Clinical Quicknotes
on Substance Use Disorders

Substance Use Disorders
Center of Excellence

Medications for Opioid Use Disorder (MOUD) in Adolescents and Young Adults

Author: Mark Hurst, MD, FAPA
Edited by: Susan Painter, DNP, C-CNS and Phylicia Bediako, PhD, MSW
April 2024

Quick Takes

- Opioid Use Disorder (OUD) frequently begins adolescence and young adulthood
- Adolescent and Young Adult (AYA) OUD and lethal overdose rates areclimbing
- AYAs should receive effective, evidence-based treatment, including MOUD
- MOUD reduces mortality and is endorsed by the American Academy of Pediatrics and The Society for Adolescent Health and Medicine
- The benefits of MOUD almost always exceed any potential risks

Case History:

> *An 18-year-old high school senior presented for assessment with her parents two days after an opioid overdose. She was previously high functioning, with good academic performance and leadership roles on athletic teams. Recently, her academic performance and athletic involvement declined, and her peer group changed. She admitted to taking a "painkiller" from another athlete following an injury several months ago. Aside from pain relief, she used painkillers in increasing amounts because she liked how they made her feel. She and her parents are frightened by the overdose and want things to change.*

In the United States in 2022, 697,000 individuals between the ages of 12 and 24 had a diagnosable Opioid Use Disorder (OUD) and in 2021 over 6,000 people between ages 15 and 24 died from an opioid overdose, a 69% increase compared to 2019.1,2 Early identification and effective treatment of all substance use disorders (SUDs) in adolescents and young adults (AYAs) is essential to avoid the medical consequences, psychosocial consequences, and disruption in normal development that SUDs cause, helping AYAs lead lives that are productive and satisfying to them. The American Academy of Pediatrics (AAP) and The Society for Adolescent Health and Medicine (SAHM) strongly endorse all AYAs being offered MOUD as part of comprehensive treatment for OUD.[3,4]

The effectiveness, safety, and favorable side-effect profile of MOUD is well-established in individuals over the age of 18 (including young adults), with a growing literature base supporting the same in adolescents. MOUD is associated with improved retention in treatment, reduced use of illicit opioids, and substantial reduction in mortality.[5-7] Despite this evidence and the strong recommendations of AAP and SAHM, treatment of youth with MOUD is rare, with less than 5% of youth diagnosed with an OUD and less than 2% who experienced a non- lethal overdose receiving it.[8,9]

The FDA has approved three medications for the treatment of OUD in those over age 18: buprenorphine, naltrexone, and methadone (Table 1). Buprenorphine is FDA-approved for use in those 16 and older. Methadone, the most studied of all MOUDs, was previously used only in those under 18 if they had failed other treatments, but this restriction is removed as of

April 4, 2024. Naltrexone is sometimes used in this age group based upon patient, family, or provider preference, but evidence of effectiveness is limited.[10-12]

TABLE 1. KEY CONSIDERATIONS OF MOUDS[10-12]

	Buprenorphine Products	Methadone	Naltrexone Products
Opioid receptor binding	Partial agonist	Full agonist	Antagonist
DEA classification	Controlled	Controlled	Non-controlled
Most common form	Sublingual (SL) film (combined buprenorphine-naloxone)	Oral solution	Long-acting injection
Other forms	Tablets (SL), Bucco-mucosal film, Long-acting injection		Oral
Typical dosage	Sufficient to prevent withdrawal symptoms and cravings. Typical SL maintenance dose 16mg daily (8-24mg)	Sufficient to prevent withdrawal symptoms and cravings. Typical oral dose 60-120mg daily	380mg IM injection every 4 weeks)
Other considerations	Prescribed "off-label" for <16. y.o.	Only available through government-regulated programs	Requires 7-14 days of opioid abstinence prior to treatment to avoid precipitating withdrawal symptoms. Prescribed "off-label" for <18 y.o.

The physician diagnosed the patient with OUD and suggested both psychosocial treatment and medication. The family agreed with psychosocial treatment but feared that medication was "substituting one drug for another." They were informed that MOUD significantly improves the likelihood of successful treatment, including reducing the risk of lethal overdose. The patient agreed to take a "low-dose" sublingual buprenorphine-naloxone film. She achieved a daily dose of 8mg buprenorphine but refused to increase further. The family was provided with naloxone and instructed on its use to reverse opioid overdose.

It is important to discuss stigma and the efficacy of medical and non-medical treatment modalities with patients and families.[13] MOUD should be highlighted as a well-researched and effective treatment that substantially reduces mortality over therapy alone. It is not "drug substitution" nor a "treatment of last resort." Experts advocate initiating MOUD as early as possible in the course of OUD to minimize the risk of worsening addiction, lifelong harm, or overdose death.[4]

All individuals with OUD and their close contacts should have access to naloxone and receive instruction in its use to treat opioid overdose.[14]

"All adolescents and young adults with Opioid Use Disorder should be offered medication for OUD as a critical component of an integrated treatment approach that includes pharmacologic and non-pharmacologic strategies"

-SOCIETY FOR ADOLESCENT HEALTH AND MEDICINE

During the first month of treatment, the patient was compliant with both counseling and medication, but experienced moderate opioid cravings, occasional withdrawal symptoms, used illicit opioids at least weekly, and had an acquaintance overdose. Buprenorphine was increased to 16 mg daily and counseling increased in frequency. Cravings and withdrawal symptoms abated, opioid use ceased, and academic performance improved. She voiced continued commitment to treatment, but questioned how long she would need to continue medication.

Duration should be addressed early in MOUD treatment. Longer treatment duration is associated with reduced mortality and improved overall outcomes leading experts to recommend treatment duration of months-to-years rather than days-to-weeks.15 There should be no arbitrary timeframe for tapering or discontinuation and no requirement to stop MOUD, even in the event of relapse. The decision to reduce MOUD should involve collaboration between the patient (and guardian, if relevant) and provider only after a period of sustained stability.

If buprenorphine is utilized, it should be slowly tapered, and the patient closelymonitored for emergence of cravings, relapse, or other concerning behaviors that indicate a need to modify the tapering process.10,16,17 If naltrexone injection is being utilized, tapering is generally not practical, and the medication is stopped. The patient should still be monitored as noted above and the effectiveness of the medication-free state continuously evaluated. Overdose risk increases with the discontinuation of any form of MOUD, but naltrexone is particularly concerning as the patient will no longer be opioid tolerant and lower opioid doses will have greater impact.18

Opioid Use Disorder is a serious and growing problem in the United States, contributing to the premature death of thousands of adolescents and young adults. Effective treatment is needed to avoid the devastation it causes. MOUD is the most effective treatment in preventing opioid overdose deaths. All those who treat individuals with OUD, including those who treat adolescents and young adults, should be familiar with MOUD and support the use of this life-saving treatment.

For Additional Information on This Topic

- ORNSpring 2024-Opioid Use Disorder in Youth. Opioid ResonseNetwork, American Osteopathic Academy of Addiction Medicine (2024)
- Training to TreatOpioid Use Disorders in Adolescents. American Academy of Pediatrics (2016)
- Medications for Opioid Use Disorder. Providers Clinical Support System (Updated 2024)
- Practice-Based Guidelines: Buprenorphine in the Age of Fentanyl (PCSSGuidance). Providers Clinical Support System (2023)
- Tip 63: Medications for Opioid Use Disorder. SAMSHA (2021)
- Opioid Online Training Series. Ohio Department of Mental Health and Addiction Services (2022)

Upcoming Trainings on Substance Use Disorders

- Ohio Alcohol and Substance Use (AUD/SUD) ECHO. Northeastern Ohio Medical University. Commences March 1, 2024, and continuing
- PCSS MOUD Half and Half Training. Northeastern Ohio Medical University. May 30, 2024
- Ohio Substance Use Disorders Center of Excellence. Multiple trainings on various topics in coming months, throughout Ohio and online

Please click https://redcap.link/SUDCOE_Interest if you would like receive more Clinical Quicknotes or other Ohio SUD COE training and learning community opportunities.

At the SUD COE, we are committed to bringing you resources and trainings that meet your needs in providing care to patients with substance use disorders.

Please consider completing the survey below to help us better understand and meet your needs.

Please copy and paste this link https://redcap.link/QUICKNOTES_feedback or scan the QR code below to provide your feedback. Thanks!

References

1. Substance Abuse and Mental Health Services Administration. (2023). K*ey substance use and mental health indicators in the United States: Results from the 2022 National Survey on Drug Use and Health* (HHS Publication No. PEP23-07-01-006, NSDUH Series H-58). Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. https://www.samhsa.gov/data/report/2022-nsduh-annual-national-report
2. National Safety Council Injury Facts. (2023). Drug overdoses. Retrieved February 16, 2024, from https://injuryfacts.nsc.org/home-and-community/safety-topics/drugoverdoses/data-details/
3. Committee on Substance Use and Health. (2016). Medication-assisted treatment of adolescents with opioid use disorders (Position Paper). Pediatrics, 138(3): e20161893. https://doi.org/10.1542/peds.2016- 1893
4. Hadland, S.E., Aalsma, M.C., Akgül, S., Alinsky, R.H., Bruner, A., Chadi, N., Galagali, P. M., Kreida, E. C., Robinson, C. A., & Wilson. J. D. (2021). Medication for adolescents and young adults with opioid use disorder (Position Paper). *Journal of Adolescent Health* 68: 632-636. https://doi.org/10.1016/j.jadohealth.2020.12.129
5. Hadland, S. E., Bagley, S. M., Rodean, J., Silverstein, M., Levy, S., Larochelle, M. R., Samet, J. H., & Zima, B. T. (2018). Receipt of timely addiction treatment and association of early medication treatment with retention in care among youths with opioid use disorder. *JAMA* Pediatrics, 172(11), 1029–1037. https://doi.org/10.1001/jamapediatrics.2018.2143
6. This QuickNote is an overview only and is not intended to be the sole resource for prescribing of MOUD. The reader is encouraged to seek training from one of the sources listed in "Additional Training" prior to prescribing MOUD. Vo, H. T.,Robbins, E., Westwood, M., Lezama, D., & Fishman, M. (2016). Relapse prevention medications in community treatment for young adults with opioid addiction. *Substance abuse*, 37(3), 392–397. https://doi.org/10.1080/08897077.2016.1143435
7. Sordo, L., Barrio, G., Bravo, M. J., Indave, B. I., Degenhardt, L., Wiessing, L., Ferri, M., & Pastor-Barriuso, R. (2017). Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. BMJ (*Clinical research ed.*), 357, j1550. https://doi.org/10.1136/bmj.j1550
8. Chavez, L. J., Bonny, A. E., Bradley, K. A., Lapham, G. T., Cooper, J.,Miller, W., & Chisolm, D. J. (2020).Medication treatment and health care use among adolescents with opioid use disorder in Ohio. *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, 67(1), 33–39. https://doi.org/10.1016/j.jadohealth.2020.01.016
9. Alinsky, R.H., Zima, B. T., Rodean, J.,Matson, P. A., Larochelle, M. R., Adger, H., Jr., Bagley, S.M., & Hadland, S. E. (2020). Receipt of addiction treatment after opioid overdose among Medicaid-enrolled adolescents and young adults. *JAMA Pediatrics*, 174(3), e195183. https://doi.org/10.1001/jamapediatrics.2019.5183
10. Substance Abuse and Mental Health Services Administration. (2021). *Medications for opioid use disorder* (Treatment Improvement Protocol Series 63 Publication No. PEP21-02-01-002). Substance Abuse and Mental Health Services Administration. https://library.samhsa.gov/sites/default/files/pep21-02-01-002.pdf
11. Medications for the Treatment of Opioid Use Disorder, 42 C.F.R. § 8 (2024). https://www.federalregister.gov/documents/2024/02/02/2024-01693/medications-for-the-treatment-of- opioid-use-disorder
12. Mitchell, S. G., Monico, L. B., Gryczynski, J., Fishman, M. J., O'Grady, K. E., & Schwartz, R. P. (2021). Extended-release naltrexone for youth with opioid use disorder. *Journal of Substance Abuse Treatment*, 130, 108407. https://doi.org/10.1016/j.jsat.2021.108407
13. Bagley, S.M.,Hadland, S. E.,Carney, B. L., & Saitz, R. (2017). Addressing stigma in medication treatment of adolescents with opioid use disorder. *Journal of Addiction Medicine*, 11(6), 415–416. https://doi.org/10.1097/ADM.0000000000000348
14. Katzman, J. G., Takeda, M. Y., Greenberg,N., Moya Balasch, M., Alchbli, A., Katzman, W. G., Salvador, J.G., & Bhatt, S. R. (2020). Association of take-home naloxone and opioid overdose reversals performed bypatients in an opioid treatment program. *JAMA Network Open*, 3(2), e200117. https://doi.org/10.1001/jamanetworkopen.2020.0117
15. Woody, G. E., & Fishman, M. (2020).Medication treatment for opioid-addicted youth-What are we waiting for? *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, 67(1),9–10. https://doi.org/10.1016/j.jadohealth.2020.04.002
16. Woody, G. E., Poole, S. A., Subramaniam, G., Dugosh, K., Bogenschutz, M., Abbott, P., Patkar, A., Publicker, M., McCain, K., Potter, J. S., Forman, R., Vetter, V., McNicholas, L., Blaine, J., Lynch, K. G., &Fudala, P. (2008). Extended vs short-term buprenorphine-naloxone for treatment of opioid-addicted youth: A randomized trial. *JAMA*, 300(17), 2003–2011. https://doi.org/10.1001/jama.2008.574
17. Chang, D. C., Klimas, J., Wood, E., & Fairbairn, N. (2018). Medication-assisted treatment for youth with opioid use disorder: Current dilemmas and remaining questions. *The American Journal of Drug and Alcohol Abuse*, 44(2), 143–146. https://doi.org/10.1080/00952990.2017.1399403
18. Burns, M., Tang, L., Chang, C. H., Kim, J. Y., Ahrens, K., Allen, L., Cunningham, P., Gordon, A. J., Jarlenski, M. P., Lanier, P., Mauk,R., McDuffie, M. J.,Mohamoud, S., Talbert, J., Zivin, K., & Donohue, J. (2022). Duration of medication treatment for opioid-use disorder and risk of overdose among Medicaid enrolleesin 11 states: A retrospective cohort study. *Addiction (Abingdon, England)*, 117(12), 3079–3088. https://doi.org/10.1111/add.15959

Substance Use Disorders Center of Excellence

Ohio Department of Behavioral Health

CASE WESTERN RESERVE UNIVERSITY
Jack, Joseph and Morton Mandel School of Applied Social Sciences
Center for Evidence-Based Practices