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Guidelines for Adolescent Depression in Primary Care (GLAD-PC): Part I. Practice Preparation, Identification, Assessment, and Initial Management

Rachel A. Zuckerbrot, MD,[a] Amy Cheung, MD,[b] Peter S. Jensen, MD,[c] Ruth E.K. Stein, MD,[d] Danielle Laraque, MD,[e] GLAD-PC STEERING GROUP

abstract

OBJECTIVES: To update clinical practice guidelines to assist primary care (PC) clinicians in the management of adolescent depression. This part of the updated guidelines is used to address practice preparation, identification, assessment, and initial management of adolescent depression in PC settings.

METHODS: By using a combination of evidence- and consensus-based methodologies, guidelines were developed by an expert steering committee in 2 phases as informed by (1) current scientific evidence (published and unpublished) and (2) draft revision and iteration among the steering committee, which included experts, clinicians, and youth and families with lived experience.

RESULTS: Guidelines were updated for youth aged 10 to 21 years and correspond to initial phases of adolescent depression management in PC, including the identification of at-risk youth, assessment and diagnosis, and initial management. The strength of each recommendation and its evidence base are summarized. The practice preparation, identification, assessment, and initial management section of the guidelines include recommendations for (1) the preparation of the PC practice for improved care of adolescents with depression; (2) annual universal screening of youth 12 and over at health maintenance visits; (3) the identification of depression in youth who are at high risk; (4) systematic assessment procedures by using reliable depression scales, patient and caregiver interviews, and *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* criteria; (5) patient and family psychoeducation; (6) the establishment of relevant links in the community; and (7) the establishment of a safety plan.

CONCLUSIONS: This part of the guidelines is intended to assist PC clinicians in the identification and initial management of adolescents with depression in an era of great clinical need and shortage of mental health specialists, but they cannot replace clinical judgment; these guidelines are not meant to be the sole source of guidance for depression management in adolescents. Additional research that addresses the identification and initial management of youth with depression in PC is needed, including empirical testing of these guidelines.

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[a]*Division of Child and Adolescent Psychiatry, Department of Psychiatry, Columbia University Medical Center, and New York State Psychiatric Institute, New York, New York;* [b]*University of Toronto, Toronto, Canada;* [c]*University of Arkansas for Medical Science, Little Rock, Arkansas;* [d]*Albert Einstein College of Medicine, Bronx, New York, New York; and* [e]*State University of New York Upstate Medical University, Syracuse, New York*

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DOI: https://doi.org/10.1542/peds.2017-4081

Address correspondence to Rachel A. Zuckerbrot, MD. E-mail: rachel.zuckerbrot@nyspi.columbia.edu

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

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To cite: Zuckerbrot RA, Cheung A, Jensen PS, et al. Guidelines for Adolescent Depression in Primary Care (GLAD-PC): Part I. Practice Preparation, Identification, Assessment, and Initial Management. *Pediatrics*. 2018;141(3):e20174081

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BACKGROUND

Major depression in adolescents is recognized as a serious psychiatric illness with extensive acute and chronic morbidity and mortality.[1–4] Research shows that only 50% of adolescents with depression are diagnosed before reaching adulthood.[5] In primary care (PC), as many as 2 in 3 youth with depression are not identified by their PC clinicians and fail to receive any kind of care.[6,7] Even when diagnosed by PC providers, only half of these patients are treated appropriately.[5] Furthermore, rates of completion of specialty mental health referral for youth with a recognized emotional disorder from general medical settings are low.[8]

In view of the shortage of mental health clinicians, the barriers to children's access to mental health professionals, the well-documented need for PC clinicians to learn how to manage this condition, the increasing evidence base that is available to guide clinical practice, the increased selective serotonin reuptake inhibitor–prescribing rates in pediatric PC,[9,10] and new evidence that a multifaceted approach with mental health consultation may improve the management of depression in PC settings,[8,10–16] guidance for the identification and management of depression in adolescents in PC were urgently needed. To address this gap as well as to meet the needs of PC clinicians and families who are on the front lines with few mental health resources available, in 2007, the Center for the Advancement of Children's Mental Health at Columbia University and the Sunnybrook Health Sciences Center at the University of Toronto joined forces with the New York Forum for Child Health, the New York District II Chapter 3 of the American Academy of Pediatrics (AAP), and the Resource for Advancing Children's Health (REACH) Institute along with leading experts across the United States and Canada to address the need for a synthesis of knowledge in this area. The result of this initiative was the development of the Guidelines for Adolescent Depression in Primary Care (GLAD-PC). These guidelines are based on available research and the consensus of experts in depression and PC. The two companion articles[17,18] constituted the first-ever evidence- and expert consensus–derived guidelines to guide PC clinicians' management of adolescent depression. The guidelines were also accompanied by a tool kit (available at no cost for download at http://www.gladpc.org).

In this article, we present the updated recommendations on the identification, assessment, and initial management of depression in PC settings and new recommendations on practice preparations (not previously in the GLAD-PC). In the accompanying report, we present the results of the reviews and recommendations on treatment (psychotherapy, psychopharmacology, and pediatric counseling) and ongoing management.

Major depressive disorder (MDD) is a specific diagnosis described in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5)[19] characterized by discrete episodes of at least 2 weeks' duration (although episodes can last considerably longer) and involving changes in affect, cognition and neurovegetative functions, and interepisode remissions. Other types of depression exist, such as persistent depressive disorder and premenstrual dysphoric disorder. It is important to note that depressive disorders have been separated from bipolar and related disorders in the DSM-5. Although the evidence for the psychopharmacology recommendations in the accompanying article focuses exclusively on MDD, the recommendations around identification, assessment, and initial management can be applied to other forms of depression as well.

Our guidelines also distinguish between mild, moderate, and severe forms of MDD. The DSM-5 depression criteria include 9 specific symptoms that have been shown to cluster together, run in families, and have a genetic basis,[20–24] and a large body of evidence accumulated over time now supports the internal consistency of depressive symptoms and the validity of the major depression construct.[20] According to the DSM-5, the severity of depressive disorders can be based on symptom count, intensity of symptoms, and/or level of impairment. This commonly used method to define depression severity has been used in large population-based studies[25] and may be particularly relevant in PC settings, in which less severe clinical presentations of depression may be more common. Thus, mild depression may be characterized on the basis of lower scores on standardized depression scales with a shorter duration of symptoms or meeting minimal criteria for depression. Following the DSM-5, mild depression might be defined as 5 to 6 symptoms that are mild in severity. Furthermore, the patient might experience only mild impairment in functioning.

In contrast, depression might be deemed severe when a patient experiences all of the depressive symptoms listed in the DSM-5. Depression might also be considered severe if the patient experiences severe impairment in functioning. Moderate depression falls between these 2 categories.

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In general, however, even if not all 9 DSM-5–defined symptoms of depression are present, for the purposes of these guidelines, an adolescent with at least 5 criteria of MDD should be considered in the severe category if he or she presents with a specific suicide plan, clear intent, or recent attempt; psychotic symptoms; family history of first-degree relatives with bipolar disorder; or severe impairment in functioning (such as being unable to leave home).

These guidelines were developed for PC clinicians who are in a position to identify and assist youth with depression in their practice settings. Although the age range of 10 to 21 years may encompass preteenagers, adolescents, and young adults in specific instances, this age range was chosen to include those who might be considered developmentally adolescent. Research that supports adult depression guidelines includes adults 18 years and older. Much of the adolescent depression research focuses on children 18 years and younger. However, because adolescent medicine clinicians and school health clinicians often see patients until they are 21 years old, we have included the older adolescents. Furthermore, a PC clinician faced with an adolescent between the ages of 18 and 21 years can choose to use either adult or adolescent depression guidelines on the basis of the developmental status of the adolescent and his or her own comfort and familiarity with each set of guidelines.

METHODS

The original GLAD-PC recommendations were developed on the basis of a synthesis of expert consensus– and evidence-based research review methodologies, as described in Zuckerbrot et al.[17] The 5-step process included conducting focus groups with PC clinicians, patients, and their families, a systematic literature review, a survey of depression experts to address questions that were not answered in the empirical literature,[26] an expert consensus workshop, and an iterative guideline drafting process with opportunity for input from all workshop attendees.

For the research update of the GLAD-PC, systematic literature reviews were conducted in the same 5 key areas of adolescent depression management in PC settings as the original guidelines: identification and assessment, initial management, safety planning, treatment, and ongoing management of youth depression. Consistent with the original review, the updated searches were conducted by using relevant databases (eg, Medline and PsycInfo), and all primary studies published since the original GLAD-PC reviews in 2005 and 2006 were examined. All update procedures were conducted with the input and guidance of the steering group, which is composed of clinical and research experts, organizational liaisons, and youth and families with lived experience. As in the original review, recommendations were graded on the basis of the University of Oxford's Centre for Evidence-Based Medicine grade of evidence (1–5) system, with 1 to 5 corresponding to the strongest to the weakest evidence respectively (see http://www.cebm.net/wp-content/uploads/2014/06/CEBM-Levels-of-Evidence-2.1.pdf). They were also rated on the basis of the strength of expert consensus among the steering group members that the recommended practice is appropriate. Recommendations with strong (>70%) or very strong (>90%) agreement are given here.

In addition, a new review on the topic of practice preparation was conducted given the emerging evidence for this area since the development of the original GLAD-PC guidelines. Electronic searches of relevant databases were conducted for English-language studies in which researchers examined practice preparation for treating youth depression in PC that were published between 1946 and September 2016. Search terms were grouped by categories and included the following: "child* or adolesc* or youth or teen* or juvenile" and "primary care or pediatr* or family prac* or general prac*" and "depress* or dysth* or mood or bipolar" and "collaborative care or integrat* health or medical-behavioral health care or behavioral health or medical home or shared care or facilita* or practice prepar*". Reference lists for relevant articles were also examined for additional studies that were not identified through search engines. A total of 135 abstracts were carefully examined. Studies that were conducted outside of PC facilities or that used solely adult populations were screened out, leaving a total of 8 relevant articles. A full report of all the literature reviews is available on request.

RESULTS

Literature Reviews

Practice Preparation

Once PC practices have buy-in from administrative and clinical staff to improve depression care for youth, 2 important steps are necessary. First, before practices embark on screening for or identifying youth who are at risk for depression, training in such issues as appropriate screening tools, assessment and diagnostic methods, safety planning, and so on is important. Second, it

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is necessary to have access to community resources, such as mental health specialists (mental health specialists can include child and adolescent psychiatrists, psychiatric nurse practitioners, and therapists), not just as a potential referral resource but also for as-needed consultation for case patients that the PC clinicians choose to manage. We review the available evidence pertaining to these 2 areas (provider training and specialty consultation) below.

Effective Training Methods

PC practices vary widely in their capacity to implement full-scale collaborative or integrative behavioral health programs to address psychological difficulties in youth. At minimum, providing PC providers with guidance, education, and training in key topic areas such as identification, evaluation of suicide risk, and initial management of adolescent depression can be a feasible and cost-efficient means of improving care delivery when comprehensive organizational restructuring efforts are out of reach. However, simply providing PC providers with relevant information is not enough because passive education strategies are usually inadequate for producing lasting change in provider behavior.[27]

Researchers in large-scale review studies suggest that the adoption of practice guidelines improves when training and implementation strategies are tailored to the PC practice (eg, training that is developed by primary mental health care specialists, such as the training provided by the REACH Institute [http://www.thereachinstitute.org/] and Child and Adolescent Psychology for Primary Care [http://www.cappcny.org/])[28] and/or use comprehensive training methods, such as varying information delivery methods and skill-building exercises, such as role-playing.[27] Evidence regarding which specific theory-driven training strategies are most effective at eliciting behavior change with PC providers, particularly related to mental health, is sparse, but 1 promising framework leverages principles from the theories of reasoned action and planned behavior to inform training methodology (see Perkins et al[29] for explanation and review). This approach posits 3 primary determinants of PC behavior change: attitudes toward the practice innovation, the strength of intention to adopt the new practice(s), and sense of self-efficacy in one's ability to continue the new behavior. Although no randomized trials in which researchers use this or other systematic frameworks for PC provider–training methodologies were identified, researchers in preliminary studies offer support for training approaches that incorporate basic science-guided behavior change theory and methods. There is increasing evidence that quality-improvement strategies and techniques can change PC practitioner behavior both in mental health and in other arenas.[30,31] The REACH Institute (which is committed to renewing and improving techniques for professionals and parents to treat children with behavioral and emotional needs) has developed and widely implemented a 3-day intensive training on evidence-based pediatric mental health assessment, diagnosis, and treatment practices (including for youth depression) that is guided by basic science behavior change principles, demonstrating long-term practice changes (eg, increased use of symptom scales) as well as favorable PC provider attitudes toward, intentions to follow, and self-efficacy to adhere to the clinical guidelines up to 1 year later.[32] In another study of the same training approach, participating PC providers showed higher levels of self-efficacy in diagnosing and managing youth depression and related disorders than those who received only more traditional continuing education programs (eg, lectures).[33]

An unrelated study demonstrated that provider attitudes toward youth mental health in PC impacts rates of identification. PC providers who viewed psychosocial treatment as burdensome were less likely to identify youth mental health problems.[34] A subsequent follow-up to the study revealed that providing PC staff with communication training enhanced their self-efficacy and willingness to discuss depression symptoms with patients and staff, and this was associated with long-term changes in practice behaviors, such as providing an agenda during the PC visit, querying for additional mental health concerns, and making encouraging statements to patients and families when symptoms are disclosed.[35] The small amount of available literature offers support for hands-on, interactive, and basic science theory–driven training strategies for PC clinicians, but more research is needed before a consensus can be reached on how best to optimize training and educational strategies for PC providers.

Access to Specialty Consultation

In addition to obtaining relevant training, PC providers will benefit from having access to ongoing consultation with mental health specialists.[36,37] Consultation after training allows learning to be tailored to the PC provider's actual practice[38] and can increase provider comfort with diagnosing and treating mental health issues.[33,39] More than 25 states have established programs to promote collaboration between PC providers

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and child psychiatrists by providing PC providers with education, rapid access to consultation, and referral options. Among the first psychiatric consultation programs was Targeted Child Psychiatry Services (TCPS) in the state of Massachusetts,[40,41] which offered regional providers access to real-time telephone consultation with a child psychiatrist and the option to refer a child to the psychiatry practice for a mental health evaluation, short-term psychosocial therapy, and/or pharmacotherapy. Program use data revealed that TCPS consultation support alone was sufficient to retain and treat in PC 43% of youth who potentially would have been referred to specialty services.[40] TCPS was subsequently expanded statewide and became known as the Massachusetts Child Psychiatry Access Project.[14] Similar programs in other states offer free training, telephone consultation, and referral advice to PC providers.[14,42,43] Participating PC providers consistently report being highly satisfied with the consultation they receive[14,42,43] and increasingly comfortable with treating mental health problems within the PC setting after consultation.[14,42,43] Additionally, consultation programs may improve access to mental health care not only by increasing its availability within PC but also by decreasing potentially unnecessary referrals to specialty care, which in turn makes specialty providers more available to treat complex or severe patients.[41,44]

Identification and Assessment

In 2009, after the publication of the GLAD-PC, the United States Preventive Services Task Force (USPSTF) endorsed universal adolescent depression screening in teenagers ages 12 to 18 years.[45] This recommendation was based on evidence that there are validated depression screening tools that work in an adolescent PC population and the evidence that there are treatments that work for the identified population.[45,46] On the basis of our review to date, no researchers in a randomized control trial (RCT) have compared functional or depressive outcomes in a cohort of adolescents who were screened in PC by the PC providers themselves versus a cohort of adolescents who were not screened. This lack of evidence, which is also mentioned in the Canadian review of the literature in 2005,[47] the 2009 Williams et al[46] review performed for the USPSTF, the updated 2016 Forman-Hoffman et al[48] review for the USPSTF, and a 2013 systematic literature review published in *Pediatrics*,[49] becomes less relevant as more evidence accumulates regarding the specific steps in the process, such as the validity of PC screening, the feasibility of PC screening, the feasibility of implementing treatment in those who are identified as having depression, and the efficacy of treatment of those who received evidence-based treatments in PC. In our updated review in this area, we found 8 new articles that provide some psychometric data regarding the use of depression screens in the pediatric PC population (Supplemental Table 1) and 38 other articles that touch on screening issues that range from whether screening is taking place and whether screening impacts follow-up procedures or treatment to the specifics of screening, such as the use of mobile devices or gated procedures (Supplemental Table 2). Supplemental Tables 1 and 2 present the new evidence as well as the limitations for existing screening tools and protocols. Please see our original 2007 guidelines for the past review of screening tools and protocols.

During the original GLAD-PC development process, secondary to the paucity of data on the validity of screening tools in the adolescent PC population, the original GLAD-PC guideline was used to review instruments that are used in community and psychiatric populations as well.[17] Given that those screens are still in use and that their psychometric data still apply, in this current review, we focus only on new screening data in PC. Eight of the articles present psychometric data, such as sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), or area under the curve (Supplemental Table 1). Most relevant were the 2 publications by Richardson et al[56,57] in which they validated the Patient Health Questionnaire-2 (PHQ-2) and the Patient Health Questionnaire-9 (PHQ-9) in a PC sample against a gold standard diagnostic interview (the Diagnostic Interview Schedule for Children-IV [DISC-IV]). The PHQ-9, with a cut-point of 11, had a sensitivity and specificity of 89.5% and 77.5%, respectively, to DISC-IV MDD with a PPV of 15.2% and NPV of 99.4%. A PHQ-2 cut score of 3 had a sensitivity and specificity of 73.7% and 75.2%, respectively, to DISC-IV MDD.

Researchers have looked at brief depression-specific screening questions that stand alone (eg, the PHQ-2),[51,57,65,75,79,82,85] longer depression-specific scales that stand alone (eg, the PHQ-9, the Mood and Feelings Questionnaire, the Columbia Depression Scale, and the PHQ-9: Modified for Teens),[58,62,63,66,67,70,74,78,80–82,86–88] brief depression screening questions that are part of a larger psychosocial tool (eg, the Guidelines for Adolescent Preventive Services [GAPS] questionnaire and the Pediatric Symptom Checklist [PSC]),[53,54,64,68,69] and brief screening questions or longer depression-specific scales that are combined with other screens for

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either other psychiatric disorders (eg, Screen for Child Anxiety Related Disorders-5) and/or screens for other high-risk behaviors (eg, substance use and sexual activity) to make a more multidimensional tool or packet in 1 (eg, the behavioral health screen [BHS]).[50,52,55,59–61,76,77,83,84,89] Not all of the screens in these studies have specific psychometric validation data (eg, 2 depression questions on the GAPS). Clinicians may also consider the use of tools that can be used to screen for depression and other risk behaviors or more disorders. Although no researchers have compared the functional or depressive outcomes of a cohort of adolescents who were initially screened only for depression with a cohort of adolescents who were initially screened for an array of high-risk behaviors and emotional issues, some hint at the possibility that too much information may overwhelm the clinician and result in positive depression screening questions being overlooked in the morass of issues needing to be addressed.[52,53,59–61,64,76,80,82–84,89] Therefore, clinicians should base the selection of a depression-specific tool versus a more general tool on their own expertise and clinical supports in their practices. For example, a solo practitioner starting to address depression care in his or her practice may choose to start with screening for depression alone before moving to more general screening for riskier behaviors or disorders.

There is limited evidence to evaluate whether one can use a general parent questionnaire as a gated entry for adolescent self-report depression screening. Researchers in 1 study of general mental health screening used the parent- or youth-completed Pediatric Symptom Checklist-35 alone to screen for internalizing disorders, but this provides no psychometric data,[69] whereas others used the Parent Pediatric Symptom Checklist-17 (PSC-17) along with other, more depression-specific child and parent scales.[54,56,57,82] One of these studies reveals adequate psychometric data for the parent PSC-17 internalizing subscale as compared with the Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS) MDD module, performing as well as the Children's Depression Inventory but only with children aged 8 to 15 years.[54] Richardson et al[56,57,82] suggest some correlation with adolescent depression self-report tools, with the adolescent scores that are higher on the PHQ-9 or PHQ-2 being associated with higher mean on the parent PSC-17 internalizing subscale, with a correlation of 0.21 ($P = .02$). However, the data presented do reveal that some teenagers who scored above the cutoffs on the self-reports would have parents who score below the cutoff of 5 on the internalizing subscale of the PSC-17. The authors do not present the data regarding how many teenagers would be missed by using the internalizing subscale as a gate and whether those teenagers met DISC-IV MDD criteria. Lastly, researchers in 1 study looked at the correlation of the PSC-17 internalizing subscale between the parent- and youth-completed PSC-17 but only among subjects whose parents were already positive.[53] The data revealed low agreement, with a κ of 0.15 (95% confidence interval of 0.00–0.30). However, those adolescents who did match with their parents were of higher severity than those parents who were positive but did not match with their negative-scoring teenagers. In addition, the parent PSC-17 in general has usually been studied with the younger adolescent cohort and not the older adolescent cohort. Once again, there is no RCT in which researchers compare the outcomes of a cohort of adolescents who were universally screened with an adolescent depression self-report versus a cohort that was only screened with self-reports after a positive parent PSC result. All of these data reveal that there is limited evidence in the older teenage cohort about using parent reports alone, that parent information may be helpful if used in conjunction with child reports when a clinician is available to resolve discrepant data, and that if used alone, parent reports may only account for the adolescents with the most severe conditions, but those data are unclear.

Researchers have also looked at paper screens, Internet-based screens, and electronic screens that are accessed through a mobile or personal digital assistant device. Although there appears to be no evidence of researchers comparing such screening methods to each other, all methods seem to be equally successful (in that adolescents rarely refuse screening) and equally problematic (obstacles to universal screening exist with every method). See Supplemental Tables 1 and 2 for more specific information.

Some researchers report adaptive (brief initial questions and, if gated questions have positive results, then automated additional questions)[61] as well as algorithmic screening, in which a positive PHQ-2 result or the equivalent triggers a person to then administer a PHQ-9 or the equivalent.[65,75,79,85] Although evidence for this type of gated screening is limited, researchers in 1 study compared the psychometric data of the PHQ-2 versus the PHQ-9 in the same population.[57]

One limitation of brief depression screening may be the loss of the suicide questions if one focuses

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only on brief questions on the basis of criterion A for MDD. The validation study of the PHQ-2 found that 19% of teenagers who did endorse suicidality did not screen positive on the PHQ-2, suggesting that in a real-world setting, they would have been missed.[57] Several studies in which researchers used brief or long depression-specific screenings that did not include a suicide question did add a suicide question for this reason.[60,70,83,84,89] In this review, we did not review the suicide screening in pediatric PC literature but are aware of the USPSTF decision not to endorse suicide screening secondary to its conclusion for the lack of evidence for PC intervention for suicidal adolescents.[90] However, we do note which depression screening studies also looked for suicide as well as the rates of suicidality that were found (Supplemental Tables 1 and 2).

One other area that was examined in the review is the definition of depression when screening for depression. The definition of depression affects the psychometric properties and evidence for the use of a screen given that trying to find only MDD versus trying to find any depressive symptoms requires different specificities and sensitivities, and using the same screens for both purposes would result in choosing different cutoffs. Again, whereas the USPSTF comments on screening for MDD, the screening literature seems to be more unfocused. Richardson et al[79] used a score of 2 as the initial gate and a score of 10 on the PHQ-9 as a positive score for entry into the next step. Forty percent of the sample did not meet the criteria for MDD but were deemed to be impaired enough with depressive symptoms to enter the study. When Lewandowski et al[74] studied the large-scale use of the PHQ-9 modified in the health maintenance organization (HMO), they looked at whether any depressive disorder was identified, even adjustment disorder, rather than just MDD. The Youth Partners in Care (YPIC) intervention[11,58] also included teenagers without MDD who had clinically significant and current depressive symptoms. Van Voorhees et al,[91] in a series of small studies and now in a large RCT, have been purposely screening to account for depressive symptoms and depressive disorders other than MDD because the Competent Adulthood Transition with Cognitive-behavioral, Humanistic and Interpersonal Training (CATCH-IT) prevention model was developed for teenagers with depressive symptoms and disorders other than MDD.[65] Thus, the evidence for choosing instruments and cutoff scores may depend on what depression end point a PC provider is pursuing and what intervention the clinician wishes to put in place.

Although the USPSTF clearly endorsed screening at age 12 years, the literature in which researchers look at depression screening includes studies that have starting ages ranging from age 8 to 14 years and later ages ranging from 15 to 24 years. Most of the younger-age studies include depression as part of a broader psychosocial screening effort, with the researchers looking specifically at depression screening that focuses on some of the older age ranges (Supplemental Tables 1 and 2). With that said, there is no evidence to compare outcomes in a cohort of adolescents who were screened at age 11 years versus age 12 years versus age 13 years.

The last guideline review included the YPIC study, which did reveal that an identification program in PC, when combined with high-quality depression treatment, actually yields better outcomes than treatment-as-usual conditions (when no high-quality depression treatment is available).[11] Two follow-up publications from the same intervention[58,87] are included in this review and once again show that identified youth who receive evidence-based treatment do have better outcomes. More recently, Richardson and colleagues, in their collaborative care for adolescent depression RCT, compared controls who screened positive and whose positive results were given to both parents and PC clinicians with subjects who were screened and placed in a collaborative care intervention.[79] Those in the collaborative care intervention had a greater chance of response and remission at 12 months and a greater likelihood of receiving evidence-based treatments. The researchers only tracked outcomes in those who were screened; although it is possible that those who were screened did better than those adolescents with depression who were not screened, the study does reveal that screening alone is not likely to improve outcomes by much given how much better those in the group that had screening combined with an intervention in place did and how much more likely they were to receive care than those who were only screened.

Although much of the literature on identification crosses both the area of screening and assessment in that the PC provider can use the screening tool to aid in the assessment, we found some studies that focused less on the screening tools and more on the assessment of depression in pediatric PC. These studies included those in which researchers used standardized patients to help with depression and suicide assessment as well as a protocol to teach PC clinicians how to do a therapeutic interview during the assessment process.[62,63,71–73]

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In summary, no perfect depression screening and/or assessment tool exists, and no perfect screening algorithm or systematic protocol exists, but a number of adolescent depression assessment instruments do possess adequate psychometric properties to recommend their use in depression detection and assessment, and there is a limited amount of evidence to support some differing methods of implementation (Supplemental Table 3). Thus, it is reasonable to expect that depression detection in PC can be improved by the use of adolescent self-report checklists with or without parent self-reports. Reliance on adolescent self-report depression checklists alone will lead to substantial numbers of false-positive and false-negative cases. Screening and detection are only the first step to making a diagnosis. Instead, optimal diagnostic procedures should combine the use of depression-specific screening tools as diagnostic aids, buttressed by follow-up clinical interviews in which one obtains information from other informants (eg, parents) as legally permissible and uses either other tools or interviews to assess for other psychiatric diagnoses as well, reconciling discrepant information to arrive at an accurate diagnosis and impairment assessment before treatment. Although screening parents may not be required, gathering information from third-party collaterals to make a diagnosis is important. Teenagers should be encouraged to allow their parents to access their information, and the importance of including parents in the diagnostic discussion should be emphasized. For more information about rating scales and cutoff scores, please refer to the GLAD-PC tool kit.

Initial Management of Adolescent Depression

On behalf of the initial GLAD-PC team, Stein et al[92] reviewed the literature on psychosocial interventions for anticipatory guidance. No RCTs or evidence-based reviews were found. Citing earlier literature reviews in the area of injury prevention[93] and anticipatory guidance,[94] Stein et al[92] found some limited evidence that anticipatory guidance strategies, such as education and counseling, in the PC setting can be effective.

Another area reviewed by Stein et al[92] involved psychosocial interventions for improved adherence. In an evidence review on asthma adherence, Lemanek et al[95] suggested that some educational and behavioral strategies are probably efficacious in creating change. In addition, a study in which researchers used cognitive behavioral strategies revealed that diabetic adherence can also be improved.[95]

For this update, our team searched the Cochrane Database of Systematic Reviews for all types of interventions that were implemented in the adherence arena. These reviews[96–98] revealed that only complex, multifaceted approaches that include convenient care, patient education, reminders, reinforcement, counseling, and additional supervision by a member of the care team were effective in improving adherence in different chronic medical conditions, including asthma, hypertension, diabetes, and adult depression. In the pediatric literature, research regarding adherence commonly involved interventions that targeted both patients and their families.[99] Several key components have been identified that may improve compliance and/or adherence, including patient self-management and/or monitoring, patient and/or family education and/or support, and the setting and supervision of management goals.[100,101] The identification and periodic review of short- and long-term goals provides an individualized plan that both the provider and the patient and family can follow over time.[100,101] Specifically in the area of youth depression, however, current research evidence reveals that only more complex interventions are likely to have the greatest impact on both adherence and treatment outcomes. This kind of coordinated care, which is often described as collaborative care or integrated behavioral health, is discussed further in the accompanying report on depression treatment and ongoing management.[102]

Safety Planning

Safety planning with adolescent patients who have depression and are suicidal or potentially suicidal usually consists of instructing the family to remove lethal means, instructing the family to monitor for risk factors for suicide (including sexual orientation and intellectual disability), engaging the potentially suicidal adolescent in treatment, providing adolescents with mutually agreeable and available emergency contacts, and establishing clear follow-up. In our updated review of the literature, we found no trials in which researchers have studied the impact of or how to conduct any of these aspects of safety planning with adolescents with depression. Once again, no studies were found in which researchers examined the benefits or risks of a safety contract. Researchers in several articles reviewed what little literature is available regarding the use of suicide safety contracts, and all concluded that these should not be used in clinical practice because there is no empirical evidence that they actually prevent suicide.[103–107] Multiple authors also asserted that contracts have numerous flaws, which could actually be harmful to the clinician-patient alliance. Some alternatives to a contract have been proposed (for example, the commitment to treatment statement discussed by Rudd et al[107]), but none have been tested in a clinical trial. Some studies have suggested that

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limiting access to firearms or other lethal means can decrease suicide by those methods, but the evidence is still unclear as to whether, on a broader population level, restricting access to certain lethal methods results in an overall decrease of suicide rates.[108–116] In addition, Brent et al[117] found that the families of adolescents with depression are frequently noncompliant with recommendations to remove firearms from the house. Yet, a small prospective follow-up of patients who were seen in an emergency department (ED) for mental health concerns found that the majority of their families removed or secured lethal means (firearms, alcohol, prescription medications, and over the counter medications) after injury-prevention education in the ED.[117] Some limited evidence suggests that quick and consistent follow-up and/or treatment with a team approach will be most helpful in increasing compliance and engagement among patients who are suicidal.[118–120]

GUIDELINES

The strength of the evidence on which each recommendation is based has been rated 1 (strongest) through 5 (weakest) according to the Centre for Evidence-Based Medicine levels of evidence and paired with the strength of the recommendation (strong or very strong).

Practice Preparation

Recommendation 1:*PC clinicians are encouraged to seek training in depression assessment, identification, diagnosis, and treatment if they are not previously trained (grade of evidence: 5; strength of recommendation: very strong).*

Consistent with the original GLAD-PC guidelines, PC clinicians who manage adolescent depression are advised to pursue additional education in identification, assessment, diagnosis, treatment and follow-up, consent and confidentiality, safety risk assessment and management, liability, and billing practices. Appropriate training on the assessment, diagnosis, and treatment of adolescent depression enhances PC providers' attitudes and self-efficacy to treat youth depression within their practices, thereby making it more likely that psychological disorders will be identified in the patient population.[34] The REACH Institute and Child and Adolescent Psychology for Primary Care are examples of organizations that provide training opportunities to PC clinicians. In addition to high-quality content, studies of PC provider training reveal that effective information delivery methods are important to the successful uptake of new practice behaviors. Such training methods include a succinct presentation of high-priority information, interactive content delivery methods, hands-on learning activities (eg, role-plays), and cultivating peer leaders to champion new practices. Additionally, access to ongoing consultation after training allows learning to be tailored to the PC provider's actual practice[38] and can increase comfort with diagnosing and treating mental health issues.[33,39] Clinicians also need to practice self-care by using supports for themselves as they take on more responsibilities of caring for youth with depression because engaging with this population can prove to be emotionally challenging.

Recommendation 2: PC clinicians should establish relevant referral and collaborations with mental health resources in the community, which may include patients and families who have dealt with adolescent depression and are willing to serve as a resource for other affected adolescents and their family members. Consultations should be pursued whenever available in initial cases until the PC clinician acquires confidence and skills and when challenging cases arise. In addition, whenever available, these resources may also include state-wide or regional child and adolescent psychiatry consultation programs (grade of evidence: 5; strength of recommendation: very strong).

The lack of linkages among relevant services within a system of care is a large gap in the management of chronic disorders in young people.[121] Furthermore, family-based interventions have been shown to help youth with mental illness.[122] Therefore, establishing mental health referral and collaboration resources in the local community for adolescents with depression and their families is essential to ensuring timely and effective access to needed services.[11,123] Such linkages may include mental health sites to which patients can be referred for specialty care services, such as comprehensive evaluations, psychosocial treatment, pharmacotherapy, and crises intervention services (in the event of suicidality). In highly underserved areas, these linkages may also include paraprofessionals who are tasked with providing the bulk of supportive counseling services to local residents. To reduce barriers to care, PC providers may arrange to have standing agreements with these practices regarding referral, the exchange of clinical information, points of contact, and so on. Schools play a critical role, especially if therapeutic support is available. Clinicians should connect to any available resources in the school system. PC providers should also work with the patient and/or family to establish an individual education plan to provide supports for the teenager in the school setting. Other linkages may include online or in-person support groups, advocacy groups (eg, the American

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Foundation for Suicide Prevention), and family partner organizations (ie, patients and/or caregivers who have experience dealing with adolescent depression and serve as a resource for affected adolescents and families whenever these services are available).

To provide support to PC providers, >25 states have established programs to promote collaboration between PC providers and child psychiatrists by providing PC providers with education, rapid access to consultation, and referral options. PC sites may wish to search registries such as the National Network of Child Psychiatry Access Programs (www.nncpap.org) to identify any regional or state-wide programs that are available in their areas.

Identification and Surveillance

Recommendation 1: Adolescent patients ages 12 years and older should be screened annually for depression (MDD or depressive disorders) with a formal self-report screening tool either on paper or electronically (universal screening) (grade of evidence: 2; strength of recommendation: very strong).

Given the high prevalence of adolescent depression (lifetime prevalence is estimated to be ~ 20% by age 20 years), the evidence that adolescent depression can be persistent, the fact that adolescence is a time of significant brain maturation, and longitudinal studies that reveal that adolescents with depression have significant problems as adults, it is important to try to identify and treat adolescents with depression early in the course of the disorder. Although most PC clinicians believe it is their responsibility to identify depression in their adolescent patients, evidence suggests that only a fraction of these youth are identified when presenting in PC settings even after the USPSTF mandate on screening.[45] Extant evidence does suggest that screening with a systematic tool will identify more adolescents with depressive disorders than not screening at all. Providers should choose a tool with at least minimal validation data. Given that more evidence is needed to guide the choice of a depression screening tool, at this point, providers should choose a depression-only tool or a combined tool, a short tool as a gate or a longer initial tool, and an adaptive screening or a paper screen on the basis of what they believe will work better for their practices, patients, and health organizations. Furthermore, the current literature does reveal that screening and scoring before the provider is in the room with the patient can be most helpful to the workflow. Although both the USPSTF and the AAP support the universal use of an adolescent self-report screen, using a parent-completed PSC as an initial gate may be acceptable given the limited evidence. However, 1 limitation to gated depression screening, using either a short self-report or a longer parent psychosocial report as the initial gate, is the loss of the suicide questions that are part of longer adolescent self-reports. Given the high rate of suicidal ideation and attempts among adolescents and the fact that not all adolescents who are suicidal will have MDD, it seems likely that screening for suicidality may be helpful as well, so providers should consider including suicide questions. Choosing a cutoff score for the selected tool will need to depend on the practice's expected prevalence rates as well as the practice's available and accepted pathways for intervention. Although there is no evidence to suggest how often a teenager should be screened, screening once per year seems reasonable until more evidence is amassed, whether this takes place at health maintenance visits or at the next available sick visit. Finally, this recommendation should not discourage PC providers who regularly speak with their teenagers about their moods from continuing to do so and should not dissuade clinicians from learning how to better identify teens with depression through interview, but we merely endorse universal adolescent depression self-report instruments as an initial screening tool.

Recommendation 2: Patients with depression risk factors (eg, a history of previous depressive episodes, a family history, other psychiatric disorders, substance use, trauma, psychosocial adversity, frequent somatic complaints, previous high-scoring screens without a depression diagnosis, etc) should be identified (grade of evidence: 2; strength of recommendation: very strong) and systematically monitored over time for the development of a depressive disorder by using a formal depression instrument or tool (targeted screening) (grade of evidence: 2; strength of recommendation: very strong).

As part of overall health care, PC clinicians should routinely monitor the psychosocial functioning of all youth because problems in psychosocial functioning may be an early indication of a variety of problems, including depression. Risk factors that clinicians may use to identify those who are at high risk for depression include a previous history or family history of (1) depression, (2) bipolar disorder, (3) suicide-related behaviors, (4) substance use, and (5) other psychiatric illness; (6) significant psychosocial stressors, such as family crises, physical and sexual abuse, neglect, and other trauma history; (7) frequent somatic complaints; as well as (8) foster care and adoption.[124–126] Research evidence shows that patients who present with such risk factors are likely to experience future depressive episodes.[22,127–133] There are recent

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data as well that reveal that those who score high on depression screening instruments, even when they are not initially diagnosed with depression, may be at risk for a depression diagnosis within 6 months.[66] Although these at-risk teenagers may be screened annually as part of the practice's universal depression screening, they may also require a more frequent, systematic, targeted screening during other health care visits (ie, well-child visits and urgent care visits). Following the chronic care model, teens with depression, past depression, frequent somatization, or other risk factors may need to be included in a registry and managed more closely over time.

Assessment and/or Diagnosis

Recommendation 1: PC clinicians should evaluate for depression in those who screen positive on the formal screening tool (whether it is used as part of universal or targeted screening), in those who present with any emotional problem as the chief complaint, and in those in whom depression is highly suspected despite a negative screen result. Clinicians should assess for depressive symptoms on the basis of the diagnostic criteria established in the **DSM-5** ***or the*** **International Classification of Diseases, 10th Revision** ***(grade of evidence: 3; strength of recommendation: very strong) and should use standardized depression tools to aid in the assessment (if they are not already used as part of the screening process) (grade of evidence: 1; strength of recommendation: very strong).***

Scoring high on a screening tool alone does not make for a diagnosis of MDD, especially given that in a low-risk PC population, the PPV of a positive screen result may be low. However, as discussed earlier, a positive screen result can also indicate a different depressive disorder or subthreshold depression. On the other hand, in youth who are suspected of having depression on the basis of other initiating triggers, such as risk factors, somatic complaints, or other emotional chief complaints, assessing for depression (regardless of whether there is a positive screen result) may be in order. PC clinicians should probe for the presence of any of several depressive disorders, including MDD, persistent depressive disorder (dysthymia), and other specified or unspecified depressive disorders by using systematic, rigorous assessment methods. Although standardized instruments should be used to help with diagnosis, they should not replace direct interview by a clinician.[134–136] Because adolescents with depression may not be able to clearly identify depressed mood as their presenting complaint, providers need to be aware of common presenting symptoms that may signal MDD. These may include irritability, fatigue, insomnia or sleeping more, weight loss or weight gain, decline in academic functioning, family conflict, and other symptoms of depressive disorders.[137]

Recommendation 2: Assessment for depression should include direct interviews with the patients and families and/or caregivers (grade of evidence: 2; strength of recommendation: very strong) and should include the assessment of functional impairment in different domains (grade of evidence: 1; strength of recommendation: very strong) and other existing psychiatric conditions (grade of evidence: 1; strength of recommendation: very strong). Clinicians should remember to interview an adolescent alone.

Evidence of the core symptoms of depression and functional impairment should be obtained from the youth as well as from families and/or caregivers separately.[138–140] The involvement of the family is critical in all phases of management and should be included in the assessment for depressive disorders. If family involvement is determined to be detrimental, then involving another responsible adult would be appropriate. Family relationships may also affect the presentation of depression in adolescents. However, despite the importance of family involvement and the imperative to try to include family, adolescents value their sense of privacy, confidentiality, and individuality. It is important to remember that adolescents should be interviewed alone about their depressive symptoms, suicidality, and psychosocial risk factors and circumstances. The cultural backgrounds of the patients and their families should also be considered during the assessments because they can impact the presentation of core symptoms.[141] Collateral information from other sources (eg, teachers) may also be obtained to aid in the assessment. Given the high rates of comorbidities, clinicians should assess for the existence of comorbid conditions that may affect the diagnosis and treatment of the depressive disorder.[2,22,142,143] These comorbidities may include 1 or more of the following conditions: substance use, anxiety disorder, attention-deficit/hyperactivity disorder, bipolar disorder, physical abuse, and trauma. Instruments that assess for a range of common comorbid mental health conditions should be considered as well during this assessment phase if they were not used in the initial screening protocol. Clinicians should also assess for impairment in key areas of functioning, including school, home, and peer settings.[144] Subjective distress should be evaluated as well. Regardless of the diagnostic impression or any further treatment plans, a safety assessment, including

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for suicidality, should be completed by the clinician (see recommendation 3 in Initial Management of Depression).

Initial Management of Depression

Recommendation 1: Clinicians should educate and counsel families and patients about depression and options for the management of the disorder (grade of evidence: 5; strength of recommendation: very strong). Clinicians should also discuss the limits of confidentiality with the adolescent and family (grade of evidence: 5; strength of recommendation: very strong).

Management should be based on a plan that is developed with the understanding that depression is often a recurring condition. As seen in studies of depression interventions, families and patients need to be educated about the causes and symptoms of depression, impairments associated with it, and the expected outcomes of treatment.[145–148] Information should be provided at a developmentally appropriate level and in a way that the patient and family can understand the nature of the condition and the management plan. Communication that is developmentally appropriate should facilitate the ability of parents and patients to work with the clinicians to develop an effective and achievable treatment plan. To establish a strong therapeutic alliance, the clinicians should also take into account cultural factors that may affect the diagnosis and management of this disorder.[141] Clinicians should also be aware of the negative reactions of family members to a possible diagnosis of depression in a teen (ie, sadness, anger, and denial). Sample materials are available in the GLAD-PC and include resources for patients and parents. Because the symptoms of depression can also affect many areas of an adolescent's life, other ongoing partnerships may need to be established with personnel in schools and other settings (eg, extracurricular activities). Confidentiality should also be discussed with the adolescent and his or her family. Adolescents and families should be aware of the limits of confidentiality, including the need to involve parents or legal authorities when the risk of harm to the adolescent or others may be imminent. Clinicians should be aware of state laws regarding confidentiality (for additional information, see www.advocatesforyouth.org).

Recommendation 2: After appropriate training, PC clinicians should develop a treatment plan with patients and families (grade of evidence: 5; strength of recommendation: very strong) and set specific treatment goals in key areas of functioning, including home, peer, and school settings (grade of evidence: 5; strength of recommendation: very strong).

From studies of chronic disorders in youth, it is suggested that better adherence to treatment is associated with the identification and tracking of specific treatment goals and outcomes. Written action plans in asthma management have some evidence for improved outcomes.[149] Similarly, studies of adolescents with depression reveal greater adherence and outcomes when they were assessed to be ready for change and received their treatment of choice.[11,86] If a patient presents with moderate-to-severe depression or has persistent depressive symptoms, treatment goals and outcomes should be identified and agreed on via close collaboration with the patient and family at the time of treatment initiation. Treatment goals may include the establishment of a regular exercise routine, adequate nutrition, and regular meetings to resolve issues at home. In the adult depression literature, monitoring appears to be most effective when it is implemented through designated case managers who monitor patients' clinical status and treatment plan adherence.[12] The benefits of such programs may be enhanced through the use of electronic medical records (EMRs) and the development of patient registries. Technologies such as apps are being used more commonly in clinical practice, and there is emerging evidence for their effectiveness.[150]

Recommendation 3: All management should include the establishment of a safety plan, which includes restricting lethal means, engaging a concerned third party, and developing an emergency communication mechanism should the patient deteriorate, become actively suicidal or dangerous to others, or experience an acute crisis associated with psychosocial stressors, especially during the period of initial treatment, when safety concerns are the highest (grade of evidence: 3; strength of recommendation: very strong). The establishment and development of a safety plan within the home environment is another important management step.

Suicidality, including ideation, behaviors, and attempts, is common among adolescents with depression. In studies of completed suicide, more than 50% of the victims had a diagnosis of depression.[151] Therefore, clinicians who manage this disorder should develop an emergency communication mechanism for handling increased suicidality or acute crises. After assessing a patient for suicidality, the clinician should obtain information from a third party, assess that adequate adult supervision and support are available, have an adult agree to help remove lethal means (eg, medications and firearms) from the premises, warn the patient of the disinhibiting effects of drugs and alcohol, put contingency planning

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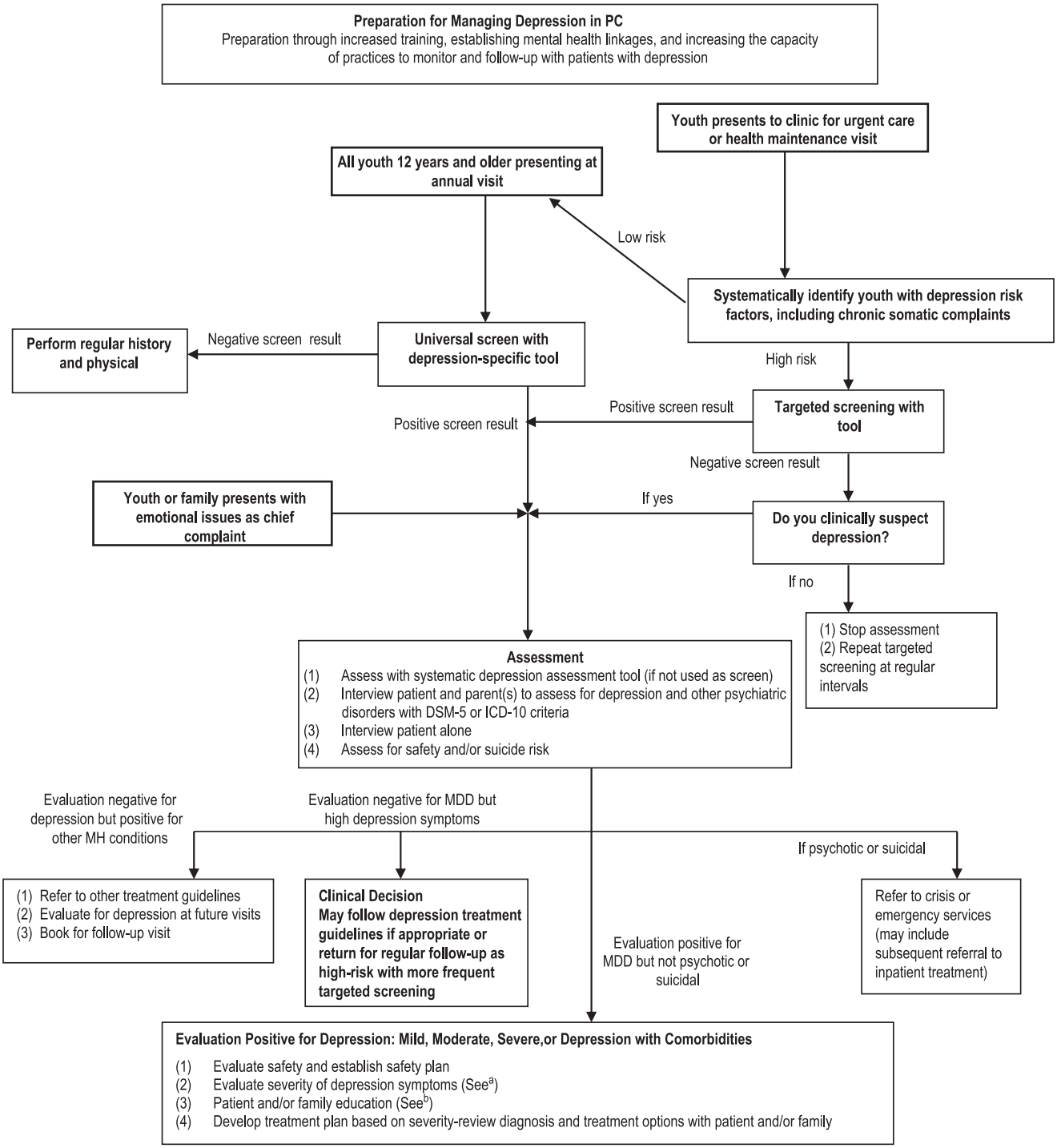

FIGURE 1
Clinical assessment flowchart. ICD-10, *International Classification of Diseases, 10th Revision*; MH, mental health. [a] See part I of the guidelines for definitions of mild, moderate, and severe depression. Please consult the tool kit for methods that are available to aid clinicians in distinguishing among mild, moderate, and severe depression. [b] Psychoeducation, supportive counseling, facilitation of parental and patient self-management, referring for peer support, and regular monitoring of depressive symptoms and suicidality.

in place, and establish follow-up within a reasonable period of time.[109,120,152,153] This plan should be developed with adolescents (and with their families and/or caregivers if possible) and should include a list of persons and/or services for the adolescent to contact in case of acute crisis or increased suicidality. The establishment of this plan is especially important during the period of diagnosis and initial

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treatment, when safety concerns are the highest. It is critical for PC clinicians to make linkages with their closest crisis support and hospital services so that they are supported in crisis situations when caring for youth with depression. Clinicians may also work with schools to develop an emergency plan for all students who may experience acute suicidal crises. This global approach may prevent, in some instances, having to label a specific child as suicidal when providers are merely trying to ensure that safety measures are in place in case the child decompensates. Components of a safety plan may also include a list of persons who are aware of the adolescents' issues and will be able to assist if contacted during an acute crisis (Fig 1).

DISCUSSION

Although not definitive and subject to modification on the basis of the ongoing accumulation of additional evidence, this part of the updated guidelines is intended to help address the lack of recommendations regarding practice preparation, screening, diagnosis, and initial management of depression in adolescents aged 10 to 21 years in PC settings in the United States and Canada. As such, these guidelines are intended to assist PC clinicians in family medicine, pediatrics, nursing, and internal medicine, who may be the first (and sometimes only) clinicians to identify, manage, and possibly treat adolescent depression. These guidelines may also be helpful to allied health professionals who care for adolescents.

Although not all the steps involved in identifying, diagnosing, and initially managing the care for adolescent depression in PC have been (or even can be) subject to rigorous RCTs, there is sound reason to believe that existing tools and management protocols for adolescent depression can be applied in the PC setting. Although more research is needed, we suggest that these components of the identification and initial management of adolescent depression in PC can be done. The recommendations were developed and updated on the basis of areas that had at least strong agreement among experts.

Should These Guidelines Be Universally Deployed?

One might question whether PC clinicians should identify and diagnose the problem of adolescent depression if the lack of psychiatric services prevents them from referring these youth.[154] This caution notwithstanding, the increasingly prevailing recommendation is that at a minimum, PC clinicians should be provided the necessary guidance to support the initial management of adolescent depression.[155,156] Nonetheless, because practitioners and their clinical practice settings vary widely in their degree of readiness in identifying and managing adolescent depression, it is likely that a good deal of time and flexibility will be required before these guidelines are adopted systematically or as a universal requirement. It is conceivable that integrated health care systems with EMRs, tracking systems, and access to specialty mental health backup and consultation will be most ready and able to fully implement the guidelines. The second part of the guidelines, the companion article, addresses the treatment of depression. Practices that do identify adolescent depression and have nowhere to refer patients to may benefit from the guidance offered in the next set of recommendations.

Preparatory Steps

Because the management of adolescent depression may constitute a new or major challenge for some PC practices, a number of important considerations should be kept in mind when preparing to implement the guidelines given the findings from studies in the adult literature; input from our focus groups of clinicians, families, and patients; and the experience of members of the GLAD-PC Steering Committee. Specifically, PC clinicians who manage adolescent depression should pursue the following: (1) additional training regarding issues such as advances in screening, diagnosis, treatment, follow-up, liability, consent, confidentiality, and billing; (2) practice and systems changes, such as office staff training and buy-in, EMRs, and automated tracking systems, whenever available; and (3) establishing linkages with mental health services.

Linkages with community mental health resources are necessary to both meet the learning needs of the PC clinicians and to facilitate consultation for and/or referral of difficult cases. Practice and systems changes are useful in increasing clinicians' capacity to facilitate monitoring and follow-up of patients with depression. For example, staff training may help prioritize calls from adolescent patients who may not state the nature of their call. Specific tools and/or templates have been developed that offer examples of how to efficiently identify, monitor, track, and refer teenagers with depression. These materials are available in the GLAD-PC tool kit. The tool kit addresses how each of the recommendations might be accomplished without each practice necessarily having to "reinvent the wheel."

CONCLUSIONS

Review of the evidence suggests that PC clinicians who have appropriate training and are attempting to deliver comprehensive health care should be able to identify

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and initiate the management of adolescent depression. This will likely require real changes in existing systems of care. As health care models such as the medical home indicate, comprehensive health care should include assessment and coordination of care for both physical and behavioral health issues. This first part of the guidelines for adolescent depression in PC may enable providers to pull together the current best evidence and deliver the best available, high-quality care even in instances when they are not in a position to treat such youth. Mounting evidence suggests that pediatric providers can and should identify and coordinate depression care in their adolescent populations.

APPENDIX: PART I TOOLKIT ITEMS

- Screening/assessment instruments (i.e., Columbia Depression Scale)
- Information sheet on the developmental considerations in the diagnosis of depression
- Assessment Algorithm/Flow Sheet (Fig 1)
- Fact sheet/family education materials
- Educational materials on suicide prevention/safety planning

LEAD AUTHORS

Rachel A. Zuckerbrot, MD
Amy Cheung, MD
Peter S. Jensen, MD
Ruth E.K. Stein, MD
Danielle Laraque, MD

GLAD-PC PROJECT TEAM

Peter S. Jensen, MD – Project Director, *University of Arkansas for Medical Science*
Amy Cheung, MD – Project Coordinator, *University of Toronto* and *Columbia University*
Rachel Zuckerbrot, MD – Project Coordinator, *Columbia University Medical Center* and *New York State Psychiatric Institute*
Anthony Levitt, MD – Project Consultant, *University of Toronto*

STEERING COMMITTEE MEMBERS

GLAD-PC Youth and Family Advisory Team
Joan Asarnow, PhD – *David Geffen School of Medicine, University of California, Los Angeles*
Boris Birmaher, MD – *Western Psychiatric Institute and Clinic, University of Pittsburgh*
John Campo, MD – *Ohio State University*
Greg Clarke, PhD – *Center for Health Research, Kaiser Permanente*
M. Lynn Crismon, PharmD – *The University of Texas at Austin*
Graham Emslie, MD – *University of Texas Southwestern Medical Center and Children's Health System Texas*
Miriam Kaufman, MD – *Hospital for Sick Children, University of Toronto*
Kelly J. Kelleher, MD – *Ohio State University*
Stanley Kutcher, MD – *Dalhousie Medical School*
Danielle Laraque, MD – *State University of New York Upstate Medical University*
Michael Malus, MD – *Department of Family Medicine, McGill University*
Diane Sacks, MD – *Canadian Paediatric Society*
Ruth E. K. Stein, MD – *Albert Einstein College of Medicine and Children's Hospital at Montefiore*
Barry Sarvet, MD – *Baystate Health, Massachusetts*
Bruce Waslick, MD – *Baystate Health Systems, Massachusetts, and University of Massachusetts Medical School*
Benedetto Vitiello, MD – *University of Turin and NIMH (former)*

ORGANIZATIONAL LIAISONS

Nerissa Bauer, MD – *AAP*
Diane Sacks, MD – *Canadian Paediatric Society*
Barry Sarvet, MD – *American Academy of Child and Adolescent Psychiatry*
Mary Kay Nixon, MD – *Canadian Academy of Child and Adolescent Psychiatry*
Robert Hilt, MD – *American Psychiatric Association*
Darcy Gruttadaro (former) – *National Alliance on Mental Illness*
Teri Brister – *National Alliance on Mental Illness*

ACKNOWLEDGMENTS

The authors wish to acknowledge research support from Justin Chee, Lindsay Williams, Robyn Tse, Isabella Churchill, Farid Azadian, Geneva Mason, Jonathan West, Sara Ho and Michael West. We are most grateful to the advice and guidance of Dr. Jeff Bridge, Dr. Purti Papneja, Dr. Elena Mann, Dr. Rachel Lynch, Dr. Marc Lashley, and Dr. Diane Bloomfield.

ABBREVIATIONS

AAP: American Academy of Pediatrics
BHS: Behavioral Health Screen
CATCH-IT: Competent Adulthood Transition with Cognitive-behavioral, Humanistic and Interpersonal Training
DISC-IV: Diagnostic Interview Schedule for Children-IV
DSM-5: *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*
ED: emergency department
EMR: electronic medical record
GAPS: Guidelines for Adolescent Preventive Services
GLAD-PC: Guidelines for Adolescent Depression in Primary Care
HMO: health maintenance organization
K-SADS: Kiddie Schedule for Affective Disorders and Schizophrenia
MDD: major depressive disorder
NPV: negative predictive value
PC: primary care
PHQ-2: Patient Health Questionnaire-2
PHQ-9: Patient Health Questionnaire-9
PPV: positive predictive value
PSC: Pediatric Symptom Checklist
PSC-17: Pediatric Symptom Checklist-17
RCT: randomized controlled trial
REACH: Resource for Advancing Children's Health
TCPS: Targeted Child Psychiatry Services
USPSTF: United States Preventive Services Task Force
YPIC: Youth Partners in Care

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FINANCIAL DISCLOSURE: In the past 2 years, Dr Jensen has received royalties from several publishing companies: Random House, Oxford University Press, and APPI Inc. He also is a part owner of a consulting company, CATCH Services LLC. He is the chief executive officer and president of a nonprofit organization, the Resource for Advancing Children's Health Institute, but receives no compensation; the other authors have indicated they have no financial relationships relevant to this article to disclose.

FUNDING: We thank the following organizations for their financial support of the Guidelines for Adolescent Depression in Primary Care project: the Resource for Advancing Children's Health Institute and the Bell Canada Chair in Adolescent Mood and Anxiety Disorders.

POTENTIAL CONFLICT OF INTEREST: Dr Zuckerbrot works for CAP PC, child and adolescent psychiatry for primary care, now a regional provider for Project TEACH in New York State. Dr Zuckerbrot is also on the steering committee as well as faculty for the REACH Institute. Both of these institutions are described in this publication. Drs Cheung and Zuckerbrot receive book royalties from Research Civic Institute.

COMPANION PAPER: A companion to this article can be found online at www.pediatrics.org/cgi/doi/10.1542/peds.2017-4082.

REFERENCES

1. Fleming JE, Offord DR, Boyle MH. Prevalence of childhood and adolescent depression in the community. Ontario Child Health Study. *Br J Psychiatry*. 1989;155(5):647–654
2. Birmaher B, Brent D, et al. Practice parameters for the assessment and treatment of children and adolescents with depressive disorders. AACAP. *J Am Acad Child Adolesc Psychiatry*. 1998;37(suppl 10):63S–83S
3. Copeland WE, Angold A, Shanahan L, Costello EJ. Longitudinal patterns of anxiety from childhood to adulthood: the Great Smoky Mountains Study. *J Am Acad Child Adolesc Psychiatry*. 2014;53(1):21–33
4. Mandoki MW, Tapia MR, Tapia MA, Sumner GS, Parker JL. Venlafaxine in the treatment of children and adolescents with major depression. *Psychopharmacol Bull*. 1997;33(1):149–154
5. Kessler RC, Avenevoli S, Ries Merikangas K. Mood disorders in children and adolescents: an epidemiologic perspective. *Biol Psychiatry*. 2001;49(12):1002–1014
6. Burns BJ, Costello EJ, Angold A, et al. Children's mental health service use across service sectors. *Health Aff (Millwood)*. 1995;14(3):147–159
7. Leaf PJ, Alegria M, Cohen P, et al. Mental health service use in the community and schools: results from the four-community MECA Study. Methods for the Epidemiology of Child and Adolescent Mental Disorders Study. *J Am Acad Child Adolesc Psychiatry*. 1996;35(7):889–897
8. Martini R, Hilt R, Marx L, et al. *Best Principles for Integration of Child Psychiatry Into the Pediatric Health Home*. Washington, DC: American Academy for Child and Adolescent Psychiatry; 2012
9. Rushton JL, Clark SJ, Freed GL. Pediatrician and family physician prescription of selective serotonin reuptake inhibitors. *Pediatrics*. 2000;105(6). Available at: www.pediatrics.org/cgi/content/full/105/6/e82
10. Zito JM, Safer DJ, DosReis S, et al. Rising prevalence of antidepressants among US youths. *Pediatrics*. 2002;109(5):721–727
11. Asarnow JR, Jaycox LH, Duan N, et al. Effectiveness of a quality improvement intervention for adolescent depression in primary care clinics: a randomized controlled trial. *JAMA*. 2005;293(3):311–319
12. Gilbody S, Whitty P, Grimshaw J, Thomas R. Educational and organizational interventions to improve the management of depression in primary care: a systematic review. *JAMA*. 2003;289(23):3145–3151
13. Scott J, Thorne A, Horn P. Quality improvement report: effect of a multifaceted approach to detecting and managing depression in primary care. *BMJ*. 2002;325(7370):951–954
14. Sarvet B, Gold J, Bostic JQ, et al. Improving access to mental health care for children: the Massachusetts Child Psychiatry Access Project. *Pediatrics*. 2010;126(6):1191–1200
15. Kolko DJ, Campo J, Kilbourne AM, Hart J, Sakolsky D, Wisniewski S. Collaborative care outcomes for pediatric behavioral health problems: a cluster randomized trial. *Pediatrics*. 2014;133(4). Available at: www.pediatrics.org/cgi/content/full/133/4/e981
16. Kolko DJ, Perrin E. The integration of behavioral health interventions in children's health care: services, science, and suggestions. *J Clin Child Adolesc Psychol*. 2014;43(2):216–228
17. Zuckerbrot RA, Cheung AH, Jensen PS, Stein RE, Laraque D; GLAD-PC Steering Group. Guidelines for Adolescent Depression in Primary Care (GLAD-PC): I. Identification, assessment, and initial management. *Pediatrics*. 2007;120(5). Available at: www.pediatrics.org/cgi/content/full/120/5/e1299
18. Cheung AH, Zuckerbrot RA, Jensen PS, Ghalib K, Laraque D, Stein REK; GLAD-PC Steering Group. Guidelines for Adolescent Depression in Primary Care (GLAD-PC): II. Treatment and ongoing management [published correction appears in *Pediatrics*. 2008;121(1):227]. *Pediatrics*. 2007;120(5). Available at: www.pediatrics.org/cgi/content/full/120/5/e1313
19. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*. 5th ed. Washington, DC: American Psychiatric Association; 2013
20. Robins E, Guze SB. Establishment of diagnostic validity in psychiatric illness: its application to schizophrenia. *Am J Psychiatry*. 1970;126(7):983–987
21. Feighner JP, Robins E, Guze SB, Woodruff RA Jr, Winokur G, Munoz R. Diagnostic criteria for use in psychiatric research. *Arch Gen Psychiatry*. 1972;26(1):57–63

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22. Lewinsohn PM, Essau CA. Depression in adolescents. In: Gotlib IH, Hammen CL, eds. *Handbook of Depression*. New York, NY: Guilford Press; 2002:541–559

23. Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. *Arch Gen Psychiatry*. 2003;60(8):837–844

24. Keller MB, Klein DN, Hirschfeld RM, et al. Results of the DSM-IV mood disorders field trial. *Am J Psychiatry*. 1995;152(6):843–849

25. Cuijpers P, de Graaf R, van Dorsselaer S. Minor depression: risk profiles, functional disability, health care use and risk of developing major depression. *J Affect Disord*. 2004;79(1–3):71–79

26. Cheung AH, Zuckerbrot RA, Jensen PS, Stein REK, Laraque D; GLAD-PC Steering Committee. Expert survey for the management of adolescent depression in primary care. *Pediatrics*. 2008;121(1). Available at: www.pediatrics.org/cgi/content/full/121/1/e101

27. Oxman AD, Thomson MA, Davis DA, Haynes RB. No magic bullets: a systematic review of 102 trials of interventions to improve professional practice. *CMAJ*. 1995;153(10):1423–1431

28. Baskerville NB, Liddy C, Hogg W. Systematic review and meta-analysis of practice facilitation within primary care settings. *Ann Fam Med*. 2012;10(1):63–74

29. Perkins MB, Jensen PS, Jaccard J, et al. Applying theory-driven approaches to understanding and modifying clinicians' behavior: what do we know? *Psychiatr Serv*. 2007;58(3):342–348

30. Rinke ML, Driscoll A, Mikat-Stevens N, et al. A quality improvement collaborative to improve pediatric primary care genetic services. *Pediatrics*. 2016;137(2):e20143874

31. Chauhan BF, Jeyaraman MM, Mann AS, et al. Behavior change interventions and policies influencing primary healthcare professionals' practice-an overview of reviews [published correction appears in *Implement Sci*. 2017;12(1):38]. *Implement Sci*. 2017;12(1):3

32. Humble C, Domino M, Jensen P, et al. Changes in perceptions of guideline-level care for ADHD in North Carolina. In: *American Public Health Association Annual Meeting*; October 27–31, 2012; San Francisco, CA

33. Hargrave TM, Fremont W, Cogswell A, et al. Helping primary care clinicians give mental health care: what works? In: *Annual Meeting of the American Academy of Child and Adolescent Psychiatry*; October 20–25, 2014; San Antonio, TX

34. Brown JD, Riley AW, Wissow LS. Identification of youth psychosocial problems during pediatric primary care visits. *Adm Policy Ment Health*. 2007;34(3):269–281

35. Brown JD, Wissow LS, Cook BL, Longway S, Caffery E, Pefaure C. Mental health communications skills training for medical assistants in pediatric primary care. *J Behav Health Serv Res*. 2013;40(1):20–35

36. Craven MA, Bland R. Better practices in collaborative mental health care: an analysis of the evidence base. *Can J Psychiatry*. 2006;51(6, suppl 1):7S–72S

37. Gillies D, Buykx P, Parker AG, Hetrick SE. Consultation liaison in primary care for people with mental disorders. *Cochrane Database Syst Rev*. 2015;(9):CD007193

38. Powell BJ, McMillen JC, Proctor EK, et al. A compilation of strategies for implementing clinical innovations in health and mental health. *Med Care Res Rev*. 2012;69(2):123–157

39. Kaye D, Fornari V, Scharf M, et al. Learn then apply: increased impact of formal education with consultation support on PCP knowledge, skills, and confidence in child mental health care. *J Am Acad Child Adolesc Psychiatry*. 2016;55(10):S210–S211

40. Connor DF, McLaughlin TJ, Jeffers-Terry M, et al. Targeted child psychiatric services: a new model of pediatric primary clinician–child psychiatry collaborative care. *Clin Pediatr (Phila)*. 2006;45(5):423–434

41. Aupont O, Doerfler L, Connor DF, Stille C, Tisminetzky M, McLaughlin TJ. A collaborative care model to improve access to pediatric mental health services. *Adm Policy Ment Health*. 2013;40(4):264–273

42. Gadomski AM, Wissow LS, Palinkas L, Hoagwood KE, Daly JM, Kaye DL. Encouraging and sustaining integration of child mental health into primary care: interviews with primary care providers participating in Project TEACH (CAPES and CAP PC) in NY. *Gen Hosp Psychiatry*. 2014;36(6):555–562

43. Hilt RJ, Romaire MA, McDonell MG, et al. The Partnership Access Line: evaluating a child psychiatry consult program in Washington state. *JAMA Pediatr*. 2013;167(2):162–168

44. Ivbijaro GO, Enum Y, Khan AA, Lam SS, Gabzdyl A. Collaborative care: models for treatment of patients with complex medical-psychiatric conditions. *Curr Psychiatry Rep*. 2014;16(11):506

45. US Preventive Services Task Force. Screening and treatment for major depressive disorder in children and adolescents: US Preventive Services Task Force recommendation statement. *Pediatrics*. 2009;123(4):1223–1228

46. Williams SB, O'Connor EA, Eder M, Whitlock EP. Screening for child and adolescent depression in primary care settings: a systematic evidence review for the US Preventive Services Task Force. *Pediatrics*. 2009;123(4). Available at: www.pediatrics.org/cgi/content/full/123/4/e716

47. MacMillan HL, Patterson CJ, Wathen CN, et al; Canadian Task Force on Preventive Health Care. Screening for depression in primary care: recommendation statement from the Canadian Task Force on Preventive Health Care. *CMAJ*. 2005;172(1):33–35

48. Forman-Hoffman V, McClure E, McKeeman J, et al. Screening for major depressive disorder in children and adolescents: a systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med*. 2016;164(5):342–349

49. Lewandowski RE, Acri MC, Hoagwood KE, et al. Evidence for the management of adolescent depression. *Pediatrics*. 2013;132(4). Available at: www.pediatrics.org/cgi/content/full/132/4/e996

50. Bevans KB, Diamond G, Levy S. Screening for adolescents'

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internalizing symptoms in primary care: item response theory analysis of the behavior health screen depression, anxiety, and suicidal risk scales. *J Dev Behav Pediatr*. 2012;33(4):283–290

51. Borner I, Braunstein JW, St Victor R, Pollack J. Evaluation of a 2-question screening tool for detecting depression in adolescents in primary care. *Clin Pediatr (Phila)*. 2010;49(10):947–953

52. Diamond G, Levy S, Bevans KB, et al. Development, validation, and utility of Internet-based, behavioral health screen for adolescents. *Pediatrics*. 2010;126(1). Available at: www.pediatrics.org/cgi/content/full/126/1/e163

53. Duke N, Ireland M, Borowsky IW. Identifying psychosocial problems among youth: factors associated with youth agreement on a positive parent-completed PSC-17. *Child Care Health Dev*. 2005;31(5):563–573

54. Gardner W, Lucas A, Kolko DJ, Campo JV. Comparison of the PSC-17 and alternative mental health screens in an at-risk primary care sample. *J Am Acad Child Adolesc Psychiatry*. 2007;46(5):611–618

55. Katon W, Russo J, Richardson L, McCauley E, Lozano P. Anxiety and depression screening for youth in a primary care population. *Ambul Pediatr*. 2008;8(3):182–188

56. Richardson LP, McCauley E, Grossman DC, et al. Evaluation of the Patient Health Questionnaire-9 Item for detecting major depression among adolescents. *Pediatrics*. 2010;126(6):1117–1123

57. Richardson LP, Rockhill C, Russo JE, et al. Evaluation of the PHQ-2 as a brief screen for detecting major depression among adolescents. *Pediatrics*. 2010;125(5). Available at: www.pediatrics.org/cgi/content/full/125/5/e1097

58. Asarnow JR, Jaycox LH, Tang L, et al. Long-term benefits of short-term quality improvement interventions for depressed youths in primary care. *Am J Psychiatry*. 2009;166(9):1002–1010

59. Bakken S, Jia H, Chen ES, et al. The effect of a mobile health decision support system on diagnosis and management of obesity, tobacco use, and depression in adults and children. *J Nurse Pract*. 2014;10(10):774–780

60. Chisolm DJ, Klima J, Gardner W, Kelleher KJ. Adolescent behavioral risk screening and use of health services. *Adm Policy Ment Health*. 2009;36(6):374–380

61. Dumont IP, Olson AL. Primary care, depression, and anxiety: exploring somatic and emotional predictors of mental health status in adolescents. *J Am Board Fam Med*. 2012;25(3):291–299

62. Fallucco EM, Seago RD, Cuffe SP, Kraemer DF, Wysocki T. Primary care provider training in screening, assessment, and treatment of adolescent depression. *Acad Pediatr*. 2015;15(3):326–332

63. Fallucco EM, Conlon MK, Gale G, Constantino JN, Glowinski AL. Use of a standardized patient paradigm to enhance proficiency in risk assessment for adolescent depression and suicide. *J Adolesc Health*. 2012;51(1):66–72

64. Gadomski AM, Scribani MB, Krupa N, Jenkins PL. Do the Guidelines for Adolescent Preventive Services (GAPS) facilitate mental health diagnosis? *J Prim Care Community Health*. 2014;5(2):85–89

65. Gladstone TG, Marko-Holguin M, Rothberg P, et al. An internet-based adolescent depression preventive intervention: study protocol for a randomized control trial. *Trials*. 2015;16:203

66. Gledhill J, Garralda ME. Sub-syndromal depression in adolescents attending primary care: frequency, clinical features and 6 months' outcome. *Soc Psychiatry Psychiatr Epidemiol*. 2013;48(5):735–744

67. Gledhill J, Garralda ME. The short-term outcome of depressive disorder in adolescents attending primary care: a cohort study. *Soc Psychiatry Psychiatr Epidemiol*. 2011;46(10):993–1002

68. Grasso DJ, Connor DF, Scranton V, Macary S, Honigfeld L. Implementation of a computerized algorithmic support tool for identifying depression and anxiety at the pediatric well-child visit. *Clin Pediatr (Phila)*. 2015;54(8):796–799

69. Hacker K, Arsenault L, Franco I, et al. Referral and follow-up after mental health screening in commercially insured adolescents. *J Adolesc Health*. 2014;55(1):17–23

70. John R, Buschman P, Chaszar M, Honig J, Mendonca E, Bakken S. Development and evaluation of a PDA-based decision support system for pediatric depression screening. *Stud Health Technol Inform*. 2007;129(pt 2):1382–1386

71. Kramer T, Iliffe S, Bye A, Miller L, Gledhill J, Garralda ME; TIDY Study Team. Testing the feasibility of therapeutic identification of depression in young people in British general practice. *J Adolesc Health*. 2013;52(5):539–545

72. Kramer T, Iliffe S, Gledhill J, Garralda ME. Recognising and responding to adolescent depression in general practice: developing and implementing the Therapeutic Identification of Depression in Young people (TIDY) programme. *Clin Child Psychol Psychiatry*. 2012;17(4):482–494

73. Iliffe S, Gallant C, Kramer T, et al. Therapeutic identification of depression in young people: lessons from the introduction of a new technique in general practice. *Br J Gen Pract*. 2012;62(596):e174–e182

74. Lewandowski RE, O'Connor B, Bertagnolli A, et al. Screening for and diagnosis of depression among adolescents in a large health maintenance organization. *Psychiatr Serv*. 2016;67(6):636–641

75. Libby JM, Stuart-Shor E, Patankar A. The implementation of a clinical toolkit and adolescent depression screening program in primary care. *Clin Pediatr (Phila)*. 2014;53(14):1336–1344

76. Olson AL, Gaffney CA, Hedberg VA, Gladstone GR. Use of inexpensive technology to enhance adolescent health screening and counseling. *Arch Pediatr Adolesc Med*. 2009;163(2):172–177

77. Ozer EM, Zahnd EG, Adams SH, et al. Are adolescents being screened for emotional distress in primary care? *J Adolesc Health*. 2009;44(6):520–527

78. Rausch J, Hametz P, Zuckerbrot R, Rausch W, Soren K. Screening

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for depression in urban Latino adolescents. *Clin Pediatr (Phila)*. 2012;51(10):964–971

79. Richardson LP, Ludman E, McCauley E, et al. Collaborative care for adolescents with depression in primary care: a randomized clinical trial. *JAMA*. 2014;312(8):809–816

80. Richardson LP, Russo JE, Lozano P, McCauley E, Katon W. Factors associated with detection and receipt of treatment for youth with depression and anxiety disorders. *Acad Pediatr*. 2010;10(1):36–40

81. Richardson L, McCauley E, Katon W. Collaborative care for adolescent depression: a pilot study. *Gen Hosp Psychiatry*. 2009;31(1):36–45

82. Rockhill CM, Katon W, Richards J, et al. What clinical differences distinguish depressed teens with and without comorbid externalizing problems? *Gen Hosp Psychiatry*. 2013;35(4):444–447

83. Stevens J, Klima J, Chisolm D, Kelleher KJ. A trial of telephone services to increase adolescent utilization of health care for psychosocial problems. *J Adolesc Health*. 2009;45(6):564–570

84. Stevens J, Kelleher KJ, Gardner W, et al. Trial of computerized screening for adolescent behavioral concerns. *Pediatrics*. 2008;121(6):1099–1105

85. Sudhanthar S, Thakur K, Sigal Y, Turner J. Improving validated depression screen among adolescent population in primary care practice using electronic health records (EHR). *BMJ Qual Improv Rep*. 2015;4(1):u209517.w3913

86. Tanielian T, Jaycox LH, Paddock SM, Chandra A, Meredith LS, Burnam MA. Improving treatment seeking among adolescents with depression: understanding readiness for treatment. *J Adolesc Health*. 2009;45(5):490–498

87. Wells KB, Tang L, Carlson GA, Asarnow JR. Treatment of youth depression in primary care under usual practice conditions: observational findings from Youth Partners in Care. *J Child Adolesc Psychopharmacol*. 2012;22(1):80–90

88. Zuckerbrot RA, Maxon L, Pagar D, Davies M, Fisher PW, Shaffer D. Adolescent depression screening in primary care: feasibility and acceptability. *Pediatrics*. 2007;119(1):101–108

89. Gardner W, Klima J, Chisolm D, et al. Screening, triage, and referral of patients who report suicidal thought during a primary care visit. *Pediatrics*. 2010;125(5):945–952

90. LeFevre ML; US Preventive Services Task Force. Screening for suicide risk in adolescents, adults, and older adults in primary care: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2014;160(10):719–726

91. Van Voorhees BW, Vanderplough-Booth K, Fogel J, et al. Integrative Internet-based depression prevention for adolescents: a randomized clinical trial in primary care for vulnerability and protective factors. *J Can Acad Child Adolesc Psychiatry*. 2008;17(4):184–196

92. Stein RE, Zitner LE, Jensen PS. Interventions for adolescent depression in primary care. *Pediatrics*. 2006;118(2):669–682

93. Bass JL, Christoffel KK, Widome M, et al. Childhood injury prevention counseling in primary care settings: a critical review of the literature. *Pediatrics*. 1993;92(4):544–550

94. Nelson CS, Wissow LS, Cheng TL. Effectiveness of anticipatory guidance: recent developments. *Curr Opin Pediatr*. 2003;15(6):630–635

95. Lemanek KL, Kamps J, Chung NB. Empirically supported treatments in pediatric psychology: regimen adherence. *J Pediatr Psychol*. 2001;26(5):253–275

96. Haynes RB, McDonald H, Garg AX, Montague P. Interventions for helping patients to follow prescriptions for medications. *Cochrane Database Syst Rev*. 2002;(2):CD000011

97. Haynes RB, Yao X, Degani A, Kripalani S, Garg A, McDonald HP. Interventions to enhance medication adherence. *Cochrane Database Syst Rev*. 2005;(4):CD000011

98. Roter DL, Hall JA, Merisca R, Nordstrom B, Cretin D, Svarstad B. Effectiveness of interventions to improve patient compliance: a meta-analysis. *Med Care*. 1998;36(8):1138–1161

99. Blum RW. Compliance in the adolescent with chronic illness. *Semin Adolesc Med*. 1987;3(2):157–162

100. La Greca AM. It's "all in the family": responsibility for diabetes care. *J Pediatr Endocrinol Metab*. 1998;11(suppl 2):379–385

101. La Greca AM, Bearman KJ. Commentary: if "an apple a day keeps the doctor away," why is adherence so darn hard? *J Pediatr Psychol*. 2001;26(5):279–282

102. Cooley WC. Redefining primary pediatric care for children with special health care needs: the primary care medical home. *Curr Opin Pediatr*. 2004;16(6):689–692

103. Edwards SJ, Sachmann MD. No-suicide contracts, no-suicide agreements, and no-suicide assurances: a study of their nature, utilization, perceived effectiveness, and potential to cause harm. *Crisis*. 2010;31(6):290–302

104. Garvey KA, Penn JV, Campbell AL, Esposito-Smythers C, Spirito A. Contracting for safety with patients: clinical practice and forensic implications. *J Am Acad Psychiatry Law*. 2009;37(3):363–370

105. McMyler C, Pryjmachuk S. Do 'no-suicide' contracts work? *J Psychiatr Ment Health Nurs*. 2008;15(6):512–522

106. Lewis LM. No-harm contracts: a review of what we know. *Suicide Life Threat Behav*. 2007;37(1):50–57

107. Rudd MD, Mandrusiak M, Joiner TE Jr. The case against no-suicide contracts: the commitment to treatment statement as a practice alternative. *J Clin Psychol*. 2006;62(2):243–251

108. Brent DA, Perper JA, Allman CJ, Moritz GM, Wartella ME, Zelenak JP. The presence and accessibility of firearms in the homes of adolescent suicides. A case-control study. *JAMA*. 1991;266(21):2989–2995

109. Brent DA, Perper JA, Moritz G, Baugher M, Schweers J, Roth C. Firearms and adolescent suicide. A community case-control study. *Am J Dis Child*. 1993;147(10):1066–1071

110. Shah S, Hoffman RE, Wake L, Marine WM. Adolescent suicide and household access to firearms in Colorado: results

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of a case-control study. *J Adolesc Health*. 2000;26(3):157–163

111. Hawton K, Townsend E, Deeks J, et al. Effects of legislation restricting pack sizes of paracetamol and salicylate on self poisoning in the United Kingdom: before and after study. *BMJ*. 2001;322(7296):1203–1207

112. Sinyor M, Levitt AJ. Effect of a barrier at Bloor Street Viaduct on suicide rates in Toronto: natural experiment. *BMJ*. 2010;341:c2884

113. Sinyor M, Howlett A, Cheung AH, Schaffer A. Substances used in completed suicide by overdose in Toronto: an observational study of coroner's data. *Can J Psychiatry*. 2012;57(3):184–191

114. Sinyor M, Schaffer A, Redelmeier DA, et al. Did the suicide barrier work after all? Revisiting the Bloor Viaduct natural experiment and its impact on suicide rates in Toronto. *BMJ Open*. 2017;7(5):e015299

115. Hawton K, Bergen H, Simkin S, et al. Effect of withdrawal of co-proxamol on prescribing and deaths from drug poisoning in England and Wales: time series analysis. *BMJ*. 2009;338:b2270

116. Hawton K, Bergen H, Simkin S, et al. Long term effect of reduced pack sizes of paracetamol on poisoning deaths and liver transplant activity in England and Wales: interrupted time series analyses. *BMJ*. 2013;346:f403

117. Brent DA, Baugher M, Birmaher B, Kolko DJ, Bridge J. Compliance with recommendations to remove firearms in families participating in a clinical trial for adolescent depression. *J Am Acad Child Adolesc Psychiatry*. 2000;39(10):1220–1226

118. Brent DA. Assessment and treatment of the youthful suicidal patient. *Ann N Y Acad Sci*. 2001;932:106–128; discussion 128–131

119. Stewart SE, Manion IG, Davidson S. Emergency management of the adolescent suicide attempter: a review of the literature. *J Adolesc Health*. 2002;30(5):312–325

120. Asarnow JR, Berk M, Hughes JL, Anderson NL. The SAFETY Program: a treatment-development trial of a cognitive-behavioral family treatment for adolescent suicide attempters. *J Clin Child Adolesc Psychol*. 2015;44(1):194–203

121. Stroul B, Friedman RM. *A System of Care for Children and Youth With Severe Emotional Disturbances*. Washington, DC: CASSP Technical Assistance Center, Center for Child Health and Mental Health Policy, Georgetown University Child Development Center; 1994

122. Hoagwood KE. Family-based services in children's mental health: a research review and synthesis. *J Child Psychol Psychiatry*. 2005;46(7):690–713

123. Heflinger CA, Sonnichsen SE, Brannan AM. Parent satisfaction with children's mental health services in a children's mental health managed care demonstration. *J Ment Health Adm*. 1996;23(1):69–79

124. Slap G, Goodman E, Huang B. Adoption as a risk factor for attempted suicide during adolescence. *Pediatrics*. 2001;108(2). Available at: www.pediatrics.org/cgi/content/full/108/2/e30

125. Bruskas D. Children in foster care: a vulnerable population at risk. *J Child Adolesc Psychiatr Nurs*. 2008;21(2):70–77

126. Lehmann SH, Havik OE, Havik T, Heiervang ER. Mental disorders in foster children: a study of prevalence, comorbidity and risk factors. *Child Adolesc Psychiatry Ment Health*. 2013;7(1):39

127. Fergusson DM, Horwood LJ, Lynskey MT. Maternal depressive symptoms and depressive symptoms in adolescents. *J Child Psychol Psychiatry*. 1995;36(7):1161–1178

128. Fergusson DM, Horwood LJ, Lynskey MT. Childhood sexual abuse and psychiatric disorder in young adulthood: II. Psychiatric outcomes of childhood sexual abuse. *J Am Acad Child Adolesc Psychiatry*. 1996;35(10):1365–1374

129. Fergusson DM, Woodward LJ, Horwood LJ. Risk factors and life processes associated with the onset of suicidal behaviour during adolescence and early adulthood. *Psychol Med*. 2000;30(1):23–39

130. Goodwin RD, Fergusson DM, Horwood LJ. Early anxious/withdrawn behaviours predict later internalising disorders. *J Child Psychol Psychiatry*. 2004;45(4):874–883

131. Weissman MM, Wickramaratne P, Nomura Y, et al. Families at high and low risk for depression: a 3-generation study. *Arch Gen Psychiatry*. 2005;62(1):29–36

132. Weissman MM, Wickramaratne P, Nomura Y, Warner V, Pilowsky D, Verdeli H. Offspring of depressed parents: 20 years later. *Am J Psychiatry*. 2006;163(6):1001–1008

133. Nomura Y, Wickramaratne PJ, Warner V, Mufson L, Weissman MM. Family discord, parental depression, and psychopathology in offspring: ten-year follow-up. *J Am Acad Child Adolesc Psychiatry*. 2002;41(4):402–409

134. Piacentini J, Shaffer D, Fisher P, Schwab-Stone M, Davies M, Gioia P. The diagnostic interview schedule for children-revised version (DISC-R): III. Concurrent criterion validity. *J Am Acad Child Adolesc Psychiatry*. 1993;32(3):658–665

135. Cox A, Hopkinson K, Rutter M. Psychiatric interviewing techniques II. Naturalistic study: eliciting factual information. *Br J Psychiatry*. 1981;138:283–291

136. Cox A, Rutter M, Holbrook D. Psychiatric interviewing techniques V. Experimental study: eliciting factual information. *Br J Psychiatry*. 1981;139:29–37

137. Ryan ND, Puig-Antich J, Ambrosini P, et al. The clinical picture of major depression in children and adolescents. *Arch Gen Psychiatry*. 1987;44(10):854–861

138. Costello EJ, Angold A, Burns BJ, et al. The Great Smoky Mountains Study of youth. Goals, design, methods, and the prevalence of DSM-III-R disorders. *Arch Gen Psychiatry*. 1996;53(12):1129–1136

139. Schwab-Stone ME, Shaffer D, Dulcan MK, et al. Criterion validity of the NIMH diagnostic interview schedule for children version 2.3 (DISC-2.3). *J Am Acad Child Adolesc Psychiatry*. 1996;35(7):878–888

140. Jensen PS, Rubio-Stipec M, Canino G, et al. Parent and child contributions

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to diagnosis of mental disorder: are both informants always necessary? *J Am Acad Child Adolesc Psychiatry*. 1999;38(12):1569–1579

141. Manson S, Shore J, Bloom J. The depressive experience in American Indian communities: a challenge for psychiatric theory and diagnosis. In: Kleinman A, Good B, eds. *Culture and Depression*. Berkeley, CA: University of California Press; 1985:331–368

142. Treatment for Adolescents With Depression Study Team. The treatment for adolescents with depression study (TADS): demographic and clinical characteristics. *J Am Acad Child Adolesc Psychiatry*. 2005;44(1):28–40

143. Kovacs M, Obrosky DS, Sherrill J. Developmental changes in the phenomenology of depression in girls compared to boys from childhood onward. *J Affect Disord*. 2003;74(1):33–48

144. Curry J, Rohde P, Simons A, et al; TADS Team. Predictors and moderators of acute outcome in the Treatment for Adolescents with Depression Study (TADS). *J Am Acad Child Adolesc Psychiatry*. 2006;45(12):1427–1439

145. Brooks SJ, Kutcher S. Diagnosis and measurement of adolescent depression: a review of commonly utilized instruments. *J Child Adolesc Psychopharmacol*. 2001;11(4):341–376

146. Emslie GJ, Findling RL, Yeung PP, Kunz NR, Li Y. Venlafaxine ER for the treatment of pediatric subjects with depression: results of two placebo-controlled trials. *J Am Acad Child Adolesc Psychiatry*. 2007;46(4):479–488

147. Clarke GN, Rohde P, Lewinsohn PM, Hops H, Seeley JR. Cognitive-behavioral treatment of adolescent depression: efficacy of acute group treatment and booster sessions. *J Am Acad Child Adolesc Psychiatry*. 1999;38(3):272–279

148. Mufson L, Dorta KP, Wickramaratne P, Nomura Y, Olfson M, Weissman MM. A randomized effectiveness trial of interpersonal psychotherapy for depressed adolescents. *Arch Gen Psychiatry*. 2004;61(6):577–584

149. Bhogal S, Zemek R, Ducharme FM. Written action plans for asthma in children. *Cochrane Database Syst Rev*. 2006;(3):CD005306

150. Boydell KM, Hodgins M, Pignatiello A, Teshima J, Edwards H, Willis D. Using technology to deliver mental health services to children and youth: a scoping review. *J Can Acad Child Adolesc Psychiatry*. 2014;23(2):87–99

151. Shaffer D, Fisher P, Dulcan MK, et al. The NIMH diagnostic interview schedule for children version 2.3 (DISC-2.3): description, acceptability, prevalence rates, and performance in the MECA study. Methods for the Epidemiology of Child and Adolescent mental disorders study. *J Am Acad Child Adolesc Psychiatry*. 1996;35(7):865–877

152. American Academy of Child and Adolescent Psychiatry. Summary of the practice parameters for the assessment and treatment of children and adolescents with suicidal behavior. *J Am Acad Child Adolesc Psychiatry*. 2001;40(4):495–499

153. Berk MS, Asarnow JR. Assessment of suicidal youth in the emergency department. *Suicide Life Threat Behav*. 2015;45(3):345–359

154. Asarnow JR, Jaycox LH, Anderson M. Depression among youth in primary care models for delivering mental health services. *Child Adolesc Psychiatr Clin N Am*. 2002;11(3):477–497, viii

155. Olin SC, Hoagwood K. The surgeon general's national action agenda on children's mental health. *Curr Psychiatry Rep*. 2002;4(2):101–107

156. Coyle JT, Pine DS, Charney DS, et al; Depression and Bipolar Support Alliance Consensus Development Panel. Depression and bipolar support alliance consensus statement on the unmet needs in diagnosis and treatment of mood disorders in children and adolescents. *J Am Acad Child Adolesc Psychiatry*. 2003;42(12):1494–1503

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Guidelines for Adolescent Depression in Primary Care (GLAD-PC): Part I. Practice Preparation, Identification, Assessment, and Initial Management

Rachel A. Zuckerbrot, Amy Cheung, Peter S. Jensen, Ruth E.K. Stein, Danielle Laraque and GLAD-PC STEERING GROUP

Pediatrics 2018;141;
DOI: 10.1542/peds.2017-4081 originally published online February 26, 2018;

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