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# Suicidal Behavior in Children Younger than Twelve: A Diagnostic Challenge for Emergency Department Personnel

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## Abstract

Suicide is one of the leading causes of death in children younger than 12 years and is the fourth leading cause of death in 12 year olds. Increasing numbers of young children now present to the emergency department (ED) with mental health issues, and ED personnel must determine the most appropriate disposition options for these children, sometimes without the assistance of specialty mental health services. Much of the present body of literature describing suicidality fails to separate children from adolescents for analysis and discussion. This article reviews relevant literature pertaining to suicidal thoughts and behaviors in young children and discusses problems with available data, as well as epidemiology, risk factors, typical motivations, methods, assessment, and disposition for these patients. Suicidal children younger than 12 years are often clinically different from suicidal adolescents and adults and may require unique assessment and disposition strategies in the ED. A child who has ideation without a clear plan, or has made an attempt of low lethality, can sometimes be discharged home, provided that a supportive, responsible caregiver is willing to monitor the child and take him or her to outpatient mental health appointments. If the home environment is detrimental, or the child has used a method of high potential lethality, inpatient treatment is the most appropriate course of action. Mental health specialty services, when available, should be used to help determine the most appropriate disposition.

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**Keywords:** child suicide, intentional self-destructive behavior, youth suicide, intentional death, suicidal children

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From both a child safety and an emergency department (ED) perspective, suicidal behavior in young children is a concern. This phenomenon is more frequent among children younger than 12 years than previously realized.<sup>1-4</sup> It was once assumed that young children were not capable of either contemplating or performing suicidal acts; however, a growing body of research has shown that young children do plan, attempt, and successfully commit suicide.<sup>3,5-7</sup> This article addresses several issues, including problems with defining and determining the rates of childhood suicide, relevant risk factors, methods of suicidal behavior, and strategies

for assessing suicidality in this population. We also suggest strategies for disposition for this special population group.

Such information is important for emergency physicians and other personnel who will likely encounter prepubescent children at risk for suicidal behavior. Increasing numbers of children now present to the ED with mental health issues.<sup>8</sup> In addition, the rate of ED visits for attempted suicide for children younger than 14 years is comparable to the rate of visits for individuals aged 50 years and older.<sup>9</sup> ED personnel are increasingly charged with determining the most appropriate disposition options for these children, sometimes without the assistance of specialty mental health services.<sup>10,11</sup>

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## BACKGROUND

For this article, MEDLINE, Cochrane Library, National Electronic Library for Mental Health, and PSYCHINFO searches were completed to identify relevant empirical publications and case literature. Reference sections of published articles were also searched.

Historically, most child development specialists believed that children could not have suicidal thoughts or

engage in suicidal behaviors because they could not develop a mature concept of death, including the concept of finality, until at least 10 years of age.<sup>7,12</sup> Prepubertal children primarily engage in concrete operational thinking, which leads to rigid cognitive patterns and limited ability to problem solve or create multiple solutions to problematic situations.<sup>13,14</sup> As a result, their concepts of causality are not yet fully developed and they are “not able to estimate degrees of lethality or outcomes of their self-destructive acts.”<sup>13</sup> In addition, many children in this age range do not have the abstract thinking skills necessary to consider existential issues or think about the consequences to others of an attempted suicide.

Scientific literature suggests that children as young as preschool age can display suicidal behavior and thinking.<sup>12,15–20</sup> Most child development specialists now agree that the essential quality of suicidality is the intent to cause self-injury or death, regardless of the cognitive ability to understand finality, lethality, or outcomes.<sup>3,12,13</sup> In this article, we rely on Pfeffer’s definition of suicidality in children: “thoughts and/or actions that if fully carried out may lead to serious self-injury or death.”<sup>21</sup>

Specific data describing suicidality in young children are relatively scarce and inconsistent.<sup>6</sup> The problems with these data may be due in part to the ideas described previously, that children are too cognitively and/or developmentally immature to express suicidal feelings. Other reasons for the lack of these data in children younger than 12 years include underreporting of known suicides (particularly by parents) and mistaken classification of completed suicide and attempts as accidents.<sup>1,22–29</sup> For example, McIntire et al. examined self-poisoning events in children.<sup>25</sup> These investigators found that only 13% of 1,103 cases in children aged 6–18 years were unintentional poisonings. When detailed follow-up information was obtained for 50 consecutive cases, only two out of 50 events continued to be classified as accidents. Data focusing specifically on young children were especially disturbing. Children aged 6–10 years ingested sedatives at twice the rate of 4 year olds. In addition, seven out of eight cases of children aged 5–10 years of age involved intentional self-poisoning.

It is widely recognized that suicide completion rates fail to capture the true scope of suicidality in all age groups; therefore, current data are likely an underestimate of the prevalence of this problem for children younger than 12 years.<sup>2,24</sup> In 2003, suicide rates were 0.0 per 100,000 for ages 0 to 4 years, 0.6 per 100,000 for ages 5 to 14 years (250 deaths), and 9.7 per 100,000 for ages 15 to 24 years (3,988 deaths). According to the same report, 68 children younger than 12 years committed suicide. The youngest child was aged 5 years, and five 9 year olds also committed suicide.<sup>30</sup>

The suicide rate for children ages 5 to 14 years skyrocketed in the past (an increase of 267% from 1970s rates of 0.3 per 100,000 to rates of 0.8 per thousand in 1986). This rate then decreased in 1996 (302 deaths) to current levels (250 deaths).<sup>6</sup> Even with this decrease, suicide remained the 12th leading cause of death among children 12 years and younger in 2003. In addition, suicide was the fourth leading cause of death for 12 year olds.<sup>30</sup> It is unclear how many of these children presented to the ED, because place of death was not included in these data.

Estimating the true numbers of suicide attempts in young children is also difficult, because there are no national databases or official figures for any age group.<sup>10,31</sup> In addition, meta-analyses are difficult to compile due to variation in age group definitions and conflicting definitions of “suicide attempt.”<sup>31</sup> Another problem with existing literature is its focus on adolescents and young adults; only a few studies examine the rates of attempted suicide for prepubertal youth.<sup>32,33</sup> Again, keeping data limitations in mind, the rate of ED visits for attempted suicide for children younger than 14 years is approximately 0.5 per 1,000 visits.<sup>9</sup> Another study found that 1% of school-age children reported a recent suicide attempt and 2% reported suicidal threats.<sup>34</sup>

Studies examining suicidal ideation in young children also demonstrate some variability in frequency estimates and differences in age groupings. Gould et al. found that 1.9% out of their sample of 1,285 randomly selected children aged 7–12 years reported suicidal ideation.<sup>35</sup> In contrast, Thompson et al. found that approximately 10% of their sample of 1,051 8 year olds expressed suicidal ideation.<sup>36</sup> It is not surprising that the participants in the study by Thompson et al. displayed a higher level of suicidal ideation, because this sample consisted of children who had previously been or were currently at high risk for maltreatment and/or abuse.

## RISK FACTORS

In his classic study, Shaffer described the characteristics of 30 young suicide completers.<sup>37</sup> These children were very intelligent, socially isolated, aggressive, suspicious, physically precocious, and highly vulnerable to criticism. In addition, child suicide completers displayed antisocial behavior and problems in school. Mothers of these children tended to have psychiatric problems themselves. Generalizability of Shaffer’s results is somewhat limited, because his sample of children was 12–14 years of age. In addition, later studies suggest that IQ is not a predictor of youth suicidality.<sup>38</sup>

Relatively few contemporary investigators have published information on risk factors for suicidal behavior in young children.<sup>6,33,34,38,39</sup> However, there are multiple case series available.<sup>12,16,40–42</sup> Based on this literature, some tentative conclusions can be drawn. Child suicide completers seem to experience fewer risk factors than late-adolescent completers.<sup>33</sup> However, ED personnel cannot discount the importance of the presence of risk factors as a reason to initiate a suicide assessment.

The following risk factors have been linked to suicidality in young children and should prompt a more thorough suicide screening: previous suicide attempts, presence of psychiatric disorders and psychopathology, preoccupation with death, and family history of psychopathology and suicidal behavior. Environmental/contextual and demographic factors also play a role in childhood suicidality.

### Previous Suicide Attempts

Once a child has made a suicide attempt, the risk that he or she will eventually complete suicide increases significantly.<sup>42,43</sup> Prepubertal children who have attempted suicide previously may be up to six times more likely to

attempt suicide in adolescence, as such behavior “may begin with relatively low intent and lethality and increase in crescendo-like fashion with age.”<sup>44</sup> Rosenthal and Rosenthal examined 16 suicidal preschoolers (2.5 to 5 years old) who were referred to a child psychiatry outpatient clinic after attempting to seriously injure themselves.<sup>39</sup> Three children had made a single previous suicide attempt, and 13 had made multiple attempts.

### Presence of Psychiatric Disorders and Psychopathology

Children who exhibit psychiatric disorders also run a high risk for suicidality. Children with affective disorders, disruptive/conduct disorders, and schizophrenia, as well as symptoms of psychotic or delusional thinking, are more likely to display suicidal behavior than children without these disorders.<sup>6,33,35,44–48</sup> However, the rates of psychopathology in suicidal young children are somewhat surprising. Suicide completers younger than 15 years have a lower rate of affective and substance abuse disorders than older adolescents.<sup>33,48–50</sup> In contrast, the prevalence of disruptive disorders in suicidal children is about the same as in suicidal adolescents.<sup>33</sup>

Increasing attention has been focused on the link between bipolar disorder and suicidality; there is an extremely high risk of suicidal ideation and behavior for young children with this diagnosis.<sup>48,51–55</sup> Children who take antidepressant medication for psychiatric disorders may also have increased risk. In 2004, the Food and Drug Administration placed a black box warning on numerous antidepressants describing the link between these medications and suicidal behaviors in children.<sup>51</sup> Some researchers suggest that antidepressant use may “unmask” a biological vulnerability to bipolar disorder, which can trigger suicidal ideation and/or suicidal behaviors.<sup>51,56</sup> A more recent meta-analysis of the efficacy and risk of using antidepressants for treating children with major depressive disorder, obsessive-compulsive disorder, and non-obsessive-compulsive disorder anxiety disorders suggests that the symptom reduction benefits of these medications appear to be much greater than the risks from suicidal ideation and suicide attempts.<sup>57</sup> However, children presenting to the ED with psychiatric symptoms should be screened for current or previous psychotropic medication prescriptions (particularly antidepressants).

The severity of a particular disorder likely influences a child’s level of risk.<sup>47,58</sup> Foley et al. suggest that the severity of symptom-related impairment may be more important than a specific diagnosis per se in identifying youth who are most at risk for suicide.<sup>40</sup> Comorbid psychiatric illnesses are also a red flag; young children with conduct disorders and concomitant depression, as well as depression coexisting with anxiety, are at high risk for suicidal behavior.<sup>39,46</sup>

### Preoccupation with Death

Children who are suicidal tend to think about and dream more about death, fear death more, and worry more about death than similar children who do not exhibit suicidality.<sup>59–61</sup> Orbach et al. have written extensively about the differences between normal and pathological preoccupation with death.<sup>62</sup> Normal preoccupation is tempo-

rary and tends to follow a related event such as the death of a pet or family member. Suicide risk is low if a child maintains a somewhat realistic picture of death, evidences relatively mild anxiety about death, and gives no indication of concrete plans for suicide.

### Family History of Psychopathology and Suicidal Behavior

The presence of psychopathology in family members, including mood and personality disorders, violent behavior, and substance abuse, is correlated with suicidal behavior in children.<sup>45</sup> A family history of suicide is also a known risk factor.<sup>63–65</sup> The attempted or completed suicide of a close relative can have a tremendous impact on children and can lead them to consider or attempt suicide. Brent et al. examined adult suicide attempters, nonattempters, and their offspring, including children 2–14 years of age ( $n = 75$ ).<sup>63</sup> The investigators did not conduct a separate analysis for the offspring who were prepubertal. However, findings suggested that the offspring of suicide attempters had a “6-fold increased risk of suicide attempts relative to offspring of non-attempters.” Another study utilizing the same sample suggested that a child is more likely to attempt suicide at a younger age if a parent and a sibling display suicidal behavior.<sup>66</sup>

### ENVIRONMENTAL AND CONTEXTUAL VARIABLES

Not surprisingly, a negative home environment can also influence suicidality in children. Poverty, poor family cohesion, divorce, witnessing or experiencing violence, experiencing multiple transitions in the living situation, and a history of maltreatment are all linked to suicidal behavior.<sup>6,35,44,65,66</sup> In addition, experiencing stressful events, including physical and/or sexual abuse and losses of emotionally important people through death, separation, or termination of the relationship, are all associated with suicidal behavior.<sup>44</sup> High levels of assaultive behavior in relatives is also common.<sup>42</sup>

Negative situations at school can also increase the risk of suicidal thoughts and behaviors in young children. Children who are coping with negative peer pressure, peer problems, poor performance, and loneliness are at risk. Experiencing peer-driven violent behavior (such as bullying, extortion, or coercion to use alcohol or drugs) is also a significant risk factor in that it can quickly lead to feelings of hopelessness, helplessness, and despair.<sup>6,67</sup>

Rosenthal et al.<sup>68</sup> evaluated nine preschoolers with suicidal behaviors who were admitted to an inpatient children’s mental health unit. The group included one girl and eight boys who ranged in age from 3½ to 5½ years old. Family constellations included one intact family, seven divorced families (four remarried), and one single parent. Six of the nine children were initially unwanted by their parents, seven had been neglected or abused, and five had experienced intense anger displayed toward them by a parent. One can clearly see from this small sample that although divorce is a common risk factor, it is only part of a pathological framework in which suicidal children were frequently unwanted and abused.

## DEMOGRAPHIC VARIABLES

Suicide is more common in preadolescent boys than girls (ages 5–14 years), with a ratio of 3:1.<sup>69</sup> Research also suggests that there are different risk factors for suicidality associated with gender.<sup>6</sup> The most important risk factors for suicide attempts in young girls ages 9–17 years are the presence of depression and previous suicide attempts. Mood disorders are also correlated with an increased risk of suicidal ideation in girls. In contrast, the most important risk factors for suicide attempts in boys ages 9–17 years are previous suicide attempts, mood and anxiety disorders, disruptive behavior (behavior associated with attention-deficit/hyperactivity disorder, conduct disorder, and oppositional defiant disorder), and substance abuse.

The relationship between race and suicidality in young children has not been investigated extensively. White children ages 9–17 years studied by Gould et al.<sup>35</sup> and 8 year olds studied by Thompson et al.<sup>36</sup> were about twice as likely as African American children to report suicidal ideation. This result seems to contradict previous studies with adolescents, which suggest that African American and Hispanic adolescents attempt suicide more frequently than white adolescents.<sup>70</sup> However, discrepant results may be due to the different aspects (e.g., suicidal ideation vs. suicide attempt) of suicidality being investigated.

## SUICIDE TRIGGERS

Many wonder what could motivate a young child to consider or attempt suicide. The following suicidal motivators have been reported: identification with a depressed or lost mother or lost father; shouldering the blame or distracting from family problems such as divorce; self-punishment; escape from an unbearable life situation; attempting to regain control; acting out the covert or overt desire of the parent to be rid of the child; seeking retaliation or revenge against real or perceived wrongs; avoidance of punishment/abuse; and seeking a better, happier, more comfortable place.<sup>38,68,69,71</sup> Feelings of hopelessness and anger, as well as psychotic symptoms such as hearing voices directing the children to kill themselves, were also associated with suicidality.<sup>71</sup> In contrast to older adolescents, who often commit suicide because of problems with a romantic relationship, conflicts with parents and disciplinary crises are potential suicide precipitants for young children.<sup>48,72</sup>

Some children may want to follow the deceased or see the deceased again, others have problems coping with the grief, and others copy the suicide act, thinking that it is acceptable behavior without fully understanding the consequences of their suicidal actions.<sup>15,60,63,69,71</sup> In an unusual case of folie à deux, an older brother (age 9 years) planned to commit suicide, and the younger brother (age 5 years) wanted to go with him; therefore, the two brothers took an overdose of pills together.<sup>65</sup>

## SUICIDAL METHODS

A variety of threatened or attempted suicidal methods for children younger than 12 years have been reported in the literature by clinicians. Research suggests that

younger children tend to use less complex and more easily available strategies.<sup>49</sup> These methods include hanging, self-immolation (setting oneself on fire), jumping from a high place or down stairs, stepping in front of a moving vehicle, intentional drowning, stabbing/cutting, banging head with deadly intent, strangling/suffocating, and medication overdose.<sup>15,16,21,38,73–76</sup> Frequently, these attempts look like accidental occurrences upon initial assessment.<sup>15,16,25,77</sup>

In 1994, guns/firearms were the most common method for committing suicide in children ages 5–14 years.<sup>78</sup> However, Shaw et al., in a review of ten years of Canadian data, reported an increasing trend toward suffocation (typically hanging) as the most common method of suicide in those younger than 15 years.<sup>79</sup> Data from the Centers for Disease Control and Prevention for 2003 support the above finding; 62.3% of suicides in children ages 10–14 years were by suffocation.<sup>30</sup> In addition, Groholt et al.<sup>33</sup> and Hoberman and Garfinkel<sup>80</sup> also found that hanging was the most common method of suicide in young children.

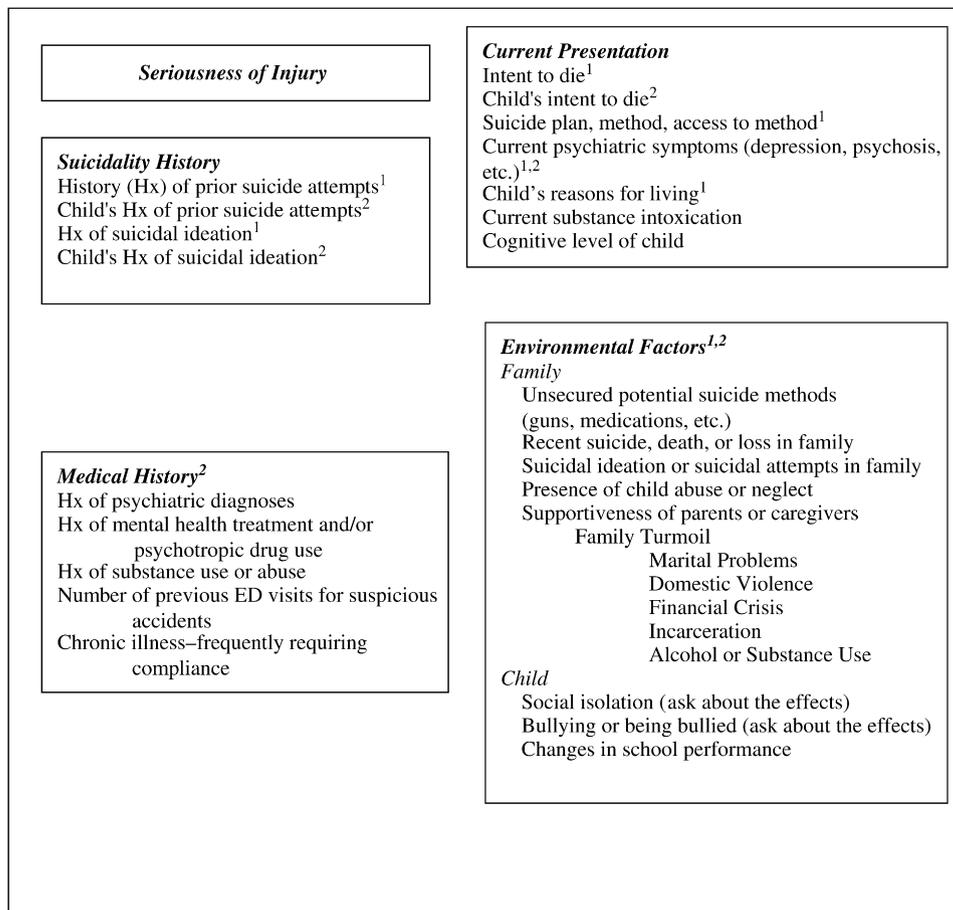
## SCREENING

Because young children exhibit fewer warning signs and links to precipitating events than older adolescents, suicide is somewhat hard to predict.<sup>31,81</sup> Routine screening in the ED is especially important, particularly for children with previous suicidal behavior and risk factors.<sup>49</sup> Children who present to the ED with behavior problems, psychiatric illness or illnesses, moderate to severe psychiatric symptoms (particularly depression, psychosis, or delusional thinking), and/or the risk factors mentioned previously should also be screened for suicidality. Emergency clinicians should also pay careful attention to children who present with “accidents” (running into traffic, injury with sharp objects, gunshot injuries, falling off balconies, poisoning) that may have been intentional.

Interviewing children about suicidality is different than discussing this topic with adolescents or adults. Unfortunately, few reliable and valid tools have been developed specifically to assess suicidal risk in young children. Young children bring varied levels of cognitive functioning to clinical situations, so it is crucial to ensure that the child is able to comprehend the interview. Questions that rely on shorter, more recent time periods (past days or weeks) tend to be easier and produce more accurate results than those that require longer periods of remembering.<sup>28</sup>

As suggested by Kennedy et al., the initial concern with a suicidal child in the ED should be securing the child from imminent self-harm.<sup>82</sup> Children should only be placed in areas in which they do not have access to potentially lethal devices or substances and should not be left alone. Subsequent assessment and treatment decisions should be completed as quickly as possible. In addition, ED staff should provide age-appropriate communication to both the young child and any caregivers present about suicidality and its treatment, both in the ED and beyond.

Clinical interviews with children and parents are the most common method of assessing suicidality.<sup>83</sup> ED personnel conducting an assessment of young children need



**Figure 1.** Factors to consider when assessing the child's level of risk of suicidal behavior. 1 denotes questions addressed to the child, and 2 denotes questions addressed to the child's caregiver. The interviewer should also investigate with the child the impact of issues raised by the caregiver (e.g., how does being bullied make you feel?).

to begin with a one-to-one, individualized interview. Even though caregivers may be reluctant to comply, more information may be obtained from children who are questioned alone. In addition, research suggests that the child is the most important informant, because parents tend to underestimate the presence and frequency of children's suicidality.<sup>28,29,84–86</sup> For example, Thompson et al. found that parents of approximately 75% of 8-year-old participants reporting suicidal ideation were unaware of this problem.<sup>36</sup>

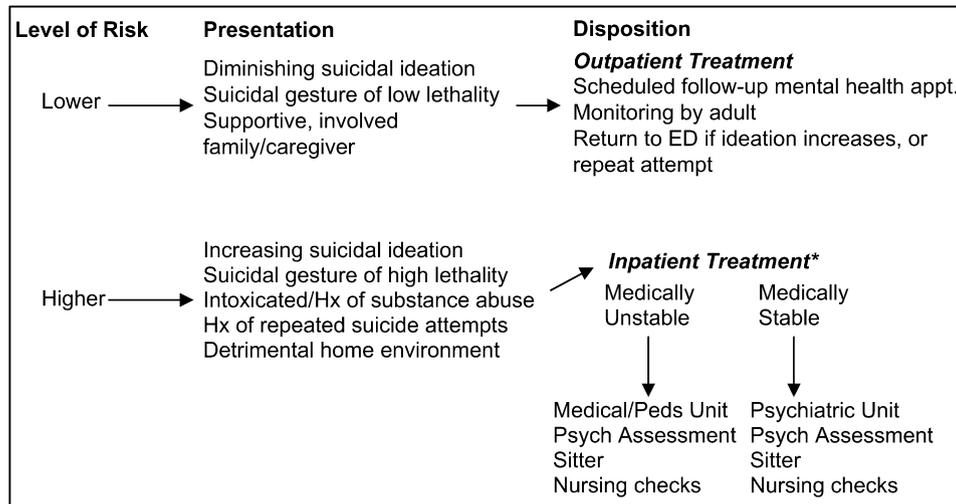
Emergency department personnel should start by asking children screening questions such as "Do you ever think about hurting yourself?" or "Do you ever feel sad enough that it makes you want to go away and not come back?" Asking "Do you feel like crying a lot?" may also help children disclose important information about their emotions. Initially posing questions with the terms "suicide" or "killing oneself" should be avoided, due to the concern with suggestibility discussed in the Suicide Triggers section.

Most brief self-report screening tools for suicidal behavior have not been developed specifically for young children. However, two tools are available that have been used with children younger than 12 years: the Risk of Suicide Questionnaire<sup>11</sup> and the Child Suicide

Risk Assessment.<sup>87</sup> Caution is warranted, however, because neither tool has been validated extensively with this population.

In addition to screening for suicide risk, it is important to assess children for their level of suicidal intent. Children may not have the cognitive skills necessary to accurately estimate the level of lethality of a particular behavior. Asking questions such as "Did you think that you would die from taking those pills, or jumping off that balcony, etc.?" or "Do you want to die?" may enable an emergency clinician to determine the child's level of determination in succeeding with suicide.

Initial assessment should also include questions about depressive symptoms, such as sleep, appetite, and concentration, as well as energy level, fatigue, or feelings of worthlessness, self-reproach, and guilt. Children who are depressed can also present with anger, irritability and agitation, sudden unexplained behavior or attitude changes, or feeling bored.<sup>85</sup> After initial questions are completed, an assessment of the risk factors listed in Figure 1 should be conducted. ED personnel should also interview the child's caregivers or family members to obtain additional information. Some parents or caregivers may be uncomfortable with or resistant to such questions; consequently, it is important that ED staff



**Figure 2.** ED disposition of suicidal children. \*Note that all children should be carefully monitored (with repeated checks) by health care staff in all inpatient settings to avoid suicides in these environments.

remain nonjudgmental throughout the interview. Parents may even feel relief at the opportunity to discuss this topic with their children or clinicians.<sup>11</sup>

A thorough physical examination, including a check of vital signs and mental status examination, should also be part of the assessment procedure. ED personnel should pay particular attention to potential signs of previous suicide attempts, physical and/or sexual abuse, substance abuse, and previous self-destructive behaviors. The child's belongings and clothing should be searched for any potential suicide instruments such as medications, sharp objects, or firearms. Additional laboratory tests such as toxicology screens or tests to rule out organic causes for psychiatric symptoms may also be warranted.<sup>82</sup>

## DISPOSITION

As with any other age group, the goals of ED treatment of suicidal young children include both short-term and long-term safety.<sup>82</sup> However, just as the assessment of young children is unique, the recommendations for the disposition of suicidal behavior in this population are somewhat different. Adolescents and adults are frequently divided into three groups based on the lethality of their attempts (e.g., low, medium, high).<sup>86</sup> Treatment recommendations are then targeted toward the level of lethality and can potentially include discharge with a plan of outpatient follow-up (with low-risk patients). However, because suicidality in young children is relatively rare, it is likely indicative of a serious disturbance in social, emotional, cognitive, or family functioning; therefore, discharging a young child rather than referring to an inpatient psychiatric setting, a pediatric medical ward, or intensive home-based services is often not appropriate. Mental health professionals (if available) can provide valuable information about the child's level of pathology as well as the social support available in or absent from the home environment, information that is crucial to disposition decisions. If a mental health professional is not available for consultation, seriously at-

risk children need to be questioned about their life situation and suicidal ideation.

If the home environment seems to be creating or exacerbating the child's suicidal thoughts and behaviors, the child should be admitted to the hospital and the appropriate child protective agency notified immediately. The choice of whether the admission should be psychiatric or medical depends on factors such as the seriousness of the child's medical condition and whether children's psychiatric beds are available.<sup>82</sup> Figure 2 summarizes disposition recommendations.

It is important to remember that not all suicidal children verbally disclose suicidal thoughts or intentions.<sup>88</sup> One study suggested that only 24%–45% of suicidal children expressed ideation.<sup>79</sup> In addition, children who express suicidal or self-destructive thoughts may not be in immediate danger of acting on them. However, these children should be taken seriously and assessed further to determine the level of intervention necessary. Incorrectly assuming that a child is suicidal is preferable to failing to obtain treatment for an at-risk child.

## CONCLUSIONS

Much of the available literature describing suicidality fails to separate children younger than 12 years from adolescents for analysis and discussion. Current data suggest that suicide is the 12th leading cause of death in children younger than 12 years and is the fourth leading cause of death in children 12 years old. It is likely that these data are an underestimate of the prevalence of this type of tragedy due to methodological problems and reporting biases. We suggest that many overdoses and odd, "suspicious" accidents in children older than 5 years should be examined in the differential diagnosis as a possible suicidal event.

It is clear that suicide attempts and ideation do occur in prepubertal children, and such behavior can serve as a precursor to future suicide attempts. Literature examining the risk factors, motivation, and methods of suicide in young children is increasing. This research suggests

that children are as likely as older adolescents to commit suicide when exposed to risk factors. This risk seems to result from a pathological combination of child and family factors. As with many "rule out diagnoses," the presence of one risk factor in a child should prompt a thorough assessment of all other potential risk factors. Education about these risk factors should be part of the initial and ongoing training of all ED staff. Future research efforts should be directed toward clarifying the prevalence of suicidality in this population, as well as developing brief screening and comprehensive assessment tools for this vulnerable segment of our society.

## References

- Cohen-Sandler R, Berman AL, King RA. Life stress and symptomatology: determinants of suicidal behavior in children. *J Am Acad Child Psychiatry*. 1982; 21:178-86.
- Madge N, Harvey JG. Suicide among the young: the size of the problem. *J Adolesc*. 1999; 22:145-55.
- Pfeffer CR. Suicidal behavior in children: from the 1980s to the new millennium. In: Maris RW, Canetto SS, McIntosh JL, Silverman MM (eds). *Review of Suicidology*. New York, NY: Guilford, 2000, pp 159-69.
- Pfeffer CR. Suicidal behavior in children: an emphasis on developmental influences. In: Hawton K, vanHeeringer K (eds). *The International Handbook of Suicide and Attempted Suicide*. Chichester, England: Wiley, 2000, pp 220-35.
- Matter DE, Matter RM. Suicide among elementary school children: a serious concern for counselors. *Elem School Guidance Counseling*. 1984; 18:260-7.
- Pompili M, Mancinelli I, Girardi P, Ruberto A, Tatarelli R. Childhood suicide: a major issue in pediatric health care. *Issues Compr Pediatr Nurs*. 2005; 28:63-8.
- Trad PV. Self-destructive preschool children. In: O'Brien JD, Pilowsky DJ, Lewis OW (eds). *Psychotherapies with Children and Adolescents: Adapting the Psychodynamic Process*. Northvale, NJ: Jason Aronson Inc., 2000, pp 27-51.
- Julien A. Children at risk stranded in the ER, shortage of psychiatric beds delays critically needed treatment. *Hartford Courant*. 2000; May 19:A1.
- Doshi A, Boudreaux ED, Wang N, Pelletier AJ, Camargo CA Jr. National study of US emergency department visits for attempted suicide and self-inflicted injury, 1997-2001. *Ann Emerg Med*. 2005; 46:369-75.
- Press B, Kahn S. Management of the suicidal child or adolescent in the emergency department. *Curr Opin Pediatr*. 1997; 9:237-41.
- Horowitz LM, Wang PS, Koocher GP, et al. Detecting suicide risk in a pediatric emergency department: development of a brief screening tool. *Pediatrics*. 2001; 107:1133-7.
- Connolly L. Suicidal behavior: does it exist in preschool aged children? *Ir J Psychol Med*. 1999; 16:72-4.
- Pfeffer CR. Childhood suicidal behavior: a developmental perspective. *Psychiatr Clin North Am*. 1997; 20:551-62.
- Piaget J, Inhelder B. *The Psychology of the Child*. New York, NY: Basic Books, 1969.
- Bender L, Schilder P. Suicidal pre-occupations and attempts in children. *Am J Orthopsychiatry*. 1937; 7:225-34.
- Tishler CL. Intentional self-destructive behavior in children under age ten. *Clin Pediatr*. 1980; 19:451-3.
- Brent DA, Kalas R, Edelbrock C, Costello AJ, Dulcan MK, Conover N. Psychopathology and its relationship to suicidal ideation in childhood and adolescence. *J Am Acad Child Psychiatry*. 1986; 25:666-73.
- Carlson GA, Cantwell DP. Suicidal behavior and depression in children and adolescents. *J Am Acad Child Psychiatry*. 1982; 21:361-8.
- Pfeffer CR, Conte HR, Plutchik R, Jerrett I. Suicidal behavior in latency-age children: an outpatient population. *J Am Acad Child Psychiatry*. 1980; 19:703-10.
- Pfeffer CR. Diagnosis of childhood and adolescent suicidal behavior: unmet needs for suicide prevention. *Soc Biol Psychiatry*. 2001; 49:1055-61.
- Pfeffer CR. Suicidal behavior of children: a review with implications for research and practices. *Am J Psychiatry*. 1981; 138:154-9.
- Freiberg K. *Human Development: A Life-Span Approach*. 2nd ed. Monterey, CA: Wadsworth, 1983.
- Stillion JM, McDowell EE, May JH. *Suicide across the Life-Span: Premature Exits*. New York, NY: Hemisphere, 1989.
- Blumenthal SJ. Youth suicide risk factors, assessment and treatment of adolescent and young adult patients. *Psychiatr Clin North Am*. 1990; 13:511-56.
- McIntire MS, Angle CR, Schlicht ML. Suicide and self-poisoning pediatrics. *Adv Pediatr*. 1977; 24:291-309.
- McIntire MS, Angle CR. "Suicide" as seen in poison control centers. *Pediatrics*. 1971; 48:914-22.
- McIntire MS, Angle CR. The taxonomy of suicide as seen in poison control centers. *Pediatr Clin North Am*. 1970; 17:697-706.
- Klimes-Dougan B. Screening for suicidal ideation in children and adolescents: methodological considerations. *J Adolesc*. 1998; 21:435-44.
- Walker M, Moreau D, Weissman MM. Parents' awareness of children's suicide attempts. *Am J Psychiatry*. 1990; 147:1364-6.
- Hoyert DL, Heron MP, Murphy SL, Kung HC. Deaths: Final data for 2003. *Natl Vital Stat Rep*. 2006; 54(13):1-120.
- Lewinsohn PM, Rohde P, Seeley JR. Adolescent suicidal ideation and attempts: prevalence, risk factors, and clinical implications. *Clin Psychol Sci Pract*. 1996; 3:25-46.
- McIntosh JL. Epidemiology of adolescent suicide in the United States. In: Maris RW, Canetto SS, McIntosh JL, Silverman MM (eds). *Review of Suicidology*. New York, NY: Guilford Press, 2000, pp 3-33.
- Groholt B, Ekeberg O, Wichstrom L, Haldorsen T. Suicide among children and younger and older adolescents in Norway: a comparative study. *J Am Acad Child Adolesc Psychiatry*. 1998; 37:473-81.

34. Pfeffer CR, Zuckerman S, Plutchik R. Suicidal behavior in normal school children: a comparison with child psychiatric inpatients. *J Am Acad Child Adolesc Psychiatry*. 1984; 27:357-61.
35. Gould MS, King R, Greenwald S, et al. Psychopathology associated with suicidal ideation and attempts among children and adolescents. *J Am Acad Child Adolesc Psychiatry*. 1998; 37:915-23.
36. Thompson R, Briggs E, English DJ, et al. Suicidal ideation among 8-year-olds who are maltreated and at risk: findings from the LONGSCAN studies. *Child Maltreat*. 2005; 10:26-36.
37. Shaffer D. Suicide in childhood and early adolescence. *J Child Psychol Psychiatry*. 1974; 15:275-91.
38. Pfeffer CR. Suicidal behavior in children and adolescents: causes and management. In: Lewis M (ed). *Child and Adolescent Psychiatry: A Comprehensive Textbook*. 2nd ed. Baltimore, MD: Williams and Wilkins, 1996, pp 666-73.
39. Rosenthal PA, Rosenthal SR. Suicidal behavior by preschool children. *Am J Psychiatry*. 1984; 141:520-5.
40. Foley DL, Goldston DB, Costello J, Angold A. Proximal psychiatric risk factors for suicidality in youth. The Great Smoky Mountain Study. *Arch Gen Psychiatry*. 2006; 63:1017-24.
41. Frances A, Pfeffer CR. Reducing environmental stress for a suicidal ten-year-old. *Hosp Community Psychiatry*. 1987; 38:22-4.
42. Pfeffer CR. The family system of suicidal children. *Am J Psychother*. 1981; 35:330-41.
43. Pfeffer CR. Clinical perspectives on treatment of suicidal behavior among children and adolescents. *Psychiatr Ann*. 1990; 20:143-50.
44. Brent DA, Oquendo M, Birmaher B, et al. Familial transmission of mood disorders: convergence and divergence with transmission of suicidal behavior. *J Am Acad Child Adolesc Psychiatry*. 2004; 43:1259-66.
45. Pfeffer CR, Jiang H, Kakuma T. Child-adolescent suicidal potential index (CASPI): a screen for risk for early onset suicidal behavior. *Psychol Assess*. 2000; 12:304-18.
46. Baum KM, Walker EF. Childhood behavioral precursors of adult symptom dimensions in schizophrenia. *Schizophr Res*. 1995; 16:111-20.
47. Harrington R, Bredenkamp D, Groothues C, Rutter M, Fudge H, Pickles A. Adult outcomes of childhood and adolescent depression III: links with suicidal behaviours. *J Child Psychol Psychiatry*. 1994; 35:1309-19.
48. Pfeffer CR, Plutchik R, Mizruchi MS, Lipkins R. Suicidal behavior in child psychiatric inpatients and outpatients and nonpatients. *Am J Psychiatry*. 1986; 143:773-38.
49. Shaffer D, Pfeffer CR, Bernet W, et al. Practice parameter for the assessment and treatment of children and adolescents with suicidal behavior. *J Am Acad Child Adolesc Psychiatry*. 2001; 40(Suppl 7):24S-51.
50. Brent DA, Baugher M, Bridge J, Chen T, Chiappetta L. Age and sex-related risk factors for adolescent suicide. *J Am Acad Child Adolesc Psychiatry*. 1999; 23:1497-505.
51. Shaffer D, Gould MS, Fisher P, et al. Psychiatric diagnosis in child and adolescent suicide. *Arch Gen Psychiatry*. 1996; 53:339-48.
52. Citrome L, Goldberg JF. Bipolar disorder is a potentially fatal disease. *Postgrad Med*. 2005; 17(2):9-11.
53. Geller B, Zimmerman B, Williams M, Delbello MP, Frazier J, Beringer L. Phenomenology of prepubertal and early adolescent bipolar disorder: examples of elated mood, grandiose behaviors, decreased need for sleep, racing thoughts and hypersexuality. *J Child Adolesc Psychopharmacol*. 2002; 12:3-9.
54. Kowatch RA, Fristad M, Birmaher B, et al. Treatment guidelines for children and adolescents with bipolar disorder. *J Am Acad Child Adolesc Psychiatry*. 2005; 44:213-35.
55. Lewinsohn PM, Klein DN, Seeley JR. Bipolar disorders in a community sample of older adolescents: prevalence, phenomenology, comorbidity, and course. *J Am Acad Child Adolesc Psychiatry*. 1995; 34:454-63.
56. Papolos DF, Hennen J, Cockerham MS. Factors associated with parent-reported suicide threats by children and adolescents with community-diagnosed bipolar disorder. *J Affect Disord*. 2005; 86:267-75.
57. Bridge JA, Iyengar S, Salary CB, et al. Clinical response and risk for reported suicidal ideation and suicide attempts in pediatric antidepressant treatment. *JAMA*. 2007; 297:1683-96.
58. Martin A, Young C, Leckman JF, Mukonoweshuro C, Rosenheck R, Leslie D. Age effects on antidepressant-induced manic conversion. *Arch Pediatr Adolesc Med*. 2004; 158:773-80.
59. Pfeffer CR. *The Suicidal Child*. New York, NY: The Guilford Press, 1986.
60. Pfeffer CR. Suicidal fantasies in normal children. *J Nerv Ment Dis*. 1985; 173:78-84.
61. Pfeffer CR. Preoccupations with death in "normal" children: the relationship to suicidal behavior. *Omega*. 1989; 20:205-12.
62. Orbach I, Feshbach S, Carlson G, Glaubman H, Gross Y. Attraction and repulsion by life and death in suicidal and in normal children. *J Consult Clin Psychol*. 1983; 51:661-70.
63. Brent DA, Oquendo M, Birmaher B, et al. Familial pathways to early-onset suicide attempts: risk for suicidal behavior in offspring of mood-disordered suicide attempts. *Arch Gen Psychiatry*. 2002; 59:801-7.
64. Pfeffer CR, Normandin L, Kakuma T. Suicidal children grow up: suicidal behavior & psychiatric disorders among relatives. *J Am Acad Child Psychiatry*. 1994; 33:1087-97.
65. Tishler CL, Meltzer J. Folie a deux in children: an emergency room presentation. *Clin Case Stud*. 2004; 3:49-56.
66. Brent DA, Oquendo M, Birmaher B, et al. Peripubertal suicide attempts in offspring of suicide attempters with siblings concordant for suicidal behavior. *Am J Psychiatry*. 2003; 160:1486-93.
67. Evans G, Farberow NL. *The Encyclopedia of Suicide*. New York, NY: Fact on File, 2003.
68. Rosenthal PA, Rosenthal SR, Doherty MB, Santora D. Suicidal thoughts and behaviors in depressed hospitalized preschoolers. *Am J Psychotherapy*. 1986; 40:201-12.
69. Pfeffer CR. Self-destructive behavior in children and adolescents. *Psychiatr Clin North Am*. 1985; 8:215-26.

70. Grunbaum JA, Kann L, Kinchen SA, et al. Youth risk behavior surveillance: United States, 2001. *MMWR Morb Mortal Wkly Rep.* 2002; 51:1-64.
71. Kosky R. Childhood suicidal behavior. *J Child Psychol Psychiatry.* 1983; 24:457-68.
72. Goldman S, Beardslee WR. Suicide in children and adolescents. In: Jacobs DG (ed). *The Harvard Medical School Guide to Suicide Assessment and Intervention.* San Francisco, CA: Jossey Bass, 1999, pp 417-22.
73. Ackerly WC. Latency-age children who threaten or attempt to kill themselves. *J Am Acad Child Psychiatry.* 1967; 6:242-61.
74. Morrison GC, Collier JG. Family treatment approaches to suicidal children and adolescents. *J Am Acad Child Psychiatry.* 1969; 8:140-53.
75. Paulson MJ, Stone D, Sposto R. Suicide potential and behavior in children ages 4-12. *Suicide Life Threat Behav.* 1978; 8:225-42.
76. Pfeffer CR, Conte HR, Plutchik R, Jerrett I. Suicidal behavior in latency-age children: an empirical study. *J Am Acad Child Psychiatry.* 1979; 18:679-92.
77. McIntire MS, Angle CR. The taxonomy of suicide and self-poisoning: a pediatric perspective. In: Wells CF, Stuart IR (eds). *Self-destructive Behavior in Children and Adolescents.* New York, NY: Van Nostrand Reinhold, 1981, pp 224-49.
78. Singh GK, Kochanek KE, MacDorman MF. Advance report of final mortality statistics, 1994. *Mon Vital Stat Rep.* 1996; 45(3):1-80.
79. Shaw D, Fernandez JR, Rao C. Suicide in children and adolescents: a 10-year retrospective review. *Am J Forensic Med Pathol.* 2005; 26:309-15.
80. Hoberman HM, Garfinkel BD. Completed suicide in children and adolescents. *J Am Acad Child Adolesc Psychiatry.* 1988; 27:689-95.
81. Clark D. Suicidal behavior in childhood and adolescence: recent studies and clinical implications. *Psychiatr Ann.* 1993; 23:271-83.
82. Kennedy SP, Baraff LJ, Suddath RL, Asarnow JR. Emergency department management of suicidal adolescents. *Ann Emerg Med.* 2004; 42: 452-60.
83. Wise A, Spengler PM. Suicide in children younger than age fourteen: clinical judgment and assessment issues. *J Mental Health Counseling.* 1997; 19: 318-36.
84. Herjanic B, Reich W. Development of a structured psychiatric interview for children: Agreement between child and parent on individual symptoms. *J Abnorm Child Psychol.* 1982; 10: 307-24.
85. Leenaars AA, Wenckstern S. *Suicide Prevention in Schools.* New York, NY: Hemisphere, 1991.
86. Tishler CL, McKenry PC. Parental negative self and adolescent suicide attempts. *J Am Acad Child Adolesc Psychiatry.* 1982; 4:404-8.
87. Larzelere RE, Andersen JJ, Ringle JL, Jorgensen DD. The Child Suicide Risk Assessment: a screening measure of suicide risk in pre-adolescents. *Death Stud.* 2004; 28:809-27.
88. Carlton PA, Deane FP. Impact of attitudes and suicidal ideation on adolescents' intentions to seek professional psychological help. *J Adolesc.* 2000; 23: 35-45.

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