if they are withheld for a short period of time (up to 2–3 days). If these medications are withheld for a longer period of time they may need to be reinitiated gradually by the prescribing clinician after the need for full opioid agonist analgesia has resolved. For guidance on re-initiation and titration see Parts 4 and 5 of this guideline.

Patients Treated with Naltrexone

Oral naltrexone should be discontinued at least 72 hours before elective surgery if pain management with opioids is anticipated. Extended-release naltrexone should be stopped at least 30 days before surgery, and oral naltrexone may be used temporarily (until 72 hours prior to the planned surgery). The surgical team should be aware of the use of naltrexone. Patients should be off opioids for 3–7 days before resuming naltrexone (oral or extended-release formulations). Re-initiation of naltrexone should be coordinated with the opioid use disorder treating clinician. See the naltrexone section for recommendations related to initiation.

Summary of Recommendations – Special Populations: Individuals With Pain

1. (MINOR REVISION) For all patients with pain, it is important that the correct diagnosis is made and that pain is addressed. Alternative treatments including non-opioid medications with pain modulating properties, behavioral approaches, physical therapy, and procedural approaches (e.g., regional anesthesia) should be considered before prescribing opioid medications for pain.
2. (MINOR REVISION) If pharmacological treatment is considered, non-opioid analgesics, such as acetaminophen and NSAIDs, and non-opioid medications with pain modulating properties should be tried first.
3. (MINOR REVISION) For patients with pain who have an active opioid use disorder but are not in treatment, methadone or buprenorphine should be considered. The patient's opioid use disorder and pain should be stabilized and managed concurrently.
4. (MAJOR REVISION) For patients taking methadone or buprenorphine for the treatment of opioid use disorder, temporarily increasing the dose or dosing frequency (i.e. split dosing to maximize the analgesic properties of these medications) may be effective for managing pain. (Titration of methadone should follow the guidance in Part 4 of this guideline)
5. (MAJOR REVISION) For patients taking methadone for the treatment of opioid use disorder who have acute pain refractory to other treatments and require additional opioid-based analgesia, adding a short acting full agonist opioid to their regular dose of methadone can be considered to manage moderate to severe acute pain. The dose of additional full agonist opioid analgesic prescribed is anticipated to be higher than the typical dose necessary to achieve adequate analgesia in opioid-naïve individuals.
6. (NEW) Patients receiving buprenorphine for opioid use disorder who have moderate to severe acute pain refractory to other treatments and require additional opioid-based analgesia may benefit from the addition of as-needed doses of buprenorphine.
7. (MAJOR REVISION) The addition of a short-acting full agonist opioid to the patient's regular dose of buprenorphine can be effective for the management of severe acute pain in supervised settings, such as during hospitalization. The dose of additional full agonist opioid analgesic prescribed is anticipated to be higher than the typical dose necessary to achieve adequate analgesia in opioid-naïve individuals. Because of a lack of evidence, the committee was unable to come to consensus on whether this adjunct treatment can be safely prescribed in ambulatory care settings.
8. (MAJOR REVISION) Discontinuation of methadone or buprenorphine before surgery is not required. Higher-potency intravenous full agonists opioids can be used perioperatively for analgesia.
9. (MINOR REVISION) Decisions related to discontinuing or adjusting the dose of buprenorphine prior to a planned surgery should be made on an individual basis, through consultation between the surgical and anesthesia teams and the addiction treatment provider when possible.
10. (MAJOR REVISION) If it is decided that buprenorphine or methadone should be discontinued before a planned surgery, this may occur the day before or the day of surgery, based on surgical and anesthesia team recommendations. Higher-potency intravenous full agonists opioids can be used perioperatively for analgesia. Methadone or buprenorphine can be resumed post-operatively when the need for full opioid agonist analgesia has resolved, with additional considerations for post-operative pain management as described for acute pain above. The initial dose and titration should typically be determined by the prescriber. In general, pre-surgery daily doses of these medications can be resumed if they were withheld for less than 2–3 days.
11. (MINOR REVISION) Patients on naltrexone may not respond to opioid analgesics in the usual manner. Therefore, it is recommended that mild pain be treated with non-opioid analgesics, and moderate to severe pain be treated with higher potency NSAIDs (e.g. ketorolac) on a short-term basis.
12. (MINOR REVISION) Oral naltrexone should be discontinued 72 hours before surgery and extended-release injectable naltrexone should be discontinued 30 days before an anticipated surgery. (Reinitiation of naltrexone should follow the guidance in Part 6 of this guideline)
13. (NEW) Naltrexone's blockade of the mu opioid receptor can often be overcome when necessary with high potency full agonist opioids. In these instances, patients should be closely monitored in an emergency department or hospital setting.

Areas For Further Research

1. Research on optimal acute and chronic pain management strategies for patients on medications for opioid use disorder.
2. Studies on the safety and effectiveness of adding full agonist opioid analgesics to the patient's baseline buprenorphine dose in non-acute care settings are needed.
3. Further research is needed on chronic pain management for patients with opioid use disorder.

4. Research on pain management in pregnant women on medications for opioid use disorder during delivery.

PART 10: SPECIAL POPULATIONS: ADOLESCENTS

Background

The American Academy of Pediatrics categorizes adolescence as the totality of three developmental stages (early-, middle- and late-adolescence)—puberty to adulthood—which occur generally between 11 and 21 years of age.[1] Adolescents present for treatment with a broad spectrum of opioid use disorder severity and with a range of co-occurring medical and psychiatric illnesses. Consequently, clinicians will need to respond with a full range of treatment options, including pharmacotherapy. However, limited evidence exists regarding the efficacy of pharmacotherapies for opioid withdrawal management or opioid use disorder in adolescents.[159] Pharmacological therapies have primarily been developed through research with adult populations.[160]

The treatment of adolescents with opioid use disorder presents many unique medical, legal, and ethical dilemmas that may complicate treatment. Given these unique issues, adolescents with opioid use disorder often benefit from services designed specifically for them. Furthermore, the family should be involved in treatment whenever possible.

Confidentiality in Treatment

One issue of particular importance to consider in the treatment of adolescents is confidentiality. Adolescents have reported that they are less likely to seek substance use disorder treatment if services are not confidential.[161] Confidential care, particularly with respect to sensitive issues such as reproductive health and substance use, has become a well-established practice.[162,163] This is a subject of complexity as it is an area governed by both Federal and state laws. Moreover, defined age ranges of adolescence vary. A myriad of clinical and legal responsibilities may be evoked if confronted by a young person's request for confidentiality. More than half of the states in the U.S., by law, permit adolescents under 18 years of age to consent to substance use disorder treatment without parental consent. Collaboration with families, including shared information and decision making, should be pursued with the adolescent's consent. Providers will also sometimes need to make decisions based on best medical judgement about disclosure without adolescent consent for safety concerns to address imminent danger. State law should also be consulted. An additional reference source in decision-making regarding the implications on coordination of care, effectiveness of treatment without parental communication, and more are fully discussed in a SAMHSA's Treatment Improvement Protocol (TIP) #33.[164]

Pharmacotherapy Options for Adolescents

Opioid agonists (methadone and buprenorphine) and antagonists (naltrexone) may be considered for treatment of opioid use disorder in adolescents. However, efficacy studies for these medications have largely been conducted in adults. This recommendation is based largely on the consensus opinion of the Guideline Committee. Limited data are available comparing the relative effectiveness of these treatments in adolescents.

Opioid Agonists: Methadone and Buprenorphine

Buprenorphine has been approved by the FDA for the treatment of patients aged 16 years and older. When prescribed outside of opioid treatment programs, through a waiver, federal law does not limit the prescription of buprenorphine to adolescent patients based on their age. There is no evidence to suggest that there are major safety concerns conveyed by younger age.

Methadone is approved for the treatment of patients who are aged 18 years and older. Federal regulations for opioid treatment programs (42 CFR 8.12) allow for methadone and buprenorphine (when not prescribed pursuant to a DATA 2000 waiver) to be provided for patients under 18 who have a documented history of at least two prior unsuccessful withdrawal management attempts, and have parental consent.[42]

Efficacy Research on Agonists and Partial Agonists in Adolescents

There are no controlled trials evaluating methadone for the treatment of opioid use disorder in adolescents under the age of 18. Descriptive trials support the usefulness of treatment with methadone in supporting treatment retention in adolescent with heroin use disorder.[165] The usefulness of treatment with buprenorphine has been demonstrated in two RCTs. Studies have, however, not included adolescents under the age of 16.[166,167] Buprenorphine is not FDA-approved for use in patients less than 16 years old. Buprenorphine is more likely to be available in programs targeting older adolescents and young adults. No direct comparison of the efficacy of buprenorphine versus methadone has been conducted in adolescent populations.

Opioid Antagonist: Naltrexone

Extended release naltrexone has been approved by the FDA for the treatment of patients aged 18 years and older. Naltrexone does not induce physical dependence and is easier to discontinue. Some small studies have demonstrated the efficacy of extended-release injectable naltrexone in adolescents and young adults.[75,168] The safety, efficacy, and pharmacokinetics of extended-release injectable naltrexone have not been established in the adolescent population, although there is no evidence to suggest that younger age should convey major safety risks.

Psychosocial Treatment for Adolescents

Psychosocial treatment is recommended in the treatment of adolescents with opioid use disorder. Recommended treatments based on the consensus opinion of the Guideline Committee include family intervention approaches, educational or vocational support, and behavioral interventions to incrementally reduce use. Adolescent group counseling can cause unintended (iatrogenic) effects as group members can ''reinforce drug use and thereby derail the purpose of the

therapy'' according to the National Institute on Drug Abuse and should be carefully considered.[75] Holistic risk-reduction interventions, including naloxone distribution; education on overdose prevention; safe injection practices; risky behavior modification; and contraception access (including the option of long-acting reversible contraception); etc., should be considered and incorporated into an adolescent patient's treatment plan as appropriate. Treatment of co-occurring psychiatric conditions is also especially important in this population. Adolescents often benefit from specialized treatment programs that provide multiple services. The risk benefit balance of pharmacological treatment without concurrent psychosocial treatment should be carefully considered and discussed with the patient and their parent or guardian as appropriate. While a patient's decision to decline psychosocial treatment or the absence of available psychosocial treatment should not preclude or delay pharmacological treatment of opioid use disorder (with appropriate medication management), motivational interviewing or enhancement should be used to encourage patients to engage in psychosocial treatment services appropriate for addressing their individual needs.

Summary of Recommendations – *Special Populations: Adolescents*

1. Clinicians should consider treating adolescents who have opioid use disorder using the full range of treatment options, including pharmacotherapy.
2. (MINOR REVISION) Opioid agonists (methadone and buprenorphine) and antagonists (naltrexone) may be considered for treatment of opioid use disorder in adolescents.[91] Federal laws and FDA approvals should be considered when recommending pharmacotherapy for adolescent patients.
3. (MAJOR REVISION) Psychosocial treatment is recommended in the treatment of adolescents with opioid use disorder. The risk benefit balance of pharmacological treatment without concurrent psychosocial treatment should be carefully considered and discussed with the patient and her or his parent or guardian as appropriate. A patient's decision to decline psychosocial treatment or the absence of available psychosocial treatment should not preclude or delay pharmacological treatment of opioid use disorder, with appropriate medication management. Motivational interviewing or enhancement can be used to encourage patients to engage in psychosocial treatment services appropriate for addressing their individual needs.
4. (MINOR REVISION) Concurrent practices to reduce infection (e.g., risk behavior reduction interventions) are recommended as components of comprehensive treatment for the prevention of blood-borne viruses (infections related to injection practices) and sexually transmitted infections.
5. Adolescents may benefit from treatment in specialized treatment programs that provide multidimensional services (See *The ASAM Criteria* guidelines).[2]

Areas for Further Research

1. Further studies are needed to examine the efficacy of pharmacotherapy for adolescents with opioid use disorder. Due to the few clinical trials in adolescents, most of the current recommendations are based on research with adults.
2. Further research is needed to identify which psychosocial treatments, alone and in combination with pharmacotherapy, are best suited for use with adolescents.
3. More longitudinal studies are needed to determine treatment factors (e.g., treatment modality, length of treatment, treatment settings) associated with positive long-term outcomes for adolescents with OUD.

PART 11: SPECIAL POPULATIONS: INDIVIDUALS WITH CO-OCCURRING PSYCHIATRIC DISORDERS

Background

Co-occurring psychiatric disorders are common among individuals who have opioid use disorder. Epidemiological studies have demonstrated a higher prevalence of substance use among people with psychiatric disorders relative to the general population.[169] Reasons for the association between psychiatric and substance use disorders may include (1) that the dual diagnoses result from risk factors that are common to both disorders (e.g. adverse childhood experiences), (2) shared genetic vulnerability that contributes to the dysregulation in dopamine and glutamate systems in psychiatric and substance use disorders,[170,171] and (3) substances may be used as a method of self-medication among patients with psychiatric disorders.[172–174]

Co-occurring psychiatric disorders should not bar patients from opioid use disorder treatment. The presence of the following common psychiatric disorders should be evaluated in patients presenting with possible opioid use disorder:

1. depression;
2. anxiety;
3. personality disorders;
4. post-traumatic stress disorder.

Assessment of Psychiatric Co-occurrence

The assessment of psychiatric disorders is critical when attempting to place patients in the appropriate treatment. Hospitalization may be appropriate for patients with severe or unstable psychiatric symptoms that may compromise the safety of self or others. An initial patient assessment should determine whether the patient is stable. Patients with suicidal or homicidal ideation should be referred immediately for treatment and possibly hospitalization. Patients should also be assessed for signs or symptoms of acute psychosis and chronic psychiatric disorders.

An assessment including medical history, physical examination, and an assessment of mental health status and/or psychiatric disorder should occur at the beginning of agonist or antagonist treatment (see Part 1: Assessment and Diagnosis of Opioid Use Disorder). However, completion of all assessments should not delay or preclude initiating pharmacotherapy for opioid use disorder. If not completed before initiating treatment, assessments should be completed

as soon as possible thereafter. Reassessment using a detailed mental status examination should occur after stabilization with methadone, buprenorphine, or naltrexone.

Co-occurring Psychiatric Disorders and Suicide Risk

Psychiatric disorders and substance use disorders are both strongly associated with increased risk for suicide.[175] More than 90% of patients who attempt suicide have a major psychiatric disorder.[176] In cases where suicide attempts resulted in death, 95% of patients had a psychiatric diagnosis.[177]

Management of a suicidal patient should include the following:

1. Reduce immediate risk.
2. Manage underlying factors associated with suicidal intent.
3. Monitor and follow-up.

Considerations with Specific Psychiatric Disorders

Depression or Bipolar Disorder

Antidepressant therapy may be initiated with pharmacotherapy for opioid use disorder for patients with symptoms of depression. Patients presenting with mania should be evaluated to determine whether symptoms arise from the bipolar disorder or substance use. Patients with bipolar disorder may require additional psychiatric care, hospitalization, and/or treatment with prescription mood stabilizers.

All patients with depression, including bipolar disorder, should be asked about suicidal ideation and behavior. Patients with a history of suicidal ideation or attempts should have their medication use monitored regularly, including medications for the treatment of opioid use disorder and psychiatric medications.

Schizophrenia

Antipsychotic medication may be initiated with pharmacotherapy for opioid use disorder for patients with schizophrenia or other psychotic disorders. Coadministration of antipsychotic medications with opioid agonist pharmacotherapy or use of long-acting depot formulations of antipsychotic medications is an option to consider in patients with histories of medication nonadherence.

All patients with schizophrenia should be asked about suicidal ideation and behavior. Patients with a history of suicidal ideation or attempts should have their medication use monitored regularly. This includes medications for the treatment of opioid use disorder and psychiatric medications.

For patients with schizophrenia and co-occurring opioid use disorder who have a recent history of, or are at risk of repeated hospitalization or homelessness, assertive community treatment (ACT) should be considered. ACT is designed to provide treatment, rehabilitation, and support services to individuals who are diagnosed with severe psychiatric disorders, and whose needs have not been well met by more traditional psychiatric or psychosocial services. The efficacy of ACT has had mixed results on substance use disorder outcomes, but has shown benefit in preventing homelessness.[178–180] When ACT or another intensive case management programs are unavailable, traditional case management can be helpful to patients who are unable to manage necessary, basic tasks.

Co-occurring Psychiatric Disorders and Agonist Treatment

Pharmacological and conjunctive psychosocial treatments should be considered for patients with both an opioid use disorder and a psychiatric disorder. Suicidal patients should be hospitalized. Agonist treatment could be initiated in the inpatient setting following stabilization. Patients at risk for suicide should not be given take-home doses if started on agonist treatment medication unless the risk/benefit ratio is clearly justified.

Methadone

Methadone for the treatment of opioid use disorder has been found to reduce psychiatric distress in a few weeks. Psychotherapy has been found useful in patients who have moderate to severe psychiatric disorders.

Buprenorphine

Psychiatrically stable patients are good candidates for buprenorphine. Patients with depression who are receiving treatment with buprenorphine require a higher level of monitoring. The extended-release injectable and implantable buprenorphine formulations may be useful in patients with a co-occurring psychiatric disorder who may not be able to adhere well to daily oral dosing.

Co-occurring Psychiatric Disorders and Antagonist Treatment

Psychiatrically stable patients are candidates for treatment with extended-release injectable naltrexone. There are little data, however, regarding the relative efficacy of naltrexone in opioid-dependent patients with co-occurring psychiatric disorders. The once-monthly injections of extended-release injectable naltrexone may be useful in patients with a co-occurring psychiatric disorder who may not be able to adhere well to daily oral dosing. Patients should be closely observed for adverse events as some patients have reported suicidal ideation, suicide attempts, and depression.

Summary of Recommendations – *Special Populations: Individuals With Co-occurring Psychiatric Disorders*

1. **MINOR REVISION** A comprehensive assessment including determination of mental health status and suicide risk should be used to evaluate whether the patient is stable. Patients with suicidal or homicidal ideation should be referred immediately for treatment and possibly hospitalization.
2. Management of patients at risk for suicide should include reducing immediate risk, managing underlying factors associated with suicidal intent, and monitoring and follow-up.

3. (MINOR REVISION) All patients with psychiatric disorders should be asked about suicidal ideation and behavior. Patients with a history of suicidal ideation or attempts should have adherence for opioid use disorder and psychiatric disorder medications monitored more closely.
4. (MINOR REVISION) Assessment for psychiatric disorder should occur at the onset of agonist or antagonist treatment. However, completion of all assessments should not delay or preclude initiating pharmacotherapy for opioid use disorder. If not completed before initiating treatment, assessments should be completed as soon as possible thereafter. Reassessment using a detailed mental status examination should occur after stabilization with methadone, buprenorphine, or naltrexone.
5. (MAJOR REVISION) Pharmacotherapy in conjunction with psychosocial treatment should be offered to patients with opioid use disorder and a co-occurring psychiatric disorder. A patient's decision to decline psychosocial treatment or the absence of available psychosocial treatment should not preclude or delay pharmacological treatment of opioid use disorder, with appropriate mediation management. Motivational interviewing or enhancement can be used to encourage patients to engage in psychosocial treatment services appropriate for addressing their individual needs.
6. Clinicians should be aware of potential interactions between medications used to treat co-occurring psychiatric conditions and opioid use disorder.
7. Assertive community treatment should be considered for patients with co-occurring schizophrenia and opioid use disorder who have a recent history of, or are at risk of, repeated hospitalization or homelessness.

Areas for Further Research

1. Implementation research is needed to determine best practices for assessing, diagnosing, and treating co-occurring psychiatric disorders for patients with opioid use disorder in diverse treatment settings.
2. More longitudinal research is needed to better understand how co-occurring psychiatric disorders affect long-term prognosis for opioid use disorder remission, and how risks for both opioid use disorder and psychiatric condition relapse can be anticipated and mitigated.
3. More research is needed on how to improve access and linkage to psychiatric care for patients with co-occurring opioid use disorder.

PART 12: SPECIAL POPULATIONS: INDIVIDUALS IN THE CRIMINAL JUSTICE SYSTEM

Background

A substantial proportion of justice involved individuals – including those in prisons, jails, drug courts, or under community supervision – have opioid use disorder. A history of incarceration is common among people who inject drugs; 56–90% of people who inject drugs have been incarcerated previously.[181] The United States leads the world in the number of people incarcerated in Federal and state correctional facilities. At the end of 2017, there were an estimated 1.5 million people in prison under state or Federal jurisdiction.[182] In all, 6.7 million people in the United States are under correctional control (prison policy initiative, 2018).[183] Approximately one quarter of those held in the U.S. criminal justice system have been convicted of a drug offense.[184] Continued drug use is common among people in prison, and many individuals initiate injection drug use while in prison.[185]

Drug use in prison is particularly risky because of the environment. The high concentration of at-risk individuals, the stress of incarceration, loss of tolerance following withdrawal, and general overcrowding can increase the risk of adverse consequences associated with drug use, including violence, overdose and overdose deaths, suicide, and self-harm.[186] Sterile injection equipment is rare and sharing needles is common, leading to a high risk of contracting and spreading HIV and hepatitis C. Discharge from prison is associated with a high risk for opioid overdose and death.[187] Consequently, it is important to identify and implement effective treatments for justice involved individuals and effectively coordinate transitions to community care.

For the purposes of this *Practice Guideline*, a prison is to be differentiated from a jail. At the most basic level, the fundamental difference between jail and prison is the length of stay for inmates. Jails are usually run by local law enforcement and/or local government agencies and designed to hold inmates awaiting trial or serving a short sentence. Prison terms are of longer duration. Opioid use disorder treatment should not be discontinued when individuals become incarcerated.

Federal law requires that incarcerated individuals be treated for health problems since they have no other way to access medical care. Thus, individuals with hypertension, COPD, diabetes, HIV, wound infections, schizophrenia, and other serious health problems receive treatment while incarcerated. Addiction treatment, with few exceptions, has historically been excluded from the range of services provided in U.S. correctional facilities. However, as addiction is increasingly recognized as a serious health problem for which there are effective medications, there is growing pressure for jails and prisons to treat this disease, as is required for other health conditions.

Effectiveness of Pharmacotherapy

Pharmacotherapy can effectively treat opioid use disorder among incarcerated individuals. All FDA approved medications for the treatment of opioid use disorder should be available to patients within the criminal justice system. The treatment plan, including choice of medication, should be based on the patient's individual clinical needs. Most research on the effectiveness of pharmacotherapy for the treatment of opioid use disorder among incarcerated individuals has focused on methadone. However, there is growing evidence supporting the use of buprenorphine and extended-release naltrexone in this population.[188] A randomized controlled trial of methadone in conjunction with counseling compared with counseling alone found that in the year following release from jail, those who were treated with methadone and counseling spent 7 times as many days in treatment for substance use

disorder during the post-release year compared with those who had counseling alone. None of the counseling-only participants continued in treatment for the entire year, compared to 37 percent of the methadone participants. The counseling-only individuals were also significantly more likely to test positive for opioids 12 months post-release.[189] A recent 2019 systematic review and meta-analysis (published after the RAM rating process and presented here as additional supporting material) found that among 807 inmates (within prisons and jails), methadone treatment during incarceration increased community treatment engagement, reduced illicit opioid use and reduced injection drug use post-release.[190] The same systematic review found that buprenorphine and naltrexone were as effective as methadone in reducing illicit opioid use post-release.[191]

Treatment with methadone or buprenorphine while incarcerated results in significant reductions in deaths from overdose in the weeks and months following release from prison.[192,193] Correctional personnel should collaborate with community-based treatment providers to ensure seamless continuity of pharmacotherapy and psychosocial treatment upon re-entry. A retrospective analysis of data from the Rhode Island Office of State Medical Examiners found that among recently incarcerated individuals, there was a 60.5% reduction in deaths resulting from a drug overdose in 2017 compared with 2016 following introduction of a new model for screening and treating incarcerated individuals with opioid use disorder within the Rhode Island Department of Corrections prison/jail system.[192] The number of individuals needed to be treated to prevent one death from overdose was 11.[192]

Naloxone kits should be available within correctional facilities. At-risk individuals and their families should be educated in how to administer naloxone, and all individuals with opioid use disorder should be offered naloxone kits upon release from the facility.[194]

Methadone

Treatment with methadone has been shown to have several beneficial effects for incarcerated individuals with opioid use disorders. Individuals treated with methadone inject less drugs, use less drugs after release, and are more likely to participate in community-based addiction treatment.[185,195–197] Treatment with methadone lowered the rate of reincarceration during the 3-year period following first incarceration.[197,198] Importantly, forced withdrawal from methadone treatment during incarceration reduces the likelihood of individuals re-engaging in treatment post-release.[199,200]

Buprenorphine

As noted, buprenorphine has also been associated with beneficial effects in individuals in prison with opioid use disorder. An RCT comparing buprenorphine and methadone among men who use heroin who were newly admitted to prison showed that treatment completion rates were similar, but that patients taking buprenorphine were significantly more likely to enter community-based treatment after release.[201] In a more recent trial, buprenorphine initiated in prison was also associated with a greater likelihood of entering community treatment.[189,192] However, buprenorphine was diverted in some cases. Recent approval of new extended-release buprenorphine formulations can help to address this by reducing the risk of diversion.

Naltrexone

Extended-release injectable naltrexone has been shown to be effective for relapse prevention in some trials conducted in criminal justice settings. A 24-week trial comparing extended-release naltrexone with usual care in the form of brief counseling and referrals for community treatment programs found that treatment with extended-release naltrexone was more effective than usual care in preventing opioid relapse among individuals in the criminal justice system with a history of opioid use disorder and a preference for opioid free treatment.[119] In a small pilot trial involving individuals on parole with prior opioid use disorder, 6 months of treatment with extended-release injectable naltrexone was associated with fewer opioid-positive urine drug screens and a reduced likelihood of reincarceration.[202] Further research is needed to determine the comparative effectiveness of extended-release naltrexone with methadone and extended-release buprenorphine for the treatment of opioid use disorder within the criminal justice setting.

Treatment Options

All justice-involved individuals, regardless of type of offense or disposition, should be screened for opioid use disorder and considered for initiation or continuation of medication for the treatment of opioid use disorder. Patients with opioid use disorder not in treatment should be assessed and offered individualized pharmacotherapy and psychosocial treatment as appropriate. All FDA approved medications for the treatment of opioid use disorder should be available to patients within the criminal justice system and the treatment plan, including choice of medications, should be based on the patient's individual clinical needs.

Individuals entering the criminal justice system should not be subject to forced opioid withdrawal nor forced to transition from agonist (methadone or buprenorphine) to antagonist (naltrexone) treatment. If opioid withdrawal does occur, the patient should be provided withdrawal management services. Patients being treated for opioid use disorder at the time of entrance into the criminal justice system should continue their treatment. Criminal justice staff should coordinate care and access to pharmacotherapy to avoid interruption in treatment.

Risk for relapse and overdose is particularly high in the weeks immediately following release from prison and jails. Patients being treated for opioid use disorder while in prison or jail should be stabilized on pharmacotherapy and continued on treatment after their release. Continuation of treatment after release results in a substantial reduction in all-cause and overdose mortality. Incarcerated individuals with a history of opioid use disorder who are not receiving pharmacological treatment should be assessed for relapse risk prior to reentry. Medications should be initiated a minimum of 30 days before release, and aftercare should be arranged in advance.[203] Patient care on reentry to the community should be

individualized and coordinated with treatment providers in the community.[194]

Methadone and Buprenorphine

For patients without contraindications, treatment for opioid use disorder with either methadone or buprenorphine during incarceration should be continued after release. For individuals who have been tapered off medication, restart methadone or buprenorphine with rapid transition to follow-up care after reentry. Limited research is available comparing methadone and buprenorphine treatment in the prison population. A 2009 trial found no post-release differences between the buprenorphine and methadone groups in self-reported relapse to illicit opioid use, self-reported rearrests, self-reported severity of crime or reincarceration. The buprenorphine group reported for their post-release treatment in the community more often than did the methadone treatment group.[201] As described above, a 2019 systematic review found that buprenorphine was as effective as methadone in reducing illicit opioid use post-release in prison and jail settings.[190]

Naltrexone

Extended-release injectable naltrexone may be considered to prevent relapse among criminal justice involved individuals with a history of opioid use disorder for patients with no contraindications, during incarceration or before release from prison or jail. Further research is needed on the comparative effectiveness of extended-release injectable naltrexone compared with buprenorphine or methadone for the treatment of individuals in the criminal justice system with opioid use disorder.

Summary of Recommendations – *Special Populations: Individuals in the Criminal Justice System*

1. (NEW) All FDA approved medications for the treatment of opioid use disorder should be available to individuals receiving healthcare within the criminal justice system. The treatment plan, including choice of medication, should be based on the patient's individual clinical needs.
2. (MINOR REVISION) Continuation of treatment after release results in a substantial reduction in all-cause and overdose mortality. Treatment should be individualized, and patients should receive complete information to make informed decisions in consultation with a medical and treatment team.
3. (NEW) Individuals entering the criminal justice system should not be subject to forced opioid withdrawal. Patients being treated for opioid use disorder at the time of entrance into the criminal justice system should continue their treatment. Patients with opioid use disorder who are not in treatment should be assessed and offered individualized pharmacotherapy and psychosocial treatment as appropriate.
4. (MAJOR REVISION) Initiation or maintenance of pharmacotherapy for the treatment of opioid use disorder is recommended for individuals within the criminal justice system (including both jails and prisons). Criminal justice staff should coordinate care and access to pharmacotherapy to avoid interruption in treatment. Patients should not be forced to transition from agonist (methadone or buprenorphine) to antagonist (naltrexone) treatment.
5. (MAJOR REVISION) Individuals in the criminal justice system who have opioid use disorder or who are experiencing opioid withdrawal should be offered a combination of pharmacotherapy and psychosocial treatment (based on an assessment of their individual psychosocial needs). A patient's decision to decline psychosocial treatment or the absence of available psychosocial treatment should not preclude or delay pharmacological treatment of opioid use disorder, with appropriate medication management. Motivational interviewing or enhancement can be used to encourage patients to engage in psychosocial treatment services appropriate for addressing their individual needs.
6. (NEW) If an OTP is not accessible, providers may need to transition individuals from methadone to buprenorphine. Effectively transitioning from methadone to buprenorphine can be challenging but can be achieved safely if managed by a provider experienced in the procedure.
7. (MAJOR REVISION) Risk for relapse and overdose is particularly high in the weeks immediately following release from prison and jails. Patients being treated for opioid use disorder while in prison or jail should be stabilized on pharmacotherapy (methadone, buprenorphine or naltrexone) and continue in treatment after their release. Patient care on reentry to the community should be individualized and coordinated with treatment providers in the community.
8. (NEW) Naloxone kits should be available within correctional facilities. Individuals with opioid use disorder should receive a naloxone kit prior to release, and individuals and families should be educated in how to administer naloxone.

Areas for Further Research

1. Further research is needed to identify organizational and patient-level factors influencing real-world effectiveness of pharmacotherapy delivered in jails and prisons.
2. Research is needed to assess the impact of extended-release naltrexone with or without psychosocial treatment on mortality in justice involved individuals.
3. Comparative effectiveness research is needed comparing extended-release naltrexone with methadone and buprenorphine (including extended-release buprenorphine) for the treatment of opioid use disorder in justice involved populations, particularly the comparative impact on mortality.
4. More research is needed on best practices for coordinating and ensuring ongoing access to opioid use disorder treatment upon reentry.

PART 13: NALOXONE FOR THE PREVENTION OF OPIOID OVERDOSE DEATH

Introduction

Death from opioid overdose is an epidemic in the U.S. Poisoning deaths involving opioid analgesics more than tripled in the U.S. since 1999.[204] Unintentional poisoning (primarily due to drug overdose) is now the leading cause of injury-related death among Americans aged 25–64, having surpassed motor

vehicle accidents in 2009.[205] Patients who overdose on opioids are in a life-threatening situation that requires immediate medical intervention. Naloxone is a mu-opioid antagonist with well-established safety and efficacy that can reverse opioid overdose and prevent fatalities. Fentanyl and its analogs are becoming increasingly prevalent in the drug supply. These highly potent opioids often require higher doses of naloxone, and due to naloxone's short half-life, requires monitoring and often requires administering multiple doses.

As of June 2017, all 50 states and the District of Columbia had passed legislation designed to improve layperson naloxone access and 40 states had adopted Good Samaritan laws.[206] These laws make it easier for medical professionals to prescribe and dispense naloxone; easier for people who might be in a position to assist in an overdose to access naloxone; and encourage those individuals to summon emergency responders without fear of legal repercussions (i.e., Good Samaritan laws).

Naloxone is contraindicated in patients known to be hypersensitive to naloxone hydrochloride or to any of the other ingredients. There is little peer-reviewed evidence on any naloxone-related allergic reactions.

Patients and Significant Others/Family Members

Patients who are being treated for opioid use disorder, and their family members or significant others, should be given prescriptions for naloxone. Patients and family members/significant others should be trained in the use of naloxone in overdose. The practice of co-prescribing naloxone for home use in the event of an overdose situation experienced by the patient or by any others in the household is endorsed by ASAM in a public policy statement and by SAMHSA in its toolkit on opioid overdose.[204,207]

Individuals Trained and Authorized to Use Naloxone

Until recently, administration of naloxone for the treatment of opioid overdose was only recommended for hospital personnel and paramedics. State legislation and new formulations (including a naloxone nasal spray approved in 2015) has made the use of naloxone for the treatment of opioid overdose accessible to first responders, including emergency medical technicians, police officers, firefighters, correctional officers, and individuals who might witness opioid overdose. The primary issues to be considered in this *Practice Guideline* include the safety and efficacy of naloxone for the treatment of opioid overdose by first responders and bystanders, and the best form of naloxone to use for this purpose.

Safety and Efficacy of Bystander Administered Naloxone

Ample evidence is available supporting the safety and efficacy of naloxone for the treatment of opioid overdose.[207–209] Naloxone can be safely and effectively used by paramedics and other first responders as well as bystanders.[210–214] Further, naloxone can and should be administered to pregnant women in cases of overdose to save the mother's life.

There have been a number of nonrandomized studies evaluating the effectiveness of community-based overdose prevention programs that include the distribution of naloxone to nonmedical personnel. A comprehensive review of these trials[207] concluded that bystanders (mostly opioid users) can and will use naloxone to reverse opioid overdose when properly trained, and that this training can be done successfully through these programs. The authors acknowledge that the lack of randomized controlled trials of community-based overdose prevention programs limits conclusions about their overall effectiveness. SAMHSA supports the use of naloxone for the treatment of opioid overdose by bystanders in their Opioid Overdose Prevention Toolkit.[206]

Routes of Administration

Naloxone is marketed in vials for injection, in an autoinjector for either IM or subcutaneous (SC) use, and as a nasal spray. The FDA-approved autoinjector was designed to be used by a patient or family member for the treatment of opioid overdose. In November 2015 the U.S. FDA-approved the intranasal formulation.

Few studies have compared the efficacy of naloxone by route of administration, including intranasal, IM, or intravenous. Before FDA approval of the naloxone nasal spray product, many first responders used improvised adaptors to convert the liquid naloxone product into a rapidly acting nasal spray. A recent study comparing the FDA approved nasal spray and autoinjector to the improvised nasal devices found that the approved formulations were superior to the improvised devices delivering higher levels of naloxone into the blood stream.[211] Further research is needed to definitively assess the relative effectiveness of injectable vs. intranasal naloxone.

Summary of Recommendations – *Naloxone for the Treatment of Opioid Overdose*

1. (MAJOR REVISION) Naloxone should be administered in the event of a suspected opioid overdose.
2. (MINOR REVISION) Naloxone may be administered to pregnant women in cases of overdose to save the mother's life.
3. (MINOR REVISION) Patients who are being treated for opioid use disorder (as well as people with a history of opioid use disorder leaving incarceration) and their family members/significant others should be given naloxone kits or prescriptions for naloxone. Patients and family members/significant others should be trained in the use of naloxone in overdose.
4. The Guideline Committee, based on consensus opinion, recommends that first responders such as emergency medical services personnel, police officers, and firefighters be trained in and authorized to carry and administer naloxone.

Areas for Further Research

1. Further research is needed to develop new opioid overdose reversal medications with higher potency and/or a longer half-life to address highly potent synthetic opioids such as fentanyl.

2. Further research is needed on the most effective strategies for increasing community availability of naloxone and community access to training on naloxone administration and overdose prevention.
3. Further research is needed on the most effective strategies for engaging patients in treatment following an opioid overdose reversal with naloxone.

PART 14: AREAS FOR FURTHER RESEARCH

Although this *Practice Guideline* is intended to guide the assessment, treatment, and use of medications in opioid use disorder, there are areas where there was insufficient evidence to make a recommendation. Further research is needed to compare the advantages of different medications for different patient groups, especially with the emergence of new treatments. The recommended areas of future research are outlined below and presented in the order they were introduced in the guideline.

Assessment and Diagnosis of Opioid Use Disorder (Part 1)

1. More research is needed on best practices for drug testing during the initial evaluation and throughout the entire treatment process.
2. Further research is needed on evidence-based approaches for treating opioid use disorder in patients who continue to use alcohol, cannabis, and/or other psychoactive substances.
3. Assessment and diagnosis of OUD is occurring increasingly in nontraditional settings, including hospital emergency departments and primary care. Implementation research is needed to determine the most effective tools and models for assessment and diagnosis in these settings.

Treatment Options (Part 2)

1. Further research is needed to compare the advantages of agonists and antagonists in the treatment of opioid use disorder. Whereas methadone, buprenorphine, and extended-release injectable naltrexone are all superior to no treatment in opioid use disorder, less is known about their relative advantages.
2. Further research is needed to compare extended-release formulations in treatment of opioid use disorder (extended-release naltrexone vs extended-release buprenorphine).
3. Further research is needed on the comparative effectiveness of various health care settings and delivery systems (e.g., integrated delivery systems, health maintenance organizations, preferred provider organizations, point of service care etc.) for treatment of opioid use disorder.
4. Across a variety of sub-populations, further research is needed to better understand and characterize the effectiveness of and adherence to the different pharmacotherapy options to treat opioid use disorder.

Opioid Withdrawal Management (Part 3)

1. Further study is needed on methods to accelerate the withdrawal process and facilitate the introduction of antagonists. Recently, researchers have begun to investigate the use of combinations of buprenorphine and low doses of oral naltrexone to rapidly detoxify patients and facilitate the accelerated introduction of extended-release injectable naltrexone.[215] Although these techniques seem promising, more research is needed before these can be accepted as standard practice. Similarly, there are insufficient data to determine whether opioid antagonists (naltrexone, naloxone or both) in combination with alpha-2 adrenergic agonists (lofexidine and clonidine) reduce withdrawal duration or increase rates of retention in ongoing treatment with naltrexone.[84]
2. Further research is needed to make recommendations on the optimal duration of a buprenorphine taper, and to compare the effectiveness of short versus long tapers with buprenorphine withdrawal management.
3. Further research is needed to evaluate the safety of inpatient as compared to outpatient withdrawal management.
4. Further research is needed to address whether the protocol for buprenorphine initiation should be modified for patients regularly using fentanyl and other high potency opioids

Methadone (Part 4)

1. Further research is needed to assess the effectiveness of specific types of psychosocial treatment in combination with methadone in OTP or inpatient settings. Treatment with methadone generally includes some psychosocial components, however, it is unclear when added psychosocial treatment improves patient outcomes, and which psychosocial treatments are beneficial to which patients.
2. Research is needed to evaluate the use of ECG in treatment with methadone in preventing adverse cardiac events.
3. Further research is needed on how to determine the optimal length of treatment with methadone for individual patients.
4. More research is needed on outcomes following transitions from methadone to other opioid use disorder treatment medications. For example, to what extent do different protocols for medication transitions affect short- and long-term treatment outcomes.

Buprenorphine (Part 5)

1. Further research is needed on the comparative effectiveness of newly approved buprenorphine formulations.
2. Further research is needed on how to determine the optimal length of treatment with buprenorphine for individual patients.
3. More research is needed to identify best practices for linking patients to continuing care when buprenorphine is initiated in an acute care setting.
4. Further research is needed to assess the effectiveness of specific types of psychosocial treatment in combination with buprenorphine. Evidence is needed to determine when added psychosocial treatment improves patient outcomes, and which psychosocial treatments are beneficial to which patients.

Naltrexone (Part 6)

1. Further research is needed to test the relative effectiveness of extended-release injectable naltrexone as compared to agonist treatment, including methadone and extended-release injectable buprenorphine, in terms of treatment retention, substance use outcomes, and mortality.

2. Further research is needed on optimal withdrawal management and initiation protocols to initiate treatment with naltrexone and minimize the risk of precipitated withdrawal.
3. Further research is needed on outcomes related to administering extended-release injectable naltrexone every 3 weeks for individuals who metabolize naltrexone at higher rates.
4. Further research is needed on how to determine the optimal length of treatment with naltrexone for individual patients.
5. Further research is needed on the safety and efficacy of naltrexone for pregnant women.
6. Further research is needed to develop more effective strategies for improving adherence to extended-release injectable naltrexone.

Psychosocial Treatment in Conjunction With Medications for the Treatment of Opioid Use Disorder (Part 7)

1. Further research is needed to identify the comparative advantages of specific psychosocial treatments.
2. Further study is needed to evaluate the effectiveness of psychosocial treatment in combination with specific pharmacotherapies.
3. Further research is needed on which concurrent psychosocial treatments are most effective for different patient populations and treatment settings including primary care.
4. Further research is needed on which psychosocial treatments can be effectively delivered in primary care settings.
5. Further research is needed on effective strategies for engaging patients in treatment, including models incorporating peer support.

Special Populations: Pregnant Women (Part 8)

1. Further research is needed on the safety of combination buprenorphine/naloxone and new extended-release formulations for use in pregnancy.
2. Further research is needed to investigate the safety of naltrexone while pregnant or breastfeeding.
3. Further research is needed to determine what, if any, clinical benefit there is to routinely drug testing pregnant women.
4. Further research is needed on the comparative effectiveness of inpatient versus outpatient settings for methadone and buprenorphine initiation for pregnant women.
5. Further research is needed on best treatment approaches for pregnant or breastfeeding women who cannot or will not take medication for opioid use disorder.

Special Population: Individuals With Pain (Part 9)

1. Research on optimal acute and chronic pain management strategies for patients on medications for opioid use disorder.
2. Studies on the safety and effectiveness of adding full agonist opioid analgesics to the patient's baseline buprenorphine dose in non-acute care settings are needed.
3. Further research is needed on chronic pain management for patients with opioid use disorder.
4. Research on pain management in pregnant women on medications for opioid use disorder during delivery.

Special Populations: Adolescents (Part 10)

1. Further studies are needed to examine the efficacy of pharmacotherapy for adolescents with opioid use disorder. Due to the few clinical trials in adolescents, most of the current recommendations are based on research with adults.
2. Further research is needed to identify which psychosocial treatments, alone and in combination with pharmacotherapy, are best suited for use with adolescents.
3. More longitudinal studies are needed to determine treatment factors (e.g., treatment modality, length of treatment, treatment settings) associated with positive long-term outcomes for adolescents with OUD.

Special Populations: Individuals With Co-Occurring Psychiatric Disorders (Part 11)

1. Implementation research is needed to determine best practices for assessing, diagnosing, and treating co-occurring psychiatric disorders for patients with opioid use disorder in diverse treatment settings.
2. More longitudinal research is needed to better understand how co-occurring psychiatric disorders affect long-term prognosis for opioid use disorder remission, and how risks for both opioid use disorder and psychiatric condition relapse can be anticipated and mitigated.
3. More research is needed on how to improve access and linkage to psychiatric care for patients with co-occurring opioid use disorder.

Special Populations: Individuals in the Criminal Justice System (Part 12)

1. Further research is needed to identify organizational and patient-level factors influencing real-world effectiveness of pharmacotherapy delivered in jails and prisons.
2. Research is needed to assess the impact of extended-release naltrexone with or without psychosocial treatment on mortality in justice involved individuals.
3. Comparative effectiveness research is needed comparing extended-release naltrexone with methadone and buprenorphine (including extended-release buprenorphine) for the treatment of opioid use disorder in justice involved populations, particularly the comparative impact on mortality.
4. More research is needed on best practices for coordinating and ensuring ongoing access to opioid use disorder treatment upon reentry.

Naloxone for the Treatment of Opioid Overdose (Part 13)

1. Further research is needed to develop new opioid overdose reversal medications with higher potency and/or a longer half-life to address highly potent synthetic opioids such as fentanyl.
2. Further research is needed on the most effective strategies for increasing community availability of naloxone and

community access to training on naloxone administration and overdose prevention.
3. Further research is needed on the most effective strategies for engaging patients in treatment following an opioid overdose reversal with naloxone.

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APPENDICES

Appendix I: Included Clinical Guidelines and Systematic Reviews:

Guidelines Included for the 2015 Publication:

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Appendix II: Bioequivalence Information and Charts

Available formulations of buprenorphine vary in bioequivalence as observed in pharmacokinetic studies. When transitioning patients between different formulations of buprenorphine bioavailability should be considered. Patients being switched between formulations should be started on an equivalent dosage as the previously administered product. However, dosage adjustments may be necessary when transitioning between products. Patients should be monitored for symptoms related to overdosing or underdosing. Corresponding dosage strengths are detailed below.

Suboxone or generic equivalent (sublingual tablet)	**Suboxone or generic equivalent (sublingual film)**	**Zubsolv (sublingual tablet)**	**Bunavail (buccal film)**	**Cassipa (sublingual film)**	**Generic equiv. of Subutex (sublingual tablet)**	**Sublocade[†] (subcutaneous injection)**	**Brixadi (IM or deep SC injection)[‡]**
2 mg bup/ 0.5 mg nal tablet	2 mg bup/ 0.5 mg nal film	One 1.4 mg bup/0.36 mg nal tablet			2 mg bup tablet		
4 mg bup/ 1 mg nal (taken as: two 2 mg bup/0.5 mg nal tablets)	4 mg bup/ 1 mg nal film	One 2.9 mg bup/ 0.71 mg nal tablet	One 2.1 mg/ 0.3 mg nal film		Two 2 mg bup tablets		
8 mg bup/ 2 mg nal tablet	8 mg bup/ 2 mg nal film	One 5.7mg/1.4 mg nal tablet	One 4.2mg/0.7 mg nal film		One 8 mg bup tablet	100 mg	16 mg SC bup weekly injection; or 64 mg SC bup monthly injection
12 mg bup/3 mg nal (Taken as: One and a half 8 mg bup/2 mg nal tablets or one 8 mg bup/2 mg nal tablets plus two 2 mg bup/ 2 mg nal tablets)	12 mg bup/3 mg nal film	One 8.6 mg bup/2.1 mg nal tablet	One 6.3mg/1 mg nal film		12 mg bup (Taken as: One and a half 8 mg bup tablets or one 8 mg bup tablets plus two 2 mg bup tablets)		
16 mg bup/4 mg nal (taken as: Two 8 mg bup/2 mg nal tablets)	16 mg bup/4 mg nal (taken as: Two 8 mg bup/ 2 mg nal films)	One 11.4 mg bup/ 2.9 mg nal tablet	Two 4.2 mg bup/ 0.7 mg nal films	16 mg bup/ 4 mg nal[*]	16 mg bup (taken as: Two 8 mg bup tablets)		24 mg SC bup weekly injection; or 96 mg SC bup monthly injection
24 mg bup/6 mg nal (taken as: three 8 mg bup/3 mg nal tablets)	24 mg bup/6 mg nal (taken as: Two 12 mg bup/ 3 mg nal films)	17.2 mg bup/4.1 mg nal (Taken as: Two 8.6 mg bup/2.1 mg nal tablets)	Two 6.3 mg bup/1 mg nal films		24 mg bup (taken as: Three 8 mg bup tablets)	300 mg	32 mg SC bup weekly injection; or 128 mg SC bup monthly injection

[*]In a pharmacokinetic study, the 16 mg/4 mg dose of CASSIPA showed comparable relative bioavailability of buprenorphine and naloxone compared with the same dose of buprenorphine/naloxone administered sublingually, as two 8 mg/2 mg sublingual films.

[†]The recommended dose of SUBLOCADE following induction and dose adjustment with transmucosal buprenorphine is 300 mg monthly for the first two months followed by a maintenance dose of 100 mg monthly. The maintenance dose may be increased to 300 mg monthly for patients who tolerate the 100 mg dose, but do not demonstrate a satisfactory clinical response, as evidenced by self–reported illicit opioid use or urine drug screens positive for illicit opioid use.

‡Brixadi received tentative approval from the FDA in 2018 and is eligible for marketing approval on November 30, 2020

Appendix III: Overview of Opioid Use Disorder Pharmacotherapy Options

Generic Name	For the Treatment of	Effects	Potential Side Effects	Advantages	Disadvantages	Regulatory
Methadone						
Methadone	Opioid withdrawal management; Ongoing treatment of opioid use disorder	Improved retention in treatment, reduced withdrawal symptoms and cravings, reduced illicit opioid use, reduced mortality risk	Constipation, hyperhidrosis, respiratory depression (particularly combined with benzodiazepines or other CNS depressants), sedation, QT prolongation, interactions with other medications that alter cytochrome P450 metabolism, sexual dysfunction, severe hypotension including orthostatic hypotension and syncope, misuse potential, NOWS	Strongest retention in treatment; improved social functioning; associated with reductions in criminal activity and recidivism; and infectious disease acquisition and transmission	More frequent clinic visits, only SAMHSA-certified OTPs may provide methadone for addiction treatment, higher risk for respiratory depression due to long half-life and stacking effect (requires more monitoring)	Only federally certified and accredited OTPs can dispense methadone for the treatment of OUD. Exceptions include: administering (not prescribing) an opioid for no more than 3 days to a patient in acute opioid withdrawal while preparations are made for ongoing care; administering opioid medications in a hospital to maintain or detoxify a patient as an ''incidental adjunct to medical or surgical treatment of conditions other than addiction.
Buprenorphine						
Buprenorphine (with or without naloxone)	Opioid withdrawal management; Ongoing treatment of opioid use disorder	Improved retention in treatment at doses of 16 mg or higher, reduced withdrawal symptoms and cravings, reduced illicit opioid use, reduced mortality	Constipation, nausea, precipitated withdrawal, excessive sweating, insomnia, peripheral edema, respiratory depression when with benzodiazepines or other CNS depressants, misuse potential, NOWS Implant: Nerve damage during insertion/removal, accidental overdose or misuse if extruded, local migration or protrusion Subcutaneous: Injection site itching or pain, death from intravenous injection	Ceiling effects on respiratory depression, more rapid induction to steady state dose, less potential for euphoria (compared to methadone), considered safe for office-based treatment; improved social functioning; associated with reductions in criminal activity and recidivism; and infectious disease acquisition and transmission	Requires X-Waiver to prescribe; risk for overdose when combined with alcohol, benzodiazepines, or other sedatives	Must have a waiver to prescribe buprenorphine for OUD (OTPs can dispense buprenorphine under OTP regulations without using a federal waiver); Subject to patient limits; Prescribing buprenorphine implants or extended release injectables requires REMS Program certification specific to formulation
Naltrexone						
Naltrexone	Prevention of relapse to opioid use disorder following complete opioid withdrawal	Reduced illicit opioid use, reduced cravings	Nausea, anxiety, insomnia, precipitated withdrawal, hepatotoxicity, vulnerability to opioid overdose, depression, suicidality, muscle cramps, dizziness or syncope, somnolence or sedation, anorexia, decreased appetite or other appetite disorders Intramuscular: Pain, swelling, induration (including some cases requiring surgical intervention)	No risk for misuse or physiological dependence; no special regulatory requirements; improved social functioning; associated with reductions in criminal activity and recidivism; and infectious disease acquisition and transmission	Patients must be fully withdrawn from opioids before beginning treatment, lower retention in treatment, high rates of medication nonadherence, has not been demonstrated to reduce mortality (and may increase mortality risk after medication discontinuation)	Any healthcare provider with prescribing authority can prescribe or administer naltrexone

Appendix IV: Available Pharmacotherapy Formulations

GENERIC/TRADE NAME	MU-OPIOID RECEPTOR EFFECT	FOR THE TREATMENT OF	FORMULATIONS	AVAILABLE STRENGTHS	COMMON MAINTENANCE DOSE	STANDARD DOSING REGIMEN
Methadone (Methadose, Dolophine)	Full agonist	Opioid withdrawal and opioid use disorder	Liquid concentrate, tablet, oral solution of powder or dispersible tablet	tablet: 5 mg, 10mg dispersible tablet: 40mg oral solution: 5mg/5 mL, 10mg/5mL oral concentrate solution: 10mg/mL	Range: 60 to 120 mg	Once daily (or split dosing when appropriate)
Generic buprenorphine monoproduct	Partial agonist	Opioid withdrawal and opioid use disorder	Sublingual tablet	2 mg 8 mg	16 mg Range: 4 mg to 24 mg*	Daily
Generic buprenorphine/naloxone†	Partial agonist combined with antagonist	Opioid withdrawal and opioid use disorder	Sublingual tablet	2 mg/0.5 mg 8 mg/2 mg	16 mg/4 mg Range: 4 mg/1 mg to 24 mg/6 mg*	Daily
Buprenorphine/naloxone † (Zubsolv)	Partial agonist combined with antagonist;	Opioid withdrawal and opioid use disorder	Sublingual tablet	0.7 mg/0.18 mg 1.4 mg/0.36 mg 2.9 mg/0.71 mg 5.7 mg/1.4 mg 8.6 mg/2.1 mg 11.4 mg/2.9 mg	11.4 mg/2.9 mg Range: 2.9 mg/0.71 mg to 17.2 mg/4.2 mg	Daily
Buprenorphine/naloxone † (Bunavail)	Partial agonist combined with antagonist	Opioid withdrawal and opioid use disorder	Buccal film	2.1 mg/0.3 mg 4.2 mg/0.7 mg 6.3 mg/1 mg	8.4 mg/1.4 mg Range: 2.1 mg/0.3 mg to 12.6 mg/2.1 mg	Daily
Buprenorphine/naloxone † (Suboxone)	Partial agonist combined with antagonist	Opioid withdrawal and opioid use disorder	Sublingual film; may also be administered buccally	2 mg/0.5 mg 4 mg/1 mg 8 mg/2 mg 12 mg/3 mg	16 mg/4 mg Range: 4 mg/1 mg to 24 mg/6 mg*	Daily
Buprenorphine/naloxone † (Cassipa)	Partial agonist combined with antagonist	Opioid withdrawal and opioid use disorder	Sublingual film	16 mg/4 mg	16 mg/4 mg Range: 16–24 mg	Daily
Buprenorphine (Probuphine)	Partial agonist	Treatment of opioid use disorder in clinically stable patients taking 8 mg/day or less of buprenorphine or buprenorphine/naltrexone tablet equivalents	Implants	80 mg/implant	4 implants for 6 months of treatment	Implants last for 6 months and are then removed, after which a second set can be inserted
Extended-release injection buprenorphine (Sublocade)	Partial agonist	Moderate to severe opioid use disorder in patients who have initiated treatment with transmucosal buprenorphine followed by dose adjustment for a minimum of 7 days	Subcutaneous injection	100mg 300mg	Common monthly dose: 300 mg for the first 2 months; 100 mg thereafter Range: 100 mg to 300 mg monthly	Monthly
Extended-release injection buprenorphine (Brixadi)	Partial agonist	Initiation, stabilization, and maintenance treatment of opioid use disorder	Subcutaneous injection (Weekly or Monthly)	Weekly: 8 mg, 16 mg, 24 mg, 32 mg Monthly: 64 mg, 96 mg, 128 mg	24 mg SC weekly; Range: 8–32 mg or 96 mg SC monthly; Range 64–128mg	Weekly or Monthly
Oral naltrexone (Revia)	Antagonist	For the blockade of the effects of exogenously administered opioids.	Oral tablet	50 mg	50 mg Range: 25–50 mg	Once daily (also alternative off-label regimens)
Extended-release injection naltrexone (Vivitrol)	Antagonist	Prevention of relapse to opioid use disorder following complete opioid withdrawal	Intramuscular injection	380 mg	380 mg monthly Range: 380 mg every 3–4 weeks	Once monthly by injection±

*Dosages above 24 mg buprenorphine or 24 mg/6 mg buprenorphine/naloxone per day have not shown clinical advantage.
±Dosing every 3–4 weeks may be appropriate for some patients.
†naloxone not absorbed when taken as prescribed.

Appendix V: 2019 Guideline Committee Member Relationships with Industry and Other Entities

Guideline Committee Member	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit	Research	Expert Witness
Chinazo O. Cunningham, MD, MS, FASAM	Albert Einstein College of Medicine – Professor of Medicine	None	None	General Electric Health**	None	None	None
	Quest Diagnostics			Data Safety Monitoring Board - Spouse			
Mark Edlund, MD	RTI International – Senior Research Public Health Analyst	None	None	American Psychiatric Association – Member	None	None	None
				Centers for Disease Control and Prevention**			
				Patient-Centered Outcomes Research Institute**			
Marc Fishman, MD, DFASAM	Maryland Treatment Centers – Medical Director, CEO	Alkermes**	None	Maryland Treatment Centers**	None	Alkermes** - Research Grant	Represented plaintiff in class action lawsuit alleging managed care criteria for utilization management violated standard of care**
		US WorldMeds**				National Institute on Drug Abuse** - Research Grant	Represented plaintiff in allegation that a patient was denied access to care based on overly restrictive criteria**
		Danya/Mid Atlantic ATTC**					Represented defendant in an allegation that physician and treatment center were responsible for data of patient**
		NADCP**					
		Verily**					
Adam J. Gordon, MD, MPH, FACP, DFASAM	University of Utah School of Medicine – Professor of Medicine	None	None	AMERSA* - Board of Directors, Substance Abuse Journal Editor-in-Chief	None	National Institutes of Health – Research Grant	None
	Salt Lake City VA Health Care System – Psychiatry/Chief of Medicine			Veterans Health Administration**		Veterans Health Administration – Research Grant	
Hendree Jones, PhD	University of North Carolina Department of OB/GYN – Professor	BayMark*	None	None	None	None	None
	UNC Horizons – Executive Director						
Kyle M. Kampman, MD, FASAM (*Chair*)	Perelman School of Medicine – Professor of Psychiatry	US World Meds*	None	Addiction Psychiatry Fellowship	None	Alkermes – Clinical Trial on use of naltrexone in conjunction with buprenorphine in adults with OUD transitioning from buprenorphine maintenance prior to first dose of vivitrol	None

(*Continued*)

Guideline Committee Member	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit	Research	Expert Witness
		Alkermes*				National Institute on Drug Abuse – Clinical Trial on cariprazine for cocaine use disorder	
		Allergan* Indivior					
Marjorie Meyer, MD	University of Vermont – Associate Professor	None	None	University of Vermont Medical Center	None	None	None
Daniel Langleben, MD	University of Pennsylvania - Professor	Alkermes**	None	None	None	None	None
Sandra A. Springer, MD, FASAM	Yale School of Medicine – Associate Professor of Medicine	Alkermes**	None	Infectious Diseases Society of America and HIV Medical Association – Member of Working Group at the Intersection of OUD and Infectious Disease Epidemics	National Center for Advancing Translational Sciences	National Institutes of Health – Research Grant	None
	Veterans Administration Healthcare System			National Academy of Sciences – Appointed Committee Member of Engineering and Medicine Working Group on Evaluating Community Programs Integrating Infectious disease and OUD Treatments	Veterans Administration Cooperative Studies	National Institute on Drug Abuse – Research Grant	
						National Institute on Alcohol Abuse and Alcoholism – Research Grant	
George E. Woody, MD	University of Pennsylvania Perelman School of Medicine Department of Psychiatry - Professor	None	None	None	None	Alkermes – Research Grant	Diagnosis of Substance Use Disorder**
						American Society of Addiction Medicine – Research Grant	Presence/Absence of substance use disorder or other health problem that could impair practice of licensed professional**
						National Institute on Drug Abuse** - Clinical Trial on improving outcomes of opioid addicted prisoners with extended release injectable naltrexone given before or after reentry	
Tricia E. Wright, MD, MS, FACOG, DFASAM	University of California San Francisco – Professor of Clinical Medicine	Cambridge University Press*	American College of Obstetrics and Gynecology*	None	State of Hawaii	None	None
	University Health Partners, University of Hawaii		American Society of Addiction Medicine*				

(*Continued*)

Guideline Committee Member	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit	Research	Expert Witness
Stephen A. Wyatt, DO, FAOAAM, FASAM (*Co-chair*)	Atrium Health – Medical Director of Addiction Medicine	None	None	None	None	None	None

The above table presents relationships of the **Guideline Committee** during the past 12 months with industry and other entities that were determined to be relevant to this document. These relationships are current as of the completion of this document and may not necessarily reflect relationships at the time of this document's publication. A relationship or arrangement is considered to be *significant* if the individual receives compensation which includes cash, shares, and/or anything else of value including direct ownership of shares, stock, stock options or other interest of 5% more of an entity or valued at $10,000 or more (excluding mutual funds), whichever is greater. A relationship or arrangement is considered to be *modest* if it is less than significant under the preceding definition. A relationship or arrangement is considered to be *unpaid* if the individual does not receive monetary reimbursement. **Indicates significant relationship. *Indicates modest relationship.

Appendix VI: 2019 ASAM Board of Directors Relationships with Industry and Other Entities

Board Member	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit	Research
Anthony P. Albanese, MD, DFASAM	Veterans Health Administration - Chief of Hepatology, VA Northern California Healthcare System	Gilead Sciences	Gilead Sciences	Agape Family Ministries - Board of Directors Member	None	None
	Veterans Health Administration – Affiliations Officer, VA Office of Academic Affiliations	AbbVie Pharmaceuticals	AbbVie Pharmaceuticals	California Impaired Driving Taskforce		
Anika Alvanzo, MD, MS, FACP, DFASAM	Johns Hopkins University School of Medicine - Faculty (95%) Uzima Consulting Group, LLC (5%)	None	None	Uzima Consulting Group, LLC	None	None
Gavin Bart, MD, PhD, FACP, DFASAM	Hennepin Healthcare	National Alliance for Medication Assisted Recovery	None	None	American College of Academic Addiction Medicine	None
	National Institutes of Health – Federal Grants				National Institute on Drug Abuse - Investigator on several grants	
	Substance Abuse and Mental Health Services Administration – Federal Grants				Substance Abuse and Mental Health Services Administration – Director of International Technology Transfer Grant	
Gregory Boehm, MD, DFASAM	Private Practice - Outpatient IOP (90%) Salvation Army - Child/Adolescent Psychiatry (10%) Psychiatric Patient Care in Re-Entry Program	None	None	None	None	None
Brent Boyett, DO, DMD, DFASAM	Pathway Healthcare (99%)	Mississippi Board of Medical Directors	ALANA	Pathway Healthcare - Chief Medical Officer, Board of Directors Member	Outpatient Addiction Recovery Centers	None
	Mississippi Board of Medical Directors (no pay as of yet, will be about 1%)				Indivior	
Kelly J. Clark, MD, MBA, DFAPA, DFASAM	Addiction Crisis Solutions	Council of State Governments	None	CleanSlate Centers - was Chief Medical Officer	CleanSlate Centers - Equity Interest	None
	Dr Kelly Clark, PLLC;	Sandoz		Addiction Crisis Solutions - Founder	DisposeRX - Equity Interest	
	DisposeRx			DisposeRx - Director Private Practice - Dr Kelly Clark, PLLC		
Paul H. Earley, MD, DFASAM	Earley Consultancy, LLC - Physician	DynamiCare Health, Inc.	None	Federation of State Physician Health Programs - President	None	None
	Georgia Professionals Health program - Medical Director DynamiCare Health, Inc. - Consultant					

(*Continued*)

Board Member	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit	Research
Kenneth I. Freedman, MD, MS, MBA, FACP, AGAF, DFASAM	MA Department of Public Health, Lemuel Shattuck Hospital averHealth - Chief Medical Officer (15%)	Sandoz - Advisory Panel for reSET	None	averHealth - Chief Medical Officer American Society of Addiction Medicine – Corporate Round Table Member Boston Medical Library – Trustee and Finance Committee Member	None	None
Joseph Garbely, DO, DFASAM	Caron Treatment Centers - Vice President of Medical Services, Medical Director (95%) Collaborative Neuropsychiatric Services, LLC - Addiction Psychiatrist (5%)	None	None	Caron Treatment Centers - Vice President of Medical Services, Medical Director Reading Hospital Addiction Medicine Fellowship Program - Program Director	Penn State College of Medicine - Clinical Associate Professor of Psychiatry Stony Brook College of Medicine - Clinical Adjunct Associate Professor of Family Medicine	None
Murtuza Ghadiali, MD, FASAM	The Permanente Medical Group (100%)	None	None	Bay Area Physicians for Human Rights - President Alliance Health Project of UCSF - Advisory Board Member	None	None
Adam J. Gordon, MD, MPH, FACP, DFASAM	Department of Veterans Affairs (75%) University of Utah School of Medicine (25%) National Institutes of Health – Grant Reviews (<1%) Charitable Organizations, e.g. ASAM, AMERSA - Activity Participation (<1%)	None	None	None	AMERSA Journal of Substance Abuse - Editor in Chief National Institutes of Health – Grant Reviews	None
William F. Haning, III, MD, DFAPA, DFASAM	University of Hawaii School of Medicine - Emeritus Professor, Department of Psychiatry Retirement Pension (40%) University of Health Partners - Director of Addiction Training Programs (20%) U.S. Navy - Retirement Pension (20%) Social Security Benefits (20%)	None	None	American Board of Psychiatry and Neurology - Addiction Psychiatry Examination Committee Chair Pacific Health Research and Education Institute - Board of Directors Member	American Medical Response – Physician (Spouse) Fire Departments of Honolulu, Kauai, and Maui Counties Department of Water Safety, Honolulu Emergency Department of the Queen's Medical Center	None
Randolph P. Holmes, MD, FASAM	Private Practice Medical Group (90%) Residency Faculty (5%)	None	None	None	None	None

(*Continued*)

Board Member	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit	Research
	Treatment Program Medical Director (5%)					
Brian Hurley, MD, MBA, DFASAM	Los Angeles County Department of Mental Health - Clinical and Administrative Work (66%)	Valera Health (2016)	PsyBAR	Annenberg Physician Training Program in Addictive Disease - Financial Officer	None	University of California - Smoking Cessation Grant - Primary Investigator
	Private Practice - Clinical Work (13%)	American Academy of Addiction Psychiatry State Targeted Response Technical Assistance Consortium				
	PsyBAR Insurance Reviews - Expert Clinical Opinions (7%)					
	Center for Care Innovcations Treating Addiction in the Primary Care Safety Net Program - Training Work (5%)					
	Cedar Sinai Health System - Psychiatrist (5%)					
	Friends Research Institute - Senior Scientist (4%)					
	Annenberg Physician Training Program in Addictive Disease - Associate Director (<1%)					
Frank James, MD, JD, FASAM	United HealthCare	None	None	None	None	None
	Optum					
Margaret A. E. Jarvis, MD, DFASAM	Geisinger - Chief of Addiction Medicine (90%)	Addiction Solutions	Geisinger	American Board of Preventive Medicine - Addiction Medicine Exam Committee Member	None	None
	Addiction Solutions - Consultant (10%)					
Miriam Komaromy, MD, FACP, DFASAM	University of New Mexico Health Sciences Center	Lawfirm of Baron and Budd	Rubicon, MD	Albuquerque Insight Meditation Society – Board of Directors Member	None	None
			American Medical Association			
			Alliance for Health Policy			
Marla D. Kushner, DO, FSAHM, FACOFP, DFASAM	Private Practice; Insight Behavioral Health - Consultant	Insight Behavioral Health	Alkermes	American Osteopathic Academy of Addiction Medicine - Board of Directors Member	None	None
	New Hope Recovery Center	Dane Street		New Hope Recovery Center - Medical Director		
	Mercy Hospital - Part-Time Employee			Insight Behavioral Health ARCH Program - Medical Director		
	Advocate Physician's Group HMO					

(*Continued*)

Board Member	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit	Research
	Independent Physicians of Mercy HMO Midwestern University - Teaching Advocate Hope Children's Hospital - Teaching Residents Weiss Hospital - Teaching Residents Caribbean Medical University - Teaching Des Moines University - Teaching Dane Street - Consultant Alkermes - Speaker					
Ilse Levin, DO	Mid Atlantic Permanente Medical Group	None	None	None	American Medical Association Liaison to the National Commission of Correctional Healthcare Board of Directors United States Navy – Physician (Spouse) American Academy of Family Physicians – Board of Directors (Spouse) Kaiser - Shareholder	None
Penny S. Mills, MBA	American Society of Addiction Medicine (100%)	None	None	None	None	None
Yngvild K. Olsen, MD, MPH, DFASAM	Outpatient Non-Profit Specialty Addiction Treatment Center (70%) Maryland's Behavioral Health Administration - Medical Consultant (25%) PCSS - ASAM Clinical Expert (<5%)	Behavioral Health Administration	None	National Council on Alcoholism and Drug Dependence - Board of Directors Member	Oxford University Press - Co-Author of Book on Opioid Epidemic	None
Ken Roy, MD, DLFAPA, DFASAM	CMO of Addiction Recovery Resources - Employee Legal Consultations Consultation and Speaker Efforts for Pharma	None	US World Meds, Lucymera Alkermes, Vivitrol	Addiction Recovery Resources Treatment Program - Chief Medical Officer US World Meds - Advisory Board Member Alkermes - Advisory Board Member	None	None
Peter Selby, MBBS, CCFP, FCFP, MHSc, DFASAM	Centre for Addiction and Mental Health - Chief of Medicine in Psychiatry Division (20%)	Johnson & Johnson - E-NRT Advisory Board	None	University of Toronto Addiction Medicine Fellowship, American Board of Addiction Medicine - Program Director	None	Pfizer Canada Inc.

(*Continued*)

Board Member	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit	Research
	University of Toronto Department of Family and Community Medicine - Clinician Scientist (20%)	NVision Insight Group				Centre for Addiction and Mental Health
	Centre for Addiction and Mental Health Addictions Research Program - Clinician Scientist (60%)	Mylein & Associates				Ontario Ministry of Health and Long-Term Care
		Boehringer Ingelheim (Spouse)				Canadian Institutes of Health Research Canadian Centre on Substance Use and Addiction Public Health Agency of Canada Medical Psychiatry Alliance Canadian Cancer Society Research Institute Cancer Care Ontario Ontario Institute for Cancer Research Bhasin Consulting Fund Inc. Patient-Centered Outcomes Research Institute
Jeffrey Selzer, MD, DFASAM	Medical Society of the State of New York - Medical Director of the Committee for Physician Health (80%) Northwell Health - Director of Employee Assistance Program (20%)	None	None	New York State Psychiatric Association - Addiction Psychiatry Committee Chair Medical Society of the State of New York - Addiction and Behavioral Health Committee Member American Society of Addiction Medicine - Secretary and Public Policy Committee Chair	None	None
Scott Teitelbaum, MD, DFASAM	University of Florida Health - Vice Chair of Department of Psychiatry, Chief of Addiction Medicine Florida Recovery Center - Medical Director, Fellowship Director	None	None	IBH Addiction Recovery Center – Board of Directors Member	None	None
Melissa Weimer, DO, MCR, FASAM	St. Peters Health Partners - Employee (50%) Yale School of Medicine - Employee (50%) US Department of Justice - Consultant (2%)	Alkermes (2017) Indivior (2016) American Association of Addiction Psychiatry	MCE Conference	None	InforMed - Author of CME Material	None

(*Continued*)

Board Member	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit	Research
	SCOPE of Pain - Consultant (0.5%)	SCOPE of Pain				
Timothy Wiegand, MD, FACMT, FAACT, DFASAM	URMC Faculty Practice (71%)	None	None	New York Society of Addiction Medicine - President Elect	None	None
	Other Clinical Practice - e.g. Huther Doyle Outpatient CD (18%)			American College of Medical Toxicology - Board of Directors Member, Chair of Addiction and Practice Committees;		
	Expert Witness (8%)			Medical Toxicology Foundation - Finance Chair		
	Royalties/other - e.g. Uptodate (3%)					
Aleksandra Zgierska, MD, PhD, DFASAM	University of Wisconsin	None	None	None	None	Pfizer Inc. - Research Grants awarded to University of Wisconsin - Principal/Co-Principal Investigator

The above table presents relationships of the **ASAM Board of Directors** during the past 12 months with industry and other entities that were determined to be relevant to this document. These relationships are current as of the completion of this document and may not necessarily reflect relationships at the time of this document's publication.

Appendix VII: 2019 ASAM Quality Improvement Council (Oversight Committee) Relationships with Industry and Other Entities

Quality Improvement Council Member	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit	Research
John P. Femino, MD, DFASAM	Femino Consultancy - CEO	Dominion Diagnostics**	None	None	None	None
Kenneth I. Freedman, MD, MS, MBA, FACP, AGAF, DFASAM	Aetna/CVS Health – Medical Director, SE Territory	averHealth**	None	Massachusetts Department of Public Health**	None	American Academy of Addiction Psychiatry* - Research Grant
		Sandoz**				Substance Abuse and Mental Health Services Administration* - Research Grant
		Pfizer*				
		Substance Abuse and Mental Health Services Administration*				
R. Jeffrey Goldsmith, MD, DLFAPA, DFASAM	Self-Employed Specialist in Addiction Medicine	None	None	None	None	None
Barbara Herbert, MD, DFASAM	Column Health – Senior Physician	Advocates for Human Potential*	None	None	None	None
Margaret M. Kotz, DO, DFASAM	Emerita Case Western Reserve University Medical School	None	None	None	None	None
Margaret A. Jarvis, MD, DFASAM	Geisinger Health System Department of Psychiatry – Chief of Addiction Medicine	None	None	Geisinger Health System**	None	None
P. Stephen Novack, DO	Avita Health System – Addiction Provider	None	None	None	None	None
David R. Pating, MD, FASAM	San Francisco County - Employee	None	None	National Quality Forum Behavioral Health Steering Committee American Society of Addiction Medicine Quality Committee	None	None
Sandrine Pirard, MD, PhD, MPH, FAPA, FASAM	Beacon Health Options – Vice President, Medical Director	None	None	None	None	None

The above table presents relationships of the **ASAM Quality Improvement Council** during the past 12 months with industry and other entities that were determined to be relevant to this document. These relationships are current as of the completion of this document and may not necessarily reflect relationships at the time of this document's publication. A relationship or arrangement is considered to be *significant* if the individual receives compensation which includes cash, shares, and/or anything else of value including direct ownership of shares, stock, stock options or other interest of 5% more of an entity or valued at $10,000 or more (excluding mutual funds), whichever is greater. A relationship or arrangement is considered to be *modest* if it is less than significant under the preceding definition. A relationship or arrangement is considered to be *unpaid* if the individual does not receive monetary reimbursement. **Indicates significant relationship. *Indicates modest relationship.

Appendix VIII: External Reviewer Relationships with Industry and Other Entities (2019 Guideline Development Process)

External Reviewer	Representation	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit
Samantha Arsenault	Shatterproof	Shatterproof (100%)	None	None	None	None
Chris A. Bina, PharmD	Federal Bureau of Prisons (FBP)	U.S. Government - Sr. Deputy Assistant Director, Health Services Division Federal Bureau of Prisons	None	None	None	None
Nathaniel Counts	Mental Health America (MHA)	Mental Health America (100%)	None	None	National Prevention Science Coalition One Circle Foundation Flawless Foundation Health Care Transformation Task Force	LifeBridge Health – Employee (Mother)
Jon Fanburg, MD	American Academy of Pediatrics (AAP) Section on Adolescent Health (SOAH)	Maine Medical Center - Staff Physician (95%) Quality Counts - Health Care Consulting (5%)	None	None	Section on Adolescent Health for the American Academy of Pediatrics – Executive Committee Member	None
James Finch, MD, DFASAM	Individual Reviewer	Private Practice Addiction Medicine (90%); Educational/Training Consultant: NC Governor's Institute on Substance Abuse (10%) North Carolina Governor's Institute on Substance Abuse - Educational/ Training Consultant (10%)	None	None	James W Finch, MD, PLLC – Private Practice Physician	Practice was clinical site for Duke University node of NIDA Clinical Trials Network
Michael Fingerhood, MD, FACP, FASAM	Individual Reviewer	Johns Hopkins University - Employee (100%)	None	None	None	None
Kevin Fiscella, MD, MPH	National Commission on Correctional Health Care (NCCHC)	University of Rochester Medical School (100%)	American Society of Addiction Medicine - Drug Court Initiatives	None	New York State Department of Health - Buprenorphine Working Group Member	None
Katie Greene	National Governors Association (NGA)	National Governors Association (100%)	None	None	National Governors Association - Program Director NGA Health	None
Henrick Harwood	National Association of State Alcohol and Drug Abuse Directors (NASADAD)	Retired; Consulting	Foundation for Opioid Response Efforts	None	Institute for Research, Education and Training in Addictions - Board Member	None
Steven M. Jenkusky, MD, MA, FAPA	Magellan	Managed Care Organization and Part-Time Hospital Physician Magellan Healthcare Presbyterian Healthcare Services	None	None	None	None
Paul Katz, DO, FACA, DFASAM	Individual Reviewer - ASAM Maryland/ DC State Chapter President	Chesapeake Wellness Center - CEO Eastern Shore Psychological Services - Associate Director of Addiction Services	None	None	Chesapeake Wellness Center - President and CEO Cecil County Drug and Alcohol Commission - Appointed Member Mayors Council on Drug and Alcohol - Member	None

(*Continued*)

External Reviewer	Representation	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit
Bobby P. Kearney, MD, FASAM	Individual Reviewer - ASAM Opioid Treatment Program (OTP) Interest Group	Private Practice Opioid Treatment Program	None	None	Addiction Recovery Medical Services	None
Audrey M. Kern, MD, FASAM	Individual Reviewer - ASAM Northern New England State Chapter President	Pear Therapeutics - Medical Director (95%) Sobriety Centers of New Hampshire (5%)	None	None	SUD/OUD Pear Therapeutics - Medical Director	None
Julie Kmiec, DO, FASAM	American Osteopathic Academy of Addiction Medicine (AOAAM)	University of Pittsburgh Physicians - Clinical Work (65%) University of Pittsburgh - Research and Teaching (25%) Consultation - Independent Contractor (10%)	None	None	None	American Osteopathic Academy of Addiction Medicine; Pennsylvania Society of Addiction Medicine
Michelle R. Lofwall, MD, DFASAM	Individual Reviewer	Braeburn - Consulting Fees and Research Funding CVS Caremark -Consulting Fees Titan – Consulting Fees Indivior – Consulting Fees	Titan - Study Design/ Research Protocol	None	None	None
Douglas W. Martin, MD	American Academy of Family Physicians (AAFP)	None	None	None	Interstate Postgraduate Medical Association - Board of Directors Member Iowa Academy of Family Physicians - Board of Directors American Academy of Family Physicians Opioid Advisory Committee - Member	None
Shannon C. Miller, MD, DFAPA, DFASAM	Individual Reviewer	U.S. Government/ Department of Veterans Affairs (VA) - Salaried Physician (Clinical, Research, Teaching, Administrative)	None	Veterans Administration Local Medical S chools	Private Practice LLC - Sole Proprietor (clinical patient care, consulting to law firms	American Society of Addiction Medicine - Senior Editor of Principles of Addiction Medicine
Andrey Ostrovsky, MD	Individual Reviewer	Solera Health (90%) Blue Cloud (3%) Children's National Medical Center (7%)	MindRight Boulder Care Pocket Naloxone Karuna Health Aira CityBlock Galileo Sitka BlueCloud Nicolette Solera Care at Hand	None	None	None FindLocalTreatment.com
Mark Pirner, MD, PhD	US World Meds	US World Meds (100%)	None	None	None	None
John A. Renner, Jr. MD	American Academy of Addiction Psychiatry (AAAP) and American Psychiatric Association (APA)	Veterans Administration (93%)	None	None	AAAP - Board of Directors Member	Johnson & Johnson - Stock Holder

(*Continued*)

External Reviewer	Representation	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit
		Boston University Psychiatric Associates - Teaching (1%)			Veterans Administration	
		Massachusetts General Hospital - Consulting, Teaching (<1%)			Boston University School of Medicine	
		AAAP/PCSS - Consulting, Teaching (2%)			Boston University Medical Center	
		Massachusetts Psychiatric Association - Teaching (<1%)				
		APA & APA Publishing - Teaching, Royalties (2%)				
Nick Reuter, MPH	Indivior	Indivior	None	None	None	None
Elizabeth Salisbury-Afshar, MD, MPH, FAAFP, FACPM, DFASAM	American College of Preventive Medicine (ACPM)	American Institutes of Research - Director of the Center for Addiction Research and Effective Solutions (85%)	None	American Academy of Family Physicians FMX	Health and Medicine Policy Research Group – Board of Directors Member	American Academy of Addiction Psychiatry - STR-TA
		%); Heartland Alliance Health - Part-Time Physician (15%)		Midwest Opioid Summit	American College of Preventive Medicine - Conference Planning Committee Member	Providers Clinical Support System - Provide Buprenorphine Waiver Trainings
		American Family Physician Journal - Co-Editor (<.05%)			Illinois Academy of Family Physicians - Board of Directors Member (ended in 2018)	
					Illinois Society of Addiction Medicine - Treasurer	
					National Institute on Alcohol Abuse and Alcoholism	
					National Academy of Medicine – Member of Opioid Work Group on Prevention, Treatment and Recovery	
Andrew J. Saxon, MD, FASAM	Individual Reviewer	Department of Veterans Affairs - Staff Psychiatrist (70%)	Alkermes, Inc.	None	Alkermes, Inc. - Advisory Board Member	American Academy of Addiction Psychiatry
		University of Washington - Faculty Member (15%)				American Psychiatric Association
		UpToDate - Section Editor (7%)				Up-To-Date - Editor
		Forensic Work (8%)				
Kenneth Stroller, MD	American Association for the Treatment of Opioid Dependence (AATOD)	Johns Hopkins Medicine Academic Medical Center (90–95%)	None	AATOD	AATOD – Board of Directors Member	None
		Medical Consulting - Mostly Forensic (5–10%)		Johns Hopkins Medicine	The Joint Commission National Behavioral Health Council	
					SAMHSA Center for Substance Abused Treatment's National Advisory Council	

(***Continued***)

External Reviewer	Representation	Salary	Consultant	Speakers Bureau	Ownership/ Partnership/ Principal	Institutional, Organizational or other financial benefit
Bruce G. Trigg, MD	Individual Reviewer	Consultant work including mentoring and buprenorphine trainings for the NY State Department of Health, NY City Department of Health, Montana Department of Health (100%)	None	None	None	None
Marvin Ventrell	National Association of Addiction Treatment Providers (NAATP)	NAATP	None	None	NAATP	None
Corey Waller, MD, MS, DFASAM, FACEP	Individual Reviewer	Health Management Associates Locums Emergency Department Work	None	None	None	None
Alysse G. Wurcel, MD, MS	Infectious Diseases Society of America (IDSA)	None	None	None	None	None

The above table presents relationships of the **external reviewers** during the past 12 months with industry and other entities that were determined to be relevant to this document. These relationships are current as of the completion of this document and may not necessarily reflect relationships at the time of this document's publication.