

Managing major depressive disorder in adolescents in primary care

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ABSTRACT

Major depressive disorder (MDD) remains a significant risk to adolescent health and well-being, recently amplified by the COVID-19 pandemic. Access to adolescent mental health care services remains challenging in many areas, resulting in many adolescents diagnosed with MDD remaining untreated. Primary care providers are becoming increasingly crucial in promptly diagnosing and treating this concern. Various clinical guidelines can support clinicians in developing strategies for screening, diagnosing, and managing a vulnerable population with MDD. Standardized screenings, algorithms, and treatment guidelines can help improve the quality of life and functional impairment of those with MDD.

Keywords: major depressive disorder, adolescents, guidelines, screening, primary care, GLAD-PC

Learning objectives

- Summarize the statistics on MDD and the disorder's effects on adolescents.
- Identify MDD criteria as outlined by the *DSM-5* and validated screening tools.
- Describe appropriate treatment choices for adolescents diagnosed with MDD.

The 2022 National Survey on Drug Use and Health, released by the Substance Abuse and Mental Health Services Administration, estimated that 4.8 million adolescents ages 12 to 17 years experienced a major depressive episode during 2022.¹ This accounts for about 19.5% of this patient population. Of these patients, 14.6% (3.6 million patients) reported a major depressive episode with severe impairment.¹

Additionally, 50% of adolescents with major depressive disorder (MDD) are not diagnosed before adulthood, with two out of three patients in primary care not being



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accurately diagnosed or treated for depression.² The REsource for Advancing Children's Mental Health (REACH) Institute, the American Academy of Pediatrics (AAP), and the American Academy of Child and Adolescent Psychiatry (AACAP) have worked to close this gap in the healthcare system, increasingly emphasizing the role of primary care providers (PCPs) in adolescent behavioral health.

GUIDELINES

In 2018, the REACH Institute published its Guidelines for Adolescent Depression in Primary Care (GLAD-PC).³ The AAP's *Depression and Suicide Prevention* ebook, published in 2019, builds on the GLAD-PC guidelines to support PCPs in diagnosing and treating adolescents with MDD.⁴ Also, in 2019, the American Psychological Association published guidelines for treating depression in three age cohorts, including a cohort for children and adolescents.⁵ The Agency for Healthcare Research and Quality in 2020 published a systematic review of treatment for depression in children and adolescents, including treatment algorithms to better-guide PCPs.⁶ The US Preventive Services Task Force (USPSTF) updated its recommendations for screening adolescents for depression in 2022.⁷ In 2023, the AACAP released clinical practice guidelines addressing the screening and treatment of MDD.⁸ Combined with seminal and ongoing research, these guidelines offer PCPs and their support teams a better framework for managing at-risk adolescents.

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Key points

- MDD is a significant risk to adolescent health and well-being.
- An estimated two out of three patients in primary care are not being accurately diagnosed or treated for depression, and access to mental health care often is an issue.
- Various clinical guidelines can help PCPs screen, diagnose, and manage adolescents with MDD.
- PCPs can provide ongoing monitoring of treatment outcomes and refer patients to higher levels of care as needed, especially in areas without access to mental health care specialists.

In 2023, Yan and colleagues conducted a systematic review of the various clinical practice guidelines available to clinicians and noted that many of these guidelines are considered moderate to high quality.⁹ Generally, the treatment guidelines were viewed as consistent. However, many of these guidelines are based on expert recommendation and consensus because clinical evidence is limited for some of the areas examined.⁹

THE IMPORTANCE OF PRIMARY CARE

Ninety percent of adolescents see a PCP at least once a year, with 50% of these visits involving biopsychosocial concerns, school performance, or behavioral concerns.¹⁰ The Center for Health Care Strategies (CHCS) states that “adolescence is marked by significant mental, physical, and emotional changes” that can include experimentation with drugs and alcohol.¹¹ Because of these rapid developmental changes, the annual adolescent preventive medicine visit, which includes screenings for teenage risk factors and mental health screenings, is important, according to CHCS.¹¹

Additionally, GLAD-PC notes that access to adolescent mental health care services remains limited.³ However, GLAD-PC also recognizes an increasing availability of clinical evidence supporting the diagnosis and treatment of MDD, along with increased evidence supporting interprofessional care, which makes the primary care office ideal for engaging patients in care.³ Further, primary care offices are suitable venues for ongoing monitoring of treatment outcomes and referral to higher levels of care as needed, especially in areas without access to mental health care specialists. More importantly, many primary care offices engage in longitudinal relationships with patients, establishing a solid connection between the clinician and the patient and their family, thus enabling conversations about complex topics such as mental well-being.

The importance of primary care in managing adolescent mental well-being is further highlighted through the Healthy People 2030 initiative.¹² Increasing the proportion of adolescents who are screened for depression along with

treatment of those who have been diagnosed with depression are identified as two of the program’s priorities.

RISK FACTORS

Depression results from various psychologic, biologic, and environmental factors.¹³ Research has indicated that factors such as a family history of depressive disorders, significant life changes, trauma, bullying (as the victim or the perpetrator), lack of social support, sexual orientation or gender identity confusion, and race all may contribute to MDD in adolescents.¹⁴⁻¹⁶ Additionally, some risk factors are particular to adolescents, such as changing pubertal hormones, academic performance, low birth weight, maternal age under 18 years, and increased parental conflict.¹⁷ A close evaluation of the adolescent’s social history and day-to-day life can help identify factors that may contribute to MDD.

Another risk factor associated with MDD in adolescents is the presence of early life stress, which can include events such as trauma, violence, poverty, sexual abuse, physical abuse, emotional abuse, domestic violence, or the death of a family member.¹⁸ A random effects meta-analysis found that patients with early life stress were more likely to develop MDD before age 18 years than those who denied early life stress (odds ratio 2.5; 95% CI 2.8).¹⁸

Behrhorst and colleagues found that Black youth are at increased risk for MDD based on systemic inequities, including maldistribution of healthcare services and resources, exposure to trauma, residential density, and violence in the community of origin.¹⁶ Additionally, those studied demonstrated increased atypical presentations of depression, such as increased anger/aggression versus mood disruption.¹⁶ This underscores the need to understand the patient experience better and identify risk factors that may affect patient functioning, increasing the likelihood of an accurate MDD diagnosis.

A more recently identified contributing factor to MDD in adolescents is the COVID-19 pandemic. In a recent systematic review, Harrison and colleagues found a pooled prevalence of 32% for MDD, which was higher than the pre-pandemic level.¹⁹ Other data have indicated that mental well-being changes associated with COVID-19 were more likely to affect females and patients from higher-income areas.^{20,21} This difference could be related to the way in which female patients internalize stress more than their male counterparts.²¹ Analysis has suggested that social isolation, concern about one’s own health, and changing school conditions and responsibilities may have contributed to this shift in behavior.²⁰

Finally, the connection of social media to MDD continues to be of interest. Before the pandemic, social media use by adolescents was on the increase.²² As the pandemic intensified, social media and other internet applications alleviated social isolation.^{21,22} Preliminary research has identified that social media may be useful, but increased

use is related to mental health concerns such as MDD and depression, and excessive use is related to addiction.²² Issues such as cyberbullying, sleep disturbances, and online grooming may contribute to mental health changes seen with social media use.²² Additionally, children may be exposed to pornography and sexting, and be more likely to engage in early sexual activity as a result of uncontrolled social media use, which in turn can create further mental wellness issues.²² Social media overuse also is associated with physical risks, including obesity, physical inactivity, and unhealthful eating patterns.²²

SCREENING RECOMMENDATIONS

Early identification and recognition of MDD can be increased on a large scale by implementing standardized screening processes in primary care offices. The USPSTF and AAP advocate for routine screening of patients for MDD starting at age 12 years.⁷ The AAP states that screening can start as early as age 8 years in patients with risk factors for depression; however, the USPSTF has not found a predictive value with this age.²³ Therefore, based on the available evidence, there is no recommendation for routine screening for MDD in patients younger than age 12 years. The USPSTF reviewed this recommendation in 2022, updating and replacing recommendations from 2016.⁷

Risk of suicidal thoughts, behaviors, or feelings is possible at any time during a depressive episode.¹³ Identified features associated with increased suicide risk include male sex and hopelessness as the primary presenting symptom.¹³

Validated tools that can be used to screen for suicide risk in patients diagnosed with MDD include the Ask Suicide-Screening Questions toolkit and the Columbia-Suicide Severity Rating Scale.^{24,25}

Several validated tools are available for screening patients for MDD. Two of the most familiar tools are the Patient Health Questionnaire-9 modified for Adolescents (PHQ-A) and the Beck Depression Inventory (BDI).^{26,27}

These tools have the highest sensitivity (up to 90%) and specificity (up to 94%) of those tools studied.²⁸ The PHQ-A also can be used to monitor the interval changes in a patient’s depression.²⁹ Table 1 summarizes other available tools for depression screening. These tools vary by the items screened for, whether they screen for only depression or other behavioral and physical challenges, as well as by who is the primary informant and the complexity of each tool. Any tool can be used based on the clinician’s experience and comfort level. The USPSTF suggests a tool that focuses solely on depression, such as the PHQ-A, instead of a tool that screens for depression as one item among several other items.⁷

These tools can be used for patients with symptoms of depression as well as asymptomatic patients coming in for unrelated concerns, such as wellness visits.

DIAGNOSTIC CRITERIA

A positive depression screening does not indicate a definitive diagnosis of MDD in a patient. However, it does indicate a need for further evaluation. Interviews with patients, as well as their families or caregivers, can provide insight into patients’ general well-being. When conducting an interview with multiple informants, speak to the patient privately. The patient may not have disclosed some issues to family or caregivers; a private interview allows patients to share this information. Parents may not be aware of what an adolescent is experiencing, and private interviews provide a safe space for adolescents to speak about these issues.

The diagnosis of MDD (along with other depressive disorders) is made using the *Diagnostic and Statistical Manual of Mental Disorders, 5th ed. (DSM-5)*.¹³ To diagnose MDD, five or more criteria must be met, and at least one must be an irritable mood most of the day (reported subjectively by the patient, or observation by family) or diminished interest or pleasure in daily activities.¹³ In addition, symptoms must cause the patient clinically

TABLE 1. Screening tools for depression in adolescents^{26,27,37-41}

	Target domains	Ages (years)	Format	Approximate time
BDI	Attitudes and depression	13-80	12 self-report items	10 minutes
Behavior Assessment System for Children	Emotional and behavioral strengths and weaknesses	2-18	Self-report, parent report, or teacher report	20-30 minutes
Child Behavior Checklist	Emotional and behavioral concerns	6-18	Parent report, self-report (optional), or teacher report (optional)	5-10 minutes per informant
Children’s Depression Inventory	Depressive disorders	7-17	Self-report, parent report, or teacher report	5-15 minutes
Children’s Depression Rating Scale	Depression	6-18	Semistructured interview with adolescent	10-15 minutes
PHQ-A	Depression	11-17	9 self-report items	1-5 minutes
Whole Child Assessment	Diet, exercise, mental health, sexual health, risky behavior screening. Not validated.	0-20	Parent report forms by age (can be completed by patient)	Varies greatly depending on age

significant distress or impairment and must not be caused by substances or medical conditions. Also, most symptoms must be present for at least 2 weeks and, depending on the symptom, must be present throughout most of the day on most days during those 2 weeks.¹³

Depression may present heterogeneously among adolescents, which underscores the importance of evaluating the multiple domains of the patient's life to establish an accurate diagnosis. Areas of functioning to address include school performance and interactions, peer group relations, and family and home life.²³ Additionally, screening for substance use and other psychologic disorders within the differential is critical to establish the correct diagnosis.

Parents may bring in children to evaluate somatic complaints, irritability, separation anxiety, changes in behavior, or school performance. Attributing these symptoms to other causes is common, so using the *DSM-5* framework to ensure that an underlying depressive disorder is identified and addressed is essential. Additionally, some criteria can have variable presentations for children. Also consider the adolescent's developmental state—behavior changes are common throughout adolescence, altering the clinical presentation.

Of note, patients who are screened for depression are more likely to receive a diagnosis of MDD or other mood disorder in the 6 months following screening.³⁰ Although the exact cause of this increase isn't clearly understood, it does underscore the importance of continued close follow-up in patients at risk for depression.

DIFFERENTIAL DIAGNOSIS

Identification and proper diagnosis of depressive disorders can be complex in adolescents. Changes in behavior are expected during this timeframe, and periods of sadness are not uncommon. Additionally, adolescents do not always exhibit or display symptoms in the same way as adults. Somatic symptoms and behavioral changes can be seen in this patient population.

The most common mood disorders in children and adolescents include MDD, persistent depressive disorder (dysthymia), bipolar disorder, disruptive mood dysregulation

disorder, and substance-induced mood disorder.¹³ Adolescents also may have adjustment disorder with depressed mood, which is characterized as a reaction to an environmental stressor and does not meet the full diagnostic criteria for MDD.¹³

In addition to behavioral and depressive symptom inventories, perform a thorough physical examination to exclude physical causes of the depressive symptoms. Consider laboratory analyses if the patient has history or physical findings suggestive of other potential conditions.⁸ Medical conditions such as anemia, autoimmune disease, vitamin deficiency, and hypothyroidism can present similarly to depression.³¹ An ideal laboratory panel for the newly diagnosed adolescent would include a comprehensive metabolic panel, complete blood cell count, inflammatory markers (erythrocyte sedimentation rate and C-reactive protein), thyroid-stimulating hormone level, vitamin B12 level, and folic acid level.³¹

GLAD-PC also recommends that clinicians evaluate for other psychologic comorbidities when developing a differential diagnosis.²³ Common comorbidities in adolescents include substance use, anxiety disorders, bipolar disorder, abuse, trauma, disordered eating, and attention deficit/hyperactivity disorders.²³ Clinicians also must be able to distinguish between grief and depression. Commonly, grief is accompanied by a focus on the death of the individual and dominant symptoms of emptiness and loss. Symptoms of persistently depressed mood and an inability to anticipate future joy are more suggestive of depressive disorders.³¹

TREATMENT

Clinical practice guidelines provide PCPs with a wide array of options to treat MDD in adolescents (Table 2). A treatment plan should be individualized and agreed upon through shared decision-making.^{5,6,8,29}

The severity of depression can be calculated using a standardized tool such as the PHQ-9 or by using the *DSM-5* diagnostic criteria and quantifying the symptoms being experienced. This classification can then be used to guide treatment discussions. Each of the guidelines has some variability in the approach to treating MDD, but the general principles and concepts remain the same. At any point in treatment, consultation with a mental health care professional may be considered, regardless of the severity of patient presentation.²⁹

Active monitoring in patients with mild to moderate depression is a standard first-line option.³¹ The critical distinction between active monitoring and watchful waiting is that under active monitoring, important actions can be initiated in primary care before the patient begins psychotherapy and/or drug therapy for depression. These actions include scheduling frequent visits, prescribing regular exercise, recommending a peer support group, reviewing self-management goals, providing or referring to supportive counseling, providing patient and family education, and

TABLE 2. Primary care interventions for adolescents with MDD^{6,8,23,29,42}

- **Mental health care professional consultation** at any point in the diagnosis and treatment of MDD.
- **Active monitoring** of the patient's condition for 6 to 8 weeks from diagnosis.
- **Therapies** such as CBT and IPT.
- **Pharmacotherapies** such as fluoxetine or escitalopram.
- **Emergency management/stabilization** including an emergency mental health care professional evaluation or consultation, or possible hospital admission if safety is a concern.

initiating school-based support services. At a minimum, patients with active monitoring should be reassessed after 6 to 8 weeks.³¹ For patients who are improving, continued active monitoring is ideal. If the patient is not improving, or is worsening, consider intensifying therapy.³¹

In patients with mild to moderate depression, therapy also may be considered. GLAD-PC indicates that therapy is the preferred treatment modality.²⁹ After the decision to start therapy has been made, PCPs should establish a clear treatment plan with patients and families, outlining the responsibilities of the PCP and those of the therapist or consultant.

For patients with moderate or severe depression, or if the patient and family prefer medication instead of therapy, a trial of a selective serotonin reuptake inhibitor (SSRI) may be appropriate.⁸ If access to psychotherapy is an issue, an SSRI may likewise be considered. Fluoxetine is the most-researched SSRI in adolescents and continues to be recommended as first-line pharmacologic therapy. Escitalopram also is approved to treat adolescents, although recent analysis does not support or recommend against this option.⁹ Follow adolescent dosing (typically a lower starting dose than for adults) when initiating these medications.

In patients with more severe MDD, or in those with MDD complicated by other behavioral or mood disorders, the first step in treatment should be consultation with a mental health care professional.²⁹ As with therapy, the responsibilities of the PCP and the mental health care specialist should be clearly defined.

If the patient is at risk for self-harm or harming others, immediate stabilization or hospitalization may be necessary. Per the AACAP, patients exhibiting active hallucination or changes in consciousness level may require immediate hospitalization.⁸ Additionally, patients with a previous history of suicide attempts, caregiver incapacity, or previously failed treatment may be at higher risk for self-injurious behavior.⁸

In addition to the above options, all adolescents should have a safety plan developed at diagnosis, regardless of the severity at initial presentation. Essential elements of the safety plan include assessing and limiting access to lethal means in the home, such as firearms.³¹ The plan also should include information about coping skills, emergency contacts, and ways for parents and caregivers to recognize when the patient is at risk for self-harm or harming others. Most importantly, the plan should have information on emergency contacts in case of decompensation.

If a patient does not improve after initial treatment, the treatment plan will need to be reevaluated and changed. If active monitoring fails, refer the patient to psychotherapy or discuss starting medication. GLAD-PC suggests that if medication or psychotherapy do not treat the patient's MDD, PCPs should consider referring the patient for consultation with a mental health care specialist. However, GLAD-PC also recognizes that it may be possible to add

treatment modalities to monotherapy.²⁹ For example, medication can be added to psychotherapy, or vice versa. Some patients have improved outcomes with this combined approach.⁶ If the patient is on medication only and the maximum dosage has not been reached, consider increasing the dosage.⁸ Intensification of therapy using additional medications or changing SSRIs may be possible; however, GLAD-PC recommends this only be done through a psychiatrist and should not be attempted by PCPs.²⁹

EVIDENCE-BASED PSYCHOTHERAPY

Psychotherapy remains a cornerstone of treatment for MDD in adolescents and frequently is recommended early during treatment.^{6,8,29} In patients undergoing active monitoring, PCPs may offer psychotherapy through discussion and support or more formalized programs such as problem-solving treatment. However, when patients require additional therapy, referral to trained mental health care professionals is essential.

Clinical practice guidelines vary in recommendations for psychotherapy and do not recommend a particular therapy. Much of the available literature focuses on psychotherapy, specifically cognitive behavioral therapy (CBT) and interpersonal therapy (IPT) for adolescents.⁹ CBT focuses on redefining and restructuring thoughts distorted by MDD and modifying these negative thoughts.⁸

Additional therapy modalities may be beneficial or helpful to adolescents with MDD. However, data on these modalities or evidence of success with these approaches is scarce. Additionally, access to psychotherapy or patient buy-in for therapy may be limited; therefore, alternative treatment plans may need to be considered.²⁹

PHARMACOTHERAPY AND SUICIDALITY

Clinicians can use pharmacotherapy based on the patient's level of severity of depression and desire of the patient or family. Fluoxetine may be used in patients as young as age 8 years; escitalopram is approved for MDD in patients ages 12 years and older.²⁹ In 2004, the FDA issued a black box warning for SSRI use in adolescents, based on concerns of increased suicidality.³² Ongoing research has continued to demonstrate the safety and efficacy of these medications among adolescents.³³⁻³⁶ Bridge and colleagues noted that, of patients taking SSRIs, eight times more patients reported improvement in MDD symptoms than reported suicidal thoughts and feelings.³³ Additionally, multiple researchers have asserted that the risk of suicidality in patients with untreated MDD is more severe than in those being treated, establishing the importance of prompt and effective treatment.^{33,34}

To maximize patient safety when using pharmacotherapy for MDD, clinicians should implement several recommendations from clinical practice guidelines.^{5,29} Medication should always be given at dosages appropriate for patient age, which often is below the adult dosing ranges for

fluoxetine and escitalopram.²⁹ Additionally, patients should have frequent follow-ups and monitoring/reassessment while on the medication, including screening for suicidality.^{5,29,31} Selph and McDonagh recommend an individualized follow-up schedule based on individual risk, with more frequent initial visits (for example, weekly).³¹ GLAD-PC states that effective follow-up visits can be conducted in-person or via telephone.²⁹

CONCLUSION

MDD in adolescents continues to be underdiagnosed and undertreated. PCPs remain an important part of the care of this vulnerable patient population. Screening programs to detect symptoms earlier and clinical interventions based on clinical practice guidelines remain cornerstones of treating this condition, especially considering risk factors such as social media and the COVID-19 pandemic. Further research on MDD in adolescents should include continued evaluation of the various treatments and how effective these treatments can be when combined, evaluation of widespread depression screenings and their overall effect on patient outcomes, and continued studies on intensifying therapy in patients whose MDD does not respond to initial treatments. **JAAPA**

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