advocates, school-based conflict resolution programs, counseling and education for violence victims, and schoolwide antiviolence campaigns (T. Thornton, personal communication, 1994).[52,81,84] If these types of multifaceted programs prove effective, the most useful role for

clinicians may be to support and act as advocates for such programs in their own communities. Environmental, regulatory, or legislative interventions may also prove to be effective in preventing violence. For example, although they do not reduce violent behavior (i.e., threats and fights), metal detectors in schools appear to reduce the prevalence of carrying weapons to school, which would be likely to reduce the morbidity and mortality resulting from any fight that did occur.[37] Again, the most effective role for the clinician might be to sponsor and support interventions that are proven effective in preventing violent injury.

CLINICAL INTERVENTION

There is currently insufficient evidence to recommend for or against clinician counseling to prevent morbidity and mortality from youth violence ("C" recommendation). Adolescent and adult patients should be screened for problem drinking (see Chapter 52). Clinicians may wish to inform patients (and the parents of child and adolescent patients) of the risk to household members associated with the presence of firearms in the home. Clinicians should also be alert for symptoms and signs of drug abuse and dependence (see Chapter 53), the various presentations of family violence (see Chapter 51), and suicidal ideation in persons with established risk factors (see Chapter 50).

In settings where the prevalence of violence is high, clinicians should ask adolescents and young adults about previous violent behavior or victimization, current alcohol and drug use, and the availability of handguns and other firearms. Clinicians should inform those identified as being at high risk for violence about the risks of violent injury associated with easy access to firearms and with intoxication with alcohol or other drugs.

The draft of this chapter was prepared for the U.S. Preventive Services Task Force by Carolyn DiGuiseppi, MD, MPH.

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