

Recognizing and referring at-risk youth

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ABSTRACT

Nearly 20% of children and adolescents in the US have at least one mental health condition yet less than half of these youth are engaged in treatment. Violent acts such as school shootings, suicide and even bullying have been attributed in part to inadequate mental health awareness, screening and follow-up care in youth. Children and adolescents with persistent behavioral problems, low academic functioning and high rates of psychosocial adversity are ideal candidates for mental health screening in schools and the community. School-based screening offers easier access and less stigma while community care offers the opportunity for more specialized psychiatric evaluation and treatment. There are simple validated screening tools for the most common mental health problems in youth such as anxiety, depression, substance abuse, autistic spectrum disorder, attention-deficit hyperactivity disorder and suicidality. This paper provides an overview of the prevalence of psychiatric disorders in children and adolescents and recommends screening tools to facilitate recognition and referral for additional evaluation and therapeutic intervention.

KEYWORDS

child, adolescent, psychiatric disorder, screening

INTRODUCTION

Childhood and adolescence is a dynamic time of growth and development with social transitions such as entry into school, physiological changes including puberty, and brain maturation such as neuronal pruning that impacts decision making and impulse control.¹ Several studies on pediatric brain development show a decreased ability to think before acting, delay gratification, or consider future consequences compared to the adult brain.² Childhood is also the time when signs and symptoms of neuropsychiatric illness may first present and further impact a child's sense of self, ability to learn, and interact with the world around them in healthy ways.

Genetics is known to influence the development of psychiatric illness in youth, but environmental factors also contribute. Parental loss through incarceration, mental illness or financial hardship and physical, sexual, and emotional abuse all have been shown to contribute to psychiatric illness and associated behavioral problems such as aggression and violence in youth.^{3,4} A three year study of 6,483 adolescent-parent pairs in the US found that 58% experienced at least one significant childhood adversity that was a predictive factor in 28.2% of those developing psychiatric disorders.³ A Canadian study that examined the impact of bullying in 4,197 youth between the 5th and 8th grade found depression in 37.3% of children who were bullied compared to an 8.1% of children who were not bullied.⁴ A Dutch study of 974

youth ages 8 to 12 years old showed that screening during well-child examinations helped identify youth at risk for violence and antisocial behaviors, namely male children with no parent employed, poor performance at school and multiple parental concerns about the child's behavior.⁵ Collectively, these studies show that youth who experience psychosocial adversity, bullying or exhibit mood or behavioral problems, could benefit from mental health screening and intervention.

Sandy Hook elementary school, Columbine high school and Virginia Tech University are just three examples of US schools that serve as tragic reminders of what can happen when mental health issues are not fully recognized and addressed in children and adolescents. An analysis of 18 cases of school shootings found that in all cases, the shooters had warned of their plans either through direct threats, or through drawings, diaries, or essays.⁶ Unfortunately, in many of those cases, warnings or threats reported by classmates, neighbors, or parents did not reach the proper authorities for investigation and action.⁶ The Safe Schools Initiative study found that 29 out of 41 (71%) youth who committed violent acts at schools believed they had been "wronged" or suffered an injustice. Most attackers reported a history of depression or desperation, yet only seven (17%) had been diagnosed with a mental health condition.⁷ The CDC publishes recommendations for prevention of youth violence in schools but adults, parents, teachers and health care

professionals are responsible for fully investigating threats and implementing prevention strategies that include mental health screening.^{6,8}

The goal of this paper is to give MHC readers an overview of the prevalence of common neuropsychiatric disorders in youth and describe current screening methods or tools to facilitate recognition and referral for more comprehensive evaluation and treatment. Diagnostic criteria and treatment recommendations are beyond the scope of this paper. However, if pharmacotherapeutic treatment is considered, the Journal of the American Academy of Child and Adolescent Psychiatry's Practice parameter on the use of psychotropics in children and adolescents is a useful guide.⁹ It advises eight steps of care including comprehensive assessment, establishing short and long-term goals with a monitoring plan and documentation of consent/assent, drug therapy decision making and outcomes. Referrals to clinicians with expertise in evaluating and treating psychiatric illness in youth is recommended.¹²

PREVALENCE OF PSYCHIATRIC DISORDERS IN YOUTH AND REFERRAL

A 2 year study of 4,175 youths ages 11-17 years old and their parents found that the one year prevalence of any psychiatric disorder in youth was 17%.¹⁰ Psychosocial stressors contributed to the persistence of psychiatric illness and the development of multiple comorbidities including substance abuse, mood, anxiety and conduct disorders; therefore, family-based interventions are crucial to manage stressors.¹⁰ Of 2,488 high school students screened for mental health issues in Wisconsin public high schools between 2004 and 2009, 19.6% screened positive for having a mental health issue that needed follow-up (e.g., suicidal thoughts, self-injurious behavior, anxiety, mood or impulse control disorder). Most students, 73.6%, were not receiving any treatment but were given referrals to either school or community based mental health care.¹¹ Those referred to community based care were more severely ill with a higher percentage of suicidal thoughts and behaviors. Participation in mental health follow-up was more likely in school-based intervention programs compared to community-based care.¹¹ Eight out of 10 adolescents referred to school-based mental health follow-up attended at least one follow-up appointment whereas only 4 out of 10 adolescents referred to community care received follow-up. Families and youth found school-based mental health programs less stigmatizing and less challenging to connect with compared to community based programs. Due to staff limitations at schools, youth

with more serious conditions including suicidality were more likely to be seen by a mental health professional if they had a community referral. Schools need access to both referral sources to handle the diversity of student mental health needs.¹¹⁻¹³

Approximately 60% of U.S. schools offer some form of mental health awareness and prevention programs that include screening, information and referral. Despite the recognized need for successful implementation of school-based mental health programs, there is evidence that many schools lack the necessary support from administration, parents, and teachers to fully implement quality mental-health evaluation and treatment programs.¹³ Schools considered "successful implementers" of mental health care were more often receiving direct consultation from community mental health centers compared to "unsuccessful implementers" that more often faced competing administrative responsibilities, logistical barriers, and lack of parental and teacher engagement.¹³ Successful psychiatric consultants at schools need knowledge of school procedures and mental health legislation that protects the rights of students with disabilities.¹² For example, an individualized educational program should be reviewed and updated annually for youth with disabilities including chronic psychiatric disorders.¹²

Providing mental health evaluation and treatment for youth transitioning out of the juvenile justice system presents unique challenges as children go to diverse placements including group homes and foster care. A successful service that provides mental health treatment for these youth has been established in Connecticut through a partnership with the University of Connecticut and community mental health centers. It is known as the "The Home Care program" and it provides psychiatric care for youth within 2 to 3 weeks of transitioning out of juvenile justice. Psychiatric care includes evaluation, medication management, counseling and mentoring programs. It is an example of successful coordination of care and referrals for youth with psychiatric disorders.¹⁴

Table 1 shows the one-year prevalence of psychiatric disorders in youth. These prevalence rates will be discussed along with specific screening recommendations for each mental health diagnosis.

SCREENING RECOMMENDATIONS

The American Academy of Pediatrics recommends mental health screening annually during a child's primary care visit. Toward this end, Columbia University has developed youth screening tools housed on the website:

Table 1. Prevalence of psychiatric disorders in youth^{10,15-24}

Mental Health Diagnosis	One-year prevalence in ≤ 18 years old
Any Mental Health Diagnosis	17-20%
Autistic Spectrum Disorder	1%
Attention-deficit / Hyperactivity Disorder	8%
Oppositional Defiant Disorder and Conduct Disorder	5-15%
Bipolar Disorder	1-3%
Major Depression	5-8% adolescents 2-4% prepubertal children
Anxiety Disorders Social Anxiety Disorder, Panic Disorder, Generalized Anxiety Disorder and Post Traumatic Stress Disorder	6-20% have at least one disorder (SAD, Panic, GAD, PTSD)
Eating Disorders	0.4 – 3%
Schizophrenia	0.33%
Substance Use Disorder	5-10%

Teenscreen.org. The Pediatric Symptom Checklist (PSC-Y) is a general mental health screening tool for youth between the ages of 11 and 18. It includes general screening questions for anxiety, inattention, mood and suicidality.²⁵ There is a Patient Health Questionnaire modified for Youth (PHQ-9-Y) in addition to a substance abuse screening instrument [CRAFFT (Car, Relax, Alone, Forget, Friends, Trouble)]. Early screening, awareness and education about the importance of mental health in schools could decrease stigma and bullying that increases the risk for violence in youth.^{25,26} An estimated 20% of high school students report physical, emotional and/or cyber-bullying on a regular basis.^{8,25,26} Because lesbian, gay, bisexual, transgender and questioning (LGBTQ) youth are at significant risk for bullying and associated suicidality, the Trevor project has launched a “Trevor Lifeguard Workshop” designed to specifically address suicide prevention for LGBTQ youth in schools.^{8,26} Many high schools offer gay/straight alliance (GSA) organizations to further promote awareness and education.²⁶

Youth surveys show that like adults, teenagers prefer school-based over community-based mental health screening programs largely due to a decreased stigma associated with school-based programs although community based screening and referral is also needed, particularly for youth with more severe or complex mental health needs.^{11,25-27} Available screening tools are summarized in Table 2.

AUTISTIC SPECTRUM DISORDER

Approximately 1% of the population is affected by autistic spectrum disorder (ASD) which represents a wide array of clinical presentations including the more severe autistic

disorder to the less severe atypical autism, pervasive developmental disorder NOS, and Asperger’s disorder.^{17,28} A child with the more severe autistic disorder usually shows signs by 18 months where parents notice a lack of reaching developmental milestones, such as emotional responsiveness or speech development. Atypical autism and PDD-NOS may not show prominent symptoms until ages 3 to 5 years when stereotypies and deficits in socialization with other children are notable. An individual with Asperger’s disorder may go undetected until between ages 7 to 12 as language and socialization deficits are more subtle than other forms of ASD. The variability of clinical presentations of ASD adds to the difficulty in recognition and referral. Studies show pediatricians and primary care physicians believe they need more information and training on ASD assessment.¹⁷

The Autism spectrum Quotient (AQ) and the Quantitative Checklist for Autism in Toddlers (Q-CHAT) have both been adapted to reliable 10-item checklists for ease of use in primary care for children, adolescents and adults.¹⁷ Both short forms have internal consistency >0.85. Questions like, “Is it easy to get eye contact with your child?” and “Does your child point to share interest with you?” are examples of questions that can assist in identifying children that need referral for assessment and intervention. There is evidence that early diagnosis and intervention for children with autistic spectrum disorder can improve their ability to learn, communicate and adapt socially at home and at school.²⁸

ADHD

According to the 2011 American Academy of Pediatrics, the one year prevalence of ADHD in the US in 4 to 18 year

Table 2. Screening tools to assist in recognizing and referring “at-risk” youth

Diagnosis/ Mental Health Condition in ≤ 18 years old	Name of Screening Tool	Administered by clinician, parent or child
Any Mental Health Condition	PSC-Y (general screening tool)	Clinician administered recommended annually
Autistic Spectrum Disorder	AQ or Q-CHAT	Clinician and parent
ADHD	Connor’s, Vanderbilt, SKAMP, ADHD-RS, Achenbach CBCL	Parent, Teacher, Clinician and Adolescent versions
ODD/Conduct Disorder	Vanderbilt Parent rating tool Achenbach CBCL	Parent and clinician rated
Bipolar Disorder	Mood Disorder Questionnaire Family History K-SADS	Clinician rated
Depression	PHQ-g-Y CDRS	Youth – self administered Clinician administered
Anxiety Disorders	SCARED is a 5-item questionnaire (longer version also)	Child and parent administered
Suicidal Thoughts and Behaviors	PHQ-g-Y – clinician verification Columbia Suicide Screening tool clinician administered	Youth self-report with clinician verification Clinician administered
Eating Disorders	SCOFF EAT, EDI	Self or clinician administered
Schizophrenia	CAARMS	Clinician administered
Substance Use Disorder	CRAFFT	Youth administered, scored by technician or clinician

Abbreviations: Pediatric Symptom Checklist (PSC-Y); Autism Spectrum Quotient (AQ); Quantitative Checklist for Autism in Toddlers (Q-CHAT); Swanson, Kotkin, Agler, M-Flynn and Pelham Scale (SKAMP); Attention-Deficit Hyperactivity Disorder Rating Scale (ADHD-RS); Achenbach Child Behavior CheckList (Achenbach CBCL); Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS); Patient Health Questionnaire Youth Version (PHQ-g); Child Depression Rating Scale (CDRS); Screen for Childhood Anxiety-Related Emotional Disorders (SCARED); Sick Control One Fat Food (SCOFF); Eating Attitudes Test (EAT); Eating Disorders Inventory (EDI); Comprehensive Assessment of At-Risk Mental States (CAARMS); Car, Relax, Alone, Forget, Friends, Trouble (CRAFFT)

olds is 8%.¹⁸ Boys (11%) are about twice as likely as girls (6%) to have ADHD. Non-Hispanic white and black children are more likely to be diagnosed with ADHD compared to children of Hispanic or Asian descent. Worldwide rates of ADHD in children range from 4% to 12%.¹⁹ Currently, functionally impairing symptoms of inattention or hyperactivity/impulsivity or both must be present before age seven; however, the DSM-5 will likely raise the age for first symptom onset to 12 years based on evidence that many cases are not detected by age seven.²⁹ Initial signs of ADHD may include poor academic performance or behavioral problems in school or daycare.^{18,19}

ADHD is one of the most well studied neuropsychiatric disorders in youth and there are many validated rating scales to use for screening and diagnosis.^{18,19,30-32} Because a child’s behavior is more reactive to his/her environment, the key to accurate assessment is obtaining information on symptoms in diverse settings (e.g., home, school, daycare) from multiple informants; namely parents, teachers, caregivers, clinicians and even the child or teenager themselves. One example of a highly utilized

ADHD scale is the Connor’s series of rating scales that includes short and long forms for parents, teachers and youth.^{30,32} The Vanderbilt rating tool has the advantage of screening for ADHD and comorbid conditions such as anxiety, depression, disruptive behavior and poor school performance.^{31,32} The Achenbach Child Behavioral Checklist (CBCL) is a more broad-band scale useful for documenting a range of symptoms that may co-occur with ADHD such as aggression, violent behavior, anxiety, depression, and sleep difficulty. It is less specific for ADHD but can help track symptoms over time.³⁰⁻³² Appropriate diagnosis and treatment of ADHD has been shown to improve socialization, academic performance, and may even decrease the risk of more serious conduct disorder.¹⁹

Oppositional Defiant Disorder/Conduct Disorder

The one year prevalence of oppositional defiant disorder (ODD) and conduct disorder (CD) has been estimated at 5 to 15% of the general population of children and adolescents, but it is present in 30 to 50% of youth with ADHD and may be as high as 75% in youth with Bipolar

Disorder.^{19,23} ODD is a persistent pattern of negativistic or hostile behavior with frequent arguing, angry outbursts and defiance persisting for six months or more. When ODD symptoms persist for 12 months and include bullying, threats, aggression, violence, and/or cruelty to animals, conduct disorder is diagnosed.^{19,31,32}

Both ODD and CD cause problems in school and at home and can lead to early substance abuse and juvenile delinquency.¹⁹ Conduct disorder in particular, is associated with persistent violent behavior, incarceration and the development of antisocial behaviors in adulthood.^{5,19,22} There is no specific treatment for ODD and CD, but managing the comorbid condition has been shown to improve symptoms.^{19,23,33} The Centers for Medicare and Medicaid found that in 2007, 2.4% of youth in 50 states across the US were prescribed antipsychotics and 1 in 7 of these cases were for ADHD, despite the lack of evidence base showing antipsychotics are effective for ADHD.³⁴ The antipsychotics are likely prescribed to manage aggression associated with ADHD and/or comorbid conduct disorder.³⁴

ANXIETY DISORDERS

Approximately 6 to 20% of children and adolescents have at least one anxiety disorder (i.e., social anxiety, school phobia, generalized anxiety, panic disorder, post-traumatic stress disorder).^{15,20} The Screen for Childhood Anxiety-Related Emotional Disorders (SCARED) has a 5-item version for children and parents that can effectively screen for many common anxiety disorders including panic disorder and social anxiety disorder.³⁵ The 5-item version of the SCARED has psychometric properties comparable to the full 41-item version and has a sensitivity of 74% and specificity of 73% using a cutoff score of 3 or greater for discriminating anxiety from nonanxiety.³⁵ The child answers: "not true or hardly every true" or "somewhat/sometimes true" or "always/very often true" to questions like, "I am shy" or "people tell me I worry too much" or "I am afraid to be alone". One-third of adult cases of obsessive compulsive disorder have their onset in childhood. The Yale-Brown Obsessive-Compulsive Scale (YBOCs) has been modified for use in children and adolescence.²² Screening for anxiety disorders has been successfully conducted in schools, primary care office visits and pediatric emergency rooms.^{22,35}

Depression

The prevalence of depression in pre-pubertal children is 2 to 4% and rates are comparable in boys and girls, whereas the prevalence of depression in adolescence increases to

between 5 and 8% with predominance in females.^{10,15} Youth with depression experience the same low mood, lack of interest, trouble concentrating and sleep and appetite disturbance experienced by adults with depression. There are some differences in the clinical presentation associated with these symptoms. Children less than 12 are less likely to be able to verbalize hopelessness or worthlessness. Instead, they are more likely to say, "my tummy hurts, my head hurts" or they may refuse to go to school.³⁶ The clinical presentation of depression in adolescents is variable but parents and teachers should look for changes in behavior, becoming more withdrawn, more irritable, staying in bed more or fixating on negative themes.^{10,15,25}

[TeenScreen.org](http://www.teenScreen.org) has developed a Patient Health Questionnaire (PHQ-9) modified for adolescents.²⁵ It includes the same nine items on the validated adult scale but it also includes 2 more questions on suicidal thoughts and behaviors: "Has there been a time in the past month when you have had serious thoughts about ending your life?" and "Have you ever, in your whole life, tried to kill yourself or made a suicide attempt?". It also asks, "In the past year have you felt depressed or sad most days, even if you felt okay sometimes?" This question recognizes that youth can have an atypical presentation when they can still feel okay sometimes and show positive emotion on the surface. There may be an event or situation that causes them to react with suicidal thoughts or behaviors.²⁵

SUICIDE

In 2010, suicide was the second and fifth leading cause of death in 10 to 14 year olds and the fourth, fifth and eighth leading cause of death in 15 to 24 years old.³⁷ The top three methods used by youth for suicide include firearms (45%), suffocation (40%), and poisoning (8%). In 2010, approximately, 4500 youth between the ages of 10 to 24 years old lost their life due to suicide. There are 100 to 200 suicide attempts for every completed suicide in youth ages 15-24 compared to 25 attempts per completed suicide in the general population.³⁸ This higher rate of attempts in youth may be related to immature brain development associated with higher impulsivity in youth compared to adults.^{1,2} Having any mental illness increases the risk of suicidal thoughts and behaviors but youth with depression, substance abuse or those with psychotic illness are among the highest risk for lethal suicidal behaviors.^{6,8-10,39,40} Boys are four times more likely to die from a suicide attempt compared to girls.^{37,38}

The Columbia Suicide Screen (CSS-S) is an 11-item self-report and clinician administered scale demonstrated

effective for youth suicide screening in schools, clinics and emergency departments.^{39,40} Suicide screening in schools is recommended by the US surgeon general and the Institute of Medicine due to a higher likelihood of identifying youth at risk for suicide when active school screening is in place.^{40,41} A study of 1,729 students from seven high schools who completed the Columbia Suicide Screen (CSS-S) demonstrated that the majority of students who screened (+) for suicide risk were not otherwise identified by school professionals.⁴¹ A separate 2 year longitudinal study of 317 youth from New York schools who screened positive for suicidality found that 51% were in need of referrals. Of those referred, 70% received the recommended follow-up care showing that school-based suicide screening can be effective in linking students to recommended follow-up.⁴¹

The CSS-S is useful in differentiating youth with clear intent to die vs. youth with self-injurious behaviors who do not actually want to die.³⁹⁻⁴¹ The CSS-S has a sensitivity of 0.75 and a specificity of 0.83. Fortunately, false negative screens are considered highly unlikely but false positive screenings have been documented in approximately 30% of youth screened. Modifying the CSS-S to ask about recent suicidal ideation and prior attempts instead of lifetime suicidal ideation has been shown to decrease the number of false positive screens by 50%, thus decreasing costs associated with further screening.²⁷

EATING DISORDERS

Most cases of anorexia nervosa, bulimia nervosa and binge eating disorder have an onset in childhood or adolescence and frequently co-occur with depression, anxiety and self-injurious behavior. Over the past decade, eating disorder treatment centers have reported seeing cases in younger children than ever before. Children as young as nine years old may present with severe anorexia nervosa.¹⁶ Eating disorders are most responsive to treatment when they are recognized early in the course of illness. There are several eating disorders screening tools, including the 26-item Eating Attitudes Test (EAT) and the 64-item Eating Disorders Inventory (EDI). Both have been widely used in eating disorders treatment centers to record detailed information on eating disorders pathology such as restricting food, purging behaviors and distorted body image.^{42,43} Both can be used as screening tools and to monitor progress in treatment.^{42,43} Perhaps the least time intensive yet still accurate screening tool is the 5 question, Sick Control One Fat Food (SCOFF). The SCOFF is easy to administer and includes questions like, "Do you ever make yourself SICK because you feel uncomfortably

full?" and, "Do you worry you have lost CONTROL over how much you eat?". A "yes" response to ≥ 2 questions on the 5 question scale indicates a probable eating disorder and the need for further assessment.¹⁶

BIPOLAR DISORDER

The prevalence of bipolar disorder in adolescents is estimated at 1 to 3% but it is considered rare in pre-pubertal children.⁴⁴ Pediatric bipolar disorder is challenging to diagnose as many symptoms (hyperactivity, impulsivity and inattention) overlap with symptoms of ADHD. Pediatric bipolar guidelines suggest that if a child presents with symptoms that meet criteria for both bipolar disorder and ADHD, the mood should be stabilized before addressing any inattentive symptoms.⁴⁴ There are no simple screening tools for pediatric bipolar disorder; however, the 17-item self-administered and clinician-rated mood disorder questionnaire may be useful.⁴⁵ In addition, the presence of episodic illness with lack of psychosis between episodes make the diagnosis more likely. Confirmation of family history of bipolar disorder also points to the probability of bipolar disorder.²³ The Kiddie Schedule for Affective Disorders and Schizophrenia (K-SADS) is a clinician administered scale that can be used to assess for bipolar disorder.²³ The DSM-5 may include a new diagnosis, "severe mood dysregulation with dysphoria". Youth with persistent temper-tantrums and angry outbursts that may have previously received a diagnosis of bipolar disorder may be categorized with this new diagnosis.⁴⁶

SCHIZOPHRENIA

Schizophrenia is considered relatively rare in children, with the emergence of symptoms increasing throughout the teenage years. Before the age of 18, approximately 12 to 33 out of 100 individuals with schizophrenia experience the onset of their illness while only 1 out of 100 experiences their first psychotic break before the age of thirteen.^{20,47} Children with early-onset schizophrenia spectrum disorder often present with autistic like symptoms, and difficulty with socialization and language development. This complicates clinical assessment.²⁰ Over the past five years, early onset schizophrenia spectrum diagnoses have increased and there has been a lack of male predominance.^{20,47}

The Comprehensive Assessment of At-Risk Mental States or CAARMS, is a validated assessment tool developed in 1996 to facilitate screening for youth at ultra-high risk for developing psychosis. It has eight domains and must be used by a mental health care professional with experience in patient evaluation. Early psychosis intervention

programs (EPIP) are in place in some communities to reach out to children with new onset psychosis in order to provide preventative therapy and family education and support.⁴⁷ Early diagnosis and treatment can result in improved course of illness according to several studies.^{20,47,49}

SUBSTANCE ABUSE DISORDERS

The substance abuse and mental health services administration (SAMSHA) publishes an annual survey of illicit drug and alcohol use. All of the information including graphs are considered public domain and can be used in community health education programs to track changes in drug and alcohol abuse in youth over time. Illicit drug use can start early. Children as young as nine and ten year olds have reported regular alcohol or marijuana use.²⁴ The 2011 survey reports an 8 percentage point increase in illicit drug use over the past month in 16 to 17 year olds compared to 14 to 15 year olds. Eighteen to 20 year olds are the most at risk for substance abuse. According to SAMSHA data in adolescents, marijuana was the most commonly abused substance with 7.9% of youth reporting use in 2011.²⁴ Marijuana and alcohol are clearly the most commonly abused substances in youth. The rise in youth marijuana use has been associated with earlier onset psychosis in youth who go on to develop schizophrenia.⁴⁸ Alcohol use and abuse is associated with increased impulsivity and mood dysregulation in youth.^{2,19,25,44} School and community based substance abuse education programs should include information on the negative impact of marijuana, alcohol and other drugs on mental health.^{24,25}

Prescription psychotherapeutics (e.g., hydrocodone, oxycodone, stimulants, benzodiazepines) were abused by 2.8% of 12-17 year olds in 2011, a 0.2% decrease since 2010. Binge drinking has decreased in youth with 19.3% reporting binge drinking in 2002 and only 15.8% binge drinking in 2011.

The CRAFFT screening tool was developed as part of the TeenScreen.org set of screening tools for primary care.²⁵ It can be used in anyone from age 11 to 21 years old. The CRAFFT (Car, Relax, Alone, Forget, Friends, Trouble) acronym is based on cues surrounding drug abuse. Six questions are:

1. Have you ever ridden in a Car driven by someone (including yourself) who was high or had been using alcohol or drugs?
2. Do you ever use alcohol or drugs to Relax, feel better about yourself, or fit in?

3. Do you ever use alcohol or drugs while you are by yourself or Alone?
4. Do you ever Forget things you did while using alcohol or drugs?
5. Do your Family or Friends ever tell you that you should cut down on your drinking or drug use?
6. Have you ever gotten into Trouble while you were using alcohol or drugs?

For the most reliable results, the teen should be left alone in a quiet room to answer the questionnaire and they should be advised of their right to confidentiality. It takes less than 5 minutes for teens to self-administer and any technician or health care professional can score it. Sample questions include, "during the past month, did you drink alcohol, smoke marijuana or use anything else to get high?" and "have you ever ridden in a car driven by someone who was high or had been using alcohol or drugs?" There are English and Spanish versions of the CRAFFT. Substance abuse screening should be a high priority in schools and communities due to the established high prevalence, and its association with dangerous behaviors including suicide.

SUMMARY

Nearly one in five children and adolescents meet criteria for at least one mental health condition and many have multiple comorbid conditions. Youth with psychosocial adversity, low academic performance and persistent behavior problems should be screened for treatable mental health conditions based on their clinical presentation. For example, youth with suicidal thoughts and behaviors should be screened for mood disorders and substance abuse. Youth having difficulty with communication and social integration should be screened for autistic spectrum disorder, anxiety, mood disorders or early onset psychosis. Awareness combined with easy-to-administer screening tools can assist with recognizing and referring youth who could benefit from further evaluation and therapeutic interventions. Both school- and community- based screening and referral programs are necessary to meet the diversity of mental health needs in youth. Accurate assessment and intervention may help prevent violence in schools, decrease completed suicides and improve overall quality of life for children, adolescents and their families.

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