DEVELOPMENT AND EVALUATION OF A CLINICAL PRACTICE GUIDELINE TO GUIDE PRIMARY CARE PROVIDERS ON IDENTIFICATION OF ADOLESCENT SUICIDALITY

by

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As members of the DNP Project Committee, we certify that we have read the DNP Project prepared by Bianca Elena Roman entitled "Development and Evaluation of a Clinical Practice Guideline to Guide Primary Care Providers on the Identification of Adolescent Suicidality" and recommend that it be accepted as fulfilling the DNP project requirement for the Degree of Doctor of Nursing Practice.

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Final approval and acceptance of this DNP project is contingent upon the candidate's submission of the final copies of the DNP project to the Graduate College.

I hereby certify that I have read this DNP project prepared under my direction and recommend that it be accepted as fulfilling the DNP project requirement.

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STATEMENT BY AUTHOR

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SIGNED: Bianca Elena Roman

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DEDICATION

I would like to dedicate this work to my sister. I never spent much time thinking about suicide until I almost lost my sister to suicide on September 15, 2013. Now I think about it every day, and I have worked hard towards understanding every facet of suicide in order to see past the stigma and judgmental attitude surrounding suicide. I never want anyone else to suffer the way she suffered. I want to aid adolescents in getting the help they need so that they can see past their current hardship and build a future for themselves that is bright and beautiful. I am so thankful to have my sister in my life, and I am lucky that she did not die by suicide. But I don't want anyone to have to rely on luck to prevent suicide. I dedicate this work to all pediatric providers so that they may help prevent adolescent suicide.

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ABSTRACT

Suicide is an issue that plagues adolescents in the United States. Suicide crosses socioeconomic, racial, and gender divides and is difficult to predict and prevent. Primary care providers (PCPs) are in a position to detect suicidality in adolescents; however, PCPs lack the knowledge and confidence necessary to accurately identify suicidal adolescents. The author conducted an extensive review of current literature (meta-analyses, systematic reviews, literature reviews, case reports, and existing clinical practice guidelines) on identification of adolescent suicidality in pediatric primary care settings. This paper provides a set of recommendations for primary care providers on how to properly identify adolescents with suicidal ideation and behavior.

INTRODUCTION

"There is but one truly serious philosophical problem and that is suicide" (Camus, 1955). Every 13 minutes, a person in the United States (US) commits suicide (CDC, 2015). Suicide is the second leading cause of death for people aged 15-34 years and the second leading cause of death for children aged 10-14 years (CDC, 2015). Suicide is indeed an epidemic in the U.S., but due to the strong stigma that persists regarding suicide and mental health, the issue has long been neglected. (World Health Organization, 2001). In 2013, 17% of high school students reported having suicidal ideation, 13.6% of students made a plan about how they would attempt suicide, 8% of students attempted suicide, and 2.7% of students made a suicide attempt that resulted in an injury, poisoning, or an overdose that required medical attention (CDC, 2015). Depression, which is a leading contributor to suicide, affects 29.9% of high school students, according to the Youth Risk Behavior Survey (Kroning & Kroning, 2016). More adolescents and young adults in the US die from suicide each year than from cancer, heart disease, AIDS, birth defects, stroke and chronic lung disease combined (Ruble et al., 2013). Shockingly, more adolescents die from suicide than motor vehicle accidents (Ruble et al., 2013). Congress endorsed developing suicide prevention measures as a national priority (Ruble et al., 2013). However, suicide rates are still on the rise, especially among girls aged 10-14 years (Bichell, 2016). Suicide will kill more young people than any other disease (Kostenuik & Ratnapalan, 2010). Mental illness is one of the most important risk factors to suicide; therefore, identifying and treating adolescents with mental illness is crucial to preventing suicide attempts and completed suicide (Kostenuik & Ratnapalan, 2010).

Background

Risk factors for suicide are numerous and include the following: mood disorders, substance abuse, prior suicide attempts, parental loss, family dysfunction, adverse childhood events, low levels of serotonin, social isolation, somatic symptoms, a history of mental health treatment, impulsiveness, aggressiveness, a family history of suicide, being lesbian, gay, bisexual, or transgender, and having access to lethal means (Davidson & Linnoila, 2013). Other risk factors include being bullied, sleep disturbances, and having chronic medical conditions such as epilepsy or chronic pain (LeFevre, 2014). Having firearms in the home, regardless of how and where they are stored, is associated with a higher risk of completed adolescent suicide (Shain, 2016). Suicidal ideation is present in 28 to 41% of self-injury cases, and self-harm is an identified risk factor for suicidal ideation and suicide attempts (Toprak et al., 2011). Those who have attempted suicide and have a history of self-harm are more likely to be depressed, impulsive, and anxious (Toprak et al., 2011). They can also lack awareness of how lethal their suicide attempt may be (Toprak et al., 2011). A difficulty with identifying adolescents at risk for suicide and/or mental illness is that many mental health symptoms are confused for normal youth mood swings, laziness, poor attitude, and immaturity (Moutier, Cook, & Vaillancourt Strobach, 2017).

Another risk factor for suicide is having a friend or schoolmate attempt or complete suicide (Borowsky, Ireland, & Resnick, 2001). This is known as suicide contagion. When an adolescent is already vulnerable and contemplating suicide, the exposure of a suicide or suicidal behavior of another person can influence that adolescent to also attempt or complete suicide (Sullivan et al., 2015). Adolescents can be at risk for suicide due to media exposure of suicide or

suicidal behavior (Shain, 2016). For example, media coverage of a teenager's suicide may lead to other suicides (Shain, 2016). Interestingly, the number of additional deaths by suicide are proportional to the amount and duration of the media coverage (Shain, 2016). The same goes for newspapers; stories on the front page that mention suicide, the method of suicide, and a detailed description of the individual and/or their suicide act has been correlated with an increase in youth cluster suicides (Shain, 2016). This is undoubtedly why the American Foundation for Suicide Prevention has guidelines for reporters on how to responsibly report on suicide (AFSP, 2017).

The Netflix series "13 Reasons Why" was released in March of 2017 and follows the story of fictional high school student Hannah Baker and the reasons why she commits suicide (Moutier et al., 2017). The show has raised concerns from mental health and suicide prevention experts that the show romanticizes suicide, portrays suicide as a viable solution, and contains themes that are dark, engaging, and overly-relatable (Moutier et al., 2017). The National Association of School Psychologists (2017) released the following statement: "We do not recommend that vulnerable youth, especially those who have any degree of suicidal ideation, watch this series." There are currently no published statistics to prove "13 Reasons Why" increased suicide attempts and/or suicide completions, however suicide experts are concerned the show will increase the risk for suicide contagion and result in copycat and cluster suicides/suicide attempts (Moutier et al., 2017). The National Association of School Psychologists (2017) encouraged school personnel and parents to start a supportive dialogue with their students or children about the themes discussed in the series, listen to the adolescents' thoughts and concerns regarding the show and the show's themes, and be willing to provide help.

Díaz, Sánchez, and Martínez (2015) stated that 15% to 25% of adolescents have suicidal ideation. Male suicide attempts have increased from 1.3% to 3.8%, and female suicide attempts have increased from 1.5% to 10.1% (Díaz, Sánchez, & Martínez, 2015). For every adolescent death by suicide, another 100 to 200 other adolescents attempt suicide (Taliaferro, Oberstar, & Borowsky, 2012).

Adolescents with mental illnesses are more likely to visit their primary care providers (PCPs) compared with their peers (Neves & Leanza, 2014). However, PCPs identify only 30% of children and adolescents with a diagnosable depressive or anxiety disorder (O'Brien et al., 2016). In addition, suicide was brought up only in 11% of appointments with patients who had (unbeknown to their PCPs) screened positive for suicidal ideation (LeFevre, 2014). Only 36% of U.S. PCPs discussed suicide in appointments with patients that were known to be diagnosed with major depression or an adjustment disorder or those who were requesting antidepressants (LeFevre, 2014). In Maryland, less than 25% of pediatric PCPs or family PCPs declared that they frequently screened adolescents for suicide risk factors (LeFrevre, 2014). Only 12% of adolescents present with psychological problems to their PCP, yet 50% of adolescents have severe levels of psychological distress, and 22% have significant levels of suicidal ideation (Kostenuik & Ratnapalan, 2010).

Most adolescents prefer to see their PCP for emotional issues, because they feel there is less stigma associated to seeing a PCP versus a mental health professional, and PCPs are more accessible; thus, more than 50% of adolescents with depression are treated by their PCP (Horowitz & Ballard, 2009). However, 83% of children and adolescents who attempted suicide were not identified as a danger to themselves by any healthcare provider, even when seen by

their PCP months before their attempt (Horowitz & Ballard, 2009). Parents are unaware of up to 90% of suicide attempts made by their children, making suicide prevention and screening essential (Kostenuik & Ratnapalan, 2010).

This problem is significant to healthcare because the consequences of suicide are far-reaching and include death, severe psychological effects, increased risk of successive suicide attempts, increased healthcare costs, and severe emotional effects on the family and friends of suicide and suicide attempt victims (Wasserman et al., 2015). In addition, suicide costs the US $51 billion each year due to healthcare costs and loss of productivity (AFSP, 2017).

Suicide is a complex, national issue that reaches across socioeconomic and racial divides and involves different factors including biological, genetic, psychological, familial, social, cultural, and individual (Díaz, Sánchez, & Martínez, 2015). Research has shown that up to 90% of adolescents that attempt or complete suicide will have seen a healthcare provider at least once in the 12 months leading up to their suicide or suicide attempt (Shapiro, Pinto, & Evans, 2016). Depression is present in 50-79% of adolescents attempting suicide, although it is not always recognized (LeFevre, 2014). The majority of adolescents with mental health issues do not receive help (Lamis, Underwood, & D'Amore, 2016). It has been shown that increasing awareness about suicide facts and myths, risk factors for suicide, and suicide prevention methods improve providers' knowledge and comfort in utilizing suicide prevention skills (Lamis et al., 2016).

Local Problem

Arizona is ranked 12th in the country for suicide deaths of all ages (AFSP, 2017). In 2016, Arizona suicide rates were the second leading cause of death for 15 to 34-year-olds and the

first leading cause of death for children aged 10-14 (AFSP, 2017). Suicide is the eighth leading cause of death overall in the state of Arizona (AFSP, 2017). On average, one person dies by suicide every seven hours in the state of Arizona (AFSP, 2017). In Arizona, nearly four times as many people die by suicide each year than by homicide (AFSP, 2017). Overall, the rates of suicide in Arizona are higher than the national average; suicide cost Arizona a total of $1,246,006,000 in 2010 (AFSP, 2017).

Purpose

The purpose of this DNP project is to provide a clinical practice guideline on the identification of adolescent suicidal ideation and behavior for primary pediatric providers. Utilizing an extensive review of the literature, the current evidence was presented on the risk factors of suicide and how to identify and provide at risk adolescents with the appropriate services. The objective of this guideline is to help guide PCPs in the identification and management of adolescent suicidality. Key stakeholders include primary pediatric providers, patients, and families. This guideline does not provide recommendations for care after an adolescent has attempted or completed suicide.

Study Question

What are the evidence-based recommendations on the identification of adolescent suicidality for pediatric primary care providers?

THEORETICAL FRAMEWORK AND SYNTHESIS OF EVIDENCE

Theoretical Framework

The purpose of this DNP project is to develop a clinical practice guideline, which will guide primary care providers on identification and resources for management of adolescent suicidality.

Doctor of nursing practice (DNP) projects examine health related issues and address potentially poor delivery of care (Christenbery, 2011). Nursing theories support and guide the DNP project to address patient care issues (Christenbery, 2011). The nursing theory for this project is the Johns Hopkins Nursing Evidenced-Based Practice Model (JHNEBP). This theory was chosen because it is a practical approach to applying evidenced based recommendations in a variety of clinical settings (Schaffer, Sandau, & Diedrick, 2012).

An article by Schaffer, Sandau and Diedric (2012) outlines the three components of the JHNEBP: the practice question, evidence, and translation. The first step is to identify a study question or problem statement; this step is often done as a team approach. The second step is to review the available literature for applicable evidence. The literature is then summarized, critiqued and assigned a strength rating. The final step of the JHNEBP is the translation phase, which incorporates recommendations from the literature to develop an action plan and communicate findings.

The JHNEBP model will guide this project. The first step, developing the practice question, involves refining the subject area and identifying a gap in care that needs to be addressed. A review of literature, which is detailed below, will confirm that the research question has gone unanswered in the literature. The second step, literature analysis, is the most

comprehensive component of the project. The purpose is to find clear evidence to support recommendations for practice. Finally, the last step in the JHNEBP is to translate the evidence into a CPG for providers to use in daily practice.

Concepts

Suicide

The Centers for Disease Control and Prevention (2016) defined suicide as death caused by self-injury with the objective to die as a result of the self-injurious action.

Suicide Attempt

A suicide attempt is defined as "a non-fatal, self-directed, potentially injurious behavior with an intent to die as a result of the behavior; might not result in injury" (CDC, 2016).

Suicidality/Suicidal Ideation/Suicidal Behavior

Suicidality is defined as thinking about, contemplating, or planning suicide (CDC, 2016).

Self-Harm/Injury

Self-harm is defined as purposeful self-damage to the body with the anticipation that the damage will not cause death (Angelotta, 2015).

Behavioral Health Screening Tool

A behavioral health screening tool is an instrument that is used to identify behavioral health concerns such as attention-deficit hyperactivity disorder, aggression, depression, anxiety, and suicidal ideation (Hargrave & Arthur, 2015).

Behavioral Health Resources

A behavioral health resource is an organization, person, or asset that can be utilized to improve a person's mental health. Behavioral health resources for adolescents in the Phoenix area were identified in this project.

Primary Care Providers (PCPs)

For this project, a PCP is defined as a medical doctor (MD), a doctor of osteopathic medicine (DO), a nurse practitioner (NP), or a physician's assistant (PA) that is licensed to practice medicine and care for adolescents in a primary care setting. Primary care settings include private offices, family practice clinics, pediatric clinics, and urgent care clinics.

Barriers

Barriers include any obstacles that prevent PCPs from routinely using the CPG or any of the screening tools or resources described in the CPG. It is important to identify all potential barriers so that methods of overcoming the barriers can be discussed.

Facilitators

Facilitators are factors that aided in the implementation of the CPG and the screening tools and resources described in the CPG.

Adolescent/Youth

For this project, an adolescent, or youth, was defined as a child between the ages of 13 and 17.9 years.

Synthesis of Evidence

The purpose of the literature appraisal is to examine current systematic reviews, literature, and clinical practice guidelines, which address adolescent specific recommendations

for suicide screening. The search terms “adolescent” and “suicide” were utilized in the preliminary literature search on PubMed, National Guideline Clearinghouse, Cochrane Library, and Embase. PubMed revealed one relevant guideline on screening for suicide risk for adolescents, two relevant reviews, one clinical report, and one research support study. A search on the National Guideline Clearinghouse yielded one relevant guideline. A search on Cochrane Library yielded one relevant systematic review. A search on Embase yielded three relevant literature reviews. Inclusion criteria were publication date within 11 years and English language. The search terms “("Suicide"[Mesh]) AND ("Adolescent"[Mesh] OR "Psychology, Adolescent"[Mesh] OR "Adolescent Psychiatry"[Mesh] OR "Adolescent Behavior"[Mesh]” were used in the second literature search with inclusion criteria of publication date within 11 years and English language.

Risk Factors

The following factors should be considered when measuring suicide risk: previous suicide attempts, a history of substance abuse, known mental illness, feelings of hopelessness, anxiety, distress and suicidal ideation, daily thoughts of death, presence of stressful life events, and the ease of means (National Guideline Clearinghouse, 2012). Providers should consider the following as risk factors physical illness or disability, chronic illness, chronic pain, family history of suicide, and a history of suicide in the patient’s environment (National Guideline Clearinghouse, 2012). Adolescents at high risk of attempting or completing suicide include adolescents with a suicide plan that is likely to be lethal, a recent suicide attempt especially when accompanied by agitation and hopelessness, verbal statement of intent to kill themselves, and impulsivity and dysphoric mood (Shain, 2016).

Provider Education

PCPs should receive education and training on suicide (Taliaferro et al., 2012). Increased provider education has been shown to improve provider detection of depression and suicide risk in youth (Duke & Borowsky, 2009). Provider education has been shown to increase diagnosis and thus treatment of depression and reduce suicide rates (Duke & Borowsky, 2009). Combining increased provider education with universal screening in primary care settings can decrease inequalities in care and decrease missed chances to detect and treat suicidal youth (Duke & Borowsky, 2009).

A systematic review by O'Brien et al. (2016) revealed that PCPs were hesitant to ask adolescents deeper questions regarding their mental health. In addition, PCPs lacked the confidence to make mental health diagnoses due to unclear diagnostic criteria, possible comorbidities, and discrepancies between what the adolescent says and what the parents say (O'Brien et al., 2016). PCPs feel they do not have enough mental health training to address pediatric mental health issues (O'Brien et al., 2016).

However, the more education a healthcare provider has on mental illnesses, mental health, and suicide, the less antipathy they have towards suicide and those who struggle with suicidal ideation and behavior (Cleaver, 2014). Most adolescents and their parents are willing to and desire to discuss psychosocial issues with their PCP; however, PCPs do not routinely screen youth for psychosocial issues, and therefore preadolescents and adolescents with emotional disorders are underdiagnosed (Frankenfield et al., 2000).

Screening

The key to the success of suicide prevention and intervention programs is early detection so that adolescents can be connected with appropriate behavioral health services before they make an attempt on their life (Wintersteen, 2010). Many behavioral health issues first present themselves in the primary care setting, making primary care the ideal setting for an early detection program (Wintersteen, 2010).

The United States Preventive Services Task Force (USPSTF) reviewed the evidence on the accuracy and reliability of tools used to screen for suicide risk, benefits and harms of screening for suicide risk, and benefits and harms of treatments to prevent suicide (LeFevre, 2014). The USPSTF concluded that there was not enough evidence to recommend for or against routine screening by PCPs to identify suicide risk in the general population (LeFevre, 2014). However, the USPSTF did recommend that PCPs screen adolescents for depression (LeFevre, 2014). In addition, evidence showed PCPs should be alert for suicidality in patients with high suicide risk, i.e. after discharge from a psychiatric hospital or after an episode of intentional self-harm (LeFevre, 2014). Interventions during these high-risk times are effective in decreasing deaths by suicide (LeFevre, 2014).

O'Connor et al. (2013) performed a systematic review of available evidence to determine the accuracy of screening tools, the effectiveness and safety of suicide screening, and the effectiveness of treatment of suicide risk in the primary care setting. Suicide screening can be difficult because some people may not want to divulge that they have suicidal thoughts (which creates a false-negative result on a screening test) while other people may have suicidal thoughts without seriously intending to attempt/commit suicide (which creates a false-positive result on a

screening test) (O'Connor et al., 2013). In addition, although there are known risk factors for suicide, some of these risk factors are common and therefore are not strong predictors (O'Connor et al., 2013). These factors are challenges to suicide screening (O'Connor et al., 2013). O'Connor et al. (2013) studied a few different screening tools; none performed spectacularly well in adolescents, and the tools had poor applicability to general primary care patients. Screening tools used in primary care can help detect adults at risk for suicide, but there is limited evidence on their capability of identifying suicide risk in adolescents (O'Connor et al., 2013)

Pena and Caine (2006) evaluated screening programs using tools as prevention measures for adolescent suicide and found that the sensitivity of suicide screening tools ranged from 48-100% and the specificity of the tools ranged from 37-96%. One study showed there were fewer suicide attempts among adolescents in a suicide-screening group than in the control group; however, another study found there were no differences between the experimental and control group (Pena & Caine, 2006). The researchers reported some studies that examined screening programs showed that these programs improved help-seeking after screening, showed no adverse effects to screening, and decreased suicide attempts while other studies found that screening programs were too difficult to implement or were not effective (Pena & Caine, 2006). Overall, adolescent suicide screening programs can improve the detection of adolescents in need of suicide treatment (Pena & Caine, 2006).

Horowitz and Ballard (2009) conducted a review on suicide screening in primary care. Although depression and suicidal ideation/behavior are not synonymous, they are frequently intertwined (Horowitz & Ballard, 2009). The USPSTF recommended screening for major depressive disorder in adolescents 12 to 18 years of age (Horowitz & Ballard, 2009). It is

feasible and acceptable to set up a universal depression screen in pediatric primary care practices (Horowitz & Ballard, 2009). Guidelines for Adolescent Depression in Primary Care (GLAD-PC) identified useful screening tools for depression: The Beck Depression Inventory, the Reynolds Adolescent Depression Scale, the Mood and Feelings Questionnaire, and the Kutcher Adolescent Depression Scale (Zuckerbrot et al., 2007). There are two tools currently recommended by the American Academy of Child and Adolescent Psychiatry and the American Academy of Pediatrics (Bevans, Diamond, & Levy, 2012). The tools are the Beck Depression Inventory-Fast Screen (which is not free to providers) and the Patient Health Questionnaire for Adolescents (Bevans et al., 2012). These tools are proven to be reliable, valid, sensitive, and specific to identifying behavioral health symptoms in adolescents (Bevans et al., 2012). A depression detection program in the primary care setting when combined with depression treatment yields better outcomes than treatment as usual (Horowitz and Ballard, 2009). Horowitz and Ballard (2009) recommended screening adolescents at risk for suicide with extremely sensitive, validated instruments in healthcare settings across the nation. Horowitz and Ballard (2009) also recommended suicide screening for at risk children starting at eight years of age. Screening at-risk youth is effective at identifying adolescents with suicidal ideation; however, there are many adolescents that do not display typical suicide warning signs and are thus overlooked (Horowitz & Ballard, 2009). Therefore, it is important that parents, teachers, and healthcare providers be on the lookout for warning signs in all children and adolescents, not only those deemed high-risk (Horowitz & Ballard, 2009). “Skeptics say ‘they won’t tell you'; but for a great number of children and adolescents, one would be surprised at how much they will tell if providers take the time to ask the difficult questions (p. 626).”

Kostenuik and Ratnapalan (2010) conducted a literature review to provide PCPs with an approach to suicide prevention and screening in adolescents. Routine wellness visits provide the ideal opportunity for PCPs to screen adolescents to rapidly identify at-risk adolescents (Kostenuik & Ratnapalan, 2010). The Guidelines for Adolescent Depression- Primary Care (GLAD-PC) were created to assist PCPs with identifying, assessing, diagnosing, treating, and managing depression in children and young adults aged 10 to 21 years (Kostenuik & Ratnapalan, 2010). The GLAD-PC toolkit includes the Guidelines for Adolescent Preventive Services (GAPS) adolescent and parent questionnaires. PCPs should utilize these questionnaires to quickly and easily screen for mental illness and suicidality (Kostenuik & Ratnapalan, 2010). Taliaferro et al. (2012) recommended PCPs implement a screening program in their practice and postulated that PCPs are in an ideal position to detect and prevent youth suicide.

The clinical interview of the patient should not be replaced by the use of screening tools; although, these tools can supply supplementary information to the provider (National Guideline Clearinghouse, 2012). The following screening tools are recommended for adolescents: Beck's Hopelessness Scale, the Risk of Suicide Questionnaire, the Children Depression Rating Scale-Revised, and the Beck Depression Inventory (National Guideline Clearinghouse, 2012).

The American Academy of Pediatrics published a clinical report recommending that pediatric PCPs screen for suicidality (Shain, 2016). Screening tools can be helpful because some adolescents may feel more comfortable disclosing suicidality on self-report than in person (Shain, 2016). Self-administered scales can be oversensitive (resulting in too many false positives) and underspecific (resulting in too many false negatives), which causes the tools to lack predictive value (Shain, 2016).

Wintersteen (2010) conducted research to determine if screening for suicide risk in pediatric primary care practices would improve identification rates of suicidal adolescents, maintain identification rates, improve rates of referral, and be replicated in other practices. Wintersteen (2010) provided PCPs in three primary care practices with a brief training in suicide risk and added two questions in their existing electronic psychosocial interview which auto-populated for any patient between the ages of 12 and 17.9 years of age. These interventions increased the rates of suicide risk inquiry by 219%, increased the rates of identification of suicidal risk by 392% across all three clinics, increased referral rates by 392%, and the rate of detection was maintained for the next six months after the intervention (Wintersteen, 2010). Routine, universal screening for suicide risk in primary care practices can identify suicidality in adolescents which can lead to a PCP making a referral to behavioral health services prior to a fatal or severe suicide attempt (Wintersteen, 2010).

Bevans et al. (2012) created the Behavioral Health Screen (BHS), which is a web-based comprehensive screening tool to be used for adolescents to assess for psychiatric symptoms as well as risky behaviors. The BHS is a useful tool and accurately measures depression, anxiety, and suicidal risk dimensions in adolescents (Bevans et al., 2012). The BHS differs from other tools because of its ability to measure multiple behavioral health dimensions, therefore identifying comorbid conditions such as depression and anxiety, and because of its ease of delivery (Bevans et al., 2012).

Clinical Interview

The CPG for the prevention and treatment of suicidal behavior recommended primary care providers examine suicidal thoughts in patients who have risk factors for suicide. In

addition, the authors of the CPG found that screening does not increase the suicide risk (National Guideline Clearinghouse, 2012). The CPG also recommended that a kind and empathetic approach be used to gradually ask a patient about suicidal thoughts (National Guideline Clearinghouse, 2012). Once suicidal ideation is identified, the provider needs to determine the possibility of a suicide attempt: frequency of suicidal thoughts, seriousness of thoughts, presence of a suicide plan, and means of execution (National Guideline Clearinghouse, 2012).

PCPs should screen adolescents for suicide and mental illnesses in the clinical interview by asking questions regarding emotional hardships, delayed or regression of development, distress, impaired functioning, and intensity of danger to self or others (Shain, 2016). In the clinical interview, PCPs often struggle to find the right words and tone to use to ask about suicidality (O'Brien et al., 2016, p. e701). The best way to identify suicidality is to directly ask the patient or to screen via self-report (Shain, 2016). Best practice guidelines call for primary care providers to ask about many different behavioral health challenges that adolescents face (Bevans et al., 2012).

Shain (2016) stated:

> "*One approach to initiate a confidential inquiry into suicidal thoughts or concerns is to ask a general question, such as, "Have you ever thought about killing yourself or wished you were dead?" The question is best placed in the middle or toward the end of a list of questions about depressive symptoms. Regardless of the answer, the next question should be, "Have you ever done anything on purpose to hurt or kill yourself?" If the response to either question is positive, the pediatrician should obtain more detail (eg, nature of past and present thoughts and behaviors, time frame, intent, who knows and how they found out). Inquiry should include suicide plans ("If you were to kill yourself, how would you do it?"), whether there are firearms in the home, and the response of the family (p. 672).*"

Treatment

LeFevre (2014) found that the most effective treatment to decrease risk for suicide is psychotherapy, including cognitive behavioral therapy, dialectical behavior therapy, and problem-solving therapy. While these treatments are not typically performed by PCPs, PCPs can refer patients to behavioral therapy and subsequently continue to monitor patients throughout their therapy to ensure that it is working (LeFevre, 2014).

Taliaferro et al. (2012) recommended PCPs develop relationships with nearby mental health specialists in order to assist with referrals and co-management of suicidal youth. When suicidality or mental illnesses are identified, a referral should be made to the appropriate mental health professionals (Shain, 2016). Providers should make an urgent referral to mental health services if the patient has a severe mental illness, serious suicidal ideation/behavior, a suicide plan, suicidal intent, lack of a support system, or if the provider is uncertain whether there is severe suicide risk (National Guideline Clearinghouse, 2012). All adolescents who report suicidality should always be further assessed by a provider (Shain, 2016).

Literature Strengths

Although there is mixed evidence on the management of suicide, there were several points that were agreed upon by researchers. In regards to research on harmful effects of screening, there is no evidence to suggest that asking questions about suicide leads to suicidal behavior, even in high risk youth (Shain, 2016).

Literature Weaknesses

Overall, weaknesses in the literature include limitations in review methods, lack of consideration of the quality of the studies examined (Pena & Caine, 2006), and lack of statistical

power which threatened external validity (O'Connor et al., 2013). O'Connor et al. (2013) suggested that incredibly large trials are necessary to have sufficient power to see if screening and treatment decreases suicide deaths, and most of the aforementioned trials were limited by small sample sizes. In addition, O'Connor et al. (2013) further suggested that since suicide rates greatly vary between ethnicities, culturally sensitive risk-based screening tools and intervention methods may need to be developed to screen for the suicide risk in these populations. The National Guideline Clearinghouse (2012) stated that false-positive and false-negative results of screening tests could be potentially harmful to patients although they did not elaborate on what these negative effects might be.

Limitations

There is a paucity of data on the accuracy of screening instruments to identify suicide risk, limited data on treatment of adolescents at risk for suicide, and severely limited data on the potential harms of screening for suicide in adolescents (LeFevre, 2014). O'Connor et al. (2013) found that a significant limitation of their data was that they could not determine the precise accuracy of predicting suicide or suicide attempts in the clinical interview, because suicide events are relatively rare and hard to predict. O'Connor et al. (2013) determined that there is insufficient data on the subject, and that more research is necessary to conclude whether screening is effective (and what kinds of screening tools are effective) at decreasing suicide attempts in adolescents. Furthermore, evidence to show the general population should be routinely screened for suicide risk is inadequate (LeFevre, 2014). In addition, data on screening tools is limited and there is a wide range of accuracy of screening tools (LeFevre, 2014).

PCPs must realize prior to screening for suicidality that they must be able to provide treatment and management for all adolescents that screen positive (Kostenuik & Ratnapalan, 2010). Often the management of suicidality may be in the form of a referral to a mental health specialist; however, there are limited pediatric psychiatric and psychologic providers, so PCPs may have to take responsibility for managing the adolescent's mental health, which is a barrier to screening (Kostenuik & Ratnapalan, 2010).

The major barrier to screening for adolescent suicidality in primary care is time (Wintersteen, 2010). Another challenge is a lack of PCP knowledge on suicide risk factors, protective factors, and warning signs for suicide (Wintersteen, 2010). Without proper knowledge on the subject, PCPs can feel the need to make a psychiatric diagnosis, however studies have found that many suicidal youths do not have a psychiatric diagnosis at the onset of suicidal ideation or a suicide attempt (Wintersteen, 2010). Psychosocial variables are more predictive of suicidality than diagnostic variables, and it is imperative that PCPs understand this and receive knowledge and training on Suicidology (Wintersteen, 2010).

Barriers to implementing an early detection program include lack of provider training/education, limited time, difficulty accessing or knowing how to access behavioral health services, and limited ability to administer screening instruments (Bevans, Diamond, & Levy, 2012). A major barrier to the implementation of behavioral health screening in primary care is the unavailability of screening tools (Bevans et al., 2012).

Knowledge Gaps

There is not enough available research on the epidemiology of suicide, benefits of screening for suicide, performance traits of screening tests, potential harms of suicide screening,

treatment for suicide, tailored treatment for suicide based on ethnicity, and treatment aimed at parents of suicidal adolescents (LeFevre, 2014). In addition, research on the accuracy of screening tools is extremely limited in adolescents (O'Connor et al., 2013). Although suicide screening makes instinctive sense, there are no studies to definitively show the effectiveness of screening adolescents in primary care (Horowitz & Ballard, 2009). More research is necessary in the areas of neurobiology and comprehending social context as a crucial element of protecting adolescents (Duke & Borowsky, 2009). Duke and Borowsky (2009) called for increased advocacy for adolescents, development of comprehensive healthcare models for adolescents, and additional evaluation of suicide prevention programs. This project bridges the gap in the literature by synthesizing the available data and presenting the data in the form of evidence-based recommendations for the use of PCPs.

METHODOLOGY

Background

CPGs summarize available evidence on a subject and present it in a user-friendly format to assist practitioners with making evidence-based decisions in patient care (DiCenso, Guyatt, & Ciliska, 2014). CPGs provide recommendations for providers based on evidence gathered by a thorough review of the literature (DiCenso et al., 2014).

The first step in creating a CPG is to select a topic and specific clinical problem (DiCenso et al., 2014). This CPG addressed the clinical problem of identifying adolescents with suicidality in primary care. The next step is to perform a search of existing guidelines to see if one exists that addresses the clinical problem (DiCenso et al., 2014). If a CPG that fits the problem exists, it can be updated with a literature review (DiCenso et al., 2014). If a CPG does not exist, a

guideline developer must conduct a thorough and systematic review of literature to create a guideline (DiCenso et al., 2014). A CPG exists that details prevention and treatment of suicidal behavior, but it contains limited recommendations specifically for adolescents. This CPG addressed adolescent specific recommendations for identifying suicidality in primary care.

The quality of the literature is graded per the Scottish Intercollegiate Guidelines Network (SIGN) levels of evidence (Appendix B). The intended audience of this project is pediatric primary care providers (MDs, DOs, NPs, and PAs) in primary practices in the United States. The participants of this research study were four content experts in the field of general pediatrics or pediatric mental health. A total of four pediatric providers and mental health specialists in the state of Arizona were asked to rate the CPG according to the AGREE II guidelines. Two of them are mental health specialists that treat children, and two are pediatric primary care providers. The reviewers were chosen based on their willingness to participate in this study.

Implementation

The Appraisal of Guidelines for Research and Evaluation (AGREE) II was used to evaluate the CPG developed for this DNP project. AGREE was created to address the differences in the quality of clinical practice guidelines (CPGs) and to provide a way to standardize the creation of CPGs (The AGREE Research Trust, 2014). The AGREE II is an improvement upon the first AGREE and provides a framework that evaluates the quality of CPGs, provides a plan for the creation of CPGs, and apprises what information and how information should be reported in CPGs (The AGREE Research Trust, 2014). The AGREE II is general enough to be used to guide CPGs in different healthcare areas including health promotion, public health, screening, diagnosis, treatment, and interventions (The AGREE Research Trust, 2014).

This project used AGREE II in order to adhere to a structured methodology of guideline development and perform an internal assessment to see if the recommendations are comprehensive and applicable (The AGREE Research Trust, 2014). The AGREE II consists of 23 items organized in six domains along with two global rating items; the 23 items and two global items are rated on a seven-point response scale (The AGREE Research Trust, 2014). The first domain is the *Scope and Purpose* of the guideline, including the target population and health questions (The AGREE Research Trust, 2014). Domain two is *Stakeholder Involvement*, and examines whether the guideline was created by and for the appropriate people (The AGREE Research Trust, 2014). Domain three is *Rigor of Development*, and refers to the methods used to collect and synthesize the evidence and the methods to create the recommendations (The AGREE Research Trust, 2014). The fourth domain is *Clarity of Prese*ntation, addressing the language and format of the CPG (The AGREE Research Trust, 2014). The fifth domain is *Applicability* and covers barriers and facilitators to implementing the CPG (The AGREE Research Trust, 2014). *Editorial Independence* is the sixth domain, and it focuses on ensuring that the recommendations are not biased (The AGREE Research Trust, 2014). The two global response items form an overall assessment, rating the quality of the CPG and whether its use is recommended (The AGREE Research Trust, 2014)

Four experts used the AGREE II to rate the CPG on the management of suicidality. A user's manual was provided to the experts on how to rate each item with the scale (The AGREE Research Trust, 2014). Each domain was graded separately. See figure 1 for the equation to calculate the grade of each domain. Lastly, after completing the scores for the 23 items, the AGREE II appraisers provided an overall assessment of the guideline to judge the overall quality

of the guideline, taking into account the scores calculated in the assessment process. The appraisers were also asked whether they would recommend use of the guideline.

$$\frac{\text{Obtained score (Sum of review scores)} - \text{Minimum possible score}}{\text{Maximum possible score} - \text{Minimum possible score}}$$

FIGURE 1. Calculating Domain Scores

Only 67% of PCPs screen for mental health, and only 35.2% screen for suicide risk (Diamond et al., 2012). Directly asking adolescents if they have thoughts of suicide shows care and concern, and is helpful in identifying adolescents at risk for suicide (King, 1999). Therefore, this CPG was created with the assistance of AGREE II and can aid PCPs in how to properly screen for risky adolescent behavior.

Ethical Considerations

The population of interest in this guideline is an extremely vulnerable population: children and adolescents with mental illnesses and/or suicidality (Welch et al., 2015). Although actual adolescents were not involved in this project, information from a review of the literature was used to formulate recommendations that could change the way that PCPs provide care to adolescents. Thus, it was essential to bear in mind respect for persons, beneficence, and justice when creating this CPG to protect vulnerable populations from being harmed. The goal of this guideline was to improve the health of these vulnerable populations by drawing attention to their needs. See Appendix M for the form that grants Institutional Review Board approval for this project.

Respect

Respect for persons means that each person should be treated as autonomous, and people with "diminished autonomy" must be protected (National Commission, 1978). In this CPG, the importance of safety was stressed over confidentiality (Shain, 2016). Providers must tell adolescents at the onset of screening for suicide risk that what is disclosed in the screening may not be able to be kept confidential. If a person is at risk of harming themselves or others, the adolescent should know that the provider will need to tell the appropriate people necessary to keep the adolescent safe (Shain, 2016).

Beneficence

Beneficence means protecting people from harm and purposely making efforts to promote their health and well-being (National Commission, 1978). To ensure beneficence, the author ensured each recommendation in the guideline provided a benefit to adolescents. If a provider screens for something, they must have a plan for what to do if the screen is positive. For example, if a provider screens an adolescent for suicide risk and it is discovered that the adolescent has suicidal ideation, the provider must come up with a treatment plan for the adolescent that will keep them safe (Shain, 2016).

Justice

Justice in medical research refers to fairness of distribution (National Commission, 1978). When research supports a specific protocol, the protocol should be provided to all persons, not just those with money and resources (National Commission, 1978). In this CPG, there are guideline recommendations that can be applied to rural communities. Screening can be timely and costly, and the adolescent may need to be provided with behavioral health resources.

In rural communities, there may be a dearth of mental and behavioral health resources, so the PCP may have to be the one to provide counseling and support to the patient. Recommendations pertaining to this were included in this CPG so that all adolescents can be provided with the appropriate screening and follow-up, regardless of the community they live in.

Clinical Practice Guideline Development

Target User

The intended users of this CPG are PCPs that see children and adolescents 10-17 years of age. This age group was chosen because in Arizona suicide is the first leading cause of death for ages 10-14 and the second leading cause of death for ages 15-34 (AFSP, 2017). The intended setting of the CPG is the primary care setting.

Grading System

The level of evidence of the research is graded using the Scottish Intercollegiate Guidelines Network (SIGN) levels of evidence. SIGN is also used for the rating scheme to determine the strength of the recommendations. There is an alphabetical grade given to each statement that evaluates the overall evidence and rates the recommendation: (A) is the strongest recommendation as its evidence comes from high quality meta-analyses or systematic reviews; (B) is the second strongest recommendation, utilizing evidence from high-quality systematic reviews of case control or cohort studies; (C) is a moderately strong recommendation, utilizing evidence from well-performed studies; (D) is a recommendation based upon case reports or expert opinions; (Q) is a recommendation based upon qualitative studies; (GCP) is a recommendation based on clinical experience (Harbour & Miller, 2001).

TABLE 1. *Rating Scheme for the Strength of Evidence*

1++	High quality meta-analyses, systematic reviews, or clinical trials with very low risk of bias
1+	Well-conducted meta-analyses, systematic reviews, or clinical trials with some risk of bias
1-	Meta-analyses, systematic reviews of clinical trials or clinical trials with high risk of bias
2++	High quality systematic reviews of case control or cohort studies or case control or cohort studies with a very low risk of bias and a high chance that the relationship is causal
2+	Well-performed case control/cohort studies with low risk of bias and moderate chance the relationship is causal
2-	Cohort/case-control studies with high risk of bias and substantial risk the relationship is not causal
3	Non-analytical studies such as case reports and case series
4	Expert opinion

(National Guideline Clearinghouse, 2012).

TABLE 2. *Rating Scheme for the Strength of the Recommendation*

A	At least one meta-analysis, systematic review or clinical trial rated as 1++ and directly applicable to the target population of the guideline, or a body of evidence consisting of studies rated as 1+ and showing overall consistency of results.
B	A body of evidence with studies rated as 2++, directly applicable to the target population of the guideline and showing overall consistency of results; or evidence extrapolated from studies rated as 1++ or 1 +.
C	A body of evidence consisting of studies rated as 2+, directly applicable to the target population of the guideline and showing overall consistency of results; or evidence extrapolated from studies rated as 2++.
D	Evidence level 3 or 4; or evidence extrapolated from studies rated as 2+.
Q	Evidence taken from relevant qualitative studies of appropriate quality.
Good Clinical Practice (GCP)[1]	Recommended practice based on clinical experience and consensus of the editorial team.
(National Guideline Clearinghouse, 2012)	

RESULTS

Results of the Literature Analysis

A total of 10 manuscripts were sorted for similar results and practice recommendations, and five themes emerged. Once the themes were formulated into practice recommendations there were seven strong recommendations and four weak recommendations. Each recommendation is discussed in detail below.

Evidence Recommendations

Recommendation 1

It is recommended that PCPs receive and/or seek out training on adolescent suicide identification, prevention, and treatment. Grade of evidence: B.

Risk factors. There are many risk factors for suicide, and these risk factors are generally agreed upon by researchers (O'Connor et al., 2013). It's difficult to make the jump from knowing the risk factors for suicide and identifying an adolescent with suicidality. This is because so many risk factors are common, and therefore, not strong predictors of suicide (O'Connor et al., 2013). Suicide is the most complex, unexplained, tragic, and contradictory public health problem according to Kalmar (2013). Although there are identified risk factors, it is impossible to determine the real reasons behind suicide; this is because suicide is multi-causal and multi-factorial (Kalmar, 2013). However, untreated mental illness is the strongest risk factor for suicide (Kalmar, 2013).

The greater the number of risk factors an individual has, the greater they are at risk for suicide (SPRC, 2009) However, it is important to bear in mind that a lack of risk factors does not make an adolescent safe from suicide (Shain, 2016). Nevertheless, risk factors can be one tool to

help providers identify those at high risk for suicidality (Shain, 2016). Some risk factors for suicide include: previous suicide attempt, mental illness, family history of suicide or suicide attempts, parents with mental illness, gay, lesbian, bisexual, transgender, history of physical or sexual abuse, recent romantic break-up, recent death of a loved one, bullying, non-suicidal self-injury, chronic medical condition, and feelings of hopelessness (National Guideline Clearinghouse; Horowitz & Ballard, 2009; Shain, 2016). See Appendix E for a full list of potential risk factors for adolescent suicidality and a list of suicide protective factors.

Provider education. PCPs are frequently the first contact for adolescents and their families when mental health needs arise (Forman-Hoffman et al., 2016). However, only 25-35% of children and adolescents with mental disorders access mental health treatment (O'Brien et al., 2016). Therefore, PCPs need to be able to quickly identify mental health issues, begin treatment, and refer adolescents for further mental health assessment and treatment if necessary (Forman-Hoffman et al., 2016). Many adolescents that are referred to mental health specialists experience long delays in receiving care (O'Brien et al., 2016). Therefore, PCPs should promote interdisciplinary care and follow-up with mental health specialists regarding the care of adolescents with mental health needs (Forman-Hoffman et al., 2016).

Healthcare professionals should have the proper training to enable them to evaluate patients for the presence of risk factors for suicide (Duke & Borowsky, 2009; National Guideline Clearinghouse, 2012; Taliaferro et al., 2012; Wintersteen, 2010). Provider education on suicide prevention has been shown to decrease suicide rates and improve identification of suicidality (DeHay, Ross, & McFaul, 2015; Duke & Borowsky, 2009; Wintersteen, 2010). When an adolescent is identified as being at risk for suicide, they should undergo a more thorough,

comprehensive psychopathological and social assessment (National Guideline Clearinghouse, 2012).

Unfortunately, the literature does not detail specifically what education and training PCPs should undergo to meet the mental health needs of adolescents. Until curriculums in medical, nurse practitioner, and physician assistant schools evolve to better prepare PCPs to meet adolescent mental healthcare needs, PCPs need to take the initiative to obtain mental health training on their own (Taliaferro et al., 2012).

The Western Interstate Commission for Higher Education, along with the Suicide Prevention Resource Center, created a Suicide Prevention Toolkit (DeHay, Ross, & McFaul, 2015, p. 74). The Suicide Prevention Toolkit is available for free online or as a printed booklet for $25 (SPRC, 2009). The Suicide Prevention Resource Center (2009) stated that this suicide prevention toolkit includes information and tools to implement suicide prevention methods and procedures in the primary care setting. The Suicide Prevention Toolkit includes education for clinicians and office staff on how to develop mental health partnerships in the community (SPRC, 2009). The Suicide Prevention Toolkit also contains patient management tools and patient education tools (SPRC, 2009). McFaul, Mohatt, and DeHay (2014) studied the effectiveness of the toolkit. The toolkit significantly improved providers' preparedness to screen for suicidal risk and improved their opinions about working with suicidal patients (McFaul, Mohatt, & DeHay, 2014). The toolkit also had a moderately significant impact on providers' knowledge of suicidal behavior (McFaul, Mohatt, & DeHay, 2014). Taliaferro et al. (2012) also recommended PCPs use this toolkit to educate themselves on how to address the problem of youth suicide.

Recommendation 2a

There is limited evidence on the use of screening tools for all adolescents. Grade of evidence: GCP.

Recommendation 2b

Suicide screening tools should be used in high-risk populations such as adolescents that have previously attempted suicide, a history of mental illness, suffered a recent loss (friend, family, romantic break-up), a history of substance use, a history of physical or sexual abuse, adolescents that are homeless, or adolescents that are gay, lesbian, bisexual, or transgender. Grade of evidence: B.

Recommendation 2c

Any indication of suicidal intent on a screening tool necessitates further investigation by the PCP to determine whether hospitalization is necessary or if a referral to a mental health specialist is appropriate. Grade of evidence: B.

Recommendation 2d

Of the many screening tools available, the ones most recommended for adolescents include: the Suicidal Behaviors Questionnaire-Revised, the Beck Depression Inventory, the Patient Health Questionnaire-9, and the Kutcher Adolescent Depression Scale. Grade of evidence: GCP.

Screening. Screening tools represent a desire to have a quick diagnostic method of identifying risk of disease. However, screening tools must prove to be accurate if they are to be of practical use. In addition, ideal screening tools are quick and easy to complete and score, as well as free and accurate (Richardson et al., 2010). There is limited data on the accuracy of

screening tools compared with the clinical interview on detecting suicide risk (O'Connor et al., 2013). Furthermore, there is limited data on the sensitivity, specificity, and other relevant statistics on suicide screening tools. The little data that O'Connor et al. (2013) found in their systematic review suggested no screening tool performed well in adolescents. In contrast, the National Guideline Clearinghouse (2012) and Taliaferro et al. (2012) recommended using one of the following screening tools in addition to the clinical interview: The Beck Hopelessness Scale and the Beck Depression Inventory (BDI). Duke and Borowsky (2009) also recommended universal suicide screening for adolescents. While the USPSTF did not recommend universal screening for suicide in adolescents in primary care, the USPSTF did recommend universally screening for depression, and many tools that screen for depression also contain questions regarding suicidal ideation (Richardson et al., 2010). In addition, suicide screening tools are recommended to be used routinely for high-risk populations of adolescents (Horowitz & Ballard, 2009; O'Connor et al., 2013; Wintersteen, 2010). See Appendix F for examples of adolescents at high risk of suicide.

The Beck Hopelessness Scale is a 20 item self-reported questionnaire that examines negative attitudes about the future (King et al., 2014). A score of zero to three indicates minimal feelings of hopelessness, a score of four to eight indicates mild feelings hopelessness, a score of nine to fourteen indicates moderate feelings of hopelessness, and a score of 15-20 indicates severe feelings of hopelessness (Cochrane-Brink, Lofchy, & Sakinofsky, 2000). A score of eight or greater on the scale is indicative of suicidal ideation (Granö et al., 2017). Although the National Guideline Clearinghouse (2012) stated that the Beck Hopelessness Scale can be used for children and adolescents, Pearson Education, the company that sells the scale, recommends

the tool be used in people aged 17-80 years (Pearson Education, 2017). The scale has a sensitivity of 0.70 and a specificity of 0.76 for adolescents (Granö et al., 2017). The Beck Hopelessness Scale has been shown to have a stronger association with suicidal intent than the Beck Depression Inventory (Cochrane et al., 2000).

The Beck Depression Inventory (BDI) is a 21-item, self-reported rating inventory that measures characteristic attitudes and symptoms of depression. The BDI is designed for adolescents aged 13 years and older and was first developed in 1961 by Aaron T. Beck (Stockings et al., 2015). The scores range from zero to three per question with a maximum total score of 63. The higher the score the higher the symptomatology and risk for depression (Osman et al., 2008). The BDI-II is the second edition of the BDI instrument and is a quality depressive screening tool. The second edition has improved specificity of 92% compared to the BDI-I at 71% (Stockings et al., 2015). Each item is a list of four statements arranged in increasing severity about depression symptoms. A score of zero to 13 indicates minimal depression, a score of 14-19 indicates mild depression, a score of 20-28 indicates moderate depression, and a score of 29-63 indicates severe depression (Osman et al., 2008). BDI-II has a sensitivity of 88% and a specificity of 92% (Stockings et al., 2015). The questions address symptoms of weight loss, changes in body image, and somatic preoccupation. The BDI is copyrighted and a fee of $115 must be paid to receive the screening tool kit.

The Reynolds Adolescent Depression Scale second edition (RADS-2) is a 30-item questionnaire created for youth ages 11 to 20 (Osman et al., 2010). There are questions regarding dysphoric mood (i.e. anxiety, loneliness, sadness, irritability), anhedonia (i.e. change in affect, low self-worth, loss of interest in activities), negative self-evaluation (i.e. worthlessness,

helplessness), and somatic complaints (Osman et al., 2010). Each item is rated on a four-point scale (Osman et al., 2010). A raw score of 30-75 is normal, a score of 76-81 indicates mild depression, a score of 82-88 indicates moderate depression, and a score of 89 or greater indicates severe depression (Osman et al., 2010). It takes approximately 10 minutes to complete (Osman et al., 2010). It costs $179 which includes a technical Manual, 25 RADS-2 test booklets, and 25 RADS-2 summary and profile sheets (Sigma Assessment Systems, 2017). The scale has a sensitivity of 89% and specificity of 90% for adolescents (Reynolds, 2004).

The Suicidal Ideation Questionnaire (SIQ) has two forms, a 30-item self-report questionnaire for adolescents in grades 10-12 and a 15-item SIQ-JR for children in grades seven to nine (Osman et al., 2010). Each item is rated on a seven-point scale (Osman et al., 2010). Scores range from zero to 90 with scores greater than 30 indicating suicide risk (Mathias et al., 2012). The SIQ has a sensitivity of 98% and a specificity of 37% (Boege et al., 2014). The administration time is 10 minutes and the cost is $211 per kit (Boege et al., 2014).

The Suicidal Behaviors Questionnaire comes in a 30-item, 14-item, and four-item (SBQ-R) format and is appropriate for adolescents 13-18 years of age (Ghasemi, Shaghagi, & Allahverdipour, 2015). Each item on the SBQ-R is rated on a six-point scale and total scores range from zero to 18 (Ghasemi et al., 2015). A score greater than seven indicates severe risk of suicidal behavior (Osman et al., 2001). The SBQ-R has a sensitivity of 95% and specificity of 93% (Osman et al., 2001). It takes five minutes to administer, five minutes to score, and is free for providers (Osman et al., 2001).

The Behavioral Health Screen (BHS) is a comprehensive, internet-based screening tool for adolescents (Diamond et al., 2010). The BHS includes 54 items which screen in 13 different

domains: demographic, medical, school, family, safety, substance use, sexuality, nutrition and eating, anxiety, depression, suicide risk, psychosis, and trauma and abuse (Diamond et al., 2010). There are 39 additional items if some of the main items are confirmed (Diamond et al., 2010). It takes roughly 8 to 15 minutes to administer the screening tool (Diamond et al., 2010). When the adolescent has completed the questions, a report is generated for the provider that includes a summary of scores for different mental illnesses (like depression and anxiety) while also marking items such as suicidal ideation, substance abuse, sexual abuse, and protective factors such as family support (Diamond et al., 2010). The BHS has a sensitivity of 78% and specific of 85% (Diamond et al., 2010) and is one of the screening tools recommended by Taliaferro et al. (2012) and Diamond et al. (2017). By exploring potential mental illnesses as well as screening for risk behaviors and stressors, The BHS is useful in addressing suicide as a complex problem with many risk factors and triggers. (Diamond et al., 2017). The drawback for this screening tool is that it is highly expensive; it costs about $5000 for a small practice and is priced by scale (Medical Decision Logic, 2017).

The Pediatric Symptom Checklist (PSC) is a 35-item psychosocial screen with a version for parents and a version for youth (Jellinek et al., 1999). Beginning at age 11, adolescents can complete the checklist themselves (Jellinek et al., 1999). The user rates each item as never (zero points), sometimes (one point), or often (two points); a score of 30 or more indicates further evaluation by a provider or mental health specialist (Jellinek et al., 1999). None of the questions on the PSC directly ask about suicidal ideation; however, the questions do address suicide warning signs and can alert a healthcare provider to a psychosocial need (Jellinek et al., 1999). There is also a shorter version called the PSC-17, with 17 items instead of 35 (Blucker et al.,

2014). The PSC has a sensitivity of 88% and a specificity of 68% (Jellinek et al., 1999). The administration time and scoring time is less than 10 minutes and it is available to providers free of charge (Blucker et al., 2014). The PSC is one of the tools recommended by Taliaferro et al. (2012).

The Kutcher Adolescent Depression Scale (KADS) comes in a six, 11, or 16 question format (AAP, 2010). It takes approximately five minutes to complete and one minute to score (AAP, 2010). It is geared towards adolescents 12 to 17 years of age (AAP, 2010). The KADS has a sensitivity of 92% and a specificity of 71% and is free for providers (AAP, 2010). On the six question KADS, a score of six or greater indicates possible depression and signifies further evaluation by a healthcare provider (Brooks, 2004). The 11 item KADS is useful to monitor changes in depression over time (Brooks, 2004).

The Patient Health Questionnaire-9 (PHQ-9) is a nine-item adolescent self-report screen for depression and suicide (AAP, 2010). It takes approximately five minutes to complete and one minute for a provider to score (AAP, 2010). The PHQ-9 has sensitivity and specificity of 88% and is free for providers (AAP, 2010). While a score of 11 or higher indicates further evaluation of depression in an adolescent, a score of one or higher on the ninth question of the PHQ-9 indicates suicidality and should always be evaluated further by a provider (Richardson et al., 2010). The PHQ-9 is one of the tools recommended by Taliaferro et al. (2012) and Richardson et al. (2010).

The Short Mood and Feelings Questionnaire (MFQ-short) is a 13-item questionnaire that was created for children eight to 16 years of age (Angold et al., 1995); however, a study by Turner et al. (2014) showed that the tool can also be used for adolescents 17-18 years of age. The

child can mark not true (zero points), sometimes true (one point), or true (two points) for each item (Turner et al., 2014). A score of 11 or higher indicates the provider should further evaluate the adolescent for depression and suicide symptoms (Turner et al., 2014). It takes about five minutes to fill out and less than five minutes to score (AAP, 2010). The sensitivity of the tool is 70% and the specificity is 80% (AAP, 2010). The tool is available online for free (AAP, 2010).

O'Connor et al. (2013) articulated some of the difficulties with suicide screening. Some adolescents may want to hide their suicidal thoughts from others, producing false-negative results on screening tests, while others may express suicidality without serious intention of suicide, producing false-positive results on screening tests (O'Connor et al., 2013). And although there are agreed upon risk factors for suicide, they are not in and of themselves strong predictors of suicide, making it difficult to create an accurate screening tool that precisely identifies suicide risk (O'Connor et al., 2013).

Out of three trials which examined data on adverse effects of screening, none identified any adverse effects (O'Connor et al., 2013). However, O'Connor et al. (2013) concluded that this was not enough evidence to completely rule out the possibility that there may be adverse effects of suicide screening.

The Kutcher Adolescent Depression Scale and the Patient Health Questionnaire-9 both have high sensitivities and specificities and are free for providers (AAP, 2010). The Beck Depression Inventory Fast Screen is highly sensitive and specific (AAP, 2010), however is expensive.

Recommendation 3a

It is recommended that providers establish rapport with their adolescent patients. Grade of evidence: B.

Recommendation 3b

Providers should directly ask adolescents about depressive symptoms and suicidal ideation at each visit. The adolescent should be interviewed separately from parents. Providers can use the HEADSS style of interviewing and utilize the pneumonic devices SAD PERSONS and/or IS PATH WARM to help assess for suicide risk factors and warning signs. Grade of evidence: A.

Recommendation 3c

To assess suicide risk in children or adolescents, it is recommended to ask directly about suicidal ideation or planning, past suicidal behavior and other risk factors, as well as extend the evaluation to people close to the subjects (parents or teachers). Grade of evidence: B.

Clinical interview. The interview should start with non-threatening open-ended questions in order to establish rapport with the adolescent (Shain, 2016). Unexpected and invasive questions could harm rapport which could lead to a decreased chance of the adolescent honestly disclosing mental health concerns (Shain, 2016. The interview could start with the provider asking a simple question: “how have you been doing?” (Shain, 2016, p. 672). A way to normalize the interview is to ensure the adolescent does not feel singled out; the provider could say: “I know that a lot of people your age have a lot going on. What kinds of things have been on your mind or stressing you lately?” (Shain, 2016, p. 672). The provider can ask questions about school, home life, and friends before moving on to direct questions about mood and suicidal

intent (Shain, 2016). The provider should remain non-judgmental and exhibit respect and understanding towards adolescents (Carrigan & Lynch, 2003; National Guideline Clearinghouse, 2012).

PCPs should assess suicide risk in adolescents by directly asking the adolescent about suicidal ideation or planning, past suicidality, and other risk factors (Duke & Borowsky, 2009; The National Guideline Clearinghouse, 2012). Providers should routinely assess adolescents for symptoms of depression, suicidal ideation, and the existence of stressful life events (Duke & Borowsky 2009; The National Guideline Clearinghouse, 2012). Providers should assess for the presence of comorbidities in adolescents identified at risk for suicide (National Guideline Clearinghouse, 2012). Suicide screening tools should not replace the clinical interview (National Guideline Clearinghouse, 2012). The adolescent should be told at the start of the interview that everything discussed will be kept confidential from their parents except if the adolescent expresses thoughts of wanting to hurt themselves or others (National Guideline Clearinghouse, 2012).

Providers should directly ask adolescents about depressive symptoms and suicidal ideation at each visit, whether it be for a well check or for an acute issue (Shain, 2016; Taliaferro et al., 2012). The provider should start by asking questions about depressive symptoms, and then ask a general question about suicide such as, “Have you ever thought about killing yourself or wished you were dead?” (Shain, 2016, p. 672). Regardless of the answer, the provider should follow this question with: “Have you ever done anything on purpose to hurt or kill yourself?” (Shain, 2016, p. 672). If the adolescent responds yes to either question, the provider needs to continue questioning the adolescent to determine the severity of suicidality (Shain, 2016). In the

clinical interview, the provider should ask about stagnation in development, emotional problems, and alcohol and drug use (Shain, 2016). Providers should attempt to estimate the level of distress of the adolescent, how impaired the adolescent's functioning is, and the level of danger the adolescent is in of harming themselves (Shain, 2016).

Horowitz and Ballard (2009) recommended screening for suicide universally in pediatric primary care settings. As a part of depression screening, providers should assess for safety and suicide risk (Horowitz & Ballard, 2009). The Guideline for Adolescent Depression in Primary Care (GLAD-PC) is a free toolkit available online that helps providers identify and manage depression in adolescents (Horowitz & Ballard, 2009). The GLAD-PC is a useful tool for PCPs to identify mental health needs in adolescents (Kostenuik & Ratnapalan, 2010).

The GLAD-PC toolkit includes a clinical assessment flowchart, a health questionnaire for parents and adolescents, depression screening and diagnostic aids, treatment information, a guide to making mental health referrals, tips on how to talk to adolescents and their parents, education materials for adolescents and their parents, specific information about depression and suicide in adolescents, and billing information (Jensen et al., 2010). The SAD PERSONS scale was created by Patterson et al. (1983) and can be used for persons of any age; however, the GLAD-PC adapted the scale for use in adolescents. SAD PERSONS is a pneumonic device to help PCPs remember what to assess for in the clinical interview to identify potential suicidality in an adolescent (Jensen et al., 2010). SAD PERSONS stands for sex (females attempt suicide more than males but males complete suicide more), age (over 16 is higher risk), depression (or other comorbid metal illnesses), previous attempts, ethanol use (or other substance abuse), rational

thinking lost (via psychosis or intoxication), social supports lacking, organized suicide plan, no significant other (this could be a close friend), and sickness or stressors (Jensen et al., 2010).

Wintersteen (2010) added two questions regarding suicide to the psychosocial screening template in the electronic medical chart. With the template as a guide, providers would first ask questions regarding home, education, activities, and depression, and then ask the two questions regarding suicide (Wintersteen, 2010). These questions were: "Have you ever felt that life is not worth living?" and "Have you ever felt like you wanted to kill yourself?" (Wintersteen, 2010, p. 940). If the adolescent answered yes to either question, then the template would prompt six more questions: two regarding the lifetime frequency of suicide planning and the number of suicide attempts, and four focused on the occurrence of morbid ideation, suicidal ideation, suicide planning, and suicide attempts within the last week (Wintersteen, 2010). By giving providers a brief training in suicide risk and by asking all adolescents two questions regarding suicidality, rates of suicidality identification increased by 392% (Wintersteen, 2010).

The HEADSS method of interviewing an adolescent on psychosocial issues is recommended by the American Academy of Pediatrics and Bright Futures (Tanski et al., 2010). This method comprises asking questions about home life, education, employment, eating, activities, drugs, sexuality, and suicide/depression (Tanski et al., 2010). Providers should ask questions about feelings of sadness, boredom, helplessness, and/or hopelessness, issues with sleep, emotional outbursts, impulsivity, and family and peer history of mental disorders or suicide (Tanski et al., 2010). Providers should also assess for psychosomatic symptoms (i.e. headache or abdominal pain), isolation from friends and family, flat affect in the interview, morbid ideation or interests, suicidal ideation, past suicide attempts, and depression (Tanski et

al., 2010). Providers should ask direct questions about suicide such as, "Are you thinking about killing yourself?" (Taliaferro et al., 2012, p. 277). Duke and Borowsky (2009) and Taliaferro et al. (2012) recommended using the HEADSS method to interview adolescents.

While conducting the clinical interview, the PCP needs to be alert for suicide red flags and warning signs (Taliaferro et al., 2012). Another pneumonic developed by the American Association of Suicidology to help PCPs identify risk factors and warning signs of suicide in adolescents is called IS PATH WARM (Taliaferro et al., 2012). IS PATH WARM stands for ideation, substance abuse, purposelessness, anxiety, trapped feelings, hopelessness, withdrawal, anger, recklessness, and mood change (Taliaferro et al., 2012). The presence of any of these factors should alert the PCP that the adolescent is at risk for suicide, and the PCP should ask direct questions about suicidal ideation and behavior (Taliaferro et al., 2012).

UpToDate is an online evidence-based clinical decision support resource that provides recommendations for medical providers on a wide number of topics. On the topic of adolescent suicidality, UpToDate provides sample questions for providers to ask during the clinical interview.

> Sample questions include: "*Do you ever think about dying? How often? Have you ever wished you were dead? Do you ever think the world would be better off if you were dead? Do you think life would be easier for your family and friends if you were dead? Have you ever thought of what would have to happen for your life to end? Have you had thoughts about hurting yourself? Killing yourself? Have you ever tried to kill yourself?*" (Kennebeck et al., 2017).

Asking about suicidal ideation does not increase the risk of an adolescent having suicidal thoughts, attempting suicide, or completing suicide (Taliaferro et al., 2012). Rather, having a conversation with an adolescent regarding suicidal thought can relieve anxiety and may increase

hope (Taliaferro et al., 2012). There is much more risk in not asking adolescents about suicidality.

Recommendation 4a

If the adolescent has a plan, serious suicidal ideation, lack of a support system, a severe mental illness, access to lethal means, or if it is unclear if there is severe suicide intent, the adolescent should be transported to an emergency department. Grade of evidence: B.

Recommendation 4b

If the adolescent is at risk for suicide but the risk is not imminent, prompt referral to a mental health professional who is readily available (within a few days) is warranted. Grade of evidence: GCP.

Recommendation 4c.

Everything that is discussed in the clinical interview with an adolescent is confidential except if they disclose thoughts or actions of wanting to hurt themselves or others. If an adolescent admits to suicidal thoughts/behavior, parents need to be informed. The provider should educate the parents on the importance of limiting or eliminating the adolescent's access to lethal means, provide parents with resources on adolescent suicide and suicide prevention, and urge parents to set up appointments with a psychiatrist and psychologist as quickly as possible. Grade of evidence: GCP.

Referral. If an adolescent admits to having thoughts of suicidal ideation, the provider can ask further questions in attempt to determine the severity of the intent (National Guideline Clearinghouse, 2012). If the adolescent has a plan, serious suicidal ideation, lack of a support system, a severe mental illness, access to lethal means, or the severity of suicidal intent is

unclear, the adolescent should be transported to an emergency department where they can be kept safe until a vacancy is available at an inpatient adolescent behavioral health center (Horowitz & Ballard, 2009; Kostenuik & Ratnapalan, 2010; National Guideline Clearinghouse, 2012; Tanski et al., 2010). If the adolescent has thoughts of death but does not have a suicide plan or suicidal behavior, the PCP can suggest referrals to a psychiatrist and individual or family counseling and encourage social support (Taliaferro et al., 2012).

UpToDate provided a list of questions in a table format to help providers determine if an adolescent should go to an emergency department right away or if they can wait a short time before getting in to see a mental health specialist. See Appendix E. Appendix F includes examples of low risk for suicide adolescents, moderate risk adolescents, and high risk adolescents. Appendix H includes a simple flow chart to help PCPs decide what referral is appropriate.

There are five behavioral health centers that take adolescent patients in the Phoenix area. Quail Run Behavioral Health Center is in north Phoenix, Oasis Behavioral Health Hospital is in Chandler, St. Luke's Behavioral Health Center is in downtown Phoenix, Aurora Behavioral Health System is in Tempe, and Banner Behavioral Health Center is in Scottsdale. PCPs need to develop relationships with mental health specialists in their area (Taliaferro et al., 2012). Taliaferro et al. (2012) urged PCPs to take it a step further and create a unified, multidisciplinary, and collaborative practice between PCPs and mental health specialists to aid in screening for suicidal adolescents and facilitating access to mental healthcare.

Parental involvement. Parental involvement is necessary when an adolescent is identified as being at risk for suicide to keep the adolescent safe. Providers should educate

parents on limiting or eliminating the adolescent's direct access to lethal means in the home such as firearms or medications (National Guideline Clearinghouse, 2012). PCPs should provide information (or direct them to where they can find easily accessible information) to all adolescents and their families on suicidal behavior and its prevention (National Guideline Clearinghouse, 2012). Some patients or their families may not agree to seek help from mental health professionals (Jensen et al., 2010). In these instances, the provider should educate parents on the importance of mental health and the dangers of ignoring mental health issues (Jensen et al., 2010). The provider should reinforce the critical and imminent need for a mental health referral (Jensen et al., 2010).

Barriers

Wise (2016) described several barriers that prevent PCPs from adequately supporting children and adolescents with mental health concerns. There is a lack of specialty providers that provide mental health services for adolescents, making it difficult to refer adolescents to the appropriate mental health services, particularly in rural areas (Taliaferro et al., 2012; Wise, 2016). There are often long waiting lists to receive care at an inpatient psychiatric facility (Wise, 2016). General providers lack the knowledge of how to identify childhood and adolescent mental health problems; additional training in this regard is therefore appropriate (Wise, 2016). PCPs lack official psychiatric training, and therefore are not confident in assessing for suicide in adolescents (Horowitz & Ballard, 2009). Another large barrier for PCPs is that they feel they do not have enough time to address complex mental health problems in an appointment (Wise, 2016).

External Review Results

After completion of the clinical practice guidelines, the CPGs were sent to four external reviewers to provide feedback on the CPG. The external review by clinical experts was done to decrease internal biases and provide feedback to the researcher. The reviewers were chosen and invited based on their experience with the population and interventions. The appraisal process used the online AGREEE II instrument, which is a widely-used, validated tool used to assess a guideline and is in the public domain (Brouwers et al., 2010). The tool contains 23 questions and covers the following domains: scope and purpose, stakeholder involvement, rigor of development, clarity of presentation, applicability, and editorial independence (AGREE Next Step Consortium [ANSC], 2009). The construct validity of the tool, done with a MANOVA and ANOVA analysis, found the tool was sensitive enough to detect difference in high and low CPG quality ($p<0.05$) (Brouwers et al., 2010).

The individual external appraisal results and scores for each domain are listed in Table 3. The AGREE II tool does not interpret the results; the domain totals can be reviewed to understand which domains are strongest and which domains need revision. The domain totals are presented in Table 4. The AGREE II tool allows the appraiser to provide feedback for each question and these are also listed in Table 3.

TABLE 3. *External Appraisal Results*

AGREE II Questions	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer Comments
1	7	7	7	7	- Reviewer 2 said "objectives are clearly delineated following the intro; clear, concise, and appropriate to the guideline"
2	7	7	7	7	- Reviewer 2 said "clear and easy to understand"
3	7	7	7	7	- Reviewer 2 said "no question about the guideline's intended population." - Reviewer 4 said "I like that you specifically defined a narrow age range for the adolescents being targeted by this CPG. Needs can be vastly different around this age, so it helps to keep it focused."
4	4	7	4	6	- Reviewer 1 said "question 4 is not applicable for the situation." - Reviewer 3 said "it would be good to see what a psychiatrist, ED physician, social worker, and counselor would think." - Reviewer 4 said "You can include more of the biographical info for your reviewers. Don't hesitate to be direct and straightforward and ask each of your reviewers all of the qualifying info that you need to include- helps to strengthen your work product. You can write what type of facility they work in (i.e. children's hospital, pediatric psych facility, etc.)."
5	5	7	4	6	- Reviewer 3 said "I did not see where you contacted parent support groups or adolescents." - Reviewer 4 said "I know it is hard to include the direct views of your target population (teens at risk of suicide) in this CPG. However, are there any published studies which included focus groups of teens that directly address this issue?"
6	7	7	7	7	- Reviewer 2 said "very clear"
7	7	7	7	7	- Reviewer 2 said "very thorough" - Reviewer 4 said "Great job at doing a thorough search in multiple databases."
8	7	7	7	7	- Reviewer 4 said "The criteria were all laid out in the appendices with a clearly organized table, including coherent summaries of research and the strength and recommendation for each. Very easy to follow and refer to."
9	6	7	7	6	- Reviewer 1 said "the last sentence in literature strengths doesn't seem to belong. It's relevant and should perhaps be part of recommendation 2b or 3b." - Reviewer 4 said "Strengths and weaknesses are clearly described. You mention that "strengths" are detailed within each of the recommendations, which is great. But it might be even more powerful to summarize the literature strengths within that (entitled) section, similar to what you did for weaknesses. That will help to highlight the strengths and the thought you put in to your recommendations."

TABLE 3 – *Continued*

AGREE II Questions	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer Comments
10	6	7	7	6	- Reviewer 2 said "each recommendation includes an individual rationale for its inclusion in the guideline" - Reviewer 4 said "I would find it helpful to have a little more detail within the "Description of Methods Used to Formulate the Recommendations" section. Include more information why subjectively (vs. objectively) you chose these recommendations (i.e. you are focusing more on providing objective tools to help PCPs screen patients at high risk for suicide) or why these recommendations are the most important at this time."
11	7	7	7	7	- Reviewer 2 said "the statistics cited in the introduction really illuminate the desperate need for this guideline"
12	7	7	7	7	- Reviewer 2 said "every statement is supported with empirically reviewed research. Strong arguments."
13	7	7	7	7	- Reviewer 2 said "yes, by myself and several others listed in the document."
14	3	7	7	7	- Reviewer 1 said "post-publication update timeframe may be added, such as review of literature for new evidence in 5 years"
15	4	7	7	6	- Reviewer 1 said "Change recommendation 1 'and/or' to 'and'. 2a does not contain a recommendation. Is it to not formally screen low-risk adolescents? Perhaps 2d and 4c could be re-worded to emphasize the implied recommendation " - Reviewer 4 said "Recommendation 2a needs to be reworded to be more of a recommendation vs. a statement of fact. Recommendation 3a seems slightly vague- what type of rapport (make patients feel comfortable coming to them, trust with parents that they can leave patients alone with the PCP for the exam/interview, etc.)".
16	6	7	6	7	- Reviewer 3 said "options for management are presented, the issue is if external providers other than pediatric providers can assist in patients identified with issues."
17	7	6	7	7	- Reviewer 2 said "for recommendation 2b you may want to include history of self-harm (e.g. cutting behaviors) as people included in high risk behaviors."
18	6	7	7	7	

TABLE 3 – *Continued*

AGREE II Questions	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer Comments
19	6	7	5	5	- Reviewer 3 said "recommendations are stated, but not sure if providers will feel they are practical." - Reviewer 4 said "I think this section could use a little more detail. It would be nice to see how you plan on implementing (i.e. start with one private practice, hold a "Grand Rounds" session at PCH and the major hospitals in Phoenix etc.). Even if you aren't actually going to do it, just propose an implementation plan to go through the thought process of making all of your hard work and research a reality."
20	6	7	6	7	
21	2	7	3	6	- Reviewer 1 said "I'm not sure this is applicable to this guideline." - Reviewer 4 said "I would suggest including a monitoring plan. For example, once you have implemented the CPG within a pediatric practice, suggest meeting with the PCPs after 3 months, administer a questionnaire to monitor how frequently they use the guidelines and problems they encounter utilizing it, and working through some of the major concerns brought up in the questionnaire, etc."
22	7	7	7	7	
23	7	7	7	7	
Overall quality	6	7	6	6	
I would recommend this guideline for use:	Yes	Yes	Yes with modifications	Yes	- Reviewer 1 said "the appendix items are very useful and will be implemented into my practice." - Reviewer 2 said "it is painfully clear how necessary a tool like this guideline is in primary care settings." - Reviewer 3 said "you have great thoughts but feel you may be more successful if you implement in phases. Start with education, then add on high risk populations, then to all adolescents in the practice. I think providers could be overwhelmed and intimidated by doing all of the recommendations at once."

TABLE 4. *Domain Totals*

Domain	Total
1. Scope and Purpose	100%
2. Stakeholder Involvement	82%
3. Rigor of Development	96%
4. Clarity of Presentation	90%
5. Applicability	81%
6. Editorial Independence	100%

Data Collection

All data collection, including supporting literature and reviewer assessments was kept on a designated hard drive and stored for the required amount of time as set by the University of Arizona Institutional Review Board (IRB). When not in use, the hard drive was kept in a locked cabinet. The literature review of the research questions, the guideline development and the appraisal process took approximately seven months.

DISCUSSION

Summary

The review revealed eleven recommendations for best practice. The AGREE II instrument recommends at least two experts review the guideline, but recommends four (The AGREE Research Trust, 2014). This CPG included four expert reviewers of different backgrounds and specialties. The domains with the highest ratings were *Scope and Purpose* and *Editorial Independence*. The criteria in the *Scope and Purpose* domain included: clearing stating the guideline objectives, research questions, and the guideline's intended population (The AGREE Research Trust, 2014). The criteria in the *Editorial Independence* domain included: disclosure of funding and conflict of interests. Overall, the CPG received moderate to high ratings from each appraiser and each reviewer recommended the CPG for use.

Recommendations for Revision

One appraiser stated a specific post-publication update timeframe could be added, such as a review of literature for new evidence should be performed every five years. Examples of high-risk populations in recommendation 2b should be expanded to include adolescents with self-harm behaviors. These revisions have been incorporated into the CPG and are reflected in Appendix A. The recommendations discussed below have not been incorporated into the CPG yet but will be considered by the guideline developer.

One reviewer recommended expanding on the section that describes who the appraisers are, their backgrounds, and the facilities at which they work. Two appraisers stated the second recommendation (2a) is not strictly a recommendation and could be reworded or incorporated into another recommendation. One reviewer found recommendation 3a to be vague and suggested expanding on what type of rapport should be established with patients.

It was recommended that the input of other specialties should be obtained including an emergency medicine physician, psychiatrist, and social worker. In addition, members of the community could be consulted such as parents and adolescents. One reviewer suggested summarizing the literature strengths within each section in order to highlight the strengths. One reviewer suggested adding more detail to the "Description of Methods Used to Formulate the Recommendations" section.

The practicality of the recommendations was called into question by one appraiser who expressed concern that providers would find it difficult to implement all the recommendations into practice at once. One reviewer suggested going into more detail on the implementation plan. This appraiser recommended splitting the guideline into several different parts or implementing

it into different phases. One reviewer suggested including a monitoring plan, for example meeting with a clinic three months after implementing the CPG to discuss what is working, what is not working, what is challenging, and what the barriers are to implementation.

Limitations

The domains for *Stakeholder Involvement* and *Applicability* received the lowest scores. This demonstrates weaknesses of the guideline. The criteria for *Stakeholder Involvement* include: involving individuals from all applicable disciplines and professional groups in the guideline development group, seeking the views of the target population (i.e. patients and public), and identifying the target users of the guideline (The AGREE Research Trust, 2014). This CPG was an individual project rather than having a development group with individuals from all relevant professionals. This was not done because the research and guideline development was part of a student's doctorate of nursing project, and was therefore an independent process.

The criteria for *Applicability* include: describing facilitators and barriers to guideline application, providing advice and tools on how the recommendations can be implemented, stating the resource implications of implementing the recommendations, and stating monitoring criteria (The AGREE Research Trust, 2014).

Guideline Adoption

The final item on the AGREE II is the appraiser's opinion of the overall guideline quality and their recommendation for guideline use (The AGREE Research Trust, 2014). The appraisers of this guideline recommended the guideline for use. Their recommendations of modifications will be reviewed against the literature and revisions will be made if appropriate. The revised guideline will be submitted to the National Guideline Clearinghouse for dissemination.

Implications for Practice

There are several future practice implications for the clinical practice guideline. If implemented into daily practice, providers may feel more comfortable approaching adolescents and assessing their mental health using evidence-based techniques. The literature demonstrates that these interventions are more likely to result in providers effectively identifying adolescents with suicidality. This may lead to an overall reduction in adolescent suicide rates.

While there is benefit to the implementation of the clinical practice guideline, it also represents a challenge to providers. The CPG urges providers to seek mental health training and incorporate changes into their practice. This may be costly and time consuming to the providers. It is suggested that providers review the CPG, their current practice, and their resources (monetary and time) to see which recommendations can be implemented, considering that while some recommendations have initial costs, the benefits to patients are worth the costs.

Future Research

There is not currently enough evidence to support the routine use of suicide screening tools in the general adolescent population (LeFevre, 2014). However, this seems counterintuitive as providers cannot know if an adolescent is having suicidal ideation or behavior until they ask. And while many adolescents will disclose the truth in the clinical interview, some adolescents may feel more comfortable disclosing the truth to a piece of paper or computer. More research needs to be performed in this area to see what if any benefits can be obtained from screening the general adolescent population.

There is also a lack of consensus on how PCPs can be given the proper mental health training so they feel comfortable and empowered to assess and identify adolescents with mental

health problems. More research needs to be performed on how to integrate this training into advanced practice provider curriculums.

Some primary care practices have specially trained behavioral health counselors that aid PCPs in assessing and managing behavioral health needs of adults and adolescents. The use of these counselors should be examined more thoroughly to see if this could be one solution to provider time limitations and lack of provider education.

Conclusion

There has been a 26% increase in child and adolescent suicide deaths in Arizona since 2014 and an 81% increase since 2009 (ADHS, 2016). Suicide will kill more youth and adolescents than any other disease (Kostenuik & Ratnapalan, 2010). According to the ADHS (2016), 98% of these deaths are preventable. Adolescents with mental illness are more likely to visit PCPs than their peers, however PCPs are currently not adequately identifying adolescents with mental illness nor are they adequately and effectively identifying adolescents with suicidal ideation (O'Brien et al., 2016). This author reviewed existing literature to determine the best methods of identifying adolescents with suicidality. The recommendations created in this guideline could help improve primary care provider identification of adolescent suicidality.

APPENDIX A:

CLINICAL PRACTICE GUIDELINE

Proposed Clinical Practice Guideline on Identification of Adolescent Suicidality for Pediatric Primary Care Providers (PCPs)

Author and Guideline Developer
Bianca Roman, RN, BSN, CPN

Qualifying Statements

This guideline is meant to supplement current suicide guidelines. It is not meant to replace or dispute current practice guideline recommendations.
The guideline is not meant to replace clinical judgment.
The guideline is not intended to have precedent over limitations in the practice setting or existing rules or regulations.

Introduction

Every 13 minutes, a person in the United States (U.S.) commits suicide (CDC, 2015). Suicide is the second leading cause of death for people aged 15-34 years and the second leading cause of death for children aged 10-14 years (CDC, 2015). Suicide is indeed an epidemic in the US, but due to the strong stigma that persists regarding suicide and mental health, the issue has long been neglected. (World Health Organization, 2001). In 2013, 17% of high school students reported having suicidal ideation, 13.6% of students made a plan about how they would attempt suicide, 8% of students attempted suicide, and 2.7% of students made a suicide attempt that resulted in an injury, poisoning, or an overdose that required medical attention (CDC, 2015). Depression, which is a leading contributor to suicide, affects 29.9% of high school students, according to the Youth Risk Behavior Survey (Kroning & Kroning, 2016). More adolescents and young adults in the US die from suicide each year than from cancer, heart disease, AIDS, birth defects, stroke and chronic lung disease combined (Ruble et al., 2013). Shockingly, more adolescents die from suicide than motor vehicle accidents (Ruble et al., 2013). Congress endorsed developing suicide prevention measures as a national priority (Ruble et al., 2013). However, suicide rates are still on the rise, especially among girls aged 10-14 years (Bichell, 2016). Díaz, Sánchez, and Martínez (2015) stated that 15% to 25% of adolescents have suicidal ideation. Taliaferro, Oberstar, and Borowsky (2012) report for every adolescent death by suicide, another 100 to 200 other adolescents attempt suicide.

Risk factors for suicide are numerous and include the following: mood disorders, substance abuse, prior suicide attempts, parental loss, family dysfunction, adverse childhood events, low levels of serotonin, social isolation, somatic symptoms, a history of mental health treatment, impulsiveness, aggressiveness, a family history of suicide, being lesbian, gay, bisexual, or transgender, and having access to lethal means (Davidson & Linnoila, 2013). Other risk factors include being bullied, sleep disturbances, and having chronic medical conditions such as epilepsy or chronic pain (LeFevre, 2014). Having firearms in the home, regardless of how and where they are stored, is associated with a higher risk of completed adolescent suicide (Shain, 2016). Suicidal ideation is present in 28 to 41% of self-injury cases, and self-harm is an identified risk factor for suicidal ideation and suicide attempts (Toprak et al., 2011). Those who have attempted suicide and have a history of self-harm "also tend to be more depressed, impulsive, anxious and underestimating the lethality of their suicide attempts" (Toprak et al., 2011, p. 140). A difficulty with identifying adolescents at risk for suicide and/or mental illness is

that many mental health symptoms are confused for normal youth mood swings, laziness, poor attitude, and immaturity (Moutier, Cook, & Vaillancourt Strobach, 2017). Another risk factor for suicide is having a friend or schoolmate attempt or complete suicide (Borowsky, Irelad, & Resnick, 2001). This is known as suicide contagion. "Suicide contagion is a process by which exposure to the suicide or suicidal behavior of one or more persons influences others who are already vulnerable and thinking about suicide" (Sullivan et al., 2015).

Adolescents with mental illnesses are more likely to visit their primary care providers (PCPs) compared with their peers (Neves & Leanza, 2014). However, PCPs identify only 30% of children and adolescents with a diagnosable depressive or anxiety disorder (O'Brien et al., 2016). In addition, suicide was brought up only in 11% of appointments with patients who had (unbeknown to their PCPs) screened positive for suicidal ideation (LeFevre, 2014). LeFevre (2014) also found that only 36% of US PCPs discussed suicide in appointments with patients that were known to be diagnosed with major depression or an adjustment disorder or those who were requesting antidepressants. In Maryland, less than 25% of pediatric PCPs or family PCPs declared that they frequently screened adolescents for suicide risk factors (LeFrevre, 2014). According to Kostenuik and Ratnapalan (2010), only 12% of adolescents present with psychological problems to their PCP, yet 50% of adolescents have severe levels of psychological distress, and 22% have significant levels of suicidal ideation.

Most adolescents prefer to see their PCP for emotional issues, because they feel there is less stigma associated to seeing a PCP versus a mental health professional, and PCPs are more accessible; thus, more than 50% of adolescents with depression are treated by their PCP (Horowitz & Ballard, 2009). However, 83% of children and adolescents who attempted suicide were not identified as a danger to themselves by any healthcare provider, even when seen by their PCP months before their attempt (Horowitz & Ballard, 2009). Parents are unaware of up to 90% of suicide attempts made by their children, making suicide prevention and screening essential (Kostenuik & Ratnapalan, 2010).

This problem is significant to healthcare because the consequences of suicide are far-reaching and include death, severe psychological effects, increased risk of successive suicide attempts, increased healthcare costs, and severe emotional effects on the family and friends of suicide and suicide attempt victims (Wasserman et al., 2015). In addition, suicide costs the US $51 billion each year due to healthcare costs and loss of productivity (AFSP, 2017).
Suicide is a complex, national issue that reaches across socioeconomic and racial divides and involves different factors including biological, genetic, psychological, familial, social, cultural, and individual (Díaz, Sánchez, & Martínez, 2015). Research has shown that up to 90% of adolescents that attempt or complete suicide will have seen a healthcare provider at least once in the 12 months leading up to their suicide or suicide attempt (Shapiro, Pinto, & Evans, 2016). Depression is present in 50-79% of adolescents attempting suicide, although it is not always recognized (LeFevre, 2014). The majority of adolescents with mental health issues do not receive help (Lamis, Underwood, & D'Amore, 2016). "Increasing awareness of facts about suicide, risk factors, and prevention strategies may enhance knowledge, which in turn, will boost confidence in suicide prevention skills through behavioral, normative, and control beliefs" (Lamis et al., 2016).

Objectives

- Provide pediatric PCPs with evidence-based guidelines for the identification of adolescent suicidality and the criteria for specialist referral.
- Increase provider detection of adolescent suicidality
- Decrease adolescent suicide rates.

Study Questions

- What are the best ways for PCPs to identify adolescents with suicidality?
- Are suicide screening tools useful for PCPs to identify adolescents with suicidality?
- What are the barriers for PCPs in identifying adolescent suicidality?

Population

The following CPG is intended for use in the identification of adolescent patients, ages 13-17.9 years old, male and female, being managed by a pediatric PCP in the primary care setting.

Target Users

The target users of this guideline are pediatric PCPs in the primary care setting, which may include physicians (MDs and DOs), nurse practitioners, and physician assistants who specifically care for adolescent patients as defined above. Key stakeholders include primary pediatric providers, patients, and families.

Recommendations

The evidence was graded using the Scottish Intercollegiate Guidelines Network rating scheme. The grading schema is located in Appendix B. The review of literature evidence table is located in Appendix C. The author of this guideline examined current systematic reviews, literature, and clinical practice guidelines which address adolescent specific recommendations for suicide screening. The search terms "("Suicide"[Mesh]) AND ("Adolescent"[Mesh] OR "Psychology, Adolescent"[Mesh] OR "Adolescent Psychiatry"[Mesh] OR "Adolescent Behavior"[Mesh]" were used in the literature search on PubMed, National Guideline Clearinghouse, Cochrane Library, and Embase from February 1, 2017 to August 31, 2017. PubMed revealed one relevant guideline on screening for suicide risk for adolescents, two relevant reviews, one clinical report, and one research support study. A search on the National Guideline Clearinghouse yielded one relevant guideline. A search on Cochrane Library yielded one relevant systematic review. A search on Embase yielded three relevant literature reviews. Inclusion criteria were publication date within 11 years and English language.

Recommendation 1

It is recommended that PCPs receive and/or seek out training on adolescent suicide identification, prevention, and treatment.

Grade of evidence: B
Benefits: Improvement of provider confidence in assessing for psychosocial issues in adolescents. Improvement of provider identification of adolescent suicidality. Reduction of suicide rates.
Risks, harm, cost: No risk or harm; substantial cost in training providers.
Benefit-harms assessment: Preponderance of benefit over harm
Rationale: This recommendation is supported by two literature reviews, a guideline, and a research report. Healthcare professionals should have the proper training to enable them to evaluate patients for the presence of risk factors for suicide (Duke & Borowsky, 2009; National Guideline Clearinghouse, 2012; Taliaferro, Oberstar, & Borowsky, 2012; Wintersteen, 2010). Provider education on suicide prevention has been shown to decrease suicide rates and improve identification of suicidality (DeHay, Ross, & McFaul, 2015; Duke & Borowsky, 2009; Wintersteen, 2010). The Western Interstate Commission for Higher Education, along with the Suicide Prevention Resource Center, created a Suicide Prevention Toolkit (DeHay, Ross, & McFaul, 2015, p. 74). The Suicide Prevention Toolkit is available for free online or as a printed booklet for $25 (SPRC, 2009). The Suicide Prevention Resource Center (2009) stated that this suicide prevention toolkit includes "the information and tools needed to implement suicide prevention practices in primary care settings… The Toolkit includes sections on educating clinicians and office staff and developing mental health partnerships, as well as patient management tools and patient education tools." McFaul, Mohatt, and DeHay (2014) studied the effectiveness of the toolkit. The toolkit significantly improved providers' preparedness to screen for suicidal risk and improved their opinions about working with suicidal patients (McFaul, Mohatt, & DeHay, 2014). The toolkit also had a moderately significant impact on providers' knowledge of suicidal behavior (McFaul, Mohatt, & DeHay, 2014). Taliaferro et al. (2012) also recommended PCPs use this toolkit to educate themselves on how to address the problem of youth suicide. See Appendix E for a full list of suicide risk factors and suicide protective factors. See Appendix K for the website to the Suicide Prevention Toolkit. The GLAD-PC toolkit includes a clinical assessment flowchart, a health questionnaire for parents and adolescents, depression screening and diagnostic aids, treatment information, a guide to making mental health referrals, tips on how to talk to adolescents and their parents, education materials for adolescents and their parents, specific information about depression and suicide in adolescents, and billing information (Jensen et al., 2010). See Appendix K for the website for the GLAD-PC toolkit.

Recommendation 2a.

There is limited evidence on the usefulness of utilizing suicide screening tools for all adolescents.

Grade of evidence: GCP
Benefits: Not screening all adolescents cuts down on time and cost for providers.
Risks, harm, cost: Some adolescents feel more comfortable disclosing information about suicidality on a form rather than to a person. There is therefore risk of potentially not identifying an adolescent with suicidality. No cost.
Benefits-harm assessment: Balance of benefit and harm is unknown.

Rationale: The United States Preventive Services Task Force performed a literature review and could not prove the efficacy of using suicide screening tools for all adolescents in the primary care setting (O'Connor et al., 2013).

Recommendation 2b.

Suicide screening tools should be used in high-risk populations such as adolescents that have previously attempted suicide, self-harming behavior, a history of mental illness, suffered a recent loss (friend, family, romantic break-up), a history of substance use, a history of physical or sexual abuse, adolescents that are homeless, or adolescents that are gay, lesbian, bisexual, or transgender.

Grade of evidence: B
Benefits: Adolescents may admit to suicidality on a questionnaire versus in the clinical interview. Improvement of provider identification of adolescent suicidality. Reduction of suicide rates.
Risks, harm, cost: No risk or harm; potential cost of the screening tool based on which screening tool is chosen; cost of the time spent having the adolescent complete the screen and having the provider score the screen.
Benefits-harm assessment: Preponderance of benefit over harm
Rationale: This recommendation is supported by two literature reviews and a research study (O'Connor et al., 2013; Horowitz & Ballard, 2009; Wintersteen, 2010). See Appendix G for examples of adolescents at low, moderate, and high risk for suicide.

Recommendation 2c.

Any indication of suicidal intent on a screening tool necessitates further investigation by the PCP to determine whether hospitalization is necessary or if a referral to a mental health specialist is appropriate.

Grade of evidence: B
Benefits: Reduction of suicide rates.
Risks, harm, cost: No risk or harm. Cost of the time spent having the provider further question the adolescent.
Benefit-harms assessment: Benefit over harm.
Rationale: This recommendation is supported by a clinical practice guideline, three literature reviews, and a clinical report (National Guideline Clearinghouse, 2012; Horowitz & Ballard, 2009; Shain, 2016; Kostenuik & Ratnapalan, 2010).

Recommendation 2d.

Of the many screening tools available, the ones most recommended for adolescents include: the Suicidal Behaviors Questionnaire-Revised, the Beck Depression Inventory, the Patient Health Questionnaire-9, and the Kutcher Adolescent Depression Scale.

Grade of evidence: GCP.
Benefits: Adolescents may admit to suicidality on a questionnaire versus in the clinical interview. The screening tools suggested are quick to complete and score. Improvement of provider identification of adolescent suicidality. Reduction of suicide rates.
Risks, harm, cost: No risk or harm. The BDI costs $115 per kit; the other tools are free. Benefit-harms assessment: Benefit over harm.
Rationale: The Suicidal Behaviors Questionnaire-Revised is supported by a clinical trial by Osman et al. (2001). The Beck Depression Inventory is supported by a clinical practice guideline by the National Guideline Clearinghouse (2012) and a literature review by Taliaferro et al. (2012). The Patient Health Questionnaire-9 is supported by the American Academy of Pediatrics (Richardson et al., 2010) and a literature review by Taliaferro et al. (2012). The Kutcher Adolescent Depression Scale is supported by the American Academy of Pediatrics (AAP, 2010). See Appendix D for a table with the specificities, sensitivities, administration time, and cost of 11 different screening tools. See Appendix K for the web addresses of free suicide screening tools providers can access online.

Recommendation 3a.

It is recommended that providers establish rapport with their adolescent patients.

Grade of evidence: B.
Benefits: The adolescent is more likely to disclose sensitive information to the provider if the provider first establishes a relationship with the patient. Improvement of provider identification of adolescent suicidality. Reduction of suicide rates.
Risks, harm, cost: No risks, harm, or cost.
Benefit-harms assessment: Preponderance of benefit over harm.
Rationale: This recommendation is supported by a clinical report (Shain, 2016) and a clinical practice guideline (National Guideline Clearinghouse, 2012). The interview should start with non-threatening open-ended questions in order to establish rapport with the adolescent (Shain, 2016). The provider should remain non-judgmental and exhibit respect and understanding towards adolescents (Carrigan & Lynch, 2003; National Guideline Clearinghouse, 2012).

Recommendation 3b.

Providers should directly ask adolescents about depressive symptoms and suicidal ideation at each visit. Providers can use the HEADSS style of interviewing and utilize the pneumonic devices SAD PERSONS and/or IS PATH WARM to help assess for suicide risk factors and warning signs.

Grade of evidence: A
Benefits: All adolescents will be screened in the clinical interview for suicidality, making it less likely that an adolescent will be overlooked due to apparent lack of suicide risk factors. Improvement of provider identification of adolescent suicidality. Reduction of suicide rates.
Risks, harm, cost: No risk or harm; cost is based on the time spent interviewing each adolescent.
Benefit-harms assessment: Preponderance of benefit over harm

Rationale: This recommendation is supported by a clinical practice guideline, a clinical report, three literature reviews, the American Academy of Pediatrics, and Bright Futures (Duke & Borowsky, 2009; Kostenuik & Ratnapalan, 2010; National Guideline Clearinghouse, 2012; Shain, 2016; Taliaferro et al., 2012; Tanski et al., 2010; Wintersteen, 2010). The HEADSS method of interviewing comprises asking questions about home life, education, employment, eating, activities, drugs, sexuality, and suicide/depression (Tanski et al., 2010). Tanski et al. (2010) recommended asking questions about feelings of sadness, boredom, helplessness, and/or hopelessness, issues with sleep, emotional outbursts, impulsivity, and family and peer history of mental disorders or suicide. Tanski et al. (2010) also recommended assessing for "withdrawal/isolation from peers and family, psychosomatic symptoms, decreased affect on interview, preoccupation with death (music, art, media), suicidal ideation, [and] history of past suicide attempt, depression, or psychological counseling" (p. 6). Providers should ask direct questions about suicide such as, "Are you thinking about killing yourself?" (Taliaferro et al., 2012, p. 277). While conducting the clinical interview, the PCP needs to be alert for suicide red flags and warning signs (Taliaferro et al., 2012). Another pneumonic developed by the American Association of Suicidology to help PCPs identify risk factors and warning signs of suicide in adolescents is called IS PATH WARM (Taliaferro et al., 2012). IS PATH WARM stands for ideation, substance abuse, purposelessness, anxiety, trapped feelings, hopelessness, withdrawal, anger, recklessness, and mood change (Taliaferro et al., 2012). The presence of any of these factors should alert the PCP that the adolescent is at risk for suicide, and the PCP should ask direct questions about suicidal ideation and behavior (Taliaferro et al., 2012). SAD PERSONS is a pneumonic device to help PCPs remember what to assess for in the clinical interview to identify potential suicidality in an adolescent (Jensen et al., 2010). SAD PERSONS stands for sex (females attempt suicide more than males but males complete suicide more), age (over 16 is higher risk), depression (or other comorbid metal illnesses), previous attempts, ethanol use (or other substance abuse), rational thinking lost (via psychosis or intoxication), social supports lacking, organized suicide plan, no significant other (this could be a close friend), and sickness or stressors (Jensen et al., 2010). See Appendix F for examples of questions to ask during the clinical interview.

Recommendation 3c.

To assess suicide risk in children or adolescents, it is recommended to ask directly about suicidal ideation or planning, past suicidal behavior and other risk factors, as well as extend the evaluation to people close to the subjects (parents or teachers).

Grade of evidence: B
Benefits: Improvement of provider identification of adolescent suicidality. Reduction of suicide rates.
Risks, harm, cost: No risks or harm; cost of the time interviewing the adolescent and parents; cost of the time spent getting in touch with the adolescent's teacher(s).
Benefit-harms assessment: Benefit over harm.
Rationale: This recommendation is supported by a clinical practice guideline (National Guideline Clearinghouse, 2012). See Appendix F for examples of questions to ask during the clinical interview.

Recommendation 4a.

If the adolescent has a plan, serious suicidal ideation, lack of a support system, a severe mental illness, access to lethal means, or if it is unclear if there is severe suicide intent, the adolescent should be transported to an emergency department.

Grade of evidence: B
Benefits: Reduction of suicide rates.
Risks, harm, cost: Risk of sending an adolescent to the emergency room that is not an immediate threat to themselves. Risk of causing unnecessary distress to the adolescent and their family. Potential harm from the adolescent missing school. No cost.
Benefit-harms assessment: Preponderance of benefit over harm
Rationale: This recommendation is supported by two literature reviews, a clinical practice guideline, and the American Academy of Pediatrics **(**Horowitz & Ballard, 2009; Kostenuik & Ratnapalan, 2010; National Guideline Clearinghouse, 2012; Tanski et al., 2010). The adolescent should be transported to an emergency department where they can be kept safe until a vacancy is available at an inpatient adolescent behavioral health center. There are four behavioral health centers that take adolescent patients in the Phoenix area. Quail Run Behavioral Health Center is in north Phoenix, Oasis Behavioral Health Hospital is in Chandler, St. Luke's Behavioral Health Center is in downtown Phoenix, and Aurora Behavioral Health System is in Tempe. See Appendix I for the phone numbers of these health centers. See Appendix H for a simple flow chart to help with the referral decision.

Recommendation 4b.

If the adolescent is at risk for suicide but the risk is not imminent, prompt referral to a mental health professional who is readily available (within a few days) is warranted.

Grade of evidence: GCP
Benefits: Decrease in mental anguish of adolescents. Improvement of mental health of adolescents. Improvement in provider detection of psychiatric conditions.
Risks, harm, cost: No risk or harm; no cost.
Benefit-harms assessment: Preponderance of benefit over harm
Rationale: This recommendation is supported by a literature review and a clinical report. If the adolescent has thoughts of death but does not have a suicide plan or suicidal behavior, the PCP can suggest referrals to a psychiatrist and individual or family counseling and encourage social support (Taliaferro et al., 2012). See Appendix I for a list of helplines for adolescents and/or their parents.

Recommendation 4c.

Everything that is discussed in the clinical interview with an adolescent is confidential except if they disclose thoughts or actions of wanting to hurt themselves or others. If an adolescent admits to suicidal thoughts/behavior, parents need to be informed. The provider should educate the parents on the importance of limiting or eliminating the adolescent's access to lethal means, provide parents with resources on adolescent suicide and suicide prevention, and urge parents to set up appointments with a psychiatrist and psychologist as quickly as possible.

Grade of evidence: GCP
Benefits: The adolescent will be kept safe. The adolescent will be provided with resources. Reduction of suicide rates.
Risks, harm, cost: Risk of the adolescent feeling upset at their parents being involved. Risk of the parent being angry, judgmental, or not understanding towards the adolescent. Risk of the parents not agreeing to seek help from mental health professionals. Cost of the time spent discussing with and educating parents.
Benefit-harms assessment: Benefit over harm.
Rationale: This recommendation is supported by a clinical practice guideline and the Guidelines for Adolescent Depression in Primary Care Steering Committee (National Guideline Clearinghouse, 2012; Jensen et al., 2010). Parental involvement is necessary when an adolescent is identified as being at risk for suicide to keep the adolescent safe. The National Guideline Clearinghouse (2012) recommended the provider educate the parents on limiting or eliminating the adolescent's direct access to lethal means in the home such as firearms or medications. The National Guideline Clearinghouse (2012) recommended PCPs provide information (or direct them to where they can find easily accessible information) to all adolescents and their families on suicidal behavior and its prevention. Some patients or their families may not agree to seek help from mental health professionals (Jensen et al., 2010). In these instances, the provider should educate parents on the importance of mental health and the dangers of ignoring mental health issues (Jensen et al., 2010). The provider should reinforce the critical and imminent need for a mental health referral (Jensen et al., 2010). See Appendix I for a list of helplines for adolescents and/or their parents. See Appendix J for a short list of online resources providers can provide to adolescents and/or their parents.

Description of Methods Used to Formulate the Recommendations
The evidence was reviewed and rated according to the SIGN rating schemes. When there was a consensus in the literature, recommendations were made. The strength of the rating of the literature determined the strength of the recommendation. See Appendix B for the SIGN rating schema and Appendix C for the review of literature evidence table.

Methods Used to Collect/Select the Evidence
Searches of Electronic Databases including PubMed, National Guideline Clearinghouse, Cochrane Library, and Embase
Inclusion Criteria:
Adolescent subjects
Publication date within 11 years
English language
Exclusion Criteria:
Research subjects do not include adolescents
Findings are not applicable to adolescents in primary care
Non-English publication
Intervention

Literature Strengths

Although there is mixed evidence on the management of suicide, there were several points that were agreed upon by researchers. These points are detailed in the recommendations above. In regards to research on harmful effects of screening, there is no evidence to suggest that asking questions about suicide leads to suicidal behavior, even in high risk youth (Shain, 2016).

Weaknesses

Overall, weaknesses in the literature include limitations in review methods, lack of consideration of the quality of the studies examined (Pena & Caine, 2006), and lack of statistical power which threatened external validity (O'Connor et al., 2013). O'Connor et al. (2013) suggested that incredibly large trials are necessary to have sufficient power to see if screening and treatment decreases suicide deaths, and most of the aforementioned trials were limited by small sample sizes. In addition, O'Connor et al. (2013) further suggested that since suicide rates greatly vary between ethnicities, culturally sensitive risk-based screening tools and intervention methods may need to be developed to screen for the suicide risk in these populations. The National Guideline Clearinghouse (2012) stated that false-positive and false-negative results of screening tests could be potentially harmful to patients although they did not elaborate on what these negative effects might be.

Limitations

There is a paucity of data on the accuracy of screening instruments to identify suicide risk, limited data on treatment of adolescents at risk for suicide, and severely limited data on the potential harms of screening for suicide in adolecsents (LeFevre, 2014). O'Connor et al. (2013) found that a significant limitation of their data was the "unknown accuracy of a full clinical interview in predicting suicide-related events, which are relatively rare and inherently difficult to predict." O'Connor et al. (2013) determined that there is insufficient data on the subject, and that more research is necessary to conclude whether screening is effective (and what kinds of screening tools are effective) at decreasing suicide attempts in adolescents. Furthermore, evidence to show the general population should be routinely screened for suicide risk is inadequate (LeFevre, 2014). In addition, data on screening tools is limited and there is a wide range of accuracy of screening tools (LeFevre, 2014).

PCPs must realize prior to screening for suicidality that they must be able to provide treatment and management for all adolescents that screen positive (Kostenuik & Ratnapalan, 2010). Often the management of suicidality may be in the form of a referral to a mental health specialist; however, there are limited pediatric psychiatric and psychologic providers, so PCPs may have to take responsibility for managing the adolescent's mental health, which is a barrier to screening (Kostenuik & Ratnapalan, 2010).

Wintersteen (2010) reported the major barrier to screening for adolescent suicidality in primary care is time. Another challenge is a lack of PCP knowledge on suicide risk factors, protective factors, and warning signs for suicide (Wintersteen, 2010). Without proper knowledge on the subject, PCPs can feel the need to make a psychiatric diagnosis, however studies have found that many suicidal youth do not have a psychiatric diagnosis at the onset of suicidal ideation or a suicide attempt (Wintersteen, 2010). Wintersteen (2010) postulated that

psychosocial variables are more predictive of suicidality than diagnostic variables, and it is imperative that PCPs understand this and receive knowledge and training on suicidology.

Bevans et al. (2012) identify barriers to implementing an early detection program, which include lack of provider training/education, limited time, difficulty accessing or knowing how to access behavioral health services, and limited ability to administer screening instruments (Bevans, Diamond, & Levy, 2012). A major barrier to the implementation of behavioral health screening in primary care is the unavailability of screening tools (Bevans et al., 2012).

Knowledge Gaps

There is not enough available research on the epidemiology of suicide, benefits of screening for suicide, performance traits of screening tests, potential harms of suicide screening, treatment for suicide, tailored treatment for suicide based on ethnicity, and treatment aimed at parents of suicidal adolescents (LeFevre, 2014). In addition, research on the accuracy of screening tools is extremely limited in adolescents (O'Connor et al., 2013). Although suicide screening makes instinctive sense, there are no studies to definitively show the effectiveness of screening adolescents in primary care (Horowitz & Ballard, 2009). More research is necessary in the areas of neurobiology and comprehending social context as a crucial element of protecting adolescents (Duke & Borowsky, 2009). Duke and Borowsky (2009) called for increased advocacy for adolescents, development of comprehensive healthcare models for adolescents, and additional evaluation of suicide prevention programs. This project bridges the gap in the literature by synthesizing the available data and presenting the data in the form of evidence-based recommendations for the use of PCPs.

Barriers to Implementation

There is a lack of specialty providers that provide mental health services for adolescents, making it difficult to refer adolescents to the appropriate mental health services, particularly in rural areas (Taliaferro et al., 2012; Wise, 2016). There are often long waiting lists to receive care at an inpatient psychiatric facility (Wise, 2016). Wise (2016) reported general providers lack the knowledge of how to identify childhood and adolescent mental health problems; additional training in this regard is therefore appropriate. PCPs lack official psychiatric training, and therefore are not confident in assessing for suicide in adolescents (Horowitz & Ballard, 2009). Another large barrier for PCPs is that they feel they do not have enough time to address complex mental health problems in an appointment (Wise, 2016).

Facilitators

The Suicide Prevention Toolkit created by the Suicide Prevention Resource Center can be accessed for free at http://www.sprc.org/settings/primary-care/toolkit. The Suicide Prevention Resource Center (2009) stated that this suicide prevention toolkit includes "the information and tools needed to implement suicide prevention practices in primary care settings… The Toolkit includes sections on educating clinicians and office staff and developing mental health partnerships, as well as patient management tools and patient education tools." This can be used to help facilitate suicide identification recommendations. See Appendices D-K for more resources for PCPs.

Resource Implications of Applying the Recommendations

Incorporating suicide identification measures into a pediatric practice will take time and in some instances, money. Providers may want to utilize the Suicide Prevention Toolkit and/or the GLAD-PC toolkit (both free online) to educate themselves further on suicide prevention and identification. This will require time on the part of the provider. Providers may need to set aside more time for adolescent appointments so that they may conduct a thorough clinical interview. Providers may decide to use a suicide screening tool to assist with suicide identification. Some of these tools are free online, but will need to be printed. Some tools cost money and will also need to be printed. The provider may choose to develop relationships with mental health specialists in their area in order to improve their ability and confidence with referrals. This will also take time on the part of the provider.

External Reviewers

The purpose of having external reviewers rate the guideline prior to publication is to garner feedback on the specific recommendations and on the usefulness and feasibility of the guideline. The reviewers will rate the guideline according to the AGREE II tool. Their feedback will be used to modify and ameliorate the guideline prior to publication. This guideline will be reviewed by four experts: one pediatric nurse practitioner, one pediatrician, one clinical psychologist that has both pediatric and adult clients, and one psychiatric mental health nurse practitioner that cares for children. Their names are stated below.

Reviewer 1: Christen Glennan, MS, RN, CPNP, Currently practicing as a pediatric nurse practitioner

Reviewer 2: Robyn Galbraith, Psy, D., Currently practicing as a clinical psychologist

Reviewer 3: Ann Guthery, PhD, PMHNP-BC, Currently practicing as a pediatric psychiatric mental health nurse practitioner

Reviewer 4: Ambika Sohal, MPH, DO, Currently practicing as a pediatrician

Guideline Implementation/Utilization

The intent behind the creation of this CPG is make it available to implement among pediatric PCPs, first locally in the Phoenix area and later at the state level.

Guideline Updates

The author plans to submit the guideline for publishing approval over the next twelve months. During this time, a literature review will be performed every six months to reveal any recent applicable literature. A review of literature for new evidence will be performed every five years and the guideline updated accordingly.

Funding/Conflict of Interest

The creation of this CPG was the work of a Doctor of Nurse Practice project. There has been no funding, nor receipt of grants towards its development. There are no competing interests that may affect the editorial independence of the work.

APPENDIX B:

RATING SCHEMES

Rating Scheme for the Strength of Evidence

1++	High quality meta-analyses, systematic reviews, or clinical trials with very low risk of bias
1+	Well-conducted meta-analyses, systematic reviews, or clinical trials with some risk of bias
1-	Meta-analyses, systematic reviews of clinical trials or clinical trials with high risk of bias
2++	High quality systematic reviews of case control or cohort studies or case control or cohort studies with a very low risk of bias and a high chance that the relationship is causal
2+	Well-performed case control/cohort studies with low risk of bias and moderate chance the relationship is causal
2-	Cohort/case-control studies with high risk of bias and substantial risk the relationship is not causal
3	Non-analytical studies such as case reports and case series
4	Expert opinion

Rating Scheme for the Strength of the Recommendations

A	At least one meta-analysis, systematic review or clinical trial rated as 1++ and directly applicable to the target population of the guideline, or a body of evidence consisting of studies rated as 1+ and showing overall consistency of results.
B	A body of evidence with studies rated as 2++, directly applicable to the target population of the guideline and showing overall consistency of results; or evidence extrapolated from studies rated as 1++ or 1 +.
C	A body of evidence consisting of studies rated as 2+, directly applicable to the target population of the guideline and showing overall consistency of results; or evidence extrapolated from studies rated as 2++.
D	Evidence level 3 or 4; or evidence extrapolated from studies rated as 2+.
Q	Evidence taken from relevant qualitative studies of appropriate quality.
Good Clinical Practice (GCP)[1]	Recommended practice based on clinical experience and consensus of the editorial team.

(National Guideline Clearinghouse, 2012)

APPENDIX C:

EVIDENCE APPRAISAL

Author / Article	Design	Sample	Data Collection (Instruments/tools)	Findings	Bias/Limitations	Strength of Evidence/ Recommendation
O'Connor et al. (2013)	Systematic Review	Sample: Adolescents, adults, and older adults in the general population who are not already diagnosed with a psychiatric disorder. Setting: Community	The USPSTF reviewed the evidence on the accuracy and reliability of tools used to screen for suicide risk, benefits and harms of screening for suicide risk, and benefits and harms of treatments to prevent suicide. The author used citations from MEDLINE, PsycINFO, the Cochrane Central Register of Controlled Trials, and CINAHL (2002 to 2012); gray literature; and a surveillance search of MEDLINE for additional screening trials. The author selected fair or good quality studies in English that assessed the accuracy of screening tools in primary care populations and trials of suicide prevention interventions in primary or mental health care settings.	There is not enough data to weigh the balance of benefits and harms of screening for suicide risk in adolescents, adults, and older adults in a primary care setting. Screening tools may help to detect adults at risk for suicide, but screening tools have limited capability of identifying adolescents at risk for suicide. Psychotherapy may decrease suicide attempts in high-risk adults, but there is no proven effective treatment for high-risk adolescents.	Treatment evidence was derived from high-risk rather than screening-detected populations. Evidence relevant to adolescents was limited.	1+ B

Author / Article	Design	Sample	Data Collection (Instruments/tools)	Findings	Bias/Limitations	Strength of Evidence/ Recommendation
Pena and Caine (2006)	Meta-analysis	This meta-analysis included 17 diagnostic accuracy studies, randomized controlled trials and surveys. The mean age of the participants was 13.6 to 16 years. The studies included males and females with a range of ethnicities.	They searched for studies on MEDLINE and PsycInfo as well as contacted experts in the field for more studies	The researchers found that suicide screening programs may improve the detection of adolescents in need of psychiatric/psychological treatment.		1+ B
National Guideline Clearinghouse (2012)	Clinical practice guideline	Adolescents, adults and the elderly who are at risk for suicide or who are displaying suicidal ideation/behavior	The authors of the guideline performed hand-searches of published literature and searches of electronic databases. Authors performed a literature database search specializing in systematics reviews such as Cochrane Library Plus and the National Health Service Center for Reviews and Dissemination database, the Health Technology Assessment, the Database of Abstracts Reviews of Effectiveness, and the National Health Service Economic Evaluation Database. Authors of the CPG also performed a	The CPG's findings are extensive, but primarily the CPG recommends PCPs utilize a suicide risk screening program such as the Risk for Suicide Questionnaire for adolescents with suicide risk factors; if suicidal ideation is identified, the CPG recommends referral to a mental health specialist		GCP

Author / Article	Design	Sample	Data Collection (Instruments/tools)	Findings	Bias/Limitations	Strength of Evidence/ Recommendation
			search of databases specializing in CPGs, such as Turning Research into Practice, the National Guideline Clearinghouse, and GuíaSalud. The authors performed a search of general databases such as PubMed, Excerpta Medical Database, Ovid, ISI WEB, Bibliographic Index of Health Sciences, and the Spanish Medical Index. Lastly, the authors searched specialist databases such as PsycINFO in several different languages: English, French, Spanish, Italian, and Portuguese.			
Horowitz and Ballard (2009)	Review	Adolescents and youth in schools, primary care, and emergency departments	Authors performed a review of screening tool studies from 2007 through 2009	The authors found that screening the most vulnerable (highest risk) youth is the most effective approach to detect suicide risk. Such vulnerable populations include pediatric medical patients. The authors also recommend suicide screening for at-risk youth start at the age of 10; and as low as age 8, if the child is going to a healthcare provider for a mental health problem.		1+ B

Author / Article	Design	Sample	Data Collection (Instruments/tools)	Findings	Bias/Limitations	Strength of Evidence/ Recommendation
Shain (2016)	Clinical report	Adolescents seen in the primary care setting	The author did not specify methods of data collection. The reference section shows that the author relied heavily on research on adolescent suicide from the American Academy of Pediatrics and the American Academy of Child and Adolescent Psychiatry	PCPs should screen adolescents for suicide and mental illnesses in the clinical interview. Screening tools can also be utilized, by PCPs should understand that these should not replace the clinical interview as these tools can produce false positives and false negatives.		1+ B
Kostenuik and Ratnapalan (2010)	Literature review	Adolescents in primary care	The authors performed a literature search on Ovid Medline using the search terms with the key words "suicide, attempted suicide, and evaluation studies or program evaluation, adolescent."	The authors discuss that earlier identification and treatment of mental illness are the most important methods PCPs can use to decrease morbidity and mortality for adolescents contemplating suicide. GLAD-PC is a resource these authors recommend.		1+ B
Wintersteen (2010)	Research support non-US govt: prospective prereplication/ postreplication design	Three primary pediatric practices	Deidentified data were extracted during the intervention trials and from the previous year. Referral rates were extracted from social work records.	Brief provider education and standardized screening can increase detection of suicidality in adolescents and subsequently lead to more adolescent referrals to behavioral health services before adolescent attempt suicide.		1+ B

Author / Article	Design	Sample	Data Collection (Instruments/tools)	Findings	Bias/Limitations	Strength of Evidence/ Recommendation
Taliaferro, Oberstar, and Borowsky (2012)	Literature Review	Adolescents at risk for suicide	The authors reviewed literature on the incidence and warning signs of suicide, assessment of suicide risk, as risk factors and protective factors of suicide, and prevention and management methods related to youth suicidality.	Taliaferro et al. (2012) recommended PCPs develop relationships with nearby mental health specialists in order to assist with referrals and co-management of suicidal youth, receive education and training on suicide, and implement a screening program in their practice.		1+ B
Duke and Borowsky (2009)	Literature Review	Adolescents at risk for suicide	The authors reviewed available literature on factors contributing to youth suicide and the role of the PCP in youth suicide.	Duke and Borowsky (2009) recommended combining increased provider education with universal screening in primary care settings, as these interventions can increase detection of suicidal youth.		1+ B
Forman-Hoffman et al. (2016)	Systematic Review	Adolescents in the primary care setting	The authors reviewed literature on screening methods in the primary care setting for major depressive disorder in children and adolescents	Forman-Hoffman et al. (2016) recommended the Beck Depression Inventory and the Patient Health Questionnaire for helping to identify depression in children and adolescents. They recommended increased provider education on mental health in order to adequately address mental health issues in the primary care setting.	The review focused mainly on Major Depressive Disorder with some mentions of suicide recommendations. Potential publication bias.	1+ B

APPENDIX D:

SCREENING TOOLS

Screening Tool	Sensitivity %	Specificity %	Administration Time (min) Scoring Time (min)	Cost
Reynolds Adolescent Depression Scale	89	90	10 10	$179 per kit
Suicidal Ideation Questionnaire	98	37	10	$211 per kit
Suicidal Behaviors Questionnaire- Revised	93	95	5	Free
Behavioral Health Screen	78	85	7-9	$5000 per year for a small practice
Pediatric Symptom Checklist	88	68	5 2	Free
Kutcher Adolescent Depression Scale	92	71	5 1	Free
Patient Health Questionnaire-9 (PHQ-9)	88	88	5 1	Free
HEADSS			Part of the clinical interview	
SAD PERSONS			Part of the clinical interview	
Short Mood and Feelings Questionnaire	70	85	5	Free
Beck Depression Inventory	84	81	5-10 Training Required	$115 per kit
Beck Depression Inventory Fast Screen	91	91	5	$99 per kit
Beck Hopelessness Scale	70	76	5-10 5	$132.95 per kit

APPENDIX E:

LIST OF RISK AND PROTECTIVE FACTORS

Risk Factors for Suicide
Family history of suicide or suicide attempts
History of adoption
Male gender
Parents with mental illness
Lesbian, gay, bisexual, transgender, or questioning sexual orientation
History of physical or sexual abuse
Previous suicide attempt
Sleep disturbances
Depression, bipolar disorder, psychosis, PTSD, panic attacks, or other mental health disorders
Substance use/abuse
History of aggression, severe anger, and impulsivity
Pathologic internet use (more than 5 hours daily)
Non-suicidal self-injury
Recent stressful life event
Bullying (being bullied or bullying others)
Impaired parent-child relationship
Being homeless or living in a group home
Difficulties in school
Social Isolation
Recent romantic break-up
Having a friend or family member attempt or complete suicide; hearing about someone that completed suicide via media or newspapers
Somatic symptoms (headache, stomachache)
Access to lethal means
Chronic medical condition (i.e. epilepsy, chronic pain)
Feelings of hopelessness, anxiety, distress and suicidal ideation
Native American or Alaskan Native
Daily thoughts of death
Lower socioeconomic status

Protective Factors
Religious involvement
Positive link to school
Good grades
Connection between adolescent and parents, school, and/or peers
A sense of belonging
Skills in problem solving and conflict resolution
Coping and emotional regulation skills
Stable and supportive family
Positive peer relationships
Making an effort to seek help
Self-esteem and self-confidence
Restricted access to highly lethal means
Access to effective mental health care

APPENDIX F:

SUICIDE RISK ASSESSMENT FOR CHILDREN AND ADOLESCENTS

Content and nature of suicidal ideation
What are the thoughts? Are they active (volitional and with intent) or passive/non-volitional?
How often do they occur? Have they increased in intensity or frequency?
How long do they last (duration)? Are they obsessive?
Can the thoughts be controlled?
How powerful, intense is the urge? How do the thoughts make you feel?
Anticipated method/Planning
Does the child or adolescent have a method in mind? If so, have the adolescent describe it **explicitly** (since this provides information about the adolescent's level of intent and planning)
Sample questions include:
Do you have a plan?
What time would you do it? Where would you do it?
Do you think it would work? Do you think this would kill you?
Is there anyone who could find you and save you?
Access to means
Does the adolescent have **access** to the method they have in mind?
What is the level of dangerousness or lethality of the means they are considering?
Does the child or adolescent have access to firearms and medications?
Sample questions include: Do you have any of these things (pills, gun, razor, etc.) in your possession? How easy would it be for you to get them?

Factors related to intent (motivation)
How strong is the intent (motivation)?
If all the things you needed to kill yourself were available right here and you were alone, would you kill yourself right now?
Has the child or adolescent done anything to prepare?
Have you already written a note to your loved ones?
Have you practiced or come close already?
Factors related to emotional/behavioral regulation
What is the level of hopelessness and helplessness? Despair?
Are intoxicants present?
Does the child or adolescent have any psychiatric disorders or comorbidities?
Does the child or adolescent have the capacity for self-regulation or is he or she impulsive?
Is the child or adolescent able to cope and solve problems?
Factors related to stressors
Are there any recent or anticipated stressors?
Factors related to support systems
Does the child or adolescent have a strong support system?
Among your family and friends, is there anyone who makes you feel less likely to kill yourself? More?
Can the child or adolescent build an alliance? Is he or she ready to participate in treatment?
If I asked you to promise me or your family members to tell one of us when you were thinking about killing yourself, would you be able to keep that promise?
Are you willing to promise to tell one of us if you are feeling worse?

(Kennebeck et al., 2017)

APPENDIX G:

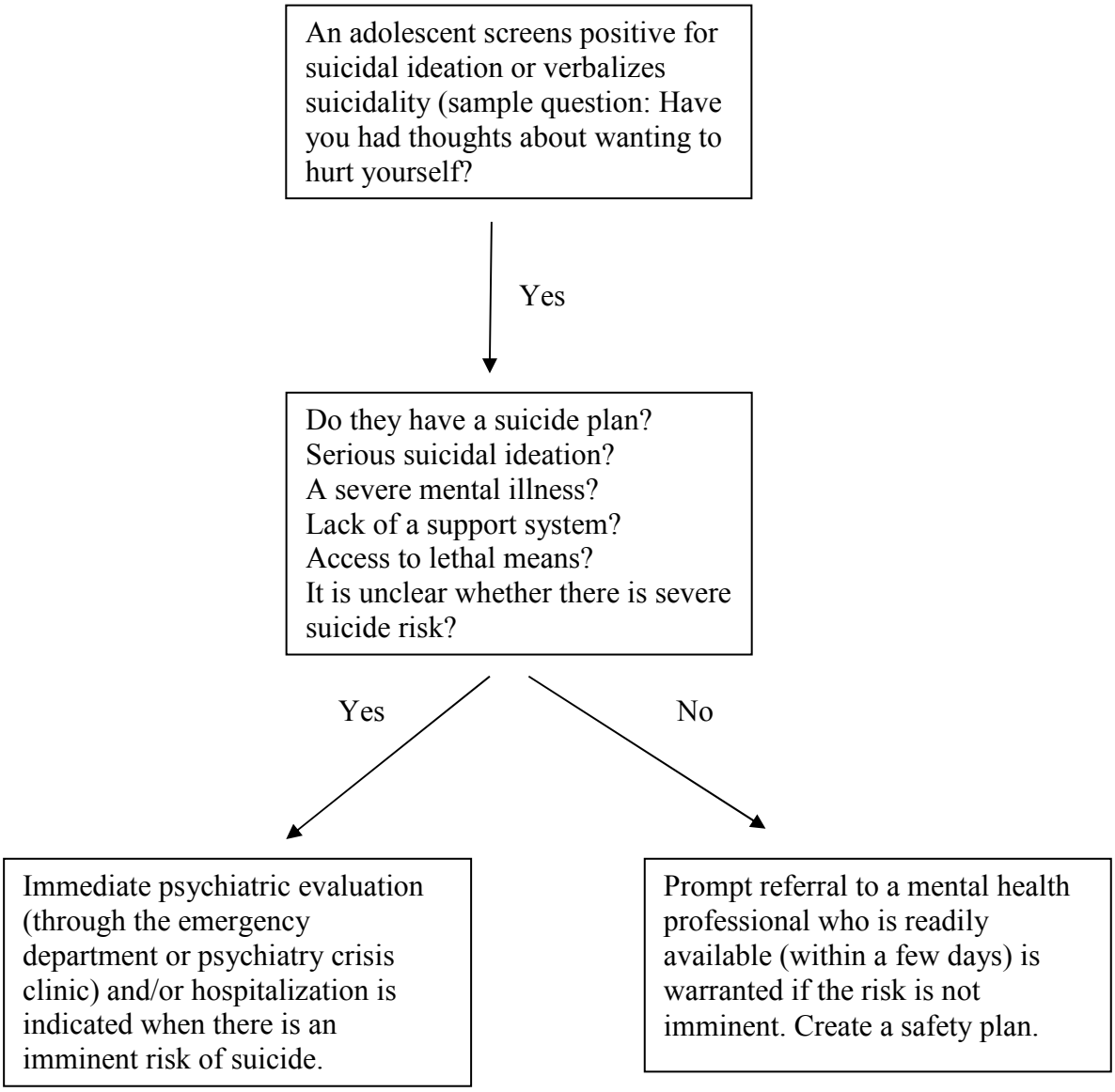
EXAMPLES OF LOW, MODERATE AND HIGH SUICIDAL RISK

Low risk
* Youth made a superficial cut to wrist after an argument with a parent.
* Youth told parent/caregiver about cutting incident afterwards.
* No identified problems at home or school.
* Reports of 'sometimes' feeling down or angry, but has no history of depression, acting out or serious emotional problems.
* Youth can identify several good friends and/or connections to family or other adults.
* Youth wants help in developing better problem-solving skills, stress-coping strategies and nonviolent/nonself-injurious ways to resolve frustration.
Moderate risk
* Youth with recurrent thoughts of suicide.
* Thoughts of suicide precipitated by repeated arguments with parents and/or friends, and school problems.
* Wants revenge against parents/peers.
* Youth took a combination of pills (whatever in the medicine cabinet) in isolation, then called to tell someone about it 20-30 min later.
* History of school problems, truancy or recent change of school.
* History of depression or symptoms of depression; difficulty controlling temper, or symptoms of attention-deficit hyperactivity disorder.
* History of alcohol intoxication and binge drinking.
* Parents separated/divorced; youth with difficulty identifying connections to other family/adults or peers.
* Youth agrees to see a therapist/counselor.
High risk
* Youth kicked out of home/homeless; is a runaway; recent break-up with a partner; friend recently died by unintentional injury or suicide.
* Youth wants to die, sees no alternative to getting out of perceived current situation; sees suicide as a practical solution for problems.
* Youth just wants relief/freedom from pain in this current life.
* Youth with access to a gun, shot self or threatening to go somewhere to finish things 'once and for all'.
* History of alcohol and/or other substance abuse.
* Youth with no connection to school; youth hates school.
* Youth unable to identify connection within family, school, peer or other adult domains.
* History of emergency department visit, hospitalization for previous suicidal ideation, suicide attempt or psychiatric disorder.
* Youth refuses intervention.

(Kennebeck et al, 2017).

APPENDIX H:

FLOW CHART FOR REFERRAL DECISION


An adolescent screens positive for suicidal ideation or verbalizes suicidality (sample question: Have you had thoughts about wanting to hurt yourself?
Yes
Do they have a suicide plan?
Serious suicidal ideation?
A severe mental illness?
Lack of a support system?
Access to lethal means?
It is unclear whether there is severe suicide risk?
Yes
No
Immediate psychiatric evaluation (through the emergency department or psychiatry crisis clinic) and/or hospitalization is indicated when there is an imminent risk of suicide.
Prompt referral to a mental health professional who is readily available (within a few days) is warranted if the risk is not imminent. Create a safety plan.

APPENDIX I:

HELPLINES

Patient Services 24/7 Helpline at Aurora Behavioral Health System: (480) 345-5420

Oasis Behavioral Health Hospital Contact Number: (866) 593-3608

St. Luke's Behavioral Health Center 24/7 Switchboard: (800) 821-4193

Quail Run Behavioral Health Center 24/7 Helpline: (602) 455-5694

Banner Behavioral Health Center Contact Number: (480) 941-7500

24/7 number for parents of struggling/troubled adolescents: (623) 879-9600

Peer Counseling Suicide Hotline 3:00pm-9:00pm: (602) 248-8336

EMPACT Suicide Prevention Center 24/7 Hotline: (480) 784-1500

24/7 National Hopeline: 1-800-SUICIDE

Crisis Text Line: Text CONNECT to 741741

Teen Lifeline: (602) 248-TEEN or 1-800-248-TEEN

24/7 Crisis Hotline: 1-800-SAY-TEEN or text "TEENHELP" to 855-11

National Suicide Prevention 24/7 Lifeline: 1-800-273-8255

An online chat option is available at:

http://www.suicidepreventionlifeline.org/GetHelp/LifelineChat.aspx

APPENDIX J:

OTHER RESOURCES

Arizona Suicide Prevention Coalition
http://www.azspc.org/
This website has an extensive list of suicide prevention resources in Arizona organized by county.

EMPACT Suicide Prevention Center
http://lafrontera-empact.org/
EMPACT is an organization that offers crisis and behavioral health resources to children, adults, and families in Arizona. They have an adult program, a child and family program, a suicide prevention and postvention program, and crisis services. The child and family program has offices in Tempe, downtown Phoenix, Glendale, Maricopa, Apache Junction, and San Tan Valley.

Society for the Prevention of Teen Suicide
Teen Section: http://www.sptsusa.org/teens/
This website has a teen section where teens can find information to help themselves or a friend who may be having suicidal thoughts. There is also information on how to cope if a friend dies by suicide.

Trevor Project
http://www.thetrevorproject.org/
The Trevor Project provides crisis intervention and suicide prevention services to lesbian, gay, bisexual, transgender, and questioning (LGBTQ) youth. The website has information about the signs of suicide and a way to connect online with other LGBTQ youth. The Trevor Helpline is a 24-hour toll-free suicide hotline at 1-866-488-7386. TrevorChat is for online crisis chat 6 hours a day at www.thetrevorproject.org/chat. Trevor Text is for texting on Fridays late afternoon to early evening. Text “Trevor” to 202-304-1200.

APPENDIX K:

SCREENING TOOLS

Pediatric Symptom Checklist
https://www.brightfutures.org/mentalhealth/pdf/professionals/ped_sympton_chklst.pdf

Kutcher Adolescent Depression Scale- 6 item
http://teenmentalhealth.org/wp-content/uploads/2014/09/6-KADS.pdf

Kutcher Adolescent Depression Scale- 11 item
http://teenmentalhealth.org/wp-content/uploads/2014/08/CAPN_11Item_KADS.pdf

Patient Health Questionnaire-9
http://www.phqscreeners.com/sites/g/files/g10016261/f/201412/PHQ-9_English.pdf

Short Mood and Feelings Questionnaire
http://www.performwell.org/index.php?option=com_mtree&task=att_download&link_id=499&cf_id=2

Suicidal Behaviors Questionnaire
https://www.integration.samhsa.gov/images/res/SBQ.pdf

Suicide Prevention Toolkit
http://www.sprc.org/settings/primary-care/toolkit

GLAD-PC Toolkit
http://www.glad-pc.org/

APPENDIX L:

EXTERNAL APPRAISAL CONFLICT OF INTEREST DISCLOSURE STATEMENTS

Conflict of Interest Disclosure

The potential for conflict of interest arises when an individual influences an activity based on a personal or professional commercial or financial interest.
An organization is not a commercial interest organization if it is*:

- A government entity;
- A non-profit (503(c)) organization;
- A provider of clinical services directly to patients, including but not limited to hospitals, health care agencies and independent health care practitioners;
- An entity the sole purpose of which is to improve or support the delivery of health care to patients, including but not limited to providers or developers of electronic health information systems, database systems, and quality improvement systems;
- A non-healthcare related entity whose primary mission is not producing, marketing or selling or distributing health care goods or services consumed by or used on patients.
- Liability insurance providers
- Health insurance providers
- Group medical practices
- Acute care hospitals (for profit and not for profit)
- Rehabilitation centers (for profit and not for profit)
- Nursing homes (for profit and not for profit)
- Blood banks
- Diagnostic laboratories

Since you participated in an educational activity, it is required that you disclose any commercial relationship of yourself or your spouse/significant other/partner. A relationship includes: salary, royalties, intellectual property rights, consulting fees, honoraria, stock or stock options, grants, contracts or other financial benefits.
Is there a potential conflict of interest?

☐ Yes ◉ No

If so, what is the name and type of relationship*:

What steps were taken to remove the conflict of interest?

☒ I have read each item carefully and completed this form to the best of my knowledge
By typing your name in the Signature box, you are providing an electronic signature and acknowledging your approval of all information provided above.
Required Signature with First and Last Name Ambika Sohal
10/3/2017

EXTERNAL APPRAISAL CONFLICT OF INTEREST DISCLOSURE STATEMENTS

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Required Signature with First and Last Name

Robyn K H. Galbraith Psy.D. 10/10/17

//2017

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Is there a potential conflict of interest?
Yes No
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Required Signature with First and Last Name
//2017

10/9/17

EXTERNAL APPRAISAL CONFLICT OF INTEREST DISCLOSURE STATEMENTS

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Required Signature with First and Last Name

Ann Guthery

//2017 Ann Guthery

APPENDIX M:

THE UNIVERSITY OF ARIZONA INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

Research
Office for Research & Discovery

Human Subjects Protection Program

1618 E. Helen St.
P.O. Box 245137
Tucson, AZ 85724-5137
Tel: (520) 626-6721
http://rgw.arizona.edu/compliance/home

Date:	September 08, 2017
Principal Investigator:	Bianca Elena Roman
Protocol Number:	1708748735
Protocol Title:	DEVELOPMENT AND EVALUATION OF A CLINICAL PRACTICE GUIDELINE TO GUIDE PRIMARY CARE PROVIDERS ON IDENTIFICATION OF ADOLESCENT SUICIDALITY
Determination:	Human Subjects Review not Required

The project listed above does not require oversight by the University of Arizona because the project does not meet the definition of 'research' and/or 'human subject'.

- **Not Research as defined by 45 CFR 46.102(d):** As presented, the activities described above do not meet the definition of research as cited in the regulations issued by the U.S. Department of Health and Human Services which state that "research means a systematic investigation, including research development, testing and evaluation, designed to contribute to generalizable knowledge".
- **Not Human Subjects Research as defined by 45 CFR 46.102(f):** As presented, the activities described above do not meet the definition of research involving human subjects as cited in the regulations issued by the U.S. Department of Health and Human Services which state that "human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains data through intervention ***or*** interaction with the individual, or identifiable private information".

Note: Modifications to projects not requiring human subjects review that change the nature of the project should be submitted to the Human Subjects Protection Program (HSPP) for a new determination (e.g. addition of research with children, specimen collection, participant observation, prospective collection of data when the study was previously retrospective in nature, and broadening the scope or nature of the research question). Please contact the HSPP to consult on whether the proposed changes need further review.

The University of Arizona maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00004218).

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