

Essentials of Opioid Use Disorder:

A Resource for Hepatologists and Infectious Disease Specialists Managing HCV and/or HIV Infection



CLINICAL CARE OPTIONS®

Defining Addiction

Definition of addiction as adopted by the American Society of Addiction Medicine (ASAM) Board of Directors in 2019: “a treatable, chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual’s life experiences. People with addiction use substances or engage in behaviors that become compulsive and often continue despite harmful consequences.”^[1]

- ASAM also notes that strategies for prevention and treatment demonstrate success rates that are generally comparable to those used for other chronic diseases

Table 1. DSM-5 Diagnostic Criteria for Opioid Use Disorder (OUD)^[2]

Category	Criteria*
Loss of control	■ Opioids are often taken in larger amounts or over a longer period than was intended ■ There is a persistent desire or unsuccessful efforts to cut down or control opioid use ■ A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects ■ Craving or a strong desire or urge to use opioids
Social problems	■ Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home ■ Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids ■ Important social, occupational, or recreational activities are given up or reduced because of opioid use
Risky use	■ Recurrent opioid use in situations in which it is physically hazardous ■ Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance
Pharmacologic problems	■ Exhibits tolerance: need for a larger amount to achieve desired effect or diminished effect with same amount ■ Exhibits withdrawal: occurrence of a characteristic opioid withdrawal syndrome or continued use of opioids or closely related substances to avoid withdrawal symptoms

*OUD diagnosis requires ≥ 2 symptoms within a 12-month time frame. Severity definitions: mild, 2-3 symptoms; moderate, 4-5 symptoms; severe, ≥ 6 symptoms. Note that experiencing these symptoms while taking opioids solely under appropriate medical supervision is an exception to (does not meet) these criteria for OUD.

Medications for the Treatment of OUD

- Medication is indicated for the treatment of OUD without necessity to provide behavioral treatment^[3]
- FDA-approved medications for the treatment of OUD include methadone, buprenorphine, and naltrexone^[4,5]
- Methadone programs require behavioral health counseling by law; however, buprenorphine treatment programs do not mandate this, nor is this required for extended-release naltrexone

Table 2. FDA-Approved Medications for Treatment of OUD^[4,5]

Medication	Mechanism of Action	Phase of Treatment	Formulation(s)	Dosages	Adverse Events	Regulations
Methadone	Mu-opioid receptor agonist	Prevention; treatment of opioid withdrawal, relapse, and maintenance	Oral	Detoxification: 20-40 mg/day Maintenance: 60-120 mg/day	Nausea, vomiting, constipation, respiratory depression, sedation, prolonged QTc, sexual dysfunctions	Available at federally regulated treatment sites
Buprenorphine*	Partial mu-opioid receptor agonist	Prevention; treatment of opioid withdrawal, relapse, and maintenance	Sublingual, buccal, injection, implant	Oral: 2-24 mg/day Injection: once monthly Implant: every 6 months	Constipation, precipitated withdrawal symptoms if administered too soon while on opioids, injection-site reactions (injection and implant formulations)	Requires DATA 2000 waiver + DEA X-number; office-based treatment
Naltrexone	Mu-opioid receptor antagonist	Relapse prevention, maintenance	Intramuscular	380 mg/mo IM every 28 days	Nausea, diarrhea, headache, joint or muscle pain, anxiety, insomnia, injection-site reactions, precipitated opioid withdrawal if administered while on opioids	None; office-based treatment

*Buprenorphine is also available as a coformulation with naloxone. When used as prescribed, the bioavailability of oral naloxone in the coformulation is minimal. The coformulation was developed to decrease IV use of buprenorphine because it will cause a precipitated withdrawal effect thus reducing misuse and diversion.

Key Drug–Drug Interaction Safety Considerations With Medications for OUD: CNS Depressants

- Concomitant use of buprenorphine or methadone with benzodiazepines or other CNS depressants may increase risk of adverse events including respiratory depression
- However, benzodiazepines are not contraindicated with opioid agonist treatment and buprenorphine and methadone for treatment of OUD should never be categorically denied to patients prescribed these medications or taking them illicitly because prohibiting OUD treatment would pose even greater morbidity and mortality risk from OUD itself; these patients may require closer monitoring if clinically warranted
- As a routine part of orientation to buprenorphine or methadone treatment, educate patients about the risks of concomitant use of benzodiazepines, psychotropics, prescription opioids, and other licit, prescribed medications
- Careful medication management by healthcare professionals can reduce these risks

Table 3. Key Drug–Drug Interactions Between Common HCV Regimens and Medications for OUD^[6]

Green: no interaction expected

HCV Regimen	Buprenorphine	Methadone	Naltrexone
Elbasvir/grazoprevir			
Glecaprevir/pibrentasvir			
Ledipasvir/sofosbuvir			
Sofosbuvir/velpatasvir			
Sofosbuvir/velpatasvir/voxilaprevir			

Table 4. Key Drug–Drug Interactions Between Common HIV Drugs and Medications for OUD^[7]

Green: no interaction expected; yellow: potential weak interaction; orange: potential interaction

HIV Drug/Drug Combination	Buprenorphine	Methadone	Naltrexone
Lamivudine			
Abacavir			
Atazanavir/cobicistat			
Atazanavir/ritonavir			
Bictegravir/emtricitabine/tenofovir alafenamide			
Doravirine			
Darunavir/cobicistat			
Darunavir/ritonavir			
Dolutegravir			
Efavirenz			
Elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide			
Elvitegravir/cobicistat/emtricitabine/tenofovir disoproxil fumarate			
Emtricitabine/tenofovir alafenamide			
Emtricitabine/tenofovir disoproxil fumarate			
Raltegravir			
Rilpivirine			

For an online interactive CME/CE/CPE-certified video module on OUD treatment designed specifically for hepatologists and infectious disease specialists providing care for patients with HCV and/or HIV infection, please go to:

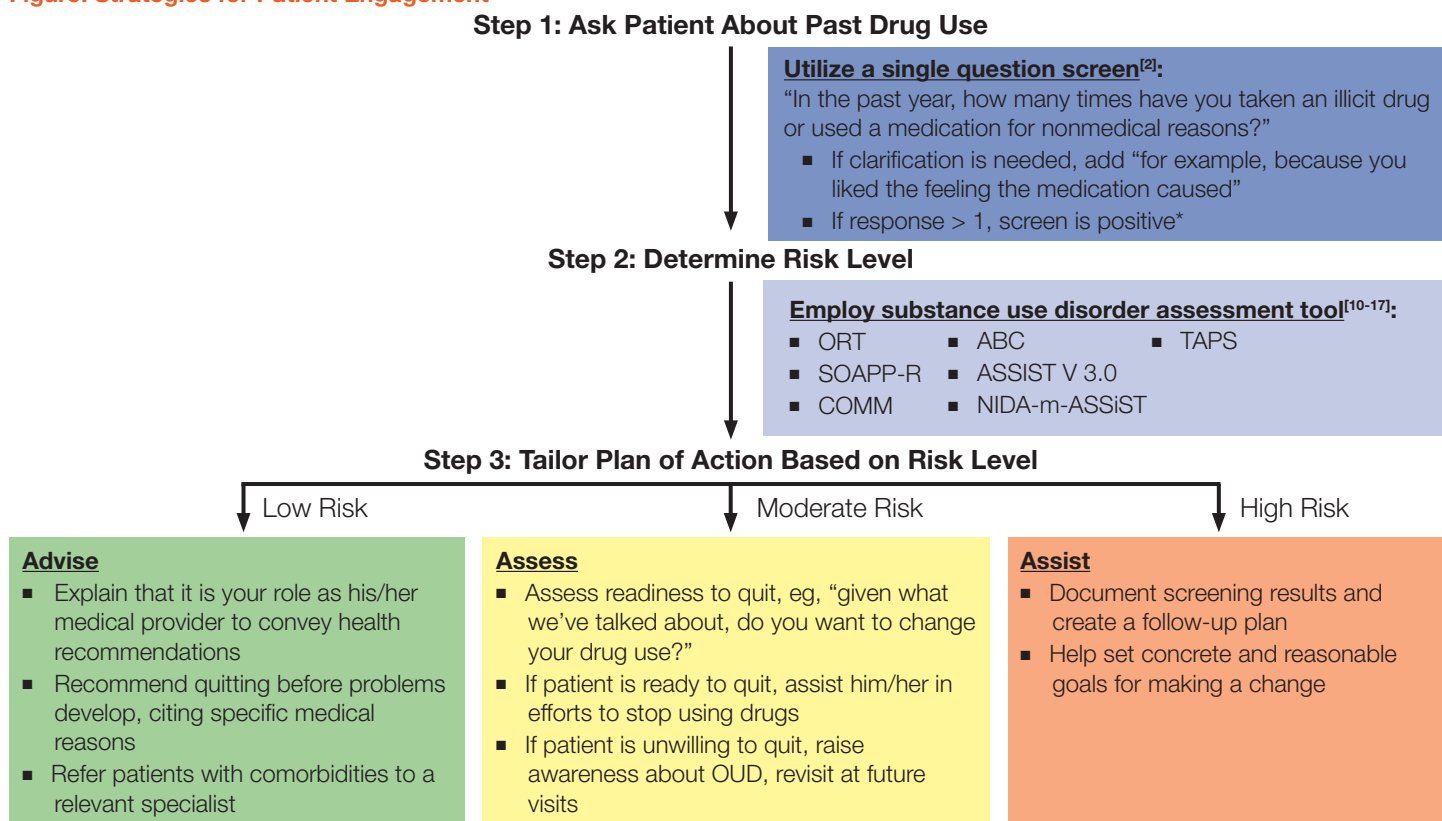
<https://www.clinicaloptions.com/hiv/programs/addiction-hcv-hiv/video-module/video-module>

For additional online resources on OUD treatment and DATA 2000 buprenorphine waiver training, visit

<https://pcssnow.org/> and <https://elearning.asam.org/buprenorphine-waiver-course>

Buprenorphine waiver training is intended for physicians and nurse practitioners in all fields of medicine, including hepatology and infectious disease, and is not intended solely for addiction medicine, addiction psychiatry, family medicine, or internal medicine providers. Given the high prevalence of OUD and other substance use disorders in both infectious disease and hepatology settings, it is even more important for these providers to be educated on management of OUD.^[8]

Figure. Strategies for Patient Engagement^[9]



*Question has 100% sensitivity and 73.5% specificity for drug use disorder (NIDA Quick Screen).

ABC, *Addiction Behaviors Checklist*; ASSIST V 3.0, *Alcohol Smoking and Substance Involvement Screening Test*; COMM, *Current Opioid Misuse Measure*; NIDA-m-ASSiST, *NIDA-Modified Alcohol, Smoking and Substance Involvement Screening Test*; SOAPP-R, *Revised Screener and Opioid Assessment for Patients With Pain*; ORT, *Opioid Risk Tool*; TAPS, *Tobacco, Alcohol, Prescription Medication, and Other Substance Use*.

Harm Reduction

OUD is a chronic disease of the brain that is characterized by cycles of relapse and remittance. Harm reduction, which is a philosophy and move for social justice, is a means of “meeting people where they are at.” It is a form of treatment for all substance use disorders and is not a purely abstinence-based approach. The goal of harm reduction is to mitigate harms associated with drug use and advocate for the rights of all persons who use drugs. In addition, harm reduction is a critical HIV and HCV prevention tool for PWID. Some examples of harm reduction include the following:

- Overdose prevention education and distribution of naloxone kits (also in some states, there is a standing order for naloxone whereby a person does not need a prescription to obtain it)
- Linkage with needle/syringe exchange programs
- Supervised injection facilities or drug consumption rooms

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