Personal and Socioeconomic Determinants in Medication-assisted Treatment of Opioid Use Disorder in Adolescents and Young Adults

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ABSTRACT

Opioid use disorder (OUD) is a pediatric and adolescent problem as most young adults (aged <25 years) in treatment programs report initiating use before 25 years of age, and there are lifelong impacts from early substance use necessitating early screening for opioid use and subsequent treatment. Medication-assisted treatment (MAT) is a highly effective intervention for OUD, and there is strong evidence for its use with adolescents; however, most adolescents with OUD are unable to access MAT or remain in MAT long term to achieve substantial recovery. Using case examples drawn from a pediatric and adolescent physician's experiences proving MAT to adolescents and young adults (ages 16–24 years), this article explores the personal and socioeconomic determinants in MAT of OUD in adolescents and young adults and provides suggestions for advocacy areas and resources to improve MAT with this population. (*Clin Ther*. 2019;41:1669–1680) © 2019 Elsevier Inc. All rights reserved.

Keywords: addiction, adolescent, medication-assisted treatment, opioid use disorder, substance use.

INTRODUCTION

Opioid use disorder (OUD) is a pediatric and adolescent problem as most young adults in treatment programs report initiating use before 25 years of age, and there are lifelong impacts from early substance use necessitating early interventions for opioid use. The 2017 National Survey on Drug Use and Health reports that, daily, an average of 886 youth aged 12–17 years and an average of 1273 youth aged 18–25 years initiate use of prescription medications. For heroin use, the average number of youth who initiated use each day was 25 and 126 persons ages 12–17 years and 18–25 years, respectively.[1] Among adults aged 18–30 years in substance use disorder (SUD) facilities primarily for treatment of prescription pain medication abuse, 22% report initiation between ages 18 and 24 years, 14% between ages 15 and 17 years, 12% between ages 12 and 14 years, and 10% aged <12 years. Among adults aged 18–30 years in SUD facilities primarily for treatment of heroin use, 27% report initiation between ages 18 and 24 years, 17% between ages 15 and 17 years, 15% between ages 12 and 14 years, and 10% aged <12 years.[2] Individuals who initiate substance use during adolescence and young adulthood are at substantial risk for long-term worse outcomes, morbidity, and mortality.[3–5] In 2017, there were 4173 opioid overdose deaths among individuals aged 0–24 years,[6] with unintentional poisoning (including medication and all illicit substances) accounting for the second highest number of accidental deaths in this age group.[7]

Medication-assisted treatment (MAT) is a highly effective intervention, and the evidence is strong for its use with adolescents.[8–10] In 2002, the US Food and Drug Administration (FDA) approved the use of buprenorphine for patients aged ≥16 years. Buprenorphine is a partial opioid agonist, available in dissolvable films or tablets, that patients may self-administer as outpatients or as a monthly injectable depot preparation.[11,12] In 2019, the National Academy of Sciences published a comprehensive

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report ("Medications for Opioid Use Disorder Save Lives") that explored the evidence base on MAT for OUD.[13] Multiple studies have validated the efficacy of buprenorphine treatment in adolescents and shown its superiority over abstinence-based treatment programs,[8–10] although there are only 3 randomized controlled trials that have generated data using buprenorphine and buprenorphine/naloxone to treat adolescents and young adults with OUD.[9,10,14] In 2016, the American Academy of Pediatrics published a policy statement endorsing the use (and research) of MAT for opioid addiction among adolescents and young adults and noted oral buprenorphine as the preferred medication.[15]

Despite the effectiveness of MAT, individual and system-wide substantial challenges remain to obtaining MAT and maintaining sobriety while receiving MAT. To better understand the challenges of MAT, this commentary provides an overview of some of the social and economic risk factors for adolescent opioid misuse and abuse, as these same factors continue to affect patients' lives while they are seeking or in MAT.

SOCIAL AND ECONOMIC RISK FACTORS TO ADOLESCENT OPIOID MISUSE AND OUD

Case Example One

A.J. is an 18-year-old man from a working-class urban community who presents to a buprenorphine treatment program for MAT for OUD. A.J.'s mother was a teen parent and has a history of cocaine use disorder. A.J.'s grandparents mostly raised him. He struggled in school for most of his life and, in high school, he started using drugs and alcohol, including prescription opioid medications. A.J. dropped out of high school after spending a few days in jail for assault and battery. Since then, he has struggled to achieve steady employment, housing, or reliable transportation. He now crushes and sniffs opioid pain medications, which he says are necessary to prevent acute withdrawal, anxiety, and insomnia. He is in regular contact with his mother and friends who are using drugs and alcohol. A.J. presents to a clinic to start MAT although he has already started using buprenorphine he obtained "on the street."

Adolescent substance use is a complex problem with many underlying familial, social, and individual risk factors including, but not limited to, familial issues, physical/mental/sexual abuse, neglect, deviant peer relationships, peer pressure and popularity, bullying gang affiliation, attention-deficit/hyperactivity disorder (ADHD), and mood disorders.[16,17] A complete discussion of all factors is outside the scope of the current article, but the National Institute on Drug Abuse presents a comprehensive discussion on its website and in the publication "Preventing Drug Use Among Children and Adolescents."[18] Genetic, familial, and environmental exposure to substance use has been shown to substantially increase the risk of SUDs.[19–21] Genetic studies of adopted children, twins, and extended families exhibit moderate to strong genetic components regarding the predisposition to developing SUDs.[22] The child and adolescent's environment may be as influential as genetics. Parents and peers can be both risk and protective factors depending on their relationships, attitudes, and patterns of substance use. Protective factors include positive parent–child relationships, parental communication and monitoring, healthy parental behaviors and attitudes, schools with anti–drug use policies, strong neighborhood attachment, and engagement in extracurricular activities.[16–18]

Adolescents who witness their parents or other significant adults using drugs or expressing attitudes that are tolerant of drug use may be inclined to experiment with drugs, acquire accepting attitudes toward drug use, and choose friends who use drugs.[23] In a large-scale study, the authors found that the most influential factors (in order of magnitude) on adolescent substance use were peer use, sibling use, parental tolerance of use, and witnessed parental use.[24] Another study showed that parental nonmedical prescription opioid use, lack of parental monitoring, lack of parental support, and family conflict increased adolescent nonmedical prescription opioid use.[25]

Mental health issues such as anxiety, ADHD, posttraumatic stress disorder, and depression significantly affect and overlap with adolescent substance use.[26–30] It is difficult to identify data that discriminate between preexisting mental health diagnoses and co-existing SUDs. There are limited longitudinal studies of substance use and mental health disorders of adolescents and young adults, with mixed results, but most data suggest reciprocal, positive correlations of substance use and mental health disorders during early adolescence through

early adulthood.[31–34] The 2017 National Survey on Drug Use and Health showed that adolescents ages 12–17 years with a history of a major depressive episode were nearly twice as likely to report an SUD compared with their peers. Of adolescents who reported an SUD, one third reported a co-occurring major depressive episode.[1] Children with ADHD are ~2 times more likely to develop an SUD compared with their peers.[35,36] Substance use may affect the brain in such a way to increase risk for mental health issues, or adolescents may participate in substance use as a way to self-medicate underlying mental health issues. Another study showed that individuals who met criteria for an OUD were more than twice as likely to have any anxiety-related diagnosis and more than 3 times as likely to have generalized anxiety disorder compared with adolescents who used primarily nonopioid substances.[37]

Adolescents who have experienced trauma (eg, physical abuse, sexual abuse, neglect, family violence) have an increased risk of SUDs. In a study of adolescents aged 11–24 years receiving treatment in a SUDs clinic, 6% of participants reported posttraumatic stress disorder with increased risk for all categories of SUD with the exception of benzodiazepines.[38] A study of urban adults found that the level of substance use (frequency, amount, and duration of use) strongly correlated with levels of childhood physical, sexual, and emotional abuse as well as current posttraumatic stress disorder symptoms. The National Epidemiologic Survey of Alcohol and Related Conditions showed that childhood physical abuse, emotional abuse, sexual abuse, emotional neglect, and physical neglect were associated with increased odds of all individual SUDs (including heroin and opioids as discrete categories) among men and women after adjusting for sociodemographic variables, with the exception of an association between physical neglect and heroin abuse or dependence.[39] In studying the impact of adverse childhood experiences, authors found a graded relationship between individuals' adverse childhood experience scores and the risk of drug initiation from early adolescence into adulthood and to problems with substance use, SUD, and parenteral use.[40] Any personal history of traumatic injury may increase the risk for opioid use; one study found that 56% of injured adolescents had an increased risk of developing an SUD within 3 years of their injury.[41] A large study of adolescent trauma patients ages 12–18 years found that >20% of injured adolescents filled two or more outpatient opioid prescriptions within 12 months of their discharge from the hospital. In addition, they reported that 1 in 8 adolescents were still taking prescription opioids at least 4 years after their injury.[42]

Adolescents who are at risk for academic failure or who have dropped out of school are likely to have substance use problems in combination with an array of other problem behaviors. It is difficult to discern which is the cause and which is the effect between poor academic achievement and SUD.[43] The 2017 National Survey on Drug Use and Health found that substance use was more likely among 12th grade aged dropouts than among those who were still in school. Dropouts reported any illicit substance use 1.7 times more and nonmedical use of prescription-type drugs 2.1 times more than 12th grade students.[44] Data from the National Youth Risk Behavior Survey showed that students with lower academic performance were more likely to report drug and alcohol use compared with peers with high academic performance.[45] A modeling analysis from the National Education Longitudinal Study suggests that substance use in high school is associated with reductions in the number of years of schooling completed.[46] Overall, data suggest a bidirectional relationship between academic performance and substance use.[47,48]

Finally, prescribers play an important role in the adolescent opioid use and misuse. In reviewing trends among commercially insured children aged ≤18 years, authors found that, in 2004, a mean of 3.3 per 1000 children and adolescents received an outpatient opioid prescription per month, which increased by 24% to 4.1 per 1000 children and adolescents between 2009 and 2012. From 2013 to 2017, there was a decrease to 2.1 per 1000 children and adolescents. A similar trend was observed for long-term opioid use.[49] Another study of adolescent patients with either public or private insurance showed an overall decrease in short-term (<3 days) opioid prescriptions and an increase in longer term (4–15 days) prescriptions between 2005 and 2015. In 2016, there was a substantial increase in 1-day opioid prescriptions.[50] These trends mirror the nation's opioid epidemic. In a large retrospective analysis of opioid-naive postoperative patients,

Harbaugh et al[51] found that opioid use persisted (prescriptions filled >90 days' postoperation) in 5% of patients (4267 patients), ranging from 2.7% to 15.2% across surgical procedures. In addition, patients with persistent opioid use filled additional opioid prescriptions of substantial quantity, with an average prescription of 200−300 oral morphine equivalents up to 6 months after surgery. Familial use of opioids also influences adolescent use. In a 2019 study, researchers found a significant positive association between nonmedical prescription opioid use by parents and adolescents: 14% of adolescents had nonmedical prescription opioid use in their lifetime if a parent had also done so compared with 8% when a parent had not used.[25]

BARRIERS TO RECEIVING MAT

Case Example Two

H.B. is a 19-year-old woman who started using prescription pain medications when she was 16 years old after a softball injury. She graduated high school and is attending community college. In the past year, she started injecting heroin or fentanyl. H.B. is now in a residential rehabilitation SUD treatment program for teenagers and young adults. She desires to start MAT with buprenorphine and is pleased she finally was able to get into a local MAT clinic. She presents to the clinic for intake with the social worker and is then scheduled to see the physician the following week. She mentions that it may be difficult for her to attend her physician intake appointment as the residential program has very strict rules about leaving the facility and the overall philosophy of the program is complete abstinence from all drugs and alcohol, including MAT. H.B. has tried complete abstinence before and is insistent that she can only succeed with MAT.

Case Example Three

J.E. is a 21-year-old woman who has been using heroin for ~6 years. She has tried a variety of treatment programs and believes that buprenorphine MAT has been the most successful. She maintained sobriety for ~1 year until her insurance lapsed. J.E. now has public insurance, but it took her 3 months to schedule an appointment with a buprenorphine provider because she had to see a primary care provider first to obtain a referral to the buprenorphine provider. After J.E. sees the buprenorphine provider, she tries to fill her prescription, but the pharmacy tells her that her insurance requires a prior authorization from the prescriber.

Case Example Four

V.L. is an 18-year-old single parent who does shift work for a large company, receiving minimum wage. She has been in MAT with buprenorphine before with a prolonged period of sobriety. She presents for treatment in this clinic after her previous provider stopped prescribing buprenorphine. She must travel ~1 h each way on public transportation to appointments, scheduling her appointments around work and child care.

Despite the proven effectiveness of MAT with buprenorphine, substantial obstacles to obtaining treatment exist. Overall, 42.3% of all US counties have Drug Enforcement Administration−waivered buprenorphine providers (physician, nurse practitioner, or physician assistant). Most waivered providers are concentrated in large central metropolitan areas where 88% of these counties have at least one provider offering buprenorphine MAT. For small and medium metropolitan counties, 37%−49% do not have waivered providers, and for rural counties, 69% lack opioid-waivered providers.[52] Even the presence of a qualified trained provider may not guarantee access because physicians who are qualified may only prescribe buprenorphine to 30 patients in their first year. After 1 year of practice, physicians may apply to increase this limit to 100 patients, and then again to 275 patients after their second full year of practice.[53] Although the American Academy of Pediatrics endorsed buprenorphine MAT as a preferred treatment for adolescents with OUD, access for adolescents is substantially limited compared with adults. Only 2% of adolescents in treatment for heroin received MAT, compared with 26% of adults. Less than 1% of adolescents in treatment for prescription opioids received MAT, compared with 12% of adults.[54] Studies show that most adolescents are only offered abstinence-based treatment for OUDs.

If adolescents identify a buprenorphine MAT provider, the additional barriers of insurance acceptance, required specialty referrals, and prior authorization to fill prescriptions impede treatment. Persons with OUD are substantially more likely to

lack insurance. One large-scale study found that 30% of persons with OUD had no insurance.[55] Without insurance, buprenorphine treatment costs from $1000 (for a generic buprenorphine/naloxone tablet) to $5000 (for a brand name buprenorphine/naloxone film) per year. Without insurance, MAT costs for medication and twice-weekly visits are approximately $115 per week or $5980 per year for a stable patient.[56] For patients who are insured, if their primary care provider does not provide MAT, then most patients will need a referral to a specialty provider for their insurance to cover those visits. This requirement creates additional delays in accessing MAT, especially if persons with OUD do not have a primary care provider. Many insurance companies require a prior authorization for buprenorphine, causing delays in dispensing MAT, often up to 72 working hours. There are limited studies that suggest prior authorization requirements increase relapse rates and decrease retention rates in MAT.[57,58] In one survey, 85% of physicians reported that prior authorizations interfered with continuity of patient care.[59]

Evidence for MAT with buprenorphine shows significant superiority over abstinence-based treatment in terms of long-term sobriety from opioids, yet many OUD treatment programs shun MAT.[60] Common myths regarding MAT include the following: (1) compulsive drug use is a choice; (2) MAT is a "crutch"; (3) MAT simply replaces one drug/addiction for another; (4) MAT prolongs rather than shortens addiction; (5) low doses and short periods of MAT maintenance result in better rates of long-term recovery; and (6) MAT maintenance patients should be encouraged to end methadone or buprenorphine treatment as soon as possible.[61] Another myth among primary care providers is that MAT is dangerous; however, primary care physicians regularly prescribe more dangerous treatments with more adverse effects, including anticoagulants, insulin, opioid pain medications, and antibiotics. In fact, abstinence-only OUD programs and lack of treatment are inherently more dangerous ways of approaching OUD as evidenced by nearly 48,000 opioid-related deaths in 2017.[62] Adolescents and young adults ages 15–24 years accounted for 4094 opioid deaths, nearly 10% of the total deaths,[63] and yet they are the population least likely to receive MAT.[54] Few data on buprenorphine deaths in the United States are available, but a large-scale study in the United Kingdom reported 52 buprenorphine-related deaths in a 6-year period, a rate of 0.022 death per 1000 prescriptions.[64]

Youth who attend treatment groups or live in residential facilities are frequently discouraged from using MAT to treat OUD.[65] For adolescents participating in such programs, lack of support may cause them to either forgo MAT, potentially placing them at greater risk for relapse, or to leave programs early, also placing them at risk for relapse. Youth seeking a sober support network often express feeling unwelcome at 12 step programs or not being "sponsored" until they are "sober" (meaning no MAT or other medications).[65,66] Without peer support, the risk of relapse or mortality significantly increases.[65]

BARRIERS TO REMAINING IN MAT

Case Example Five

C.J. is a 24-year-old single mother in recovery for heroin use whose father has alcohol use disorder and is prone to violent outbursts. She had been sober with MAT for 6 years. After an altercation with her father, C.J. left home and lived in a shelter with her child. Unfortunately, they were unable to stay in the shelter long term, and so her child is with another family member who does not allow C.J. to stay with them. She has been intermittently homeless and finds herself staying with people who are using opioids. After an attempted rape at a friend's home, C.J. relapses and uses heroin.

Case Example Six

C.A. is a 22-year-old father in MAT recovery from heroin use. He comes from a family with extensive history of alcohol use disorder. He has been in recovery for 6 months, doing well at a construction job. During an altercation at home, C.A. is arrested on an outstanding warrant from 2 years prior for theft of a pair of earphones. While detained in jail, C.A. loses his job and does not receive MAT. Within 24 h of release from jail, he relapses with fentanyl.

Finally, socioeconomic factors significantly affect patients' ability to achieve and maintain recovery in MAT. Common issues include transportation problems, living in communities in which youth continue to interact with persons still using drugs or alcohol, scheduling conflicts (eg, child care/school, employment, court dates), unstable housing or

homelessness, legal issues that require court hearings, being detained or incarcerated (which often takes them out of treatment), overall life chaos, and poor coping skills.[67,68]

Given the scarcity of MAT providers in many communities,[52] patients often must travel long distances to receive treatment. Barriers to transportation include not having a car, not having (or having lost) a driver's license, no money for gas, poor public transportation options, or lack of funds for public transportation or ride options.[69] Patients may be reliant on family members or friends for transportation, often with stigma or strings attached. Transportation issues may also impede employment opportunities or child care.

If a person with OUD continues to live in a household or community with significant drug or alcohol use, their sobriety is placed at risk. Risk factors include convenient availability of opioids, common use of opioids in public, and association with friends with OUD.[70] Studies have shown that relocating to a new community prolongs sobriety, and relocation to a less risky community is associated with even lower likelihood of relapse. In addition, return to a pre-sober community after prolonged abstinence and relocation increases the risk of resumption of drug use.[71–73]

Employment is essential to long-term recovery and survival,[74] but there is a paradoxical relationship between employment and treatment programs. Many programs or providers offer appointments during weekday hours, times in which persons may be required to work. If they are missing work due to MAT appointments, they risk losing money or their jobs, which may result in relapse. Conversely, if they are not able to participate in MAT, they are at high risk for relapse and unemployment.[75,76]

Homelessness is a substantial problem among individuals with OUD. Although studies vary, research consistently shows that more than one third of individuals who are homeless experience alcohol and drug problems.[77] A survey of 25 large US cities cited SUD as the most common reason for homelessness among single adults and unaccompanied youth.[78] Substance use is pervasive among homeless youth, with opioid use incidence rates as high as 27% of youth living on the street, 22% of youth living in shelters, and 19% of youth in unstable housing.[79] Homelessness itself is an independent variable for substance use and is impactful during the recovery period.[80,81] Individuals who return to the streets or unstable housing are more likely to relapse due to a variety of factors, including trauma, stress, persistent exposure to drugs and alcohol among homeless peers, drug dealing, or engagement in illicit income-generating activities.[81] Homeless youth also struggle with reliable transportation, lack of insurance, lack of valid identification or address, and lack of ability to communicate with medical providers, all impairing access to MAT.

Finally, court or legal involvement may impair long-term sobriety and maintenance in MAT. Many detained or imprisoned individuals struggle with SUD. In 2016, there were 450,345 individuals in jails and prisons for drug-related offenses.[82] The most recent National Inmate Survey found that more than one half (58%) of state prisoners and two thirds (63%) of sentenced jail inmates met the criteria for SUD, yet only 28% of prisoners and 22% of jail inmates had participated in a treatment program since admission.[83] During detention or incarceration, individuals with OUD who were receiving MAT are likely to relapse if they do not receive treatment.[84] Furthermore, one study showed that drug overdoses are the leading cause of death among former inmates after release from prison, representing nearly one quarter of all deaths.[85] A small percentage of the >5000 US prisons and jails, which house >2 million persons, allow access to the approved medication for SUD despite the National Commission on Correctional Care and the National Sheriff's Association endorsing and publishing guidance on MAT in jails.[86,87] Rhode Island is the first and only state to offer all FDA-approved MAT options in prisons and jails, and research shows that this program reduced postrelease deaths by 60% and all opioid-related deaths in the state by >12%.[88] In April 2019, the First District US Court of Appeals ruled a rural Maine jail must provide MAT to a woman on maintenance therapy.[89]

REDUCING BARRIERS TO MAT AND MAINTENANCE

Case Example Four Update

V.L. is an 18-year-old single parent who does shift work for a large company, receiving minimum wage. She has been in MAT with buprenorphine before

with a prolonged period of sobriety. She has been missing appointments lately and running out of medication. Urine toxicology screens have been negative for opioids, fentanyl, and morphine. During an appointment, you inquire about recent missed appointments. Since her family was evicted from their housing, they moved into a house much farther away, and she is having more difficulties with transportation. In addition, V.L. moved to the day shift at work, which she is happy about because she can take her son to school, but this change conflicts with her appointments. If she were to have appointments during the day, she must take the entire day off work, which she cannot afford. After the appointment, you confer with your social worker for solutions. The social worker determines that since the patient has Medicaid insurance, she qualifies for nonemergency medical transportation and helps her successfully apply for this option. Now that V.L. has stable transportation and has been sober for a long while, you agree to space out her appointments and see her in your evening clinic at your other clinical site. V.L. continues to maintain sobriety and consistently attends appointments. Your social worker suggests using a comprehensive screening program for social determinants of health for all patients.

The current article has explored key personal and socioeconomic determinants and barriers for successful MAT for OUD. Although the solutions to these problems are complex, the following steps may improve access and reduce barriers to maintaining sobriety while in MAT. Clinicians, professional societies, individuals, and policy makers may take some or all of the following actions: First, advocate for increased access to MAT through training of primary care providers, advanced practice providers, and providers who frequently care for persons with OUD (eg, obstetrics and gynecologists, psychiatrists, physiatrists, telemedicine providers, medical services within jails and prisons). The Substance Abuse and Mental Health Service Administration offers free online training at https://pcssnow.org/medication-assisted-treatment/. Second, advocate for MAT as first-line treatment for adolescents and young adults with OUD. Third, advocate for increased access to MAT by encouraging public and private insurance programs to eliminate referrals and preauthorization requirements. Fourth, reduce stigma surrounding MAT by educating individuals, medical health professionals, and the media that MAT is an effective, evidence-based therapy that improves lives and outcomes for all of society and use nonstigmatizing language. Fifth, screen all OUD patients upon entry to treatment and rescreen periodically for socioeconomic determinants of health using a standard screening tool such as the Accountable Health Communities Health-Related Social Needs Screening Tool (available at https://innovation.cms.gov/initiatives/ahcm/) or the Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE) (toolkit available at http://www.nachc.org/research-and-data/prapare/) (Table 1). Develop in-office resources/services, form community partnerships, advocate for local changes, and train staff to address socioeconomic determinants of health. Sixth, provide compassionate, nonjudgmental, flexible care to patients with OUD. Consider nontraditional office hours, flexible

Table 1. Resources.

Centers for Medicare and Medicaid Services: Accountable Health Communities Model	http://www.nachc.org/research-and-data/prapare/
Centers for Medicare and Medicaid Services: Non-Emergency Medical Transportation Services Booklet for Providers	https://www.cms.gov/Medicare-Medicaid-Coordination/Fraud-Prevention/Medicaid-Integrity-Education/Downloads/nemt-booklet.pdf
National Association of Community Health Centers: PRAPARE Toolkit	http://www.nachc.org/research-and-data/prapare/
National Institute on Drug Abuse	https://www.drugabuse.gov/drugs-abuse/opioids
Substance Abuse and Mental Health Services Administration	https://www.samhsa.gov/

medication prescribing, and modified attendance requirements for appointments to accommodate the many challenges persons with OUDs face and to ensure treatment engagement.

CONCLUSIONS

Opioid use disorder is a complex problem that most commonly originates during the adolescent and young adult period. Medication assisted treatment is a highly effective intervention for OUD. By understanding the social and personal determinants of OUD and barriers to MAT, providers may screen patients for these determinants, provide effective solutions or resources, and advocate to improve conditions for and reduce barriers to treatment for those suffering from OUD.

CONFLICTS OF INTEREST

The author has indicated that she has no conflicts of interest regarding the content of this article.

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