

IMPROVING EARLY IDENTIFICATION & TREATMENT OF ADOLESCENT DEPRESSION: CONSIDERATIONS & STRATEGIES FOR HEALTH PLANS



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INTRODUCTION

According to a review by the National Adolescent Health Information Center, the most common mental health disorder among adolescents is depression with over 25 percent of adolescents affected by at least mild symptoms.¹ Mental health problems pose significant financial and social burdens on the individual as well as on families and society. Adolescents with unidentified mental disorders are in poorer physical health and engage in more risky behaviors than their peers, such as unsafe sexual activity, fighting and weapon carrying.² These youths are also at the highest risk for committing suicide; studies indicate that 90 percent of teens who die by suicide were suffering from an identifiable mental disorder at their time of death, typically depression.³ Early identification and treatment can prevent the loss in productivity and high medical costs of depressed individuals, as well as the associated burdens on family members and caregivers.

Unfortunately, depression and other mental disorders often go undiagnosed in adolescence despite the availability of screening tools proven effective in identifying adolescent depression during the primary care visit. With symptoms of nearly three-fourths of all lifetime diagnosable mental health disorders beginning by age 24, it is critical to identify mental health disorders as early in life as possible.⁴ The adolescent well-care visit is when most adolescents receive their health care and thus is an opportune time to conduct mental health screenings for this population.

The evidence and support for adolescent mental health screening in primary care is stronger than ever. In light of the benefits associated with early intervention and the existence of effective treatment options, both

the Institute of Medicine (IOM) and the United States Preventive Services Task Force (USPSTF) have recently recommended that physicians in primary care settings screen adolescents for major depressive disorder. Easy and accurate screening tools exist, and behavioral health vendors, health plans and primary care providers are working together to implement screening during adolescent primary care visits. Health plans are in a unique position to support the integration of screening into a primary care visit by training physicians to use screening tools, reimbursing them for the time required to conduct a screening, and coordinating referrals for further treatment.

In this issue brief we review the prevalence of adolescent depression, consequences of unidentified depression, costs of screening and treatment, and recommendations and tools for primary care providers to identify and treat adolescent depression. Finally, we share opportunities for health plans to support providers in identifying and treating adolescent depression.

PREVALENCE OF ADOLESCENT DEPRESSION

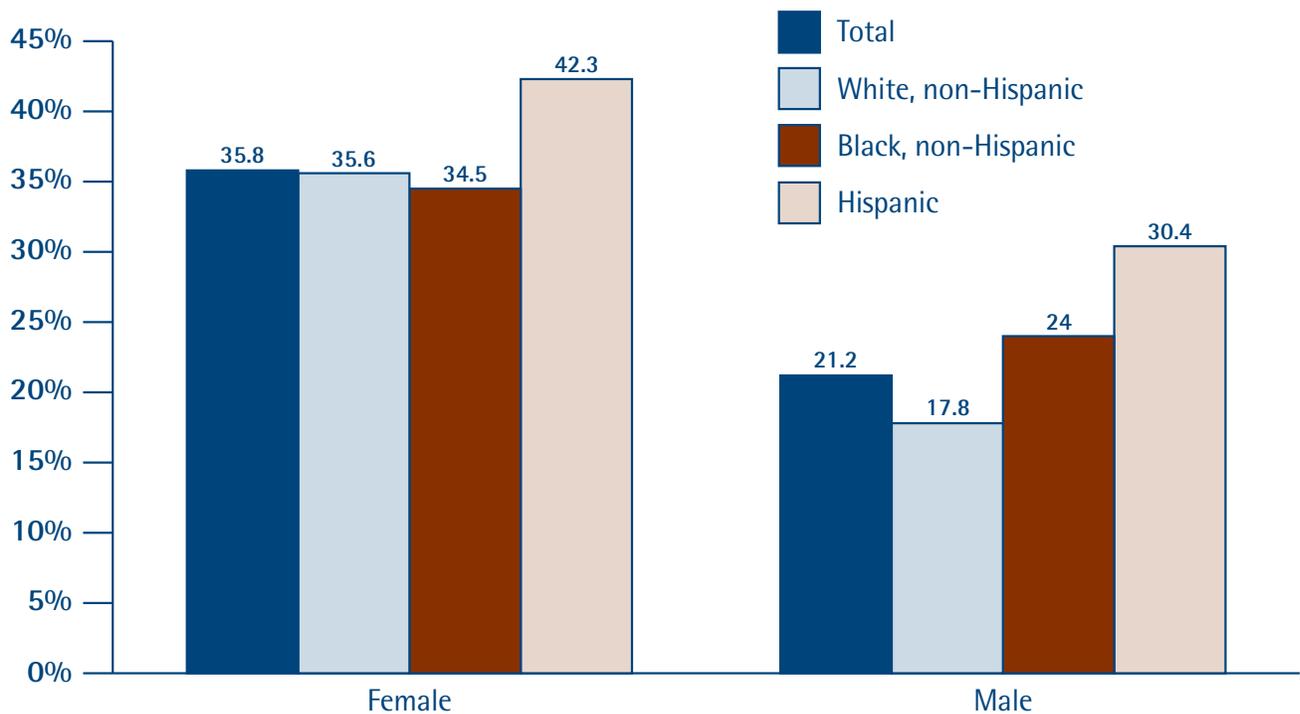
Depression is one of the most widely reported mental disorders among adolescents. Depression is associated with several risk behaviors and suicide, the third leading cause of mortality for 15 to 24 year olds. As such, it is one of the most studied mental health conditions. Although prevalence statistics vary depending on the population, symptoms or severity examined, it is estimated that over 25 percent of adolescents are affected by at least mild symptoms.⁵ In this section we review some of the data most commonly used to describe adolescent depression prevalence.

The Centers for Disease Control and Prevention's (CDC) Youth Risk Behavior Surveillance System (YRBSS) is a national school-based survey that provides one of the broadest measurements of depression in adolescents. The survey asks, "Have you ever felt so sad or hopeless almost everyday for two weeks in a row that you couldn't do some of your usual activities?" Results from the 2007 survey indicate that 36 percent of females and 21 percent of males felt this degree of sadness or hopelessness (Figure 1). Hispanic students were more likely to report this level of sadness than their non-Hispanic white or black peers.

There are numerous risk factors for depression including genetic and sociodemographic characteristics. Studies have found that genetic factors, such as parental depression, predict child and adolescent depression.⁶ However, environmental influences have also been determined to be significant, along with a combination of environmental and genetic factors. Gender, family

structure, parental education and race are also associated with differing levels of risk for depression. The relationship between these characteristics and the prevalence of depression in high school students was examined in a study that utilized AddHealth data, which is the largest, most comprehensive survey of adolescents to date. Severity levels of symptoms were identified as minimal, mild, moderate and severe using the Center for Epidemiological Studies – Depression Scale. Those with moderate and severe symptoms are typically labeled as having depression. This study revealed that in 1995 females were more than twice as likely as males to have depression; depression was almost twice as prevalent in adolescents whose mothers did not graduate from high school than among those with mothers with higher levels of education; and depression was 1.5 times more likely for adolescents living with a single parent than for those living with both parents. This study found that white students were 25 percent more likely to have depression than non-white students.⁷

FIGURE 1: SADNESS OR HOPELESSNESS WHICH PREVENTED USUAL ACTIVITIES BY GENDER AND RACE/ETHNICITY, HIGH SCHOOL STUDENTS, 2007



Source: Centers for Disease Control and Prevention, Youth Risk Behavior Surveillance System 2007.

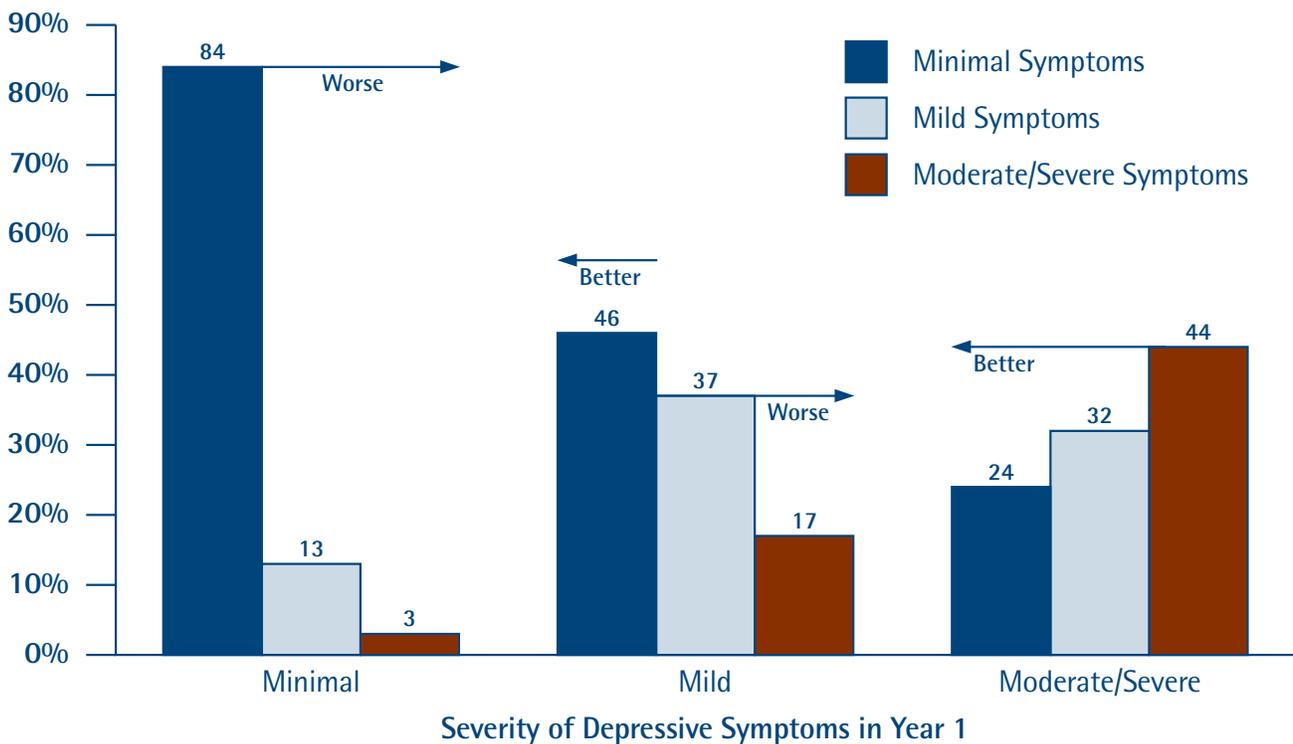
This study also surveyed these students one year later to examine the continuance of depressive symptoms over time. Although depressive symptoms were stable for many, the severity of depression symptoms changed for others and included both improvements and deteriorations in severity (Figure 2).

The Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey on Drug Use and Health (NSDUH) measures the prevalence of major depressive episode (MDE) among youth aged 12 to 17. MDE is diagnosed when a teen experiences a period of two weeks or longer characterized by persistent depressed mood or loss of interest or pleasure and at least four other behavioral symptoms, such as changes in sleep, eating, concentration and self-worth.⁸ In 2007 more than 8 percent of adolescents (approximately two million) experienced at least one MDE with females more than twice as likely as males and older adolescents more likely than their younger peers to report MDE (Figure 3). Of all adolescents with MDE, females were

more likely than males to report severe impairment.⁹ Severe impairment is assessed through the Sheehan Disability Scale (SDS) which measures impairment in a person's daily functioning due to MDE. Adolescents aged 12 to 17 are asked to assess (on a 0 to 10 scale) the level of interference caused by MDE to (1) chores at home, (2) school or work, (3) close relationships with family, and (4) social life; ratings of 7 or greater are classified as severe impairment.

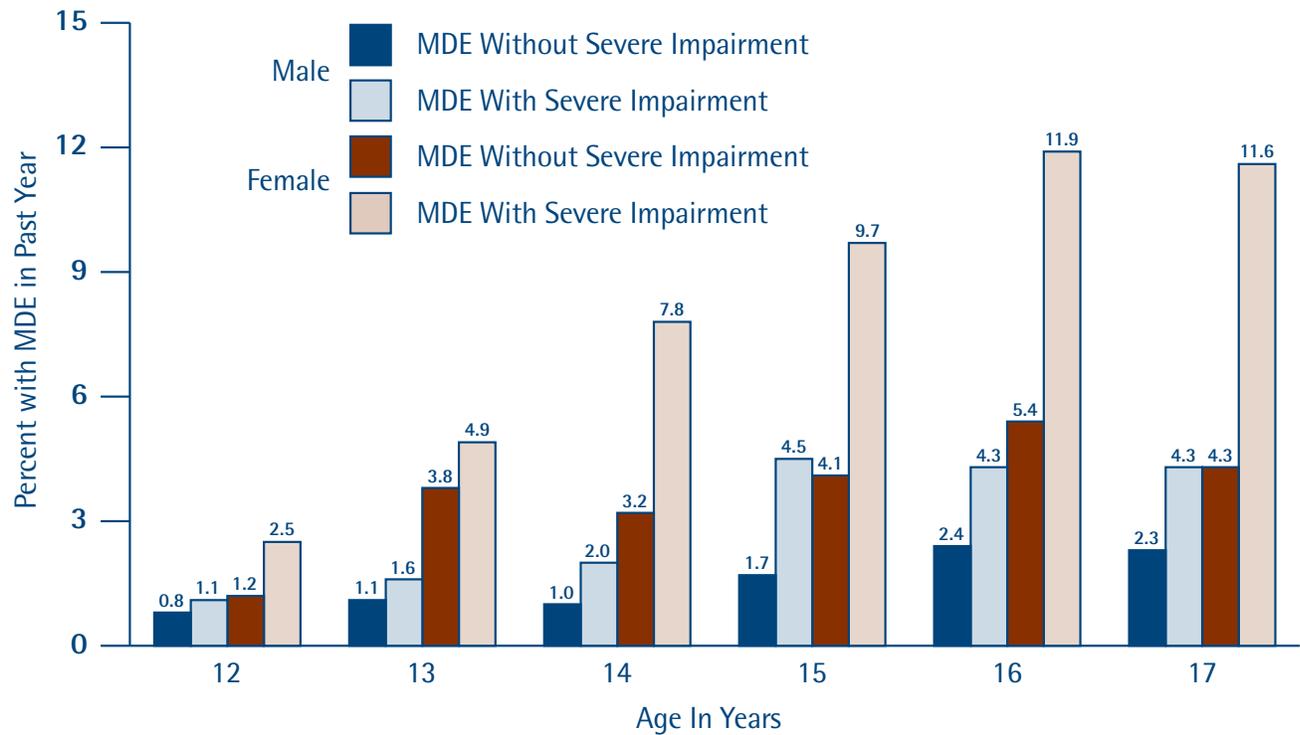
Depression frequently co-occurs with other mental health disorders. The 1990-92 National Comorbidity Survey revealed that 77 percent of 15 to 24 year olds diagnosed with major depression had at least one other psychiatric diagnosis as well. Among those with multiple diagnoses, 40 percent had anxiety disorders, 12 percent had addictive disorders, and 25 percent had conduct disorders.¹⁰ For more than two-thirds of these adolescents and young adults, the diagnosis of major depression occurred after the diagnosis of another psychiatric disorder.

FIGURE 2: SEVERITY OF DEPRESSIVE SYMPTOMS ONE YEAR LATER



Source: AddHealth data in Rushton, Forcier and Scheckman, 2002.

FIGURE 3: MAJOR DEPRESSIVE EPISODE BY SEVERE IMPAIRMENT, AGE AND GENDER, 2007



Source: Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Detailed Tables of 2007 National Survey on Drug Use and Health.

IDENTIFICATION & TREATMENT OF ADOLESCENT DEPRESSION

A lack of identification through screening as well as a lack of treatment among those diagnosed with depression are two well-known issues in the field of adolescent mental health. According to the 2001-2002 National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Medical Care Survey (NHAMCS) which track care given in physician offices, emergency rooms and outpatient departments, physicians reported depression as a diagnosis in 2.8 million adolescent outpatient visits. These visits accounted for 2.9 percent of all outpatient visits by 15 to 17 year olds and 2.0 percent for 11 to 14 year olds. Given the prevalence of depressive symptoms among adolescents, these rates indicate that only a small proportion of the adolescent population is seeking care for depressive symptoms or being screened or diagnosed with depression in the outpatient setting, which is where most adolescents receive care.

A recent study by Ozer et al. examined the rates of provider screening for adolescent depression in California. Using data from the 2003 California Health Interview Survey, they found that just under one-third (31.2 percent) of California adolescents ages 12 to 17 said they had talked to their providers about their emotions or mood. Females were more likely to report being screened for emotional distress than males (37.5 percent versus 25.1 percent, respectively). These screening rates were consistent with a second dataset used in this study from a sample of California pediatric clinics in which 34 percent of teens reported that their doctors discussed their emotions with them (36.4 percent of females and 30.4 percent of males).

Data from SAMHSA's NSDUH indicate only approximately two of every five adolescents who experience MDE receive treatment for depression. Moreover, this rate varies according to gender, geographic region, health insurance coverage and overall health (Figure 4). Females, those living in the Northeast, those covered

FIGURE 4: ADOLESCENTS WITH AT LEAST ONE MDE RECEIVING TREATMENT IN THE PAST YEAR, BY DEMOGRAPHIC, GEOGRAPHIC AND HEALTH CHARACTERISTICS, 2007

Characteristic	Percent of Adolescents with MDE in Past Year	Percent of Adolescents with MDE who Received Treatment for Depression
Total	8.2	38.9
Gender		
Male	4.6	36.7
Female	11.9	39.9
Geographic Region		
Northeast	7.9	46.2
Midwest	8.5	37.9
South	8.0	37.4
West	8.3	37.0
Health Insurance		
Private	8.1	40.6
Medicaid/CHIP	8.2	42.9
Other	9.5	*
None	7.5	17.2
Overall Health		
Excellent	5.4	31.7
Very Good	8.2	38.3
Good	11.3	42.1
Fair/Poor	15.0	50.9

Source: Substance Abuse and Mental Health Services Administration, Office of Applied Studies Detailed Tables of 2007 National Survey on Drug Use and Health.

*Data are suppressed because of low precision.

by health insurance and those in fair or poor health are more likely to receive treatment.

When mental health issues go untreated, they are more likely to result in hospitalization which can be very costly. In 2006 there were 67,404 hospital stays involving a principal diagnosis of affective disorders for children and adolescents aged 10 to 17 (**Figure 5**). These cases accounted for 7.5 percent of all hospital stays for adolescents. Two of every five (42 percent) of these stays were via admissions from the emergency department, indicating a patient in crisis. The mean charge per hospital stay for these adolescents was \$13,397, with higher mean charges for younger ages and for Medicaid patients. Total charges for all

inpatient care to this population were approximately \$903 million in 2006; private payers were charged nearly \$374 million. Clearly there are large savings to be had through effective prevention and management of adolescent depression before inpatient care is needed.

The dominant forms of treatment for adolescents with depression are psychotherapy and pharmacotherapy (**Figure 6**). According to the 2007 NSDUH, 94 percent of adolescents treated for MDE saw or spoke with a medical doctor or other professional about depression; of these, 41 percent utilized prescription medication in addition to counseling. Another 6 percent were treated with prescription medication but received no counseling.¹⁴

FIGURE 5. INPATIENT CARE FOR ADOLESCENTS WITH PRINCIPAL DIAGNOSIS OF AFFECTIVE DISORDERS, 2006

	Inpatient Stays	Percent Admitted through ER	Mean Charge per Stay	Total Charges, All Stays (\$ in millions)
All Adolescents (ages 10-17)	67,404	42.0%	\$13,397	\$903.0
Ages 10-14	28,658	41.3%	\$14,596	\$418.3
Ages 15-17	38,746	42.5%	\$12,509	\$484.7
Medicaid	29,329	41.2%	\$15,241	\$446.9
Privately Insured	31,383	41.9%	\$11,903	\$373.6
Other Payer	4,441	*	\$12,149	\$54.0
Uninsured	2,000	59.3%	\$11,578	\$23.2

Source: Authors' calculations from the Healthcare Cost and Utilization Project (HCUP) Kids' Inpatient Database, Agency for Healthcare Research and Quality. Accessed through HCUPnet at <http://hcupnet.ahrq.gov/>

*Data are suppressed because of low precision.

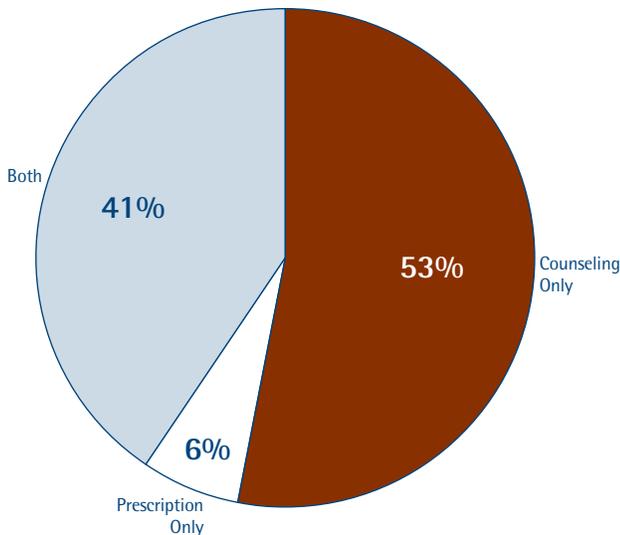
ADOLESCENT DEPRESSION & LINK TO SUICIDE RISK

Suicide is the third most common cause of death among adolescents in the U.S. following unintentional injuries and homicides. Suicide accounts for approximately 4,500 deaths a year in youth ages 12 to 24.¹⁵ In 2007 nearly 7 percent of high school students attempted suicide at least once. More than one-third of these students required treatment by a doctor or nurse for an injury, poisoning or overdose resulting from the suicide attempt.¹⁶

The risk of suicide is greatly increased by depression and other psychological disorders. Some studies indicate that 90 percent of teens who die by suicide were suffering from an identifiable mental disorder at the time of their deaths¹⁷ and approximately 95 percent of all suicides occur among people with a psychological disorder.¹⁸

Although depression is a major risk factor for suicide, there is concern that antidepressants may increase the risk of suicide, particularly for adolescents. In February 2005 the Food and Drug Administration (FDA) issued a "black box" warning about the increased risk of suicidal thinking and behavior for pediatric patients taking antidepressants. The FDA extended this warning to young adults aged 18 to 24 in 2007.¹⁹ Immediately following these warnings, as expected, there was a dramatic decrease in the utilization of antidepressants.

These FDA warnings have had unintended consequences on depression diagnosis. Research has shown that these black box warnings were followed by declines in depression diagnosis for both youths and adults. In 2007 diagnoses by primary care practitioners of new episodes of depression for children were 44 percent lower than would have been predicted based on historical trends prior to the

FIGURE 6: TREATMENT FOR ADOLESCENT DEPRESSION

Source: SAMHSA Office of Applied Studies, 2007 NSDUH

black box warning. Diagnoses for young adults were 37 percent lower, and diagnoses for adults were 29 percent lower than predicted.²⁰ While reasons for this decline have not been established and could be the result of fewer people presenting with symptoms during provider visits, the decline may stem from provider reluctance to make a diagnosis and prescribe antidepressants.

A recent study by FDA researchers confirms that the risk of suicidal behavior is greatly increased by the use of antidepressants for people under 25, with no similar increase for those aged 25 to 64. The study did, however, reveal differences in risks associated with the use of specific antidepressants. For example, the risk of suicidal behavior for those taking Zoloft (sertralene) was lower than among those taking a placebo, whereas use of Lexapro and Celexa seemed to increase risk.²¹ Thus, the full association between antidepressant use and suicidal behavior remains unclear.

RECOMMENDATIONS AND TOOLS FOR ADOLESCENT DEPRESSION SCREENING

There is strong evidence that a brief standardized depression screening instrument is well-accepted in

primary care practice. One study found that using a screening instrument, which took an average of 4.6 minutes for the patient to complete, was met with little resistance by patients and parents and was well perceived and accepted by providers. This finding confirms the recommendations of many respected professional organizations and other institutions that support mental health screening during the primary care visit. **Table 1** reviews the current recommendations specific to screening for adolescent depression.

A multitude of tools exist for primary care providers to screen adolescents for depression during the primary care visit. As part of their recommendation to screen adolescents for major depressive disorder (MDD), the USPSTF concluded that the Patient Health Questionnaire for Adolescents (PHQ-A) and the Beck Depression Inventory-Primary Care Version (BDI-PC) have successfully identified adolescents with MDD in primary care settings.²⁹ The state of Massachusetts, which recently mandated screening for children and adolescents under age 21 in its Medicaid program (MassHealth), requires that physicians use one of six approved tools when screening for depression in adolescents.³⁰ Other states may have adopted or recommended other tools for use in screening adolescents for depression. **Table 2** includes descriptions of a variety of screening tools applicable to the adolescent population, including the two instruments recommended by the USPSTF and the six tools approved by MassHealth. See **Appendix One** for more information on how to access these screening tools.

MANAGING & TREATING ADOLESCENT DEPRESSION

Following a diagnosis of depression, there is some evidence that interventions within primary care can lead to improvements in adolescent depression.³⁸ Primary care providers who offer modest levels of support, such as brief interventions consisting of as few as one to three meetings, can improve adolescent depression.³⁹ A review of the literature conducted for the USPSTF found that selective serotonin reuptake inhibitors (SSRIs), psychotherapy alone, and treatment that combines psychotherapy with pharmacotherapy have all been proven effective in reducing depressive symptoms among adolescents. However, treatment with SSRIs is

TABLE 1. RECOMMENDATIONS RELATED TO ADOLESCENT DEPRESSION SCREENING

Organization	Recommendation
U.S. Preventive Services Task Force (USPSTF) ²³	Recommends screening of adolescents (12 to 18 years of age) for major depressive disorder (MDD) when systems are in place to ensure accurate diagnosis, psychotherapy (cognitive-behavioral or interpersonal), and follow-up. Risk factors for MDD include parental depression, having co-morbid mental health or chronic medical conditions, or having experienced a major negative life event. Grade B recommendation. ¹
American Academy of Pediatrics (AAP) Bright Futures ²⁴	Recommends annual confidential screening and referral for emotional and behavioral health problems for adolescent patients.
Institute of Medicine (IOM) "Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities" ²⁵	Recommends that the Federal government expand prevention and early identification of mental, emotional and behavioral disorders in young people through a national research plan to learn how to implement evidence-based prevention and screening.
American Academy of Pediatrics (AAP)/ American Academy of Child and Adolescent Psychiatry (AACAP) Joint Task Force ²⁶	Supports the emerging use of standardized screening tools by paying for mental health screening at routine visits and paying for the administration, scoring and interpretation of standardized mental health-assessment instruments.
Society for Adolescent Medicine (SAM) ²⁷	Supports the availability of a comprehensive range of mental health services and stresses the importance of early identification and appropriate treatment without delay.
Guidelines for Adolescent Depression in Primary Care (GLAD-PC) ²⁸	<ol style="list-style-type: none"> 1. Patients (aged 10 to 21) with depression risk factors (such as history of previous episodes, family history, other psychiatric disorders, substance abuse, trauma, psychosocial adversity, etc.) should be identified and systematically monitored over time for the development of a depressive disorder. 2. Primary care clinicians should evaluate adolescents at high risk for depression and those who present with emotional problems as the chief complaint. Clinicians should use standardized depression tools to aid in the assessment. 3. Depression assessment should include direct interviews with the patients and families/caregivers and evaluation of functional impairment in different domains and the presence of other existing psychiatric conditions.

TABLE 2. SELECTED SCREENING TOOLS FOR ADOLESCENT DEPRESSION

Screening Tool	Description
BDI®-FastScreen for Medical Patients (previously known as the Beck Depression Inventory-Primary Care version or BDI-PC) ³¹	<ul style="list-style-type: none"> • Used to detect depressive symptoms • Completed by patient • Seven items, takes less than five minutes to complete • USPSTF found this tool to identify MDD accurately among teens aged 12 to 17 in primary care settings
Center for Epidemiologic Study Depression Scale [CES-D] ³²	<ul style="list-style-type: none"> • Measures depressive feelings and behaviors over the past week • Self-report • 20 questions, takes about five minutes to complete
Child Behavior Checklist [CBCL], Youth Self-Report [YSR] and Adult Self-Report [ASR] ³³	<ul style="list-style-type: none"> • The Achenbach System is a set of tools that screens for social, emotional and behavioral status. The various tools cover screening from 1½ years through adulthood. The system also offers the possibility of multi-informant assessment. • The CBCL has two forms: CBCL/1½ -5 years, commonly called the "CBCL preschool" screen; and CBCL/6-18 years, often called the "CBCL school age" screen • The YSR screens from 11 through 18 years • The ASR screens from 18 through 59 years • Forms are completed by parents (CBCL preschool and school-age forms) or by the patient (YSR and ASR) • There are over 100 questions and time for completion varies, but can be up to 20 minutes • Scoring by staff can take several minutes • All are MassHealth Approved Screening Tools
Patient Health Questionnaire for Adolescents [PHQ-A] ³⁴	<ul style="list-style-type: none"> • Designed to assess anxiety, mood, eating and substance use disorders • To be completed by the adolescent aged 13 to 18 • 83 questions but takes only a few minutes to complete • USPSTF found this tool to identify MDD accurately among teens aged 13 to 18 in primary care settings
Patient Health Questionnaire 9: Depression Screener [PHQ-9] ³⁵	<ul style="list-style-type: none"> • Screens for depression in young adults 18 years and older • One-page questionnaire that can be completed by the young adult in about five minutes and then quickly scored by staff • Endorsed by TeenScreen, National Center for Mental Health Checkups at Columbia University • MassHealth Approved Screening Tool
Pediatric Symptom Checklist and Pediatric Symptom Checklist-Youth Report (PSC & Y-PSC) ³⁶	<ul style="list-style-type: none"> • The PSC is completed by parents of children 4 to 16 years old. • The Y-PSC is completed by youths from 11 to 18+ years of age. • Both versions are 35-item questionnaires that can be completed in about five to 10 minutes, then quickly scored by staff. • Endorsed by TeenScreen National Center for Mental Health Checkups at Columbia University • Both are MassHealth Approved Screening Tools
Strengths and Difficulties Questionnaire [SDQ] ³⁷	<ul style="list-style-type: none"> • Brief behavioral screening questionnaire • Self-report version to be answered by young people aged 11 to 16 • 25 questions

associated with a small increase in risk for suicidality and should be considered only if clinical monitoring is possible.⁴⁰ The USPSTF stresses the importance of screening adolescents for mental disorders only when psychotherapy is available as a treatment option in order to prevent primary care providers from relying on pharmacotherapy alone.

While evidence about the effectiveness of specific interventions in the primary care setting is still limited, the Guidelines for Adolescent Depression in Primary Care (GLAD-PC) have emerged as an important first step in guiding primary care providers as they address adolescent depression. **The GLAD-PC recommendations for initial management of depression are:**⁴¹

1. Clinicians should educate and counsel families and patients about depression and options for management of the disorder. Clinicians should also discuss limits of confidentiality with the adolescent and family.
2. Clinicians should develop a treatment plan with patients and families and set specific treatment goals in key areas of functioning, including home, peer and school settings.
3. The primary care clinician should establish relevant links/collaboration 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 resources to other affected adolescents and their families.
4. 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 highest.

Primary care practices that identify adolescent depression may benefit from GLAD-PC's recommendations related to treatment and ongoing management. **GLAD-PC's treatment recommendations are:**⁴²

1. After initial diagnosis, in cases of mild depression, clinicians should consider a period of active support and monitoring before starting other evidence-based treatment.
2. If a primary care clinician identifies an adolescent with moderate or severe depression or complicating factors/conditions such as coexisting substance abuse or psychosis, consultation with a mental health specialist should be considered. Appropriate roles and responsibilities for ongoing management by the primary care and mental health clinicians should be communicated and agreed upon. The patient and family should be consulted and approve the roles of the primary care and mental health professionals.
3. Primary care clinicians should recommend scientifically tested and proven treatments (i.e., psychotherapies such as cognitive behavioral therapy or interpersonal psychotherapy and/or antidepressant treatment such as SSRIs) whenever possible and appropriate to achieve the goals of the treatment plan.
4. Primary care clinicians should monitor for the emergence of adverse events during antidepressant treatment (SSRIs).

GLAD-PC's recommendations for the ongoing management of adolescent depression in primary care are:⁴³

1. Systematic and regular tracking of goals and outcomes from treatment should be performed, including assessment of depressive symptoms and functioning in several key domains: home, school and peer settings.
2. Diagnosis and initial treatment should be reassessed if no improvement is noted after 6 to 8 weeks of treatment. Mental health consultation should be considered.
3. A mental health consultation should be considered for patients who achieve only partial improvement after primary care diagnostic and therapeutic approaches have been exhausted (including exploration of poor adherence, comorbid disorders, and ongoing conflicts or abuse).

4. Primary care clinicians should actively support depressed adolescents who are referred to mental health providers to ensure adequate management. Primary care clinicians may also consider sharing care with mental health agencies/professionals when possible. Appropriate roles and responsibilities regarding the provision and coordination of care should be communicated and agreed upon by the primary care clinician and mental health specialist.

PREVENTING SUICIDE & MANAGING SUICIDE ATTEMPTS

Suicide ideation and attempts are common among adolescents with depression. GLAD-PC recommends that all providers managing adolescent depression develop an emergency communication plan, establish a safety plan, and obtain information from a third party.⁴⁴ This preparation and monitoring are even more critical for youths taking antidepressants given the FDA's black box warning. The frequency of monitoring has been controversial, with the FDA calling for at least weekly face-to-face contact during the first four weeks, followed by biweekly visits for the next four weeks, then a 12 week visit, and as clinically indicated beyond 12 weeks. While no empirical evidence has been found to support weekly face-to-face visits, GLAD-PC recommends that providers develop a regular and frequent monitoring schedule and obtain input from the patient and family to ensure compliance with the monitoring strategy.⁴⁵

In addition to their role in preventing suicide, primary care providers should also be involved in treating an adolescent following a suicide attempt. Prior to discharge from the hospital, a comprehensive treatment plan should be developed that includes specific follow-up care involving both mental health and primary care clinicians. Any medication prescribed following a suicide attempt must be managed and monitored by the prescribing provider to assess continued suicidal risk. Complicating these treatment requirements, adolescents who have attempted suicide are a difficult group to engage after hospitalization, often failing to keep their outpatient appointments.⁴⁶ A close relationship between a primary care provider and an adolescent can help facilitate recovery and prevent another suicide attempt.

BARRIERS TO IDENTIFYING & TREATING ADOLESCENT DEPRESSION IN PRIMARY CARE

Despite the known benefits of early identification and treatment, as well as the multitude of available screening tools, barriers and challenges to identifying and treating adolescent depression in primary care persist. These challenges include adolescent and parental concerns, organizational and individual physician barriers, workforce shortages, coding and reimbursement limitations in private and public insurance, and a lack of research supporting primary care screening and interventions.

Adolescent and Parental Barriers

The Teen Depression Awareness Project studied the perceived barriers to adolescent depression care as reported by adolescents and their parents. The barriers to care mentioned most often by adolescents and parents were other responsibilities at school, recreational activities, needing to babysit or difficulty getting time off work. Adolescents also mentioned concerns about the perceived stigma of receiving mental health care and feeling uncomfortable talking with anyone about their feelings. Parents and adolescents alike reported access to health care as a barrier, specifically a lack of transportation to a provider's office or inconvenient office hours. Parents also noted concern regarding insurance coverage for depression screening and care.⁴⁷

Organizational and Physician Barriers

In addition to these patient and parent concerns, a survey of pediatric practices found organizational and individual physician barriers prevented providers from diagnosing or intervening when responding about their most recent case of child or adolescent depression. Organizational barriers reported most commonly were inadequate time to obtain patient history and provide counseling and education. Physician barriers to providing depression care were their perceptions of having inadequate training to diagnose, counsel and treat child or adolescent depression. Ambiguity over their level of responsibility for identifying and treating

depression is also a barrier. While nearly all pediatricians felt it was their responsibility to recognize depression in children and adolescents, only about one quarter reported it was their responsibility to treat depression in this age group. The limited use of screening tools among pediatricians also continues to be a barrier. The practices surveyed reported that depression diagnoses among children and adolescents were primarily the result of an expressed parental concern; only 40 percent reported the use of some type of screening questionnaire or tools to identify depression.⁴⁸

Workforce Barriers

Shortages of primary care providers and mental health professionals are also identified as barriers to screening and treating adolescents for depression. The lack of access to primary care providers, especially in rural areas, prevents many adolescents from receiving care. Shortages of mental health professionals, particularly child and adolescent psychiatrists, impede providers from making referrals following a diagnosis. Even when referrals are made, the fact that most are not followed through to completion by the patient or parent represents a further challenge. Providers have expressed reluctance to refer adolescents to community resources, where many services are not evidence-based, there are usually long waiting lists, and patients often find there is a stigma attached to this type of care. Furthermore, few providers and primary care practices are equipped to develop and maintain the linkages with the community resources necessary to provide a continuum of care for adolescents diagnosed with depression.⁴⁹

Coding and Reimbursement Barriers

Financial barriers also restrict the ability of primary care providers to identify and treat adolescent depression. Limits placed on the length of provider visits for reimbursement purposes hinder the ability of providers to address mental health concerns within a primary care visit. Primary care providers are already encouraged and often required to provide a large number of preventive services in their short visit time; screening for depression is another responsibility added to their already constrained time with an adolescent.⁵⁰ While screening is generally covered

by private insurance, providers and office staff often face difficulties coding for the extended visit time required for screening and further assessment of those who screen positive. Screening primarily occurs during a well visit or sports physical, and most health plans reimburse for only one code associated with these visits. In 2003 the Centers for Medicare and Medicaid Services (CMS) approved two CPT codes – 96110 and 96111 – for developmental and behavioral screening in pediatrics; however these codes are usually rejected when appended to a well visit claim.⁵¹ These codes can be used at a sick visit, but this requires a provider to bring in an adolescent for a separate visit and results in an additional co-payment for the visit.

Mental health carve-outs and their restrictions on recognized providers often prevent primary care providers from billing for mental health services. These plans generally reimburse only mental health professionals for mental health treatment, effectively placing limitations on the amount of treatment that can be provided by primary care setting physicians. Benefit packages also may limit the number of outpatient visits for mental health services, making it extremely difficult for patients to follow through with referrals and treatment. It can also be challenging to use other office staff to administer screenings or otherwise aid in the screening and referral process since non-physician staff are often not reimbursed for their time. The CMS-approved CPT code 96110 includes reimbursement to pay for cost of the screening tool and for non-physician office staff to administer and score the tool, however, as mentioned earlier, it is difficult to use this code in conjunction with a well visit.

There is also a lack of support and reimbursement for collaborative care between primary care providers and mental health professionals, whether through a phone consultation or co-location of mental health services in the primary care practice. Even when primary care and mental health services are co-located, there is often a further barrier of restrictions on billing for same day services.

For adolescents with public insurance, the Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) program requires screening and testing of all Medicaid children for mental and emotional issues and requires that services be provided if a need is detected.⁵²

However, studies have shown that only 60 percent of states reimburse for the use of standardized screening tools and 40 percent of providers report low screening rates and a reluctance to screen.⁵³

Research Barriers

While the USPSTF recommendation reviewed the current research and found that certain screening tools were effective in adolescents, this evidence is not as robust as it needs to be. More research is needed to support the widespread use of these and other screening tools and to determine effective interventions to treat depression in the primary care setting. Overall evidence on the cost-effectiveness of depression screening and other preventive interventions in primary care also continues to be limited. One study in the adult population found that primary care depression screening costs an average of \$7 per visit but yielded many false positives that resulted in additional burdens to the primary care practice staff and specialty care systems.⁵⁴ Screening of adolescents for depression is far from a universal practice for primary care providers, pointing to the need for more research on the cost-effectiveness of screening the adolescent population.

OPPORTUNITIES FOR HEALTH PLANS TO SUPPORT IDENTIFICATION & TREATMENT OF ADOLESCENT DEPRESSION

Opportunities to Support Adolescents, Parents and Primary Care Providers

Health plans can offer support to adolescents, their parents and primary care providers in order to improve the identification and treatment of adolescent depression in the primary care setting. Findings from the Teen Depression Awareness Project suggest that providers can target communications to adolescents and parents to address concerns, needs and priorities for depression care.⁵⁵ Health plans can support providers in this effort by arming them with communications tools, such as brochures or other materials, to help them engage adolescents and their parents in this dialogue. Health plans can also

target communications directly to adolescents and their parents about the signs of depression and the importance of seeking care.

Provider training and education is another way health plans can help. Such assistance could include resources and support to train providers, other health professionals or office staff to administer screening tools and training and easy access to tools to improve physicians' ability to deliver mental health services to adolescents in the primary care setting, such as those materials developed by the TeenScreen Primary Care Program. Support and training related to managing medication use among adolescents diagnosed with depression is especially critical. To further promote appropriate management and treatment of depression in primary care, health plans can promote the use of the GLAD-PC guidelines.

Opportunities to Reduce Financial Barriers

Reimbursement for the time required to administer a screening tool and further assess adolescents who screen positive during a primary care visit is a vital strategy for improving screening rates. The TeenScreen Primary Care Program has identified a number of codes and combinations of codes that can be used to bill for screening and recommends that providers consult their coding and billing department to determine the best codes to use in their practices.⁵⁶ TeenScreen is working with health plans across the country to implement coding for screenings in primary care, help providers understand how to code for mental health checkups, and help with referrals to mental health specialists by giving providers detailed resources and instructions. Several health plans participating in TeenScreen's pilot program have agreed to reimburse for the use of the CPT 91110 code to cover a routine mental health checkup in primary care without a second co-payment. They are also recognizing the use of '25' in the modifier field to allow providers to bill for additional time for further evaluation of an adolescent. Health plans can pilot the TeenScreen Primary Care Program within their network of primary care providers, and providers and plans can obtain implementation materials directly from the program free of charge. See Figure 7 for more information on the TeenScreen Primary Care Program.

FIGURE 7. TEENSCREEN NATIONAL CENTER FOR MENTAL HEALTH CHECKUPS AT COLUMBIA UNIVERSITY

The TeenScreen National Center for Mental Health Checkups at Columbia University (TeenScreen) is dedicated to early identification of mental illness in adolescents and prevention of teen suicide. The center promotes greater access to youth mental health checkups across the nation and evidence-based screenings provided as part of routine care in adolescent primary care offices, schools and other settings serving youth. TeenScreen was established in 1991 and is at the forefront of the adolescent mental health screening movement. There are currently more than 700 active TeenScreen sites located in 43 states.

Originally focused on partnering with schools, TeenScreen launched a primary care initiative in 2008 that aims to integrate mental health checkups into routine adolescent primary care. TeenScreen Primary Care conducts demonstration projects and research studies in 20 states through partnerships with health plans, hospitals, health centers and medical providers. In working with health and behavioral health plans, TeenScreen reaches out to network primary care providers to encourage their implementation of mental health screening, establishes a coding and reimbursement mechanism for providers and health plans, and develops a facilitated mental health referral system for adolescents identified through screening. The TeenScreen Primary Care Quick Start Guide is a comprehensive resource available for providers to assist with the implementation of mental health checkups in a primary care setting. Other materials available include a Pocket Guide for providers and a Teen Brochure that contains an evidence-based screening questionnaire and information about mental health screening.

By creating reimbursement and referral mechanisms with health plans, TeenScreen is targeting the primary barrier preventing providers from incorporating mental health screenings into routine care. Reimbursement codes and procedures are customized for participating plans, with reimbursement provided for administration and scoring of the questionnaire and/or for physician time for post-screening evaluation. TeenScreen also customizes a referral mechanism for participating health plans to help the primary care provider make a referral to a mental health professional after a positive screen. This process involves providing the primary care provider with a toll-free number for the behavioral health plan that providers and/or parents can call to obtain a timely appointment with a mental health professional. All calls to the number are answered by a licensed, master's level clinical care manager who conducts a risk rating assessment, determines the appropriate level of care, and assists the family in obtaining a timely appointment with a mental health provider. In the case of an emergency, the clinical care manager will secure and confirm that the patient can be seen immediately by a licensed mental health professional or in a local emergency department. The care manager then follows up within one hour of the appointment to confirm that the patient arrived at the appointment.

TeenScreen partnered with ValueOptions, a behavioral health plan, and is working with two of its managed care organizational partners – EmblemHealth in New York and Kaiser Permanente in southern Colorado. In the spring and summer of 2009, three outreach letters were mailed to approximately 8,000 pediatricians in the EmblemHealth network. As a result of this outreach, screening implementation materials were ordered by 543 providers who have so far requested 68,020 screening questionnaires for their patients. TeenScreen conducted a smaller pilot project with Kaiser Permanente in southern Colorado. Pediatricians and family physicians in Kaiser's network volunteered to participate after an introductory presentation by TeenScreen. Through September 2009, screening implementation materials have been distributed to 41 providers who so far have requested 6,400 screening questionnaires for their patients.⁶²

More information on TeenScreen in Primary Care is available at: <http://www.teenscreen.org/teenscreen-primary-care>.

Reimbursement for non-physician staff to administer screenings and facilitate referrals can also help improve screening rates and alleviate the burden from the primary care provider. Kelleher and Gardner further suggest that innovative financing mechanisms, such as global payment for case management of an adolescent with depression, could also be a useful strategy to ensure appropriate management of depression by the primary care provider.⁵⁷

Opportunities to Support Innovations in Care

Health plans may be able to spur the use of innovations in care for depression in the primary care setting. Kelleher and Gardner suggest that providers could use technology that helps lower the cost of assessment and communication with adolescents to improve early identification of depression.⁵⁸ Plans can provide or reimburse for the use of technologies, such as electronic screening tools or email consultations within an electronic medical record. Reimbursing for the use of tele-psychiatry would help providers and adolescents in rural and other areas where access to adolescent psychiatrists is limited. Reimbursement for collaborative care, such as phone consultations between primary care providers and mental health professionals, has the potential to improve care delivery to adolescents. The Massachusetts Child Psychiatry

Access Project, described in Figure 8, is an example of how consultation models can increase access to mental health care for children and adolescents who otherwise may have gone without appropriate care.⁵⁹ Primary care providers may be more willing to screen when they know they have resources available if they need additional assistance in making a diagnosis or developing a treatment plan.

Pay-for-performance initiatives, proven effective for improving the quality and frequency of screening and treatment for some disease conditions, could be applicable to depression screening. Rosenthal and Frank reviewed the literature on paying for quality and found some research that points to improvements in screening procedures through pay-for-performance initiatives, although the evidence of success in the primary care setting is limited.⁶⁰ Plans could explore including depression screening within their pay-for-performance initiatives and offer bonuses to providers who comply with screening guidelines.

Opportunities to Support Additional Research

The successful implementation of any of the above strategies by health plans will likely continue to

FIGURE 8. MASSACHUSETTS CHILD PSYCHIATRY ACCESS PROJECT (MCPAP)

The Massachusetts Child Psychiatry Access Project (MCPAP) is a statewide project that assists pediatric primary care providers in delivering mental health care to children and adolescents. Providers can access six mental health teams, comprised of child psychiatrists, therapists and a care coordinator. These teams provide phone consultations, diagnostic evaluations and care coordination to find available mental health providers for referrals. They also offer education and training to primary care providers. Since December 2007, Medicaid providers in Massachusetts have been mandated to screen children and adolescents for mental health disorders using MassHealth-approved screening tools. MCPAP teams are available to help primary care physicians utilize standardized behavioral health screening tools in their practices. MCPAP teams can also provide assistance for any clinical questions that arise from performing a depression screening, including how to manage positive screens, make the appropriate diagnosis, coordinate follow-up care and provide information about the availability of behavioral health resources for referral.

MCPAP has interacted with more than 32,000 primary care providers since its inception in 2004, and over 9,000 patients have been reached. Participating providers have reported substantial improvements in their ability to address the mental health needs of their child and adolescent patients. More information on MCPAP is available at: <http://www.mcpap.com>.

be dependent on the evidence of effectiveness of primary care interventions. Stein, Zitner and Jensen call for additional research to build the evidence base of effective mental health screening tools and interventions in primary care.⁶¹ Plans can support research evaluating the cost-effectiveness of screening and other primary care interventions, which may also lead to better reimbursement in the future for services shown to be cost-effective.

CONCLUSION

Allowing adolescent depression to continue to go undiagnosed has huge consequences for the future health of our nation. The common prevalence of depression among adolescents and the lifelong physical, social and financial consequences of living with untreated depression point to the importance of identifying depression as early as possible. Since health plans largely adhere to the recommendations of the USPSTF for clinical preventive services in making coverage decisions, the recent recommendations from the IOM and USPSTF that primary care physicians screen adolescents for mental health disorders are a positive step toward improved screening rates. The Paul Wellstone and Pete Domenici Mental Health Parity & Addiction Equity Act of 2008 is also expected to have a beneficial impact on coverage and reimbursement for mental health services as health plans begin to address these new parity requirements. The availability of accurate screening tools, combined with these recent recommendations and legislation, point toward increased support for mental health screening in primary care and the potential for screening rates to improve in future years. It will be vital, however, to continue to develop evidence and support for strategies and tools that primary care providers can use to provide effective treatment to adolescents diagnosed with depression. In order to access mental health treatment, adolescents, parents and primary care providers must first overcome the barriers preventing adolescents from being screened for depression and receiving treatment when diagnosed with depression, allowing them access to the most appropriate care. Encouraging screening, providing a billing and reimbursement mechanism, and facilitating referrals to mental health professionals are all strategies that health plans can support in order to have a significant impact on improving early identification and treatment of depression among adolescents.

APPENDIX ONE: HOW TO ACCESS SELECTED SCREENING TOOLS

Screening Tool	Cost	Contact
BDI®-FastScreen for Medical Patients	\$105 for complete kit (manual and pad of 50 record forms)	www.becksscales.com
Center for Epidemiologic Study Depression Scale [CES-D]	Free	http://cooccurring.org/public/document/ces-d.pdf http://cooccurring.org/public/document/usingmeasures.pdf
Child Behavior Checklist [CBCL], Youth Self-Report [YSR] and Adult Self-Report [ASR]	<ul style="list-style-type: none"> • CBCL (includes the YSR) - \$395.00 for computer-scored or approximately \$300.00 for hand-scored kit • ASR - \$245.00 for computer-scored or \$230.00 for hand-scored kit 	http://www.aseba.org/
Patient Health Questionnaire for Adolescents [PHQ-A] and Patient Health Questionnaire 9: Depression Screener [PHQ-9]	Free	<p>The PHQ-A is a comprehensive screen for a range of mental health disorders. A copy can be obtained by contacting Jeffrey G. Johnson, PhD, Associated Professor of Clinical Psychology, Epidemiology of Mental Disorders, Columbia University at (212) 543-5523 or jjj2@columbia.edu.</p> <p>In order to screen for depression in the primary care setting, TeenScreen has adopted a version of the PHQ-9 modified for adolescents. A copy can also be obtained from TeenScreen.</p> <p>Contact TeenScreen at (212) 265-4426 or through their website at: http://www.teenscreen.org/checkups-in-primary-care</p>
Pediatric Symptom Checklist and Pediatric Symptom Checklist-Youth Report (PSC & Y-PSC)	Free	http://www2.massgeneral.org/allpsych/psc/psc_home.htm
Strengths and Difficulties Questionnaire [SDQ]	Free	http://www.sdqinfo.com/b3.html

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