High-profile and tragic mass-murder events committed by teens periodically push youth violence into the national spotlight. Although the high-profile events are uncommon, homicide is still a leading cause of death among youth ages 10 to 24 years in the United States, and 10% of all serious violent crimes do involve a juvenile offender.\(^1,2\) With regard to any homicide, and especially those committed by youths or with youths as victims, we are left wondering if there are ways to prevent these horrible acts.

Due to enhanced awareness of youth violence, primary care providers may be asked to predict violence potential or to recommend treatments to reduce future violence risks. This article provides the primary care provider with strategies to assess youth violence, understand its causes, and manage at-risk youth. Because performing a violence risk assessment can feel overwhelming and can entail inconsistencies and biases,\(^3\) this article also attempts to demonstrate a relatively systematic approach for clinicians.

**TYPES OF VIOLENCE**

One way to characterize violence is to think of the “hot or cold” analogy. “Cold” violence would be premeditated or planned and is often predatory or related to conduct disorder. “Hot” violence would be impulsive rather than premeditated and is often situational or relationship-driven. Be-
cause adolescence is characterized by limited executive functioning during a life period marked by heightened emotional reactivity, it should not be surprising that “hot” or impulsive violence is what predominates. Impulsive violence is typically triggered by an in-the-moment stressor, event, or relationship that the young person perceives to be of vital personal importance, such as being “disrespected” in front of one’s peers.

A third, somewhat-distinct category of violence is that which results from a significant mental or emotional disturbance, such as psychotic illness, bipolar disorder, or major depression. Despite public perception that violence often correlates with mental illness, evidence (including one publication with over 34,000 subjects) suggests severe mental illness alone does not predict violent acts.

CAUSES OF VIOLENCE

Violence is typically an outcome of multiple factors working together. Predisposing biological, psychological, and social issues lay the groundwork, making one more susceptible to the influence of acutely precipitating stressors that precede violent acts. Risk is subject to change and is dependent on the constantly evolving dynamic around an individual.

Biologic risks for violence include genetic factors, chronic abuse-induced brain change, certain mental illnesses, and active substance abuse. Large studies of twins have shown that the genetic contribution to adolescent violence is significant. Male sex and conduct disorder are also relatively strong predictors of violence. Intoxication with substances also elevates risk by itself, but when combined with baseline severe mental illness, risk increases further. Physical abuse in childhood is a strong risk factor and elevates violence risk into adulthood through multiple mechanisms, including changes to brain morphology.

Psychologically, a lack of empathy and antisocial personality disorder are known to be more common in homicide perpetrators than in the general population. Other psychological risk factors include cognitive rigidity, lack of coping skills, and a tendency to attribute hostile intent by others.

It is the accumulation of risk factors, often from multiple domains, that raises the risk of imminent violence.

A history of committing violence is an important predictor of future violence, as it informs us that past risk factors did accumulate sufficiently to lead to an actual violent act and that there is a risk of recurrence. In the National Epidemiologic Survey on Alcohol and Related Conditions, those who had any violence history were three times as likely to commit repeat violence compared with those without a violence history, and four times as likely to commit severe/serious violence. Despite the increased risk, past violence history does not reveal when future violence might occur, and many youth who engage in violent behavior at one developmental stage do not necessarily do so again.

Among social factors, bullying victimhood has now become well known for its correlation with school-based violence. In one study, school homicide offenders were almost three times more likely than other students to have been bullied by a peer. Poor parental monitoring, harsh and inconsistent parental discipline, environmentally modeled use of aggression to solve problems, and living in dangerous neighborhoods are other significant social risks for youth violence.

Access to firearms is another significant factor to consider; in 2010, 73% of homicides in those younger than age 24 years occurred by firearms. Gun access is also associated with teen suicidality and violence.

It is interesting to consider that many of the risk factors historically considered as psychologically or socially predisposing also now might be considered biologically predisposing, given the advancement of knowledge regarding stress and the brain’s structural changes, biochemical changes, and gene-environment interactions that can even impact future generations through epigenetics.

Tracking the various trait-based and fluxing risk factors can help when trying to logically approach risk assessment. It is the accumulation of risk factors, often from multiple domains, that raises the risk of imminent violence. One study showed that compared to peers without risk factors, youths with two to three risk factors were three times as likely to act violently, and youths with five or more risk factors were 10 times as likely to act violently.

Table 1 provides a summary of both predisposing and acutely precipitating risk factors for youth violence.

ASSESSMENT

It is helpful to review confidentiality and its limits before starting...
the assessment (communicating an exclusion for information suggesting a risk to others). Although a provider might be concerned that a patient will reduce their disclosures if aware that information could be shared with others, patients often feel increased trust and openness when they feel the parameters of confidentiality have been honestly disclosed. Many youths expect that information they share with a provider is not confidential anyway (as they are used to communication occurring without their consent between school, home, coaches, family members, etc), and so clarifying the specifics regarding this can be informative, trust-building, and encourage more open discourse.

Nonjudgmental, open-ended, plain language inquiries set the tone for an effective assessment. Inquire directly and specifically about areas of concern, including substance abuse and past violence (eg, “Have you ever used a weapon for violence?” and “Has there been a time when you have almost hurt someone but did not? What helped you stop?”). Stringham and Weitzman recommend asking about the number of fights in the past year, exposure to weapons, violence in dating relationships, and knowledge of skills to avoid a fight. Alpert et al advise asking questions on subjects that are relevant to the FISTS (fights, injuries, sexual violence, threats, and self-defense strategies) acronym.

Always seek collateral information from school, home, and other available sources if possible. Consider the plausibility of a specific threat, how dangerous, how direct, how detailed, the imminence, the level of emotion, and also the level of openness of the individual to finding alternative solutions. For example, if a boy learns his girlfriend is cheating on him, there is a significant difference between him saying “I’m going to kill her” immediately after learning this versus saying the same thing in a less reactionary state of mind followed by actual plans for harm and access to means. Situational factors may be more important than dispositional factors, and often the collusion of multiple situational triggers may need to occur before a violent outcome proceeds. For example, a teen who is susceptible to aggression may never act belligerently to previously borderline-playful teasing within a peer group until the day he/she learns about a poor academic grade, has a major conflict at home, or becomes intoxicated. Rather than trying to determine whether or not an individual is a “violent” person, the challenge is to consider risk in context.

**TABLE 1.**

<table>
<thead>
<tr>
<th>Risk Factors in Youth Violence</th>
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<tr>
<td><strong>Biologic</strong></td>
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<tr>
<td>Static or Predisposing</td>
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<tr>
<td>• Conduct disorder</td>
</tr>
<tr>
<td>• Brain and biochemical changes from abuse and neglect</td>
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<tr>
<td>• Male sex</td>
</tr>
<tr>
<td>• Hyperactivity</td>
</tr>
<tr>
<td>• Genetic vulnerability</td>
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<tr>
<td>Dynamic or Precipitating</td>
</tr>
<tr>
<td>• Akathisia</td>
</tr>
<tr>
<td>• Substance abuse/intoxication</td>
</tr>
<tr>
<td>• Recent psychiatric prescription initiated, changed, or discontinued</td>
</tr>
</tbody>
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| Psychologic                  |
| Extreme or inconsistent discipline |
| Lack of family responsibility |
| Favorable parental attitude toward violence |
| Exposure to violent media |
| Academic failure             |
| Neighborhood crime           |
| Peer pressure (eg, gang involvement) |
| Lack of structured community activities |
| Alienation                   |
| Lack of social support       |

| Social                       |
| Hamiltion or threatened humiliation |
| Victim of bullying           |
| Interpersonal problems       |
| Loss                        |
| Acute stressors              |
| Rejection                   |
| Access to lethal weapons     |
Even with a large number of dynamic and static risks favoring violent action, other protective factors may prevent its occurrence. These might include having an involved and active caregiver, a community support advocate or therapist, or a religious identity that prohibits violence.

Violence prediction is inherently inaccurate because there are such a large number of static and dynamic factors behind the pathway to and timing of acts of violence. Despite that limitation, clinicians can still predict violence with a better-than-chance level of accuracy and should be reassured that their assessment skills are valuable to patients and communities.\textsuperscript{4,24,25} Physicians also do not need to be alone in assessing risks. One should access consultation resources if needed to help clarify and quantify risk in situations of uncertainty. A referral for a more comprehensive violence assessment may be available through a PhD-level counselor or a medical doctor with forensic training.

Use of screening tools could be considered, although they are often not routinely used in primary care practice for violence assessment. Advantages of guidance from a screening tool can include ease of comparison between different time points at which a screening has been completed for a particular patient, and enhanced structure and potential thoroughness. However, screening tools can be misleading when based on inaccurate information (due to report minimization by parent or child to avoid feared consequences). Provider-completed tools include the brief emergency department–oriented Violence Ideation and Suicidality Treatment Algorithm (VISTA) and the more lengthy instruments available for purchase, including the Structured Assessment for Violence Risk in Youth (SARVY), and the Early Assessment Risk Lists for Boys and Girls (EARL-20B and EARL-21G).\textsuperscript{27} A more general screening tool, such as the Child Behavior Checklist or the Pediatric Symptom Checklist, could be considered to screen for functioning difficulties not detected during a focused office-based contact.

**INTERVENTIONS**

If, after assessing the young person’s risk factors in context, imminent intent to harm is found, then steps should be taken to retain the youth in a safe environment until additional assessment can occur. This setting should be the least restrictive one possible in which safety can be maintained. If the patient or guardian will not agree voluntarily to retention for safety purposes, providers can consider use of a temporary hold under local mental health statutes to allow a more thorough evaluation. If there is imminent or likely danger to others and the youth will remain at large and able to act out that plan, professionals then have a “duty to protect” based on the Tarasoff court decisions.\textsuperscript{24} In this setting, confidentiality can be lawfully breached to notify those at risk and others who are in a position to put safety protection plans in place (school, law enforcement, and caregivers).

A risk for imminent harm will not be found in the majority of office-based assessments, but providers may still feel apprehensive about a patient’s potential for future violence. Because violence is due to multiple risk factors working in concert, a methodical intervention can be planned that targets the modifiable risk factors. Providers can consider what elements of the presentation can be improved upon through education, by enhancing the environment, and by treatment. For example, a child with untreated psychiatric disease, social cognitive deficiency, inadequate parental monitoring, frequent intoxication, and access to weapons could experience a significant reduction in violence risk if each of these risk factors became targets for treatment.

Education as an intervention can begin during the office visit, such as through a provider discussing the use of nonviolent strategies to manage conflict and alternatives for managing anger. Providers can set an expectation of prosocial values during the assessment and also in annual physicals through conversations about limiting exposure to violent media and about helping others (from chores in the home to community service).

Referring the child for social skills training can help with learning to navigate social situations with decreased conflict and improved self-agency, reducing the tendency to rely on violence. Enrollment in prosocial environments with adequate monitoring, such as a coached sports league or scouting organization, may enhance social abilities, lessen unsupervised time, increase positive peer connections, and allow observation of appropriate social interactions. Cognitive behavioral therapy can be helpful to examining automatic thoughts (such as attributing hostile intent by others), increasing cognitive flexibility and resilience, and strengthening coping strategies.
Resolving inadequate parental supervision and inconsistent limit-setting is another significant treatment goal. Parents of behavior-challenged children need support and encouragement regarding monitoring and discipline. Referral for behavior therapy and parent guidance can begin the process of learning management strategies or improving existing ones. Interventions to improve parent-child communication and relationships, such as Brief Strategic Family Therapy (University of Miami Health System) and Functional Family Therapy (FFT, LLC), also may reduce aggression.

Multisystemic Therapy (MST Services, Inc.) is a therapy designed for juvenile offenders that has promising results.29 It focuses on systems that surround youths — the domains of home, school, neighborhood, friends, and families. Treatment is based in the community (where an offender is most likely to act) and is designed to increase connections, provide structure, and enhance supports and oversight. If an MST program is not available locally, the principles behind it can guide a treatment plan for a youth identified as high risk. The plan should include increased supervision, monitoring, engagement, and support uniting all realms of the child’s life. Keeping patients in treatment and engaged with the resources around them helps identify fluctuating factors that can lead to periods of enhanced risk.10

If there are any concurrent mental health disorders, such as attention-deficit/hyperactivity disorder or a substance use disorder, utilizing evidence-based treatments for these conditions is an important component of violence risk reduction. Treatment of psychiatric conditions known to be responsive to medications is noted to lead to a decrease in aggressive behavior;30 however, there are no “anti-violence” drugs. Some medications are used for indirect calming effects (eg, alpha agonists) or are approved by the U.S. Food and Drug Administration to target irritability within certain populations (such as risperidone or aripiprazole in autism), but evidence is limited for the efficacy of medications in targeting violence in other pediatric populations, and the medications can have significant adverse effects.31

Access to lethal means is a violence risk factor that should be addressed; for instance, families should be instructed to remove a historically violent youth’s access to firearms. Even if routine inquiries by medical professionals regarding gun ownership are prohibited by law, as has occurred in a few states, providers may still be allowed to ask about gun possession and storage when performing an imminent violence risk assessment. Providers may also provide counsel regarding the known risk elevation with gun access. Such feedback may reduce violence because approximately 75% of parents express a willingness to follow a pediatrician’s advice regarding limiting access to guns in safety discussions.32 Brief counseling by family practitioners does positively improve firearm storage habits.33

The school system may also be able to offer options to improve academic achievement, which is a protective factor against violent behavior. Consider advising the family to request an individualized education plan (IEP) or 504 plan, which may provide tutoring,
alot time for adequate physical activity for positive outlet, reduce access to antisocial peers during the school day, or create a class schedule that reduces time in less-supervised settings. Altering the environment (school and peers) can modify static genetic risk factors. There is a strong association between peer group and violent behavior, as members of non-normative peer groups (such as gang members) become more similar to each other over time.

Consider also encouraging schools and families to explore whether there is a “Child in Need of Services” (CHINS) or “At-Risk Youth Initiative” through their juvenile legal system. As part of these programs, strict consequences are put in place for violation of the probation-type agreements. Because consequences for misbehaviors may involve outcomes such as a stay in a juvenile detention facility, some parents can be reluctant to engage these programs. However, if parental authority over the child has been eroded, this could be a helpful deterrent to further misbehavior.

In addition to creating a comprehensive treatment plan for the individual at risk of violent behavior, significant impact can also be made on a larger scale when physicians become involved in community and school initiatives to create a fair, rational, and standardized method for responding to threats. Because aggressive and defiant children are at risk for violence, one can encourage school and community-based programs that enhance supports and target improved social skills and problem-solving skills in these high-risk groups. School-based violence prevention programs that teach problem-solving and social skills are effective and thus worth promoting. Given the inaccuracies inherent in identifying an individual’s risk of violence, more broad-based school or community efforts (particularly those in communities with multiple risk heighteners) can potentially benefit a large number of youths, including those not yet recognized as potentially dangerous. Table 2 provides a summary of interventions to consider for at-risk youths.

CONCLUSION

Youth violence is a significant problem for individuals, schools, and communities. Primary care practitioners have an important role in identifying and starting treatment for those at risk of violence. A provider’s leadership when dealing with patients and families on an individual level and when guiding community and school initiatives can result in significant improvement to the future of affected individuals (victims and offenders) as well as to community safety. When amenable risk factors are identified and targeted for treatment, violence assessment and risk reduction can be accomplished.

REFERENCES


