Introduction

Youth suicide (i.e., self-inflicted injury resulting in death) and suicide attempts (i.e., self-inflicted injury with intent to die or ambivalent intent) constitute a major public health problem in the United States. Suicide is the third leading cause of death for 15 to 24 year-olds, and the sixth leading cause of death for 5 to 14 year-olds (American Academy of Child & Adolescent Psychiatry [AACAP], 2004; U.S. Centers for Disease Control and Prevention [CDC], 2007). Moreover, the middle teen years mark the period in which most suicide attempts occur, although the rate of suicide among adolescents is lower than the rate for older individuals (McKeown, Cuffe & Schultz, 2006). Males are 4.7 times more likely to complete suicide than females, while females are two to three times more likely to attempt suicide than males (Crowell, Beauchaine & Lenzenweger, 2008).

According to Garland and Zigler (1993), the rate of suicide among adolescents increased from 3.6 per 100,000 in 1960 to 11.3 per 100,000 in 1988. Between 1994 and 2003, the rate of suicide among adolescents declined steadily (McKeown et al., 2006). The CDC reported that 2003 had the largest one-year increase in youth suicide for the preceding 15-year period (2007). In 2005, Virginia’s rate of suicide in youth ages 5 to 14 was slightly higher than the national rate (1.1 per 100,000 in Virginia, compared to 0.7 per 100,000 nationally). Virginia’s rate for those 15 to 24, however, slightly lower (8.49 per 100,000), compared to 10.0 per 100,000 nationally (Virginia Department of Health, 2009; World Health Organization, 2009).

The CDC also reported a change in the methods used to attempt suicide. Firearms were the most common method for both females and males in 1990. However, in 2004, hanging/suffocation was the most common method of suicide for females, resulting in 71 percent of suicides in females ages ten to 14, and 49 percent among both males and females ages 15 to 19 (CDC, 2007). Although the use of firearms has changed for females, firearms remain the most common method of suicide for males (CDC).

There has been increasing attention paid to the issues of suicide and suicide prevention. In response, the U.S. Surgeon General issued a "Call to Action" in 1999, emphasizing the need for greater awareness of this national problem (U.S. Department of Health and Human Services, 2001). Shortly thereafter, the Department published National Strategy for Suicide Prevention to address issues such as collaboration with agencies and stakeholders (Vetter, 2002).
While non-suicidal self-injurious behavior (NSIB) is serious, the individual’s intention and ambivalence about the outcome distinguish it from suicidal behavior (Miller, Rathus & Linehan, 2007). This disorder is discussed in the “Non-Suicidal Self-Injurious” section of the Collection.

Risk Factors
The following paragraphs discuss a range of characteristics and factors associated with the risks of youth suicide.

Individual/Demographic Characteristics
Research on who commits suicide clearly indicates that adolescent females attempt suicide at a rate two to three times higher than adolescent males, but that males are nearly five times more likely to die from their suicide attempts (Crowell, Beauchaine & Lenzenweger, 2008; Spirito & Overholser, 2003). For the most part, the rate of suicide increases with age during childhood and adolescence (Spirito & Overholser).

While the rate of suicide attempts varies slightly from study to study, research indicates that African American and Latino youth have a higher rate of suicide attempts than Caucasian youth; however, the rate of suicide attempts requiring medical attention is very similar among these groups (Spirito & Overholser, 2003). Gould, Shaffer & Greenberg (2003) indicate that the rate of suicide is higher among Caucasian youth than their African American counterparts. Historically, suicide rates have been high among Native American youth, as much as 20 times the national average for some groups (AACAP, 2000).

Evidence of any link between socioeconomic status and suicide is sparse and difficult to interpret. Gould et al. (2003) report that one study that looked at the socioeconomic status of youth who committed suicide and found no difference, while another study found that low income Latino and Caucasian youth and middle income African American youth had higher rates of suicide than their counterparts in higher income groups.

Psychological Characteristics
There are a number of psychological disorders associated with increased risk of suicide. These include major depressive disorder (MDD), bipolar disorder, substance abuse, and conduct disorder (CD) (McKeown, Cuffe & Schultz, 2006). In addition, more than 90 percent of the adolescents who commit suicide suffered from at least one psychiatric disorder at the time of death (AACAP, 2000; Gould et al., 2003). More than half had suffered from a psychiatric disorder for at least two years preceding the event (AACAP). Depression has been consistently identified as the most common psychological disorder among adolescents who have committed suicide (Gould et al.). Additionally, there is a high prevalence of substance abuse among older adolescents, particularly males, who commit suicide (Gould et al.). There is also a particularly high prevalence of co-occurring depressive disorders and substance abuse among those who commit suicide (Gould et al.). High risk factors of future suicide attempts include a history of suicide attempts and non-suicidal self-injurious behavior (NSIB). Another strong predictor is suicidal or homicidal ideation (McKeown et al.; Miller, Rathus & Linehan, 2007; Spirito & Overholser, 2003).

Youth most at risk of attempting suicide are likely to have recently experienced stressful life events, such as school and work problems, legal problems and interpersonal conflict (Gould et al., 2003). The research cited suggests that parental divorce and strained parent-child relationships may be factors, after accounting for parent and youth psychopathology (Gould et al.). One study cited by Virginia Department of Health’s Suicide Prevention Resource Center reported that 35 percent of youth suicides occurred the same day those youth experienced a crisis, such as a relationship breakup or an argument with a parent (2006). Youth diagnosed with a mental disorder may be faced with a greater number of stressful events and may also perceive events as being more stressful than those not having
a diagnosed mental disorder (AACAP, 2000). It can be difficult to discern whether stress is a result of a mental disorder or is related to events with which youth are unable to cope (AACAP).

**Other Risk Factors**

There are a number of environmental factors and distressing experiences associated with increased risk of suicide. McKeown, Cuffe and Schultz (2006) found that the presence of firearms in the home is significantly associated with higher rates of suicide. This is in line with findings by Gould et al., that firearms account for the greatest number of suicides among older youth and young adults (2003).

There is strong research evidence to suggest that abuse, both physical and sexual, is associated with increased risk of youth suicide (Gould et al., 2003). There is growing, though inconclusive, evidence for a contagion effect for youth suicide (Gould et al.). Some studies have found that the suicide rate among adolescents rises following a highly publicized suicide.

Family environment and genetic factors are associated with increased risk for suicide among youth. Additionally, family history of suicide and suicide attempts and parental psychopathology are associated with increased risk for youth suicide (Gould et al., 2003). Even after accounting for the effects of parental psychopathology, completed suicide by the mother corresponded with a fivefold increase in suicide by offspring, while completed suicide by the father corresponded with a doubling in suicide by offspring (Gould et al.). Studies conducted with twins indicate that at least part of this increased suicidal risk could be attributed to genetic factors (Gould et al.).

**Assessment**

Every psychological assessment by a clinician should include an assessment of the youth’s risk of suicide (Lloyd-Richardson, 2008; Nock, Teper & Hollender, 2007). Clinicians should keep in mind that, while parents are an important source of information, research has shown that parents tend to underreport their children’s non-suicidal self-injurious behavior (NSIB) (Nock, Holmberg, Photos & Michel, 2007), thus making direct assessment critical. Clinicians should further evaluate every youth reporting suicidal ideation (i.e., thoughts of suicide), even though thoughts about death are relatively common among youth and do not always indicate severe psychopathology (AACAP, 2000). While suicide ideation is an important indication of risk for suicide (90 percent of youth who attempted suicide had previously reported suicide ideation), not every youth who reports thinking about death, hurting themselves or ending their lives will attempt suicide (Spirto & Overholser, 2003). The severity of hopelessness, isolation, suicidal ideation, and hesitation to discuss their suicidal thoughts are factors that may differentiate between youth who only contemplate death and suicide and those who, in fact, attempt to kill themselves.

The AACAP (2000) has provided guidelines for the assessment of suicidal risk among children and adolescents. These are minimal standards which, by definition, are expected to apply in almost all cases and instances where these standards are not followed should be supported in the medical record. These are outlined in Table 1.

In addition, there are a number of standardized suicide measures that range from long and comprehensive to short screeners. These are described in Table 2.
Table 1

Assessment Guidelines

Important questions to ask when conducting a youth suicide assessment:

To what degree is the youth in a high risk for suicide group?
- Are they male? (*Males are higher risk than females.*)
- Have they made past suicide attempts?
- Do they have a mood disorder?
- Do they use substance? *(among males)*
- Are they older than 16? *(among males)*

To what degree is the youth who has attempted suicide at high risk for suicide?
- Are they still thinking about committing suicide?
- Have they made past suicide attempts?
- Did they use a method other than ingestion or superficial cutting?
- Are they older than 16?
- Are they male?
- Are they living alone?
- Are they currently depressed, manic, hypomanic, severely anxious, or a combination of these?
- Do they use substances?
- Are they irritable, agitated, delusional, or hallucinating or have they threatened violence against others?

*If there is a recent history of suicidal ideation or suicidal behavior, the youth should continue to be monitored.*


Table 2

Summary of Assessment Tools

<table>
<thead>
<tr>
<th>Assessment Tool</th>
<th>Type</th>
<th>Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicide Ideation Questionnaire (SIQ)</td>
<td>Self-Report</td>
<td>Variable</td>
<td>A self-report measure that assesses suicidal thoughts (15 questions for youth in grades 7-9; 30 for youth in grades 10-12)</td>
</tr>
<tr>
<td>High School Questionnaire (SRS and MAPS)</td>
<td>Self-Report</td>
<td>Variable</td>
<td>SRS is a short screener for suicidality; MAPS is a 2-hour computer-administered assessment of risk and protective factors.</td>
</tr>
<tr>
<td>Imminent Danger Assessment</td>
<td>Clinical interview</td>
<td>20-30 minutes</td>
<td>Aids clinicians in determining the imminent danger of suicide</td>
</tr>
<tr>
<td>Schedule for Affective Disorders (K-SADS)</td>
<td>Clinical Interview</td>
<td>2.5-3.0 hours</td>
<td>A semi-structured diagnostic clinical interview designed for use with youth that provides a systematic approach for evaluating suicidality</td>
</tr>
<tr>
<td>Diagnostic Interview Schedule for Children (DISC)</td>
<td>Clinical Interview</td>
<td>1.5-2.0 hours</td>
<td>A structured diagnostic clinical interview that can be used to evaluate suicidality</td>
</tr>
</tbody>
</table>


The Suicide Ideation Questionnaire (SIQ) (Spirito & Overholser, 2003; Goldston & Compton, 2007) is a short self-report questionnaire that includes versions for both younger and older youth and addresses frequency, intensity, duration, and specificity of suicidal thoughts (Spirito & Overholser). The High School Questionnaire is a multi-component questionnaire comprised of the Suicide Risk Screen (SRS) and the Measure of Adolescent Potential for Suicide (MAPS) (Goldston & Compton, 2007). The SRS is a brief measure that assesses past suicidal behavior, suicidal thoughts, and psychopathology.
(Thompson & Eggert, 1999). MAPS - a computer-administered, self-report measure - can decrease the likelihood of suicide (Spirito & Overholser, 2003). This questionnaire assesses the following:

- direct risk factors, including exposure to suicidal behavior, attitudes/beliefs about suicide, suicide ideation, suicide plans, and past suicide attempts;
- related risk factors, such as anger, anxiety, depression, and hopelessness; and
- protective factors, including support, self-esteem, coping, and personal control.

The drawback to the MAPS is its length, which is two hours for administration of the full measure.

Bradley and Rotheram-Borus developed the *Imminent Danger Assessment*, a clinical interview to assess a youth’s imminent risk of suicide (Goldston & Compton, 2007). The interview consists of five tasks, each providing information about the youth’s level of risk and ability to remain safe (Goldston & Compton). The tasks ask the youth to:

1. identify positive aspects about himself or the future;
2. use a feeling thermometer to identify emotions, particularly emotions that lead to suicidal thoughts or feelings;
3. generate alternative coping strategies for situations that provoke suicidal feelings and thoughts;
4. identify three supportive individuals from whom they could seek support from if they feel that they cannot keep themselves safe; and
5. agree to keep themselves safe and tell someone he/she feels unable to keep themselves safe (Goldston & Compton).

The Imminent Danger Assessment provides the clinician with the following information about the youth:

- degree of hopelessness;
- ability to identify their emotions so that they can seek support prior to becoming suicidal;
- reason for saying that they are not suicidal (is the adolescent truly no longer suicidal or are they saying that they are no longer suicidal to avoid further discussion about the state of mind or to avoid hospitalization);
- ability to identify their support system; and
- ability to cope with suicidal tendencies (Goldston & Compton, 2007).

The Schedule for Affective Disorders (K-SADS) and the Diagnostic Interview Schedule for Children (DISC) are both diagnostic clinical interviews with extensive sections assessing suicidality (Goldston & Compton, 2007). The K-SADS is a semi-structured clinical interview that prompts the clinician to ask about suicidal ideation, non-suicidal self-injurious behavior, history of suicide and other related topics (Goldston & Compton). The DISC prompts the clinician to ask about the same topics in a more structured manner (Goldston & Compton).

**Promising Practices in Youth Suicide Prevention**

Currently there are no treatments which have been deemed evidence-based; accordingly there is no table summarizing evidence-based treatments provided. Despite limited literature, however, there is research to support the use of some techniques over others. The following paragraphs summarize the literature regarding treatment focus, crisis management, and on-going treatment.

In a review of the literature on treatments for suicide ideation, suicide attempts, and non-suicidal self-injurious behavior in both youth and adults, treatments which target suicidal behavior directly are shown to be effective (Miller, Rathus & Linehan, 2007). There is little research to support the effectiveness (as measured by number of suicide attempts or lethality of attempts) of treatments focusing on depression, bipolar disorder, and other underlying disorders associated with suicide (Miller, Rathus & Linehan). Spirito and Overholser note that, while it is important to treat the underlying psychopathology, such treatments do not necessarily reduce suicidal behavior (2003). In a related finding, a study looking at the outcome of two types of treatment for suicidal females, the treatment that focused directly on suicidal behavior—Dialectical Behavior Therapy—outperformed the treatment for
the control group—community treatment by an expert therapist—in reducing suicide attempts. The treatments, however, did not differ in their effect on depressive symptoms (Linehan et al., 2006).

**Crisis Management**

According to the AACAP, clinicians should be prepared to hospitalize suicide attempters who express a persistent wish to die or are exhibiting symptoms of severe mental disorders. Discharge should occur only after the following three issues have been addressed:

1) making certain adequate supervision is available;
2) ensuring that the level of suicidality has stabilized; and
3) gaining assurance that the youth’s environment will be rid of all potentially-lethal items, such as guns or medications by having an explicit conversation with the youth and parent or caregiver about the importance of securing such items. (2000)

When working with youth at high risk for suicide (particularly during the period following a suicide attempt), therapists must be available 24 hours per day, or arrange an on-call system or equivalent system, and repeatedly assess the youth’s state of risk (Spirito & Overholser, 2003). Additionally, parents need to be directed to increase the level of supervision provided the youth.

**On-going Treatment**

AACAP (2000) states that psychotherapy, while not by itself an evidence-based practice, is an important component to the treatment of suicidality in youth. A minimum standard of therapy should be adapted to the individual and that Cognitive Behavioral Therapy (CBT), Dialectical Behavioral Therapy (DBT), Interpersonal Therapy for Adolescents, Psychodynamic Therapy and Family Therapy are all options when choosing a treatment modality (AACAP). However, as previously noted, research is sparse with this population.

**Pharmacological Treatment**

The U.S. Department of Health and Human Services (2001) has outlined pharmacological interventions thought to be effective in reducing suicide. However, it must be emphasized that any medications prescribed to a suicidal youth must be carefully monitored by a third party such that any change of behavior or side effects can be immediately reported. New interventions are being developed and tested for the treatment of disorders associated with suicidal behaviors. Since few studies of treatments for mental disorders have included youth with suicidal behaviors, treatments need to be assessed for their potential to reduce suicide. Furthermore, after the youth is thoroughly assessed for any mental disorders, the clinician must tailor the pharmacological interventions to any disorders which may have been diagnosed.

**Antidepressants and the Risk of Suicidal Behavior**

According to the AACAP, selective serotonin reuptake inhibitors (SSRIs) may be successful in reducing suicidal ideation and suicide attempts in non-depressed adults with certain personality disorders (2000). However, it is necessary to closely monitor youth taking SSRIs, as there is some evidence which suggests that SSRIs can increase suicidality in youth and young adults under age 24 (Hammad, Laughren & Racoosin, 2006). A more detailed discussion of the use of antidepressants in treating children and adolescents is included in the “Antidepressants and the Risk of Suicidal Behavior” section of the Collection.

**Unproven Treatments**

The paragraphs which follow discuss treatments for youth suicide which are unproven and contraindicated.

**No-suicide Contracts**

The first discussion in the literature regarding the use of so-called no-suicide contracts was in 1973. These contracts were explicitly designed to be used for assessment purposes in much the same way
as they are used in the *Imminent Danger Assessment* discussed under Assessment (Goldston & Compton, 2007). Due in part to the complications and ethical concerns of conducting research on suicidal patients, the literature on the effectiveness of these contracts is inconclusive (McMyler & Pryjmachuk, 2008). McMyler and Pryjmachuk reviewed the literature and summarized the findings from ten empirical studies, all of which have significant methodological flaws. Further, the studies’ results were diverse, with some suggesting that using the contract reduces suicidal behavior and others suggesting that they increase suicidal behavior (McMyler & Pryjmachuk). Goldston and Compton discourage using no-suicide contracts and instead encourage developing a collaborative safety plan with their patients which identifies steps the patient can take during times of high suicidal risk, but avoids agreements that could be perceived as coercive.

**Contraindicated Treatments**

Tricyclic antidepressants are not recommended for use with suicidal youth, as their effectiveness has not been demonstrated (AACAP, 2000). Additionally, they are potentially lethal due to the small difference between therapeutic and toxic doses (AACAP). Medications, such as the benzodiazepines and certain barbiturates, should be used with great caution as they may result in disinhibition or impulsivity (AACAP).

**Sources**


VIRGINIA CRISIS CENTERS
Information provided by Virginia Department of Health Suicide and Youth Violence Prevention Program
and local providers. [February 2010]

ACTS Helpline
Hotline: 703-368-4141
   Serving Prince William County, Manassas City and Manassas Park
   P.O. Box 74 — Dumfries, VA 22026
   http://actspwc.org/wp/?page_id=259

Concern Hotline
Clarke Hotline: 540-667-0145
Frederick Hotline: 540-667-0145
Page Hotline: 540-743-3733
Shenandoah Hotline: 540-459-4742
Warren Hotline: 540-635-4357
Winchester Hotline: 540-667-0145
   P.O. Box 2032 — Winchester, VA 22604
   http://www.concernhotline.com

The Crisis Center
Hotline: 800-273-TALK (8255)
   100 Oakview Avenue — Bristol, VA 24201
   http://www.crisiscenterinc.org

Crisis Line of Central Virginia
Teen Talk: 434-947-7277
Chatterline: 434-947-KIDS (5437)
Crisis Line: 434-947-HELP (4357)
Suicide: 800-273-TALK (8255)
   P.O Box 3074 — Lynchburg, VA 24503

Crisis Line of Norfolk
Hotline: 800-273-TALK (8255)
   P.O. Box 3278 — Norfolk, VA 23514

CrisisLink
Hotline: 703-527-4077
   2503D N. Harrison Street, #114 — Arlington, VA 22207
   http://crisislink.org

Madison House
www.madisonhouse.org
Hotline: 434-296-TALK
   170 Rugby Road — Charlottesville, VA 22903

The Raft Crisis Hotline
Hotline: 540-961-8400
   700 University City Boulevard — Blacksburg, VA 24068
   www.nrvcs.org

Crisis Response Team
Trained in an internationally recognized crisis response model by the National Organization for Victim Assistance
to offer immediate assistance to the Greater Washington, DC community in the event of natural and manmade
disasters, including acts of terrorism, transportation and industrial accidents, suicide and homicide. Its immediate
goal is to reclaim a sense of safety and security. The Team helps victims through the process of restoring order
to a chaotic situation and gives them the information and resources needed to continue with the healing process.
Organizations

American Association of Suicidology
1-800-273-TALK (8255)
http://www.suicidology.org/home
For information about the School Suicide Prevention Accreditation Program, go to http://www.suicidology.org/web/guest//certification-programs/school-professionals.

American Foundation for Suicide Prevention
https://www.afsp.org

Children’s Safety Network
http://www.childrensafetynetwork.org

Jason Foundation, Inc.
http://jasonfoundation.com

The Link's National Resource Center for Suicide Prevention
http://www.thelink.org

National Alliance for the Mentally Ill (NAMI)
http://www.nami.org

National Organization for People of Color against Suicide (NOPCAS)
P.O. Box 75571 - Washington, DC 20013
http://www.nopcas.com

National Suicide Prevention Lifeline
800-SUICIDE (784-2433) (Toll-Free 24 hours/7 days a week)
800-273-TALK (8255)
TTY: 1-800-799-4TTY (4889)
http://www.suicidepreventionlifeline.org

National Youth Violence Prevention Resource Center
http://vetoviolence.cdc.gov/stryve

Suicide Awareness/Voices of Education (SA/VE)
http://www.save.org

Suicide Prevention Action Network USA, Inc. (SPAN)
http://capwiz.com/spanusa/home

Suicide Prevention Resource Center (SPRC)
http://www.sprc.org

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention (CDC)
National Center for Injury Prevention and Control
Suicide Prevention Activities
800-CDC-INFO (232-4636)
http://www.cdc.gov/ncipc/dvp/PreventingSuicide.htm

Substance Abuse and Mental Health Services (SAMHSA)
http://www.samhsa.gov

National Strategy for Suicide Prevention
http://store.samhsa.gov/home
Virginia Department of Health
Division of Injury and Violence Prevention
P.O. Box 2448, 109 Governor Street — Richmond, VA 23219
804-864-7736

For the Virginia Suicide Prevention Resource Directory, go to

Youth Suicide Prevention Program (YSPP)
http://www.yspp.org