Suicide risk assessment in high-risk adolescents

***Abstract:** A significant number of adolescents experience depression and other mental health disorders that may put them at risk for suicide. Mental health assessment is an important component of primary healthcare. Depression and suicide risk screening can assist healthcare providers in preventing suicides.*

By Barbara P. Gray, PhD, RN, CPNP and Sharolyn K. Dihigo, DNP, RN, CPNP-PC

The reality of a busy primary care practice is that there never seems to be enough time to adequately assess patients' mental and psychosocial health concerns. And yet depression rates substantially increase between the ages of 13 and 18 years, with 11% experiencing a depressive disorder by 18 years of age.[1,2] Depression carries significant developmental and mental health implications for adolescents and is also a risk factor for suicide.[3,4] The burden of suicide extends far beyond the death of the individuals who take their lives. It has a major psychosocial impact on family and friends and places an economic burden on family, the workplace, and the healthcare system.[5]

Primary care providers have expressed perceptions of inadequate preparation to address mental health problems in their patients.[6] Mental health assessment is an essential part of holistic healthcare and is particularly important in the adolescent population. The aim of this article is to increase primary healthcare providers' knowledge of suicide risk factors in adolescents and offer screening tools to better manage this important health issue.

Developmental stage of adolescence

Adolescents may physically look more like adults than children, but they still have many development phases ahead of them. A basic tenet of child development theory is that the teenage years are a time of figuring out their place in the world as they progress through stages of physical, cognitive, psychosocial, and emotional growth and development.

Neuroscientists have discovered that one of the most significant changes during adolescence is in brain structure and function.[7,8] The human brain reaches 90% of its adult size by age 6; however, major changes in gray and white matter occur throughout adolescence.[7] Gray matter is reduced through synaptic pruning, and white matter is increased, mostly due to a thickening of myelin sheaths and increased axon diameters, all of which lead to faster signal transmission among neurons and more efficient brain circuitry.[7-9]

Keywords: adolescent depression, adolescent depression screening, adolescent suicide, suicide risk factors, suicide risk screening

Todor Tsvetkov / iStock ©

CE
2.0
CONTACT HOURS

During this same time period, changes in dopamine activity affect the limbic system, which is involved with emotions, and its connection with the prefrontal cortex, responsible for executive functioning skills such as reasoning, problem solving, and decision making.[7,8] Increased emotional reactivity and impulsive, risky behaviors may ensue as a result of this process.[7,10] Surges of dopamine increase adolescents' sensitivity to receiving rewards when they get something better than they expected.[11] If it ends well, the reward for a risky behavior is worth the risk, in their view. As a result, they may seek out experiences that adults would not even consider.

In 2013, nearly one-third of adolescents reported feeling sad or hopeless for 2 or more weeks in a row.

Concurrently, during this process of brain growth and maturation, they may be exposed to factors that put them at risk for unhealthy outcomes, such as mental illness, substance abuse, issues with sexual orientation, and other stressors.[12] The presence of protective factors, such as religious beliefs, successful school performance, school and neighborhood safety, caring friends, and connectivity with interested, caring adults in their lives, may moderate the risks of some, but may not for others.[12,13]

Depression

Depression is the most prevalent mental health disorder reported in adolescents.[14] Survey data indicated that in 2013, nearly one-third of adolescents in the 9th through 12th grades reported feeling sad or hopeless for 2 or more weeks in a row.[15] The National Institute of Mental Health reports that approximately 11.2% of teens have a depressive disorder, and girls suffer with depression three to four times more than boys, at 12.4% and 4.2%, respectively.[2]

The symptoms of depression can be easily overlooked as a normal part of puberty, and therefore, left untreated. Adolescents who have depression may seem moody, have increased sadness or crying, have a sense of hopelessness or helplessness, and have frequent headaches or body aches.[16] Changes in appetite, sleep patterns, school attendance, and grades can occur. Unlike adults, depressed adolescents may demonstrate more anger and irritability.[16]

Approximately 40% of children and adolescents who have depression will have more than one mental health illness.[17] The most common comorbidity is anxiety; others include behavioral disorders, mood disorders, eating disorders, and substance abuse.[17,18] Management of depressed adolescents who have more than one psychiatric disorder is much more difficult. Most concerning is the rate of suicide in children and adolescents with these comorbidities. The higher the number of comorbidities affecting a child, the higher the risk of suicide is. For example, a child or adolescent with depression, anxiety, and attention-deficit hyperactivity disorder would have a six times higher likelihood of committing suicide when compared to adolescents without mental illness, and a child or adolescent having four psychiatric diagnoses would have an 18 times higher likelihood of committing suicide.[19] Higher rates of suicidal ideations are seen when teens have both depression and anxiety.[19,20]

Mental health screening

Approximately 80% of all teens are seen in a primary care setting each year;[12] however, healthcare providers fail to correctly identify those with a mental health condition 16% to 38% of the time.[21] Approximately one in five adolescents have a diagnosable mental health disorder.[22] Early identification and treatment of these disorders is important and necessary in order to keep them on a healthier track.[23]

Screening for mental health issues in children and adolescents has become a national healthcare priority. The American Academy of Pediatrics (AAP) and the U.S. Preventive Services Task Force (USPSTF) recommend screening for mental health disorders in primary care settings in adolescents ages 12 to 18 years when services for accurate diagnosis, treatment, and psychotherapy are available.[24,25] Early intervention, screening, and treatment can minimize the morbidity and mortality of mental illness.

Multiple mental health screening tools with adequate reliability and validity are available and can be easily administered in the primary care office.[26] Most tools are free of charge and require little training to administer. Some tools screen for several disorders, while others focus on specific screening questions for one type of mental illness. For example, the Patient Health Questionnaire for Adolescents (PHQ-A) assesses for potential problems, such as anxiety, substance abuse, mood, or eating disorders.[27] The Patient Health Questionnaire (PHQ-9) screens specifically for depressive symptoms; the score can indicate the level of severity of these symptoms.[28] The Center for Epidemiological Studies Depression Scale for Children (CES-DC), a 20-item questionnaire, is another screening tool specifically for depression.[29]

This tool is free of charge and can be administered/scored in less than 5 minutes. The Strength and Difficulties Questionnaire (SDQ) is a 25-item questionnaire available in several versions for ages 4 to 17 years. It can be administered as a self-report tool or given to parents or teachers to gain additional insight.[30] The Pediatric Symptom Checklist (PSC), or Pediatric Symptom Checklist - Youth Report (Y-PSQ), screens broadly for emotional and behavioral psychosocial concerns.[31] This 35-item questionnaire has been validated in the primary care setting and is available in different languages (see *Links to depression screening tools*).[31]

Links to depression screening tools

CES-DC:	www.brightfutures.org/mentalhealth/pdf/professionals/bridges/ces_dc.pdf
PHQ-A:	www.pandapeds.com/forms-policies/PHQ-A.pdf.pdf
PHQ-9:	http://phqscreeners.com/pdfs/02_PHQ-9/English.pdf
PHQ-9 modified for adolescents (PHQ-A):	www.ncfhp.org/Data/Sites/1/phq-a.pdf
PSC and Y- PSC:	www.massgeneral.org/psychiatry/services/psc_forms.aspx
SDQ:	www.sdqinfo.org/

Suicide risk factors

An important reason for mental health screening is to detect the presence of risk factors for suicide. Suicide is the 10th leading cause of death across all ages in the United States, with 40,600 reported suicides in 2012.[4] According to the World Health Organization, it is the third leading cause of death among 10- to 19-year olds.[32] Suicide rates increased 2.6% from 2011 to 2012, with a rate of 12.6 per 100,000 individuals. Approximately 16% of students in the 9th to 12th grades have had thoughts of suicide, and 7.8% reported one or more suicide attempts in the past year.[33,34] Although girls are more likely to attempt suicide, boys are four times more likely to die by suicide.[35]

As adolescents progress through their developmental channels, critical risk factors may come in to play that promote suicidal ideation and transition to suicidal behaviors.[12] Some of these risk factors include history of mental illness or mood disorders, such as depression, a previous suicide attempt, substance abuse, family history of a psychiatric diagnosis or suicide, and involvement in bullying, either as a victim or perpetrator (see *Risk factors for suicide in adolescents*).[4,6,12,36] Family environment may also play a role; increased reports of suicidality in adolescents have been reported in families with high levels of conflict and low family cohesion.[37] Access to lethal means to proceed with suicide, such as weapons or medication, is a risk factor.[38]

Suicide screening

Adolescents who consider suicide may present to healthcare providers for reasons other than or in addition to depression, such as eating disorders, substance use, behavioral disorders, and physical health problems. Data from the National Comorbidity Survey—Adolescent Supplement revealed that between 50% and 75% of adolescents with suicidal thoughts had recent contact with a healthcare provider, although most did not receive specialized mental healthcare.[39] It is important, therefore, to include suicide risk screening in routine health screening and to continue to screen—even if they are in treatment.[39]

While screening for depression in adolescents is recommended by the AAP and USPSTF, the most recent USPSTF recommendations based on a systematic review found insufficient evidence for suicide risk screening in all adolescents.[24,25,40,41] These recommendations, however, did not address those who show symptoms of depression or other psychiatric disorders.[42]

The National Action Alliance for Suicide Prevention views suicide as an important public health issue and compiled a Suicide Prevention Research Prioritization Task Force to increase knowledge through research and decrease the burden of suicide in the United States.[43] The overall goal is to reduce suicide deaths and attempts by 20% in 5 years.[5] One of the "Aspirational Goals" developed by the task force is to "determine the degree of suicide risk among individuals in diverse populations and in diverse settings through feasible and effective screening assessment approaches."[43]

Some health professionals and organizations have advocated for universal suicide screening; however, this has been met with resistance by some due to lack of evidence in the efficacy of suicide screening, time constraints, inadequate healthcare provider training in suicide screening, management of mental health problems once identified, and lack of mental health resources.[6,12] Additionally, some still believe that inquiring about suicidal thoughts in adolescents may encourage them to think about suicide. In reality, this has not been shown to be the case; rather, asking about suicidal ideation may let the adolescent know that the provider cares and that they are not alone.[38,44]

Clarification about suicide risk assessment is essential. Adult and adolescent populations are different from each other; tools and techniques should be aimed at what fits

within the specific population and setting. A fast-paced practice setting mandates screenings that are both effective and time-efficient.[45] Providers must understand the difference between *screening* and *assessment*. Screening is done to eliminate those who are identified as having a low risk. Screening tools should be brief, easy to administer, and highly sensitive. Assessment is a more in-depth process that quantifies the severity of risk. Assessment tools should be highly specific, having the ability to identify those who are truly at high risk and in need of prompt management.[45] Screening and assessment should be a collaborative process.

It is common to screen for depression and suicidality together because they are often linked together. The PHQ-9 contains an item that asks how often the patient is bothered by the thought that he would be better off dead, or how often he is bothered with the thought of hurting himself.[28] This is often used as a suicide risk screening question; however, the information it elicits may be ambiguous and nonspecific.[12] Thoughts of death are known to occur in patients who have chronic medical conditions and may have nothing to do with suicide. Additionally, adolescents who admit to thoughts of harming themselves may not relate this to thoughts of suicide. Specific questions about suicide are required to get the most accurate results.[12]

Suicide risk screening tools used with adolescents

Psychosocial assessment is a key component of adolescent healthcare assessment, but some adolescents do not reveal psychosocial problems and risk behaviors to primary care providers unless prompted.[36] This process can be facilitated with the use of screening tools, such as the HEEADSSS, an acronym for key topics that should be addressed in questions related to **H**ome environment, **E**ducation and employment, **E**ating habits, interest in **A**ctivities, **D**rug use, **S**exuality, symptoms of **S**uicide risk factors and depression, and **S**afety practices.[46] The concern about suicide risk should be approached directly. Wintersteen reported that including the following two questions in the psychosocial interview helped in identifying suicide risk in adolescents: "Have you ever felt that life is not worth living?" and "Have you ever felt like you wanted to kill yourself?"[47]

Several brief suicide risk screening tools have been developed and utilized with adolescents either in EDs or in primary care settings (see *Links to brief suicide-risk screening tools*). The full version of the Columbia Suicide Severity Scale (C-SSRS) screens for suicide ideation, intensity of ideation, and suicidal behaviors. It is one page (front and back) and takes only a few minutes to administer.[48] It does not require specialized mental health training to administer, but individuals who administer the tool should receive the free training offered on the website. There is also a "screener" version of the C-SSRS that contains 3 to 6 questions intended for use in EDs or in triage by first responders (C-SSRS website). The Ask Suicide Screening Questions (ASQ), a 4-question tool that has been used in EDs, inquires about suicide ideation and behavior.[49] Research is in progress related to its use in inpatient and outpatient settings. The Suicide Behaviors Questionnaire (SBQ-R) is another 4-item questionnaire that focuses on past suicidal thoughts and attempts.[50]

Other tools that have been used with the adolescent population include the Behavioral Health Screen.[51] This is a web-based risk behavior screen completed by patients. The primary care version takes about 7 minutes to complete; the shorter version for EDs takes 3 to 6 minutes.[52] The Suicidal Ideation Questionnaire (SIQ), a self-report tool focusing on suicide ideation, takes about 10 minutes to administer and 10 minutes to score.[53] The SIQ is aimed at adolescents from 15 to 18 years of age; the SIQ-JR is for ages 12 to 14 years.[54] It is available in paper/pencil or computer format.[55]

Risk factors for suicide in adolescents[4,6,12,36-38]

- Previous suicide attempt
- History of suicidal ideation
- History of mental illness/mood disorders
- History of physical and sexual abuse
- Substance abuse
- Homosexual or bisexual orientation
- Impulsivity and risk-taking
- Social isolation
- Stressful life events (including school problems, bullying, legal, or disciplinary problems)
- Family history of suicidal behavior
- Problematic relationship between adolescent and parents
- Exposure to suicidal behavior of others
- Access to lethal means

Management

One of the major concerns about suicide risk screening is determining what action to take when positive suicide risk is identified. Horowitz and colleagues pointed out that what this means is that a symptom has been identified and requires further evaluation, just as if a patient had an elevated BP and required further evaluation.[12] The patient would not

automatically be placed on an antihypertensive. Similarly, a positive result on a suicide risk screen would indicate that there is a problem/symptom, and further evaluation is needed by a mental health professional. Avoiding suicide risk assessment because the provider does not want to uncover a risk of suicide is similar to avoiding a BP measurement because the provider does not want to expose a hypertension diagnosis.[12]

The Western Interstate Commission for Higher Education and the Suicide Prevention Resource Center developed a toolkit for primary care providers to address suicide prevention in their patient population.[56] This toolkit contains information about developing office protocols for management of suicidal patients, training of office staff, provider and patient education, and developing mental health partnerships. One tool included in the toolkit is a decision tree for risk assessment of suicidal patients and initial management. Once a risk of suicide is identified, the next step is to assess the level of risk. A patient who has thoughts of death but no plans for suicide and no suicidal behavior is considered to be in the low-risk category.

A moderate risk patient has suicide ideation but no firm plans; he or she may have had a previous suicide attempt. Appropriate steps for the provider to take for the low- and moderate-risk category would include further assessment for psychiatric problems and other risk factors and enlisting the support of family, friends, and resources in the community as well as initiating contact with a therapist. A patient in the high-risk category has a detailed plan for suicide and has made preparation. The presence of factors, such as the presence of psychiatric symptoms, access to lethal means, poor social supports, and impaired judgment would necessitate hospitalization.[6]

One intervention that has been utilized in practice for patients not in imminent danger is the development of a safety plan.[6,57] This brief plan, which may take approximately 20 to 45 minutes to complete, is individualized with input of the adolescent and parents. The safety plan includes six main elements:[57]

- Recognizing signs that symptoms are worsening
- Initiating coping strategies
- Make use of social contacts to help distract from thoughts of suicide
- Contacting family members to deal with the crisis
- Contacting mental health professionals
- Reduce access to lethal means

The safety plan is different from a no-suicide contract, in which the patient is asked to make pledge (verbal or written) to not kill him or herself and to call a mental health professional when in crisis.[36,57] The no-suicide contract, while perhaps giving some reassurance to the healthcare provider, has not been found to reduce suicide or suicidal behavior.[36]

Links to brief suicide-risk screening tools

C-SSRS:	www.cssrs.columbia.edu/about_cssrs.html
ASQ:	www.nimh.nih.gov/news/science-news/ask-suicide-screening-questions-asq.shtml
SBQ-R:	www.integration.samhsa.gov/images/res/SBQ.pdf

The safety plan, on the other hand, is developed to help them know what actions to take should a crisis occur.[36,57] The process of creating a plan mandates a careful inventory of resources available and can focus not only on triggers to avoid and coping skills but also on protective factors that may help keep them safe. Parents play an important role in monitoring safety of their adolescent in such ways as contacting the primary care health provider and/or mental health professional as needed between visits and keeping the home environment as safe as possible.[36,38]

The adolescent and parents should be asked about the presence of weapons or firearms in the home; these should be removed from the home or locked away to make them completely inaccessible to the adolescent.[36,38] Additionally, medications should be locked away to prevent overdosing in a suicide attempt.[38] Follow-up visits can address the efficacy of the plan, and updates can be made based on the adolescent and parents' feedback. Safety plans are now available for smartphones, making it easily accessible for adolescents at all times.[58] The healthcare provider must continue to monitor any adolescent who is at risk for suicide. This can be done with follow-up interviews that continue to address risk factors, determination of suicide risk, and suicidal ideation.

Documentation of these areas should include rationale for clinical decision making based on information from the patient, collaborative informants, consultants, and medical records.[36,56] A tracking system is recommended to follow up on suicide ideation, current risk level, medications, and treatments.[36,56] A flagging system for medical records of patients at risk for suicide can be developed so that clinic staff can be vigilant in assessing continued or escalating risk.[36] In addition, ongoing communication (via phone or e-mail) between the primary healthcare provider, psychiatric clinicians, and designated mental health provider in the school (such as the school psychologist) is necessary for optimal management of the suicidal patient.[36,59]

Primary care providers are in a prime position to identify mental health problems in adolescent patients and initiate early referral for treatment and management

of mental health problems. Assessing for the presence of suicidal thoughts and behaviors is a key component of psychosocial screening. Suicide risk screening tools are available and can be administered in a time-efficient manner. Advanced planning and preparation can lead to a systematic, effective way to manage patients at risk for suicide, whether it is immediate referral for hospitalization or referral to a therapist and initiation of a safety plan. NP

REFERENCES

1. Avenevoli S, Swendsen J, He JP, Burstein M, Merikangas KR. Major depression in the National Comorbidity Survey-Adolescent Supplement: prevalence, correlates, and treatment. *J Am Acad Child Adolesc Psychiatry*. 2015;54(1):37-44e2.
2. Depression in children and adolescent fact sheet. National Institutes of Mental Health web site. www.nimh.nih.gov/health/publications/depression-in-children-and-adolescents/index.shtml.
3. Ahluwalia JS. Suicidal behavior in adolescents: risk factor identification, screening, and prevention. *Medscape Pediatrics*. 2009. www.medscape.org/viewarticle/702018.
4. Suicide Prevention: Youth suicide. Centers for Disease Control and Prevention Web site. www.cdc.gov/violenceprevention/pub/youth_suicide.html. Updated January 9, 2014.
5. Colpe LJ, Pringle BA. Data for building a national suicide prevention strategy: what we have and what we need. *Am J Prev Med*. 2014;47(3 suppl 2):S130-S136.
6. Taliaferro LA, Borowsky IW. Perspective: Physician education: a promising strategy to prevent adolescent suicide. *Acad Med*. 2011;86(3):342-347.
7. Casey B, Jones RM, Somerville LH. Braking and accelerating of the adolescent brain. *J Res Adolesc.* 2011;21(1):21-33.
8. Steinberg L. Should the issue of adolescent brain development inform public policy? *Issues Sci Technol.* Spring 2012. http://issues.org/28-3/steinberg/.
9. Paus T. Growth of white matter in the adolescent brain: myelin or axon. *Brain Cogn*. 2010;72(1):26-35.
10. Sturman DA, Moghaddam B. The neurobiology of adolescence: changes in brain architecture, functional dynamics, and behavioral tendencies. *Neurosci Biobehav Rev*. 2011;35(8):1704-1712.
11. Cohen JR, Asarnow RF, Sabb FW, et al. A unique adolescent response to reward prediction errors. *Nat Neurosci*. 2010;13(6):669-671.
12. Horowitz LM, Bridge JA, Pao M, Boudreaux ED. Screening youth for suicide risk in medical settings: time to ask questions. *Am J Prev Med*. 2014;47(3 suppl 2):S170–S175.
13. Taliaferro LA, Muehlenkamp JJ. Risk and protective factors that distinguish adolescents who attempt suicide from those who only consider suicide in the past year. *Suicide Life Threat Behav*. 2014;44(1):6-22.
14. Murphey D, Barry M, Vaughn B. Mental health disorders. adolescent health highlight. Child Trends Web site; Publication # 2013-1. www.childtrends.org/wp-content/uploads/2013/03/Child_Trends-2013_01_01_AHH_MentalDisordersl.pdf. Published January 2013.
15. Indicators on children and youth: adolescents who felt sad or hopeless. Child Trends Data Bank. Child Trends Web site. www.childtrends.org/wp-content/uploads/2012/07/30_Felt_Sad_or_Hopeless.pdf. Updated August 2014.
16. Teen depression. MAYO Clinic Web site. www.mayoclinic.org/diseases-conditions/teen-depression/basics/symptoms/CON-20035222. Published 2012.
17 Merikangas KR, He JP, Burstein M, et al. Lifetime prevalence of mental disorders in U.S. adolescents: results from the National Comorbidity Survey Replication—adolescent supplement (NCS-A). *J Am Acad Child Adolesc Psychiatry*. 2010;49(10):980-989. .
18. Nolen-Hoeksema S, Hilt L. *Handbook of Depression in Adolescents.* Vol 2015. New York, NY: Taylor and Francis Group; 2009.
19. Small DM, Simons AD, Yovanoff P, et al. Depressed adolescents and comorbid psychiatric disorders: are there differences in the presentation of depression? *J Abnorm Child Psychol*. 2008;36(7):1015-1028.
20. Balázs J, Miklósi M, Keresztény A, et al. Adolescent subthreshold-depression and anxiety: psychopathology, functional impairment and increased suicide risk. *J Child Psychol Psychiatry*. 2013;54(6):670-677.
21. Melnyk BM, ed. *Assessment & Evidenced-Based Management of Mood Disorders in Children and Teens: Part 1.* Kyss Program. New Jersey: Joint Special Initiative of The National Association of Pediatric Nurse Practitioners (NAPNAP) and the NAPNAP Foundation; 2009.
22. Schwartz SW. Adolescent mental health in the United States: facts for policymakers. National Center for Children in Poverty Web site. www.nccp.org/publications/pdf/text_878.pdf.
23. Health Policy Snapshot. How can early treatment of serious mental illness improve lives and save money? Issue brief. Robert Wood Johnson Foundation Web site. www.rwjf.org/content/dam/farm/reports/issue_briefs/2013/rwjf405173. Published March 2013.
24. Hagan JF, Shaw JS, Duncan PM, eds. Promoting mental health. In *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents.* 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2008. https://brightfutures.aap.org/pdfs/Guidelines_PDF/4-Promoting_Mental_Health.pdf.
25. Depression in children and adolescents: screening. U.S. Preventive Service Task Force Web site. www.uspreventiveservicestaskforce.org/Page/Topic/recommendation-summary/depression-in-children-and-adolescents-screening. Published March 2009.
26. Dihigo S. Use of screening tools for depression in adolescents: an evidenced-based systematic review. *NP Women's Healthcare*. 2014;2(2). http://npwomenshealthcare.com/use-of-screening-tools-for-depression-vol2-no2/.
27. Johnson JG, Harris ES, Spitzer RL, Williams JB. The patient health questionnaire for adolescents: validation of an instrument for the assessment of mental disorders among adolescent primary care patients. *J Adolesc Health*. 2002;30(3):196-204.
28. Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med*. 2001;16(9):606-613.
29. Radloff LS. The use of the center for epidemiologic studies depression scale in adolescents and young adults. *J Youth Adolesc*. 1991;20(2):149-166.
30. Goodman R, Ford T, Simmons H, Gatward R, Meltzer H. Using the strengths and difficulties questionnaire (SDQ) to screen for child psychiatric disorders in a community sample. *Br J Psychiatry*. 2000;177:534-539.
31. Jellinek MS, Murphy JM, Little M, Pagano ME, Comer DM, Kelleher KJ. Use of the pediatric symptom checklist to screen for psychosocial problems in pediatric primary care: a national feasibility study. *Arch Pediatr Adolesc Med*. 1999;153(3):254-260.
32. WHO calls for stronger focus on adolescent health. World Health Organization Web site. www.who.int/mediacentre/news/releases/2014/focus-adol. Published May 14, 2014.
33. Eaton DK, Kann L, Kinchen S, et al. Youth risk behavior surveillance—United States, 2011. Centers for Disease Control and Prevention. *MMWR Surveill Summ.* 2012;61(4):1–162.
34. 2012 National strategy for suicide prevention; overview: goals and objectives for action. Office of the Surgeon General and the National Action Alliance for Suicide Prevention Web site. www.surgeongeneral.gov/library/reports/national-strategy-suicide-prevention/overview.pdf. Published 2012.
35. AAS 2011 Youth suicidal fact sheet. American Association of Suicidology Web site. www.suicidology.org/Portals/14/docs/Resources/FactSheets/2011/YouthSuicidalBehavior2014.pdf. Published 2014.
36. Taliaferro LA, Oberstar JV, Borowsky IW. Prevention of youth suicide: the role of the primary care physician. *J Clin Outcomes Manag*. 2012;19:270-285.
37. Miller E, McCullough C, Johnson JG. The association of family risk factors with suicidality among adolescent primary care patients. *J Fam Viol*. 2012; 27:523-529.
38 Gordon M, Melvin G. Risk assessment and initial management of suicidal adolescents. *Aust Fam Physician.* 2014;43(6):367-372.
39. Husky MM, Olfson M, He JP, Nock MK, Swanson SA, Merikangas KR. Twelve-month suicidal symptoms and use of services among adolescents: results from the National Comorbidity Survey. *Psychiatr Serv*. 2012;63 (10):989-996.
40. O'Connor E, Gaynes BN, Burda BU, Soh C, Whitlock EP. Screening for and treatment of suicide risk relevant to primary care: a systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med*. 2013;158(10):741-754.
41. Suicide risk in adolescents, adults, and older adults: Screening. U.S. Preventive Service Task Force. www.uspreventiveservicestaskforce.org/Page/

Topic/recommendation-summary/suicide-risk-in-adolescents-adults-and-older-adults-screening. Published May 2014.

42. Brauser D. Insufficient evidence to support universal suicide screening. *Medscape Medical News*. 2013. www.medscape.com/viewarticle/803068.
43. Pearson JL, Claassen CA, Booth CL. Introduction to the Suicide Prevention Research Prioritization Task Force special supplement: the topic experts. *Am J Prev Med*. 2014;47(3 suppl 2):S102-S105.
44. Suicide. National Alliance on Mental Illness Web site. www.nami.org/Template.cfm?Section=By_Illness&Template=/ContentManagement/ContentDisplay.cfm&ContentID=23041. Reviewed January 2013.
45. Boudreaux ED, Horowitz LM. Suicide risk screening and assessment: designing instruments with dissemination in mind. *Am J Prev Med*. 2014;47(3 suppl 2):S163–S169.
46. Klein DA, Goldenring JM, Adelman WP. HEEADSSS 3.0: the psychosocial interview for adolescents updated for a new century fueled by media. *Contemp Pediatr Resource Center*. Published January 1, 2014. http://contemporarypediatrics.modernmedicine.com/contemporary-pediatrics/content/tags/adolescent-medicine/heeadsss-30-psychosocial-interview-adolesce?page=full.
47. Wintersteen MB. Standardized screening for suicidal adolescents in primary care. *Pediatrics*. 2010;125(5):938-944.
48. Posner K, Brown GK, Stanley B, et al. The Columbia-Suicide Severity Rating Scale: initial validity and internal consistency findings from three multisite studies with adolescents and adults. *Am J Psychiatry*. 2011;168(12):1266-1277.
49. Horowitz LM, Bridge JA, Teach SJ, et al. Ask suicide-screening questions (ASQ): a brief instrument for the pediatric emergency department. *Arch Pediatr Adolesc Med*. 2012;166(12):1170-1176.
50. Osman A, Bagge CL, Gutierrez PM, Konick LC, Kopper BA, Barrios FX. The Suicidal Behaviors Questionnaire-Revised (SBQ-R): validation with clinical and nonclinical samples. *Assessment*. 2001;8(4):443-454. http://dx.doi.org/10.1177/107319110100800409.
51. Diamond G, Levy S, Bevans KB, et al. Development, validation, and utility of internet-based, behavioral health screen for adolescents. *Pediatrics*. 2010;126(1):e163-e170.
52. BH-Works. Drexel University College of Nursing and Health Professions. Using technology to incorporate mental health screenings into medical settings. Scattergood Foundation Web site. www.scattergoodfoundation.org/innovideas/drexel-university-college-nursing-and-health-professions#.VLwkN890zVI. Published 2014.
53. Reynolds W. *Suicidal Ideation Questionnaire: Professional Manual*. Odessa, FL: Psychological Assessment Resources; 1998.
54. Reynolds W, Mazza J. Assessment of suicidal ideation in inner city children and young adolescent: reliability and validity of the Suicidal Ideation Questionnaire—JR. *School Psychol Rev*. 1999;28:17-30.
55. Suicide Ideation Questionnairre. PAR Web site. www4.parinc.com/Products/Product.aspx?ProductID=SIQ. Published 2012.
56. Western Interstate Commission on Higher Education and Suicide Prevention Resource Center. Suicide Prevention Toolkit for Rural Primary Care: a primer for primary health providers. Boulder (CO) Western Interstate Commission on Higher Education. www.sprc.org/sites/sprc.org/files/pctoolkit.pdf. Published 2009.
57. Stanley B, Brown GK. Safety planning intervention: a brief intervention to mitigate suicide risk. *Cogn Behav Pract*. 2012;19:256-264.
58. Stanley B, Brown GK, Doyle P. Safety plan. New York State Office of Mental Health. https://itunes.apple.com/us/app/safety-plan/id695122998?ls=1&mt=8.
59. The role of high school mental health providers in preventing suicide. Suicide Prevention Resource Center. www.sprc.org/sites/sprc.org/files/SchoolMentalHealth.pdf. Published September 2012.

Barbara P. Gray is an associate professor at Texas Woman's University, Dallas, Tex.

Sharolyn K. Dihigo is a clinical assistant professor and director of the DNP Program at the University of Texas at Arlington Graduate College of Nursing & Health Innovation, Arlington, Tex.

The authors and planners have disclosed no potential conflicts of interest, financial or otherwise.

DOI-10.1097 /01.NPR.0000470353.93213.61

CE CONNECTION

Earn CE credit online:
Go to www.nursingcenter.com/CE/NP and receive a certificate within minutes.

INSTRUCTIONS
Suicide risk assessment in high-risk adolescents

TEST INSTRUCTIONS

- To take the test online, go to our secure website at **www.nursingcenter.com/ce/NP**.
- On the print form, record your answers in the test answer section of the CE enrollment form on page 38. Each question has only one correct answer. You may make copies of these forms.
- Complete the registration information and course evaluation. Mail the completed form and registration fee of $21.95 to: Lippincott Williams & Wilkins, CE Group, 74 Brick Blvd., Bldg. 4, Suite 206, Brick, NJ 08723. We will mail your certificate in 4 to 6 weeks. For faster service, include a fax number and we will fax your certificate within 2 business days of receiving your enrollment form.
- You will receive your CE certificate of earned contact hours and an answer key to review your results. There is no minimum passing grade.
- Registration deadline is September 30, 2017.

DISCOUNTS and CUSTOMER SERVICE

- Send two or more tests in any nursing journal published by Lippincott Williams & Wilkins together and deduct $0.95 from the price of each test.
- We also offer CE accounts for hospitals and other healthcare facilities on nursingcenter.com. Call 1-800-787-8985 for details.

PROVIDER ACCREDITATION

Lippincott Williams & Wilkins, publisher of *The Nurse Practitioner* journal, will award 2.0 contact hours for this continuing nursing education activity.

Lippincott Williams & Wilkins is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

This activity is also provider approved by the California Board of Registered Nursing, Provider Number CEP 11749 for 2.0 contact hours. Lippincott Williams & Wilkins is also an approved provider of continuing nursing education by the District of Columbia and Florida #50-1223.

Your certificate is valid in all states.