

Principles of Care for Young Adults With Co-Occurring Psychiatric and Substance Use Disorders

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abstract

Over 50% of young adults (defined as individuals aged 18–25 years) with substance use disorders (SUDs) have at least 1 co-occurring psychiatric disorder, and the presence of co-occurring disorders worsens SUD outcomes. Treatment of both co-occurring psychiatric disorders and SUDs in young adults is imperative for optimal treatment, yet many barriers exist to achieving this goal. We present a series of evidence-informed principles of care for young adults with co-occurring psychiatric disorders derived by a workgroup of experts convened by Boston Medical Center's Grayken Center for Addiction. The 3 principles are as follows: (1) young adults should receive integrated mental health and addiction care across treatment settings; (2) care should be responsive to the needs of young adults exposed to trauma and other adverse childhood experiences; and (3) treatment programs should regularly assess and respond to the evolving mental health needs, motivations, and treatment goals of young adults with co-occurring disorders. Our guidance for each principle is followed by a review of the evidence supporting that principle, as well as practice considerations for implementation. More research among young adults is critical to identify effective treatments and service systems for those with co-occurring disorders.



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Over 50% of young adults (defined as individuals aged 18–25 years) with substance use disorders (SUDs) have at least 1 co-occurring psychiatric disorder.¹ When present together, psychiatric disorders and SUDs exacerbate one another, leading to more severe symptoms, lower treatment engagement and response, higher rates of relapse for both conditions, and worse prognoses, including a higher risk of suicide.^{2–4} Most psychiatric disorders begin by young adulthood⁵ and increase the risk of subsequent SUD development and persistence.⁶ Although successful treatment of childhood psychiatric disorders including attention-deficit/hyperactivity disorder, depression, and anxiety may mitigate some of this risk,^{7–10} most young adults with psychiatric conditions go untreated.^{4,11}

The association between psychiatric disorders and SUD also works in reverse: substance use can precipitate development of psychiatric symptoms. Rapid neuroanatomical and neurochemical maturation occurs during young adulthood, with corresponding cognitive, social, and emotional changes.¹² The transition to adulthood marks a time of biological vulnerability to the detrimental effects of substances. Substance use may impact critical developmental processes and predispose young adults to neuropsychiatric complications, including reduced cognitive function and episodes of psychotic and mood disorders.^{7,13,14}

Adequate treatment of co-occurring psychiatric conditions in young adults is imperative for the optimal treatment of SUDs, and successful SUD treatment is necessary to achieve maximum benefit in treating certain psychiatric conditions. Many barriers, however, exist to delivering high-quality treatment of co-occurring disorders, including those related to system design, provider training and expertise, patient motivation, and lack

of evidence-based treatments specific to young adults.

We communicate a series of evidence-informed principles of care for young adults with SUD and co-occurring psychiatric disorders, derived by a workgroup of experts in SUD among young adults, convened by Boston Medical Center's Grayken Center for Addiction. The workgroup developed 3 principles of care on the topic of co-occurring mental health disorders: (1) young adults should receive integrated mental health and addiction care across treatment settings; (2) care should be responsive to the needs of young adults exposed to trauma and other adverse childhood experiences (ACEs); and (3) treatment programs should regularly assess and respond to the evolving mental health needs, motivations, and treatment goals of young adults with co-occurring disorders. The recommendations in this article are not American Academy of Pediatrics policy, and publication herein does not imply endorsement.

CARE PRINCIPLES

Principle 1: Young Adults Should Receive Integrated Mental Health and Addiction Care Across Treatment Settings

Guidance

The workgroup concluded that recognition of co-occurring psychiatric disorders and SUDs among young adults should inform clinical management. Treatment of co-occurring substance use and psychiatric disorders in young adults should ideally involve a triad of specialists working in conjunction: addiction specialists, mental health clinicians, and medical providers. These clinicians should collaborate both on the care of individual patients and at a systems level.

At the individual level, the working group identified joint treatment

planning, care coordination, and regular communication about diagnoses, symptoms, and functional impairment as vital aspects of high-quality SUD care for young adults. The group agreed that treatment planning should consider evolving symptoms and needs and address disruptions of important developmental milestones (eg, academic failure or employment difficulties) that are common sequelae of psychiatric disorders and substance use. The working group noted that care coordination should specifically include assistance with level of care transitions, provider referrals, securing community resources, and addressing other logistic barriers to care. Facilitation of joint treatment planning among providers, patients, caregivers, and nonhealthcare sector personnel is also critical.

At the systems level, the working group determined that collaboration among clinicians should include interdisciplinary case conferences and cross-training to enhance knowledge, build interpersonal and professional connections across settings, and bridge culture divides that can underlie potentially conflicting treatment recommendations. The working group emphasized that clinicians should make every effort to set up systems that do not inadvertently exclude patients with co-occurring disorders from care. Clinicians should establish care delivery workflows based on the setting where patients first present (inpatient, outpatient, or emergency department) to ensure that collaborative, multidisciplinary services and care planning can be established from each setting.

Evidence

McGovern and colleagues proposed the quadrant model (Fig 1) in 2002 as a framework for integrating care for patients whose symptom severity varies along the 2 axes of SUD and

psychiatric disorder.¹⁵ The proposed integration strategy differs on the basis of the quadrant that best describes the severity of a patient's psychiatric and addiction symptoms. Initial validity and feasibility studies in adults indicate that the model accurately characterizes patients and their needs.^{16,17}

The greatest evidence for integrated care exists for adults with severe mental illness (SMI; defined as chronic, long-term psychiatric disorders¹⁸) and SUDs, who fall into quadrants II (SMI plus mild SUD) and IV (SMI plus severe SUD) and receive services largely through mental health agencies. In their 2001 review, Drake et al¹⁸ described the evidence supporting dual diagnosis services (in which a single team, usually at a mental health agency, provides care for both disorders) for patients with SUD and SMI. They identified several critical components of these programs (Table 1) supported by results from 8 studies that demonstrated improved outcomes for patients receiving dual diagnosis treatment.¹⁸ They also suggested that mental health agencies caring for patients with SMI should designate a clinical leader to ensure availability of dual diagnosis services for patients within the agency. Otherwise, there may be cases in which acute psychiatric treatment may be needed first because of safety concerns, such as acute suicidality or psychosis.¹⁹

For patients in quadrant I (mild SUD and mild psychiatric disorder), in which there is likely to be a disproportionate number of adolescents and young adults, an increasing body of literature supports the integration of care for both disorders in the primary care setting, particularly as part of the patient-centered medical home (PCMH).^{20,21} In the PCMH, the primary care practice coordinates care for patients with chronic conditions across multiple providers and episodes of care.^{20,21} Evidence reveals that

patients are more likely to access psychiatric care when integrated mental health providers conduct evidence-based interventions within primary care or collaborate with off-site mental health providers.²¹

The collaborative care model has the most evidence for integrating either mental health or SUD treatment within primary care.²² Collaborative care involves a multidisciplinary team of providers (typically a masters-level care manager, specialty mental health provider, and primary care provider) working together to systematically identify and evaluate patients; provide evidence-based treatment using stepped care algorithms; and use patient reported measures to monitor progress and guide next steps.²³ Collaborative care improves engagement in care and outcomes for adolescents and young adults with psychiatric disorders,²¹ and a small body of literature has begun to support its use for individuals with SUDs.^{21,24,25} Evidence also supports screening young adults and adolescents in primary care for substance use with validated tools such as the CRAFFT (Car, Relax, Alone, Forget, Friends, Trouble),^{26,27} and for psychiatric symptoms with validated tools such as the 9-item Patient Health Questionnaire.²⁸ The US Preventive Services Task Force recommends screening for substance use in adults when appropriate follow-up services could feasibly be provided (grade "B" recommendation) but found insufficient evidence to make a recommendation on screening adolescents.^{29,30}

For young adults in quadrant III of the quadrant model, there is emerging support for specific strategies, most notably the Adolescent Community Reinforcement Approach (A-CRA).³¹ Numerous randomized trials among adolescents and young adults have demonstrated the efficacy of the A-CRA, adapted from its adult

version, to reduce both SUD and psychiatric symptoms in youth with co-occurring conditions.³¹ A-CRA is a treatment based on positive reinforcement and operant conditioning principles for reducing substance use. The manualized intervention incorporates treatment strategies for individuals with co-occurring conditions, such as delivering evidence-based therapies for co-occurring conditions and facilitating adherence to psychotropic medication. Some psychopharmacological studies have supported concurrent medication management for co-occurring disorders in the outpatient setting, although the effect of such management varies by condition. For example, among 170 men and women aged 21 to 75 years with co-occurring depression and alcohol dependence, sertraline plus naltrexone led to significantly higher abstinence rates and longer time to relapse.³² However, this is not the case for all conditions and presentations, and some may necessitate sequential treatment. For example, it may be necessary to delay the prescription of controlled medications for a psychiatric condition until an SUD is stabilized (as in the treatment of attention-deficit/hyperactivity disorder among young adults, who are at risk for misuse and diversion of stimulant medication).^{33,34}

Despite the evidence for integrated treatment of co-occurring disorders, mental health and addiction care is still rarely integrated within one system or provider team,²⁰ which can lead to one disorder going undetected and untreated,³⁵ or to conflicting treatment recommendations (eg, peer-support groups such as 12-step programs may discourage patients from taking psychotropic medications,³⁶ and psychiatric treatment programs may require a commitment to abstinence³⁷). When this happens, treatment in either scenario may be rendered less

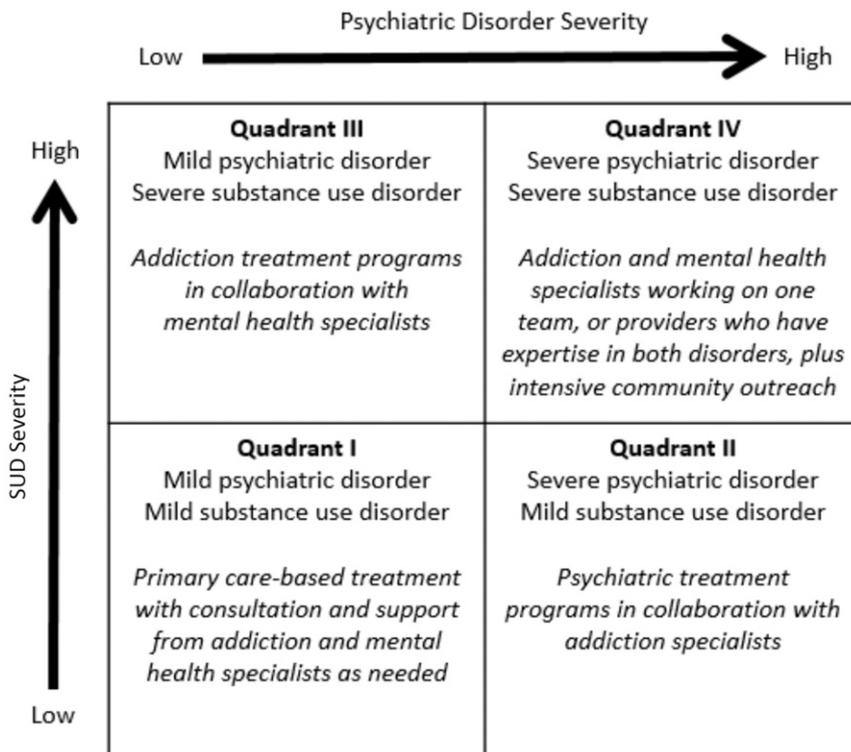


FIGURE 1 The 4-quadrant model of care for co-occurring substance use and psychiatric disorders adapted from Substance Abuse and Mental Health Services Administration and McGovern et al.^{15,16}

effective. More evidence is needed for specific interventions and systems-level strategies to provide optimally integrated care for adolescent and young adult patients.

Practice Considerations

The PCMH may be an important point of treatment entry for young adults with co-occurring disorders who are particularly difficult to engage in care.⁴ Many young adults, however, may cease pediatric care without

establishing adult primary care and thus have no medical home. This age group is less likely to be insured, have a primary care provider, or receive preventive medical care than any other age group.^{38,39} In contrast, some young adults and their families who are engaged with pediatric care may resist transitioning to adult services, in part from concern that adult providers may not be as responsive to developmental needs.^{38,40} Therefore, a specialty

addiction or mental health program may step in to coordinate care when a patient has no medical home or during acute episodes requiring higher level care.

PRINCIPLE 2: CARE SHOULD BE RESPONSIVE TO THE NEEDS OF YOUNG ADULTS EXPOSED TO TRAUMA AND OTHER AGES

Guidance

The working group agreed that settings and providers that treat young adults for SUDs should be equipped to provide both trauma-informed and trauma-specific services (Fig 2). Trauma-informed services represent approaches to care that are applied to all patients. These approaches assume that trauma exposure is common and thus an expectation rather than an exception.⁴¹ Trauma-specific services are directed at trauma-related distress, symptoms, and impairment⁴² and are reserved for individuals with trauma-related mental health diagnoses, such as posttraumatic stress disorder (PTSD).

Having a history of trauma may make it difficult for some young adults to engage in treatment. Therefore, the working group agreed that repeated assessment of trauma exposure, symptoms, and reactions, as well as safety planning to reduce risk for additional trauma (eg, violence victimization), are critical aspects of quality SUD care for young adults.

TABLE 1 Critical Components of Dual Diagnosis Programs

Component	Description
Intervention staging	Responding to a patient's needs and motivations as they change over time during a treatment relationship.
Assertive outreach	A strategy for engaging patients and their supports in care, typically with home-based outreach and intensive care management.
Motivational techniques	Use of motivational interventions to help patients identify their own goals, explore ambivalence, and ultimately recognize that management of their disorder is needed to attain those goals.
Therapeutic support	Counseling that includes cognitive and behavioral therapeutic strategies, which can be delivered in single or multiple formats including individual, group, and family.
Strengthening social supports	Activities to strengthen the social environment, including those incorporating family or social network interventions.
Chronic perspective	Incorporating long-term support for patients through multiple treatment phases including rehabilitation and relapse prevention.
Comprehensive services	Integrating services across specialties and domains, including addressing social determinants.
Cultural competence	Adapting to cultural and other local circumstances while keeping important evidence-based intervention components.

Source: Drake et al.¹⁸

The working group emphasized that SUD providers should be aware that some aspects of care may produce heightened distress among trauma survivors and lead to treatment disengagement.⁴³

Evidence

Trauma Exposure and ACEs

Trauma and ACEs, including physical or sexual abuse, neglect, or family dysfunction, are common in the general population. However, individuals who use substances are more likely to have been exposed to trauma and other ACEs and are more likely to develop subsequent physical and psychological consequences.^{44,45} An estimated 75% of adults in substance use treatment report interpersonal abuse and trauma histories.⁴⁶ Whereas 13% of adults in the general population report exposure to 4 or more ACEs,^{47,48} 84% of those with SUD report such exposure.⁴⁹ Among the adult population, a dose-response relationship has been documented between number of ACEs and a range of negative health outcomes, including increased risk for SUDs, psychiatric disorders including depression, and suicide attempts.^{50,51} One study found that adults with 4 ACEs (versus none) were twice as likely to report heavy drinking and 3 times as likely to report alcohol problems in adulthood.⁵² ACEs and childhood trauma are associated with worse outcomes in substance use treatment, including higher severity of and shorter time to relapse.^{53–55}

Assessment of Trauma History, ACEs, and Related Mental Health Problems

PTSD is one potential mental health consequence of traumatic events. Traumatic events are experiences meeting Criterion A for a diagnosis of PTSD (ie, exposure to life threat, serious injury, or sexual violence).^{46,56} Standardized tools to assess trauma exposure and related distress have been validated in

populations with co-occurring substance use, but evidence suggests that they are seldom implemented in SUD treatment settings.⁵⁷

Authors of 2 high-quality systematic reviews outline the best assessment tools for PTSD among adults and adolescents,^{58,59} including the PTSD Checklist for *DSM-5*⁶⁰ and the Life Events Checklist.⁶¹ The Primary Care PTSD Screen⁴⁹ can be used as a brief screener for PTSD, followed by a diagnostic assessment.^{58,60} Standardized assessments also exist for ACEs, including the Centers for Disease Control and Prevention–Kaiser Permanente Adverse Childhood Experiences Questionnaire,⁶² Behavioral Risk Factor Surveillance System (BRFSS) ACE⁶³ items, and the Center for Youth Wellness Adverse Childhood Experience Questionnaire (CYW ACE-Q).^{64,65}

Trauma-Informed Services

We are not aware of any randomized studies examining the efficacy of trauma-informed care; thus, our recommendation for trauma-informed services comes from observational data. The absence of data supporting trauma-informed services is largely due a lack of standardization of services or interventions, which leads to an inability to assess causal effects of specified approaches on clinical outcomes⁶⁶ or to draw comparisons across studies. In practice, trauma-informed care typically involves staff trainings to promote awareness about biases and practice considerations for vulnerable populations. Findings from a systematic review suggest that these trainings improve provider knowledge across a variety of child-serving settings,⁶⁶ but none has examined patient outcomes. Thus, there is a need to standardize trauma-informed services and test their effect on provider behaviors and patient outcomes.

Trauma-Specific Services

Several efficacy and effectiveness studies have found that treatment of PTSD can reduce substance use but that treating substance use has minimal impact on PTSD symptoms.⁶⁷ For example, a treatment study in women with dual PTSD-SUD diagnoses found a temporal association between PTSD symptom reduction and number of days of substance use.⁶⁷ Thus, PTSD-specific treatments may be warranted within substance use programs, and these may include established evidence-based PTSD treatments or dual PTSD-SUD treatments.

There are several evidence-based therapies for PTSD for adolescents and adults, based largely on cognitive behavioral therapy models, and there are several systematic reviews and meta-analyses on psychotherapies for PTSD.⁶⁸ Common components across evidence-based therapies for PTSD include psychoeducation, relaxation training, exposure, and cognitive restructuring. PTSD treatments with the strongest evidence include cognitive processing therapy, prolonged exposure therapy, and eye movement desensitization and reprocessing. Cognitive processing therapy and prolonged exposure therapy have demonstrated effectiveness for use with adolescent and young adults with PTSD,^{69,70} but there is scarce evidence on their use for co-occurring PTSD and SUD; only preliminary research exists in dually diagnosed adults.^{71–74} As an example of how treatments can be tailored for youth and young adults, developmentally adapted cognitive processing therapy includes a preparation phase to enhance motivation, emotion, and behavior management techniques for high risk behaviors, recognition of developmental tasks (ie, education about abusive partners, inclusion of social network), and a massed delivery of sessions (ie, >1 per week)

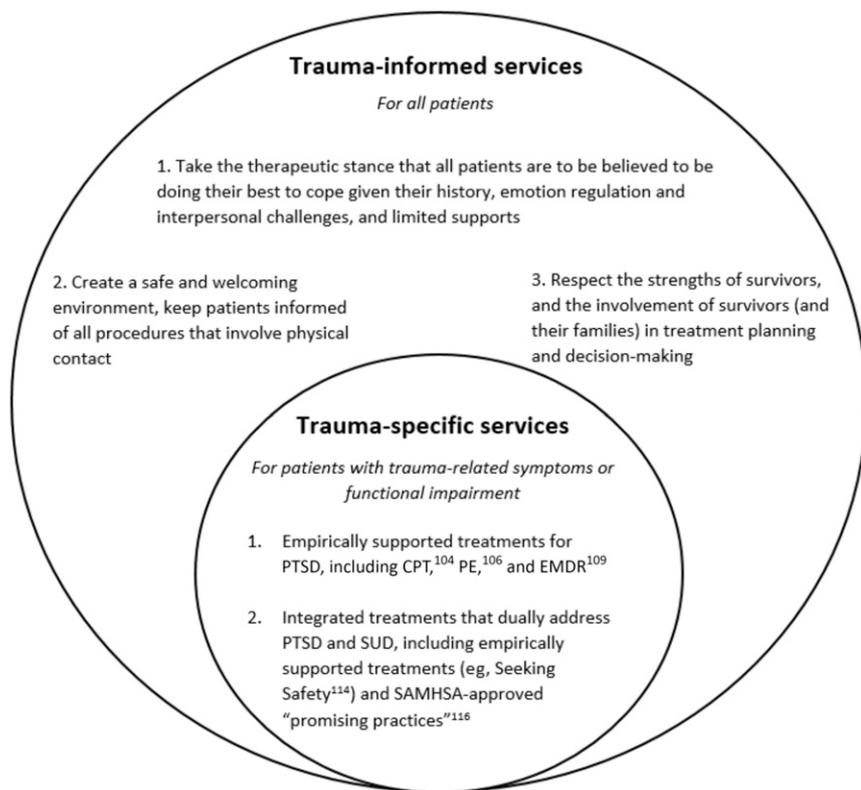


FIGURE 2

Schematic of trauma-informed and trauma-specific services for young adults with co-occurring substance use and psychiatric disorders. CPT, cognitive processing therapy; EMDR, eye movement desensitization and reprocessing; PE prolonged exposure therapy; SAMHSA, Substance Abuse and Mental Health Services Administration.

to capitalize on fluctuations in motivation.⁷⁵

Several integrated treatments have been developed recently to dually target substance use and PTSD symptoms,⁶⁷ but only Seeking Safety has preliminary evidence for effectiveness with young adults.⁷⁶ Seeking Safety is a present-focused therapy that focuses on cognitive, behavioral, and interpersonal coping skills and case management needs of clients.⁷⁷ It can be delivered in individual or group format. Integrated treatment combines cognitive behavioral therapy components from evidence-based treatments for PTSD and SUD (eg, relapse prevention).⁷⁸ There are several widely used, Substance Abuse and Mental Health Services Administration–approved integrated treatments considered “promising

practices” without strong efficacy data.^{44,45} Programs should consult the National Trauma Consortium guidelines to stay abreast of current best practices.⁷⁹

There are medications with moderate efficacy for PTSD symptoms but a limited number of studies in individuals with co-occurring disorders.⁸⁰ The best evidence exists for selective serotonin reuptake inhibitors, which have been shown to reduce PTSD symptoms in adults with co-occurring alcohol use disorder and PTSD.⁸¹

Practice Considerations

Trauma survivors report distress in care settings related to themes of trust, safety, and sense of agency. In some cases, clinical experiences (such as physical touch, a provider’s physical appearance, or loud noises)

may be reminders of a traumatic event and prompt distress. Therefore, providers should aim to develop trust over time, provide care in an unhurried fashion, talk about procedures before doing them, and validate and normalize concerns.⁴³

Trauma-informed providers and systems may also establish procedures to reduce risk of additional trauma exposure in patients’ lives, especially in the context of familial or dating relationships. This could include addressing housing and financial circumstances that increase vulnerability to victimization or providing psychoeducation on healthy relationships (eg, to improve selection of partners with lower violence risk) and connection to additional community resources (eg, shelters, advocacy groups).

Provider-initiated assessment of trauma history is critical. Providers may be hesitant to ask about trauma because of concerns about upsetting patients or not having resources to offer after disclosure. However, requiring patients to be forthcoming about trauma history is problematic for multiple reasons. First, studies reveal patients are often unaware of the relationship between trauma exposure and current substance use.⁸² Therefore, patients may not mention past trauma because they do not recognize its relevance. Survivors may also be reluctant to disclose trauma because of shame and guilt, fear of judgment, or concern about resulting family discord.⁸³ Reluctance to disclose trauma or engage in trauma-specific services may also be due to symptoms of PTSD, such as avoidance of the trauma memories and reminders.

For providers who have concerns about patients’ distress during these assessments, the literature provides some reassurance. One study found that even lengthy and sensitive trauma assessments were acceptable

to most female subjects surveyed about assessments they had completed for a randomized controlled trial of PTSD treatment.⁸⁴ Brief upset may occur for some patients but is not counterproductive. For example, Resick et al⁸⁴ found that those who endorsed greater upset during assessments were more likely to complete PTSD-focused treatment, suggesting it may have facilitated insight-building about the importance of treatment.

PRINCIPLE 3: TREATMENT PROGRAMS SHOULD REGULARLY ASSESS AND RESPOND TO THE EVOLVING MENTAL HEALTH NEEDS, MOTIVATIONS, AND TREATMENT GOALS OF YOUNG ADULTS WITH CO-OCCURRING DISORDERS

Guidance

The working group noted that treatment needs, preferences, and priorities may be particularly dynamic among young adults, changing regularly on the basis of motivation for treatment, support from family and peers, and the evolution and episodic nature of symptoms and severity. Thus, all providers and systems who care for these patients should regularly reassess symptoms and treatment goals and remain attentive to patients' changing motivations. Use of evidence-based and developmentally informed strategies that promote motivational enhancement and build therapeutic alliance is imperative for the challenge of engaging young adults in care and treatment planning for co-occurring conditions.⁸⁵ Providers and systems should also work to address barriers to accurate assessment of young adults who may have co-occurring conditions, which include separating symptoms of an existing or emerging psychiatric disorder from sequelae of intoxication or withdrawal; lack of access to expert evaluation because of scarcity of specialists or high cost; and lack of patient motivation for evaluation (eg, due to the perception

that evaluation is unnecessary, or to self and social stigma).⁸⁶

Evidence

Ambivalence regarding behavior change and treatment is expected,⁸⁷ and young adults face multiple unique barriers to engagement in care. Adolescence marks the beginning of a progression of health care disengagement.⁸⁸ Young adults have the highest uninsured and unemployment rates in the United States of any age group and, thus, may experience more financial barriers to obtaining treatment.^{89,90} Adolescents and young adults, particularly males, may also hesitate to disclose symptoms or accept treatment due to fear of public stigma (societal and familial negative attitudes toward addiction and mental health treatment)⁹¹ and self stigma (internalized negative feelings toward oneself because of perception of public stigma).^{92,93} Young adults from immigrant and minority groups face cultural factors that heighten stigma, disparities in health care access and quality, and discrimination, inducing cultural stress and poor trust in health care.⁹⁴

Therefore, providers should use evidence-based strategies designed to increase engagement in and motivation for care, including motivational interviewing (MI), motivational enhancement therapy (MET), and shared decision-making. MI is a treatment approach based on the stages of change theory that helps patients develop intrinsic motivation to change problematic behaviors.⁸⁷ Although initially developed to target substance use, MI has shown promise for use with young adults with co-occurring psychiatric and SUD.^{95,96} For example, researchers in one randomized controlled trial found that an integrated model of MI and cognitive behavioral therapy for young adults with comorbid schizophrenia and SUD led to both reduction in positive symptoms of

schizophrenia and an increase in abstinent days over a 12-month period.⁹⁵ In another randomized study, psychiatrically hospitalized adolescents with co-occurring conditions who were randomly assigned to a 2-session MI intervention versus treatment as usual had both a longer latency to first use as well as less use in 6 months postdischarge.⁹⁶

MET is another evidence-based technique for the treatment of SUD. MET includes MI plus formalized feedback to the patient on their current substance use⁴² and moves the young person toward identifying her own goals and values in treatment, desires for change, readiness, and expectations for achieving sobriety. Preliminary evidence suggests that MET could also benefit certain populations of adolescents and young adults with co-occurring disorders.⁹⁷ For example, over 2 years, researchers in one randomized controlled trial found that adolescents ages 15 to 20 years with comorbid major depressive disorder and alcohol use disorder who received an intervention combining cognitive behavioral therapy and MET had significantly greater reduction in both depressive symptoms and alcohol use disorder compared with those who did not receive the intervention.⁹⁷

Shared decision-making is an approach for partnering with patients and families to select medical treatments in a patient and family-centered manner, with evidence supporting its use for multiple medical conditions.⁹⁸ Shared decision-making offers a structured process for collaboratively exploring the potential consequences of treatment options, and for making choices in the context of individual values and preferences.⁹⁹ Although shared decision-making is a useful concept with evidence in other areas of medicine, there are limited data on its effectiveness in SUDs and mental

illness.¹⁰⁰ One randomized controlled trial found a reduction in both substance use and psychiatric symptoms with the use of a shared decision-making intervention compared with usual protocols for deciding treatment options.⁷⁵

Practice Considerations

Developmentally, young adults undergo the major psychological task of recentering,¹⁰¹ referring to the change that individuals experience as their center of self-reference transitions from one of dependence (ie, on parents) to independence.¹⁰¹ During this stage, the young adult shifts from a receiver of guidance to a more independent and collaborative decision-maker. Treatment that is responsive to this developmental milestone by placing young adults at the center of decision-making may be important for engaging young adults with co-occurring disorders in care. At the same time, family and other loved ones can play a critical role in treatment. Providers can engage families by providing information about evidence-based options and orienting them to the importance of motivational approaches and shared decision-making. Families may need support and encouragement to give young adults space and time for weighing decisions, building trust with providers, overcoming stigma, and prioritizing care. Young adults have the authority to decide on the role of family and other loved ones in their care.

CONCLUSIONS

Young adults with co-occurring psychiatric and SUDs present a vulnerable and difficult to engage, yet potentially resilient, population with appropriate treatment. Systems and providers should consider putting in place the necessary steps and supports to detect, monitor, and treat co-occurring conditions. These steps include partnerships with other providers and settings to deliver

collaborative care; the use of both trauma-specific and trauma-informed interventions; and continual reassessment of symptoms and goals throughout treatment, facilitated by the use of motivationally-based and shared decision-making strategies. Research specifically with young adults is critical to further identify the most effective treatments for patients in this age group with co-occurring disorders, and how best to implement them.

ABBREVIATIONS

ACE: adverse childhood experience
A-CRA: Adolescent Community Reinforcement Approach
MET: motivational enhancement therapy
MI: motivational interviewing
PCMH: patient-centered medical home
PTSD: posttraumatic stress disorder
SMI: severe mental illness
SUD: substance use disorder

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