

# The Importance of Screening Preteens for Suicide Risk in the Emergency Department

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## ABSTRACT

**OBJECTIVES:** To describe the prevalence of screening positive for suicide risk in a sample of 10- to 12-year-olds presenting to the emergency department (ED).

**METHODS:** Patients presenting to the ED were administered a battery of measures, including the Ask Suicide-Screening Questions and the criterion-standard Suicidal Ideation Questionnaire. Answering affirmatively to any of the 4 Ask Suicide-Screening Questions and/or scoring above the Suicidal Ideation Questionnaire cutoff score was considered a positive screen result for suicide risk.

**RESULTS:** The sample included 79 preteen patients. The overall positive screen result rate was 29.1% (23 of 79). More than half (54.1%) of patients presenting with psychiatric chief complaints screened positive for suicide risk, and 7.1% of preteens presenting with chief medical complaints screened positive. Of preteens, 17.7% (14 of 79) reported previous suicidal behavior.

**CONCLUSIONS:** Preteens think about suicide and engage in suicidal behavior at rates that warrant further study. Notably, 7% of preteens presenting with chief medical complaints screened positive, highlighting the importance of screening all preteen patients as young as 10 years old for suicide risk in the ED.



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Suicide is the third leading cause of death among preteens aged 10 to 12 years in the United States.<sup>1</sup> In 2016, the Joint Commission issued a Sentinel Event Alert recommending that all medical patients be screened for suicide risk<sup>2</sup>; however, specific guidance on the appropriate age to screen youth was not included. We aim to describe the prevalence of screening positive for suicide risk in a sample of youth ages 10 to 12 years presenting to the pediatric emergency department (ED) to inform universal suicide-risk screening practices in the medical setting in this study.

## METHODS

### Sample and Setting

This is a subanalysis from a prospective, cross-sectional, multisite study that was used to develop the Ask Suicide-Screening Questions (ASQ) suicide-risk screening instrument.<sup>3</sup> Data from participants aged 10 to 12 years (hereafter referred to as preteens) were analyzed from a convenience sample of patients presenting to 3 urban pediatric EDs, all of which are level 1 pediatric trauma centers (2008–2011). For the purposes of developing a screening tool for use for all pediatric patients presented to the ED, patients presenting with psychiatric concerns ( $n = 37$ ), in addition to patients presenting with chief medical complaints ( $n = 42$ ), were included in the sample. Patients presenting with emergent medical conditions, cognitive impairment, or without an English-speaking parent and/or guardian were excluded. Written assent and parent- and/or guardian-informed consent were obtained. Patients who screened positive on either the Suicidal Ideation Questionnaire Jr (SIQ-Jr) or ASQ received a brief suicide safety assessment by a mental health professional. The study was approved by the institutional review boards at the participating institutions. Further details regarding the methodology of the multisite study have been described elsewhere.<sup>3</sup>

### Measures

#### ASQ

The ASQ is a 4-item yes-or-no questionnaire that assesses recent suicidal thoughts and lifetime suicidal behavior.<sup>3</sup> A response of

“yes” to any of the 4 ASQ items indicated a positive result.

#### Suicidal Ideation Questionnaire

The SIQ-Jr is a 15-item questionnaire that assesses suicidal ideation severity in the past month.<sup>4</sup> Patients who scored above the threshold ( $\geq 31$ ) were considered to have a positive result for suicide risk.

#### Statistical Analysis

All analyses were conducted by using SPSS version 21 (IBM SPSS Statistics, IBM Corporation). Descriptive demographic variables were tabulated with means and SDs or proportions. Adjusted odds ratios and 95% confidence intervals were calculated by using multivariate logistic regression to predict which patients screened positive for suicide risk. Sex, age, race, and chief complaint were entered as predictor variables.

## RESULTS

### Participants

Of the 524 pediatric patients in the larger ED study, 15.1% ( $n = 79$ ) were aged 10 to 12 years (60.8% boys; 49.4% white; mean age  $11.2 \pm 0.8$  years). Among the preteens, 53.2% ( $n = 42$ ) presented to the ED with chief medical complaints (eg, back injury, headache, seizure, chest pain), and 46.8% ( $n = 37$ ) presented with chief psychiatric complaints (eg, depression, violent behavior, panic disorder).

### Suicide Risk

Of the 79 preteen patients, 29.1% ( $n = 23$ ) screened positive for suicide risk on the SIQ-Jr and/or ASQ (56.5% boys; 43.5% white; mean age  $11.1 \pm 0.9$  years). The percentage agreement between the ASQ and the SIQ-Jr was 85.9%. The mean SIQ-Jr score among the preteens who screened positive was 48.8 (SD = 13.7). ASQ item 1 (“In the past few weeks, have you wished you were dead?”) had the

highest rate of endorsement by the preteens (20.3%).

### Chief Complaints

More than half (54.1%) of the 37 preteen patients presenting with chief psychiatric complaints and 7.1% of the 42 preteens presenting with chief medical complaints screened positive for suicide risk. None of the demographic variables were found to be predictive of screening positive for suicide risk; however, preteen patients presenting with chief psychiatric complaints were >17 times more likely than patients presenting with chief medical complaints to screen positive (Table 1).

### Previous Behavior

A previous history of suicidal behavior, as defined by ASQ item 4 (“Have you ever tried to kill yourself?”), was reported by 14 of 79 (17.7%) participants, all of whom presented to the ED with a psychiatric chief complaint. Half of those who reported past behavior were 10 years old at time of screening. This suggests 8.9% of all patients engaged in past suicidal behavior at 10 years old or younger. Hanging and/or suffocation was the most common suicide attempt method reported ( $n = 4$ ; 28.6%). Other methods included stabbing and/or cutting (21.4%) and jumping from a significant height (7.2%). Data specific to method were not available or reported by the remaining youth who disclosed a history of a suicide attempt (43.2%).

## DISCUSSION

Nearly 30% of preteen ED patients screened positive for suicide risk. Importantly, 7% of preteens who screened positive presented with chief medical complaints. This finding highlights the importance of screening all preteen patients in the ED for suicide risk regardless of their presenting complaint.

There is a myth that younger children do not think about, plan, or attempt suicide; yet,

**TABLE 1** Logistic Regression of Factors Predicting Suicide Risk Among Preteens

Variable	Odds Ratio	95% Confidence Interval	<i>P</i>
Girls	2.12	0.61–7.34	.2358
White race	0.62	0.19–2.00	.4244
Age	0.78	0.39–1.58	.4953
Psychiatric chief complaint	17.46	4.27–71.36	<.0001

these data reveal that ~18% of preteen ED patients reported past suicidal behavior, with nearly 9% of patients reporting suicidal behavior at or before age 10 years. These data further underscore that suicidal behavior is occurring at this young age, and there is a need to detect these behaviors in younger patients to prevent future behaviors from occurring. Another pervasive myth related to suicide-risk screening is that asking directly about suicide may plant the thought of suicide as an option. However, several studies have demonstrated that asking about suicide does not lead to the onset or increase of suicidal thoughts or behaviors.<sup>5-8</sup>

The most commonly reported suicide attempt method was hanging and/or suffocation. Although this finding should be interpreted with caution because of the small number of patients who reported a method and the high percentage of missing responses, it is consistent with the recent literature demonstrating the increasing incidence of attempts and death by hanging and/or strangulation in youth.<sup>9,10</sup> Future research is warranted to better understand suicide attempt methods in preteen populations. Sex, race, and age did not significantly predict suicide risk. These findings are consistent with the results of the larger sample of 524 patients (10–21 years old).<sup>3</sup>

The following limitations should be considered. First, the study used a convenience sample at 3 urban pediatric EDs and may not be generalizable to all preteens. Second, the limited sample size of 10- to 12-year-olds may not yield sufficient data to detect meaningful demographic differences. Third, the majority of preteens who screened positive for suicide risk presented with psychiatric chief complaints, and moreover, this sample may reflect higher rates of past suicidal behaviors than would be

found in the general population. Lastly, all information was collected via self-report. The results should be interpreted as preliminary, and further examination with a larger sample of preteens would help elucidate and inform suicide prevention efforts.

Although suicide is a low base-rate event in this age group, this analysis demonstrates that preteens think about suicide and engage in suicidal behavior at a rate that warrants further attention. Preteens as young as 10 years old should be screened for suicide risk in the ED regardless of their presenting complaint. Also, it may be important that screening occur in primary care and inpatient medical and/or surgical units because preteens are seen more frequently in these settings.<sup>11</sup> Future research examining whether patients <10 years old would benefit from being screened for suicide risk is warranted. Screening youth for suicide risk presents a key prevention strategy with potential for saving many years of life.

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