

# Linking People with Opioid Use Disorder to Medication Treatment:

A Technical Package of Policy,  
Programs, and Practices



Centers for Disease  
Control and Prevention  
National Center for Injury  
Prevention and Control

# Linking People with Opioid Use Disorder to Medication Treatment:

## A Technical Package of Policy, Programs, and Practices

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## Executive Summary

Millions of Americans are living with opioid use disorder (OUD). Fortunately, medications for opioid use disorder (MOUD) approved by the Food and Drug Administration can effectively treat OUD, reduce illicit opioid use or prescription opioid misuse, and lower the risk of opioid-related harms, including transmission of viral hepatitis and HIV, overdose, and death.

Effective linkage to evidence-based care with MOUD is vital for patient health and for public health. This document offers guidance for developing and implementing effective linkage to care strategies for health care professionals and other community leaders in public health, education, criminal justice, social services, business, and government who are striving to increase access and linkage to MOUD.

Outpatient care programs, hospital departments (including emergency departments), harm reduction and syringe services programs, and criminal justice settings all present opportunities for linkage to care. Each opportunity described in this document is presented alongside established best practices and summaries of current research. Organizations that have developed innovative approaches for linking patients

with MOUD are highlighted, offering real-world examples to help guide and inspire action. This document also offers practical advice for providing trauma-informed and culturally appropriate care to certain populations at increased risk of OUD and other opioid-related harms.

People living with OUD face numerous challenges that limit their access to evidence-based care. Health care professionals regularly miss opportunities to engage patients about OUD, few consider how to address OUD within their practice, and still fewer offer MOUD. Further, many people seeking treatment for OUD cannot access MOUD. Significant disparities in access to MOUD persist, and many Americans live in areas where MOUD are not available.

Maximizing opportunities for linkage to care already present in our current healthcare systems, as this document describes, can help improve community health and reduce the impact of OUD across populations. Linking those living with OUD to effective treatments will reduce substance use in communities, lower rates of infectious disease, and prevent early death from overdose of opioids and other drugs.

# 1. Introduction



## 1.1 What is a Technical Package?

A technical package is a compilation of core strategies to reduce a specific risk factor or prevent a specific outcome.<sup>1</sup> It is designed to help state, local, and tribal leaders—particularly health care professionals and other community leaders in public health, education, criminal justice, social services, business, and government—to prioritize prevention activities based on the best available evidence. This technical package has four main components. The first describes opportunities for linkage to care, including the rationale for considering each opportunity. The second describes the approach to each opportunity. It includes brief descriptions of the rationale (“why this is a promising opportunity”) and best practices for taking advantage of this opportunity (“linkage to care works best when...”). The third includes evidence for each of the included opportunity for linkage to care (“what the research says”). Lastly, a sample of programs currently leveraging these opportunities for linkage to care (“examples of these principles in practice”) has been described below each opportunity, highlighting organizations that have successfully innovated and/or implemented linkage to evidence-based care for opioid use disorder (OUD) in the United States.

Alongside these main components, this technical package includes supplementary information describing (a) a cascade of care for OUD; (b) information about the social, structural, and epidemiological features of OUD, which shape patient needs and concerns, especially among those with unique characteristics and backgrounds; and (c) known barriers and facilitators of evidence-based treatment for OUD, which may affect patient trajectories through the cascade of care.

This package is a resource to inform decision-making among those working in or connected to healthcare systems in state, local, and tribal communities. The opportunities described in this document are useful for linking people living with OUD to effective, evidence-based treatment through existing health care and public health services. However, this package is not an exhaustive list. Strategies and evidence for linking people to care for OUD will evolve along with the opioid overdose epidemic.

## 1.2 Overview

This technical package presents strategies that can help state, local, and tribal leaders and healthcare professionals link persons living with OUD to evidence-based care. Strategies are based on the best available evidence. This document covers the following opportunities for linkage to care:

- Primary care
- Emergency departments
- Inpatient hospitalization
- Syringe services programs (SSPs)
- Prenatal and postpartum care
- Outpatient mental health and behavioral health care
- Healthcare settings during incarceration and community supervision

Implementation strategies described in this document focus on creating successful, sustainable, and culturally competent approaches to linking people living with OUD to evidence-based care. Commitment, cooperation, and leadership from multiple sectors, including public health, education, criminal justice, health care, social services, business, labor, and government are key to their implementation.

## 1.3 Medication for OUD Is Evidence-Based Care

Compared to non-pharmacological therapies, people receiving medications for OUD (MOUD), which are evidence-based pharmacological treatments for OUD, remain in treatment longer and have reduced illicit opioid use or prescription opioid misuse.<sup>2-4</sup> Currently, the U.S. Food and Drug Administration (FDA) has approved three medications to treat OUD (see Box 1.1). Both the full mu opioid receptor agonist methadone and the partial mu opioid receptor agonist buprenorphine bind to opioid receptors in the brain, preventing painful opioid withdrawal symptoms without causing euphoria. The third medication, naltrexone, is a mu opioid receptor antagonist that prevents all opioids from

binding to opioid receptors.<sup>5</sup> Through these mechanisms, MOUD quiets cravings, reduces the use of injection opioids, and dramatically lowers the risk of opioid-related harms, including transmission of viral hepatitis or HIV, and overdose.

MOUD has traditionally been referred to as MAT, or medication-assisted treatment, based on the premise that medications could assist non-pharmacological cognitive and behavioral therapies in treating OUD. However, compared to other forms of treatment based solely on counseling, psychotherapy, social support, or behavioral therapy, buprenorphine and methadone stand out consistently as effective treatments for OUD and for preventing overdose.<sup>6,7</sup> A review of randomized controlled trials on the effect of cognitive and behavioral interventions among people receiving buprenorphine-based treatment (a form of MOUD) found the medication itself was the most critical component in all evaluated treatment programs.<sup>8</sup> MOUD with opioid agonist medications is also the gold standard of care for OUD during pregnancy (there is insufficient scientific evidence to assess the safety of the opioid antagonist medication naltrexone during pregnancy).<sup>9</sup> Thus, treatment programs that adopt a medication-first, low-barrier approach (i.e., placing low expectations on persons wishing to begin treatment) are crucial for helping persons access and initiate MOUD treatment.

Many factors should be considered when selecting a MOUD for treatment. This decision is made best by patients and health care professionals working together to identify the most effective treatment plan for each person and their unique circumstances and desires.

## 1.4 Challenges with OUD and Treatment Capacity in the United States

The need for effective, accessible treatments for OUD in the United States is large. The 2020 National Survey on Drug Use and Health (NSDUH) showed that about 2.7 million people in the United States who are 12 years old or older, not experiencing homelessness, and not incarcerated or institutionalized, met the diagnostic criteria for a past-year OUD.<sup>10</sup> This number underestimates U.S. residents living with OUD, given that more than 500,000 people are experiencing homelessness<sup>11</sup> (including 1 in 3 military veterans living with OUD<sup>12</sup>). Further, NSDUH does not survey the approximately 2.3 million people who are incarcerated in the United States.<sup>13</sup> Most people who are incarcerated meet criteria for a substance use disorder.<sup>14–17</sup>

Fewer than one-third of those who initiate treatment for a substance use disorder in the United States receive medication.<sup>18</sup> The need for treatment with MOUD outpaces the current capacity for care,<sup>19</sup> and access to MOUD is not spread equally across the United States. The average person lives 22.7 miles away from a health care facility that provides at least one MOUD and accepts Medicaid; in non-coastal states with lower population density, the average distance to such a facility often exceeds 50 miles.<sup>20</sup>

Systemic racism, including policymakers' preference for criminalization versus the provision of evidence-based care across racial groups, has also produced unequal access to MOUD.<sup>21</sup> For example, between 2012 and 2015, 12.7 million (95 percent) of the 13.4 million office visits for buprenorphine nationwide were made by white persons; the remaining 5 percent of visits made by people from all other racial and ethnic groups combined.<sup>22</sup> Even though rates of OUD have historically been higher among white populations,<sup>23</sup> studies have found substantial racial disparities in access to MOUD among those living with OUD across racial groups. A study of pregnant people with OUD who delivered a live infant in Massachusetts between 2011 and 2015 found that, compared to non-Hispanic white people, Black non-Hispanic and Hispanic people had less than half the odds of receiving any MOUD during pregnancy.<sup>24</sup> Another study of Medicaid enrollees diagnosed with OUD found a rate of MOUD initiation in Black persons 18 percent lower than their White counterparts.<sup>25</sup> Rates of overdose death are now growing faster among Non-Hispanic Black adults than among any other racial or ethnic group.<sup>26,27</sup>

Finally, persons living with OUD are increasingly involved in polysubstance use or are experiencing other substance use disorders simultaneously.<sup>28,29</sup> Co-occurring substance use disorders can affect treatment outcomes for OUD and for other mental and behavioral disorders.<sup>28,30</sup> Connection to other support services that attend to co-occurring conditions, pursued in tandem with MOUD, is essential for those experiencing multiple disorders.

While this document outlines strategies for effective linkage to MOUD, these strategies do not ensure that treatment will be available for those who need it. As a result, expanding local treatment capacity is necessary when implementing strategies for linkage to care. Strategies for increasing treatment capacity at the local level, including financing, workforce, and professional support are detailed elsewhere.<sup>31–33</sup>

## Box1.1 Medications for Opioid Use Disorder (MOUD)

### Methadone

- Methadone has been shown to effectively treat OUD in multiple clinical trials.<sup>2,34–36</sup>
- Methadone has been shown to be more effective as a MOUD when offered at doses above 60mg per day<sup>37</sup> and when provided as a long-term maintenance treatment, rather than used in a short-term taper.<sup>2,38</sup>
- Methadone is a full mu opioid receptor agonist (i.e., it binds to mu opioid receptors and produces a full effect). Thus, increasing doses of methadone will produce increasing pharmacological effects, including respiratory depression.<sup>5</sup>
- Treatment of OUD with methadone has been shown to protect patients against fatal overdose and other causes of mortality. A patient’s risk of death from overdose or other causes tends to increase after the cessation of treatment.<sup>2,7,36,39</sup>

### Buprenorphine

- Buprenorphine is an effective treatment for OUD and is associated with treatment outcomes similar to methadone.<sup>3,36,40,41</sup>
- Multiple studies have shown that buprenorphine is most effective as a treatment for OUD when used long-term—not as a short-term taper, even if that taper is stretched out over as many as 12 weeks.<sup>42,43</sup>
- Buprenorphine is a partial mu opioid receptor agonist (i.e., it binds to mu opioid receptors and produces a partial effect), which means that increasing doses of it will not necessarily produce increasing pharmacological effects, such as respiratory depression, after a certain point.<sup>5</sup> This is often called a “ceiling effect.”
- Buprenorphine has been shown to protect against fatal overdose and other causes of mortality while a patient remains in treatment with MOUD.<sup>7,36</sup>
- Emerging evidence suggests that buprenorphine may be associated with improved fetal health indicators, compared to methadone, when used to treat OUD during pregnancy.<sup>44,45</sup>

### Naltrexone

- Naltrexone is a full mu opioid receptor antagonist (i.e. it binds to mu opioid receptors, produces zero opioid effects, and blocks the effect of opioids). Its mechanism of action as a MOUD is different than that of methadone and buprenorphine.<sup>5</sup>
- Naltrexone is the most recent FDA-approved MOUD. Research into its use as a treatment for OUD is ongoing and limited compared to that for methadone and buprenorphine.
- Studies have shown naltrexone to be a well-tolerated medication with few side effects that produces better protection against returning to substance use compared to placebo.<sup>4,46</sup>
- Naltrexone is available as an oral tablet and as an extended-release intramuscular injection given every 4 weeks. Patients should be abstinent from opioids for 7 to 10 days prior to starting naltrexone to avoid precipitating opioid withdrawal.<sup>47</sup>
- A 2018 study comparing extended-release intramuscular injection naltrexone to buprenorphine as treatment for OUD showed that 1 in 4 patients assigned to naltrexone did not successfully complete induction onto naltrexone (i.e., they did not succeed in achieving a therapeutic dose of naltrexone while using ancillary medication to manage withdrawal symptoms before dropping out of treatment). In comparison, 1 in 20 patients assigned to buprenorphine did not complete induction. However, reduced rates of return to substance use were observed among patients who did successfully complete induction on naltrexone, similar to patients who received buprenorphine.<sup>48</sup>
- A large observational study showed that patients with OUD treated with naltrexone were twice as likely to discontinue treatment after 30 days compared to patients receiving buprenorphine via a sublingual buprenorphine/naloxone formulation.<sup>49</sup>
- Three large studies have found that naltrexone is not associated with decreased risk of overdose or other causes of mortality.<sup>36,50,51</sup> A fourth study found the risk of overdose among patients receiving extended-release naltrexone to be nearly 4 times higher than the risk of overdose among patients receiving buprenorphine/naloxone.<sup>52</sup>
- In 2019, the FDA issued a statement highlighting the increased risk of overdose following the cessation of naltrexone treatment.<sup>52</sup>

Please refer to **SAMHSA’s Treatment Improvement Protocol (TIP) 63** for more detailed information about the pharmacology, mechanisms of action, side effects, drug-drug interactions, and other clinical characteristics of the three FDA-approved MOUD.<sup>54</sup>



## 2. A Cascade of Care for OUD



A cascade of care framework is a useful model for conceptualizing the logistical and therapeutic processes required for successfully treating chronic illness.<sup>55</sup> This framework can be applied to OUD to illustrate how patients can connect to and then progress through treatment for OUD, and how each step in the cascade can be designed to meet a patient's needs, preferences, and OUD severity.

A 2018 American Journal of Drug and Alcohol Abuse article outlined an OUD care cascade with these stages: (1) primary prevention, (2) secondary prevention, (3) living with undiagnosed OUD, (4) OUD diagnosis, (5) engagement in care, (6) initiation of MOUD, (7) long-term retention in care, and (8) remission.<sup>56</sup> Each stage is discussed below.

### 2.1 Primary and Secondary Prevention

According to recent estimates from the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA), more than 2.7 million Americans 12 years old or older met the diagnostic criteria for a past-year OUD in 2020.<sup>10</sup> The surveys upon which these estimates are based do not include incarcerated populations, unhoused persons not living in shelters, or those who are in institutionalized settings, and may underestimate the burden of OUD in the United States by as much as 50 percent.<sup>17</sup> Those living with OUD may also experience challenges that increase the risk for overdose, including income inequality, unemployment, unequal access to health care, elevated arrest rates, geographic disparities in access to essential health services, and racism.<sup>57</sup> A rapidly evolving and unpredictable illicit drug market in the United States creates an even greater risk for overdose.<sup>58-61</sup>

Though OUD can affect any person at any stage of life, populations with the following characteristics have historically experienced a higher-than-average risk for developing OUD and for an opioid overdose:

- Aged 18 to 35 years<sup>62</sup>
- History of adverse childhood experiences<sup>63</sup>
- Psychiatric comorbidities<sup>64</sup>
- Pre-occurring or co-occurring substance use or other mental disorders, including post-traumatic stress disorder<sup>65,66</sup>
- Prior involvement with the criminal justice system,<sup>67</sup> especially recent release from incarceration<sup>68-70</sup>
- Prescribed higher dosages (above 50mg/day of morphine or equivalent) of opioids for pain care<sup>71</sup>
- Prescribed or otherwise use of benzodiazepines or skeletal muscle relaxants while using opioids for any reason<sup>72</sup>
- Exposure to fentanyl through the use of fentanyl or the use of fentanyl-contaminated opioid or non-opioid substances<sup>61,73</sup>
- Past non-fatal overdose<sup>74-76</sup>
- Family history of substance use disorders<sup>77,78</sup>

A humane, compassionate, and nonjudgmental encounter with a clinician or with another trusted service provider can be a place to start discussing OUD concerns, especially considering that stigma from healthcare professionals is a known barrier to care for OUD.<sup>79-83</sup> Healthcare professionals can also support secondary prevention of overdose and other health consequences of OUD through linkage to MOUD and through providing naloxone to at-risk patients.<sup>84-86</sup>

## 2.2 Diagnosing OUD

Multiple evidence-based tools exist for OUD screening, many of which are available online through the National Institute on Drug Abuse (See Box 2.1).<sup>87</sup> Many of these tools can be administered by a clinician or self-administered by a patient. The American Society of Addiction Medicine also offers online webinars and training modules designed to prepare clinicians to screen for substance use disorders.<sup>88</sup>

Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria should be used to diagnose OUD (see Text Box 2.2). An easy-to-use checklist of these criteria for clinical settings is available online both as an appendix of the SAMHSA Treatment Improvement Protocol (TIP 63)<sup>5</sup> and from the American Society of Addiction Medicine.<sup>89</sup>

### Box 2.1 Tools for OUD Screening and Assessment of OUD Severity

Screening is not equivalent to diagnosis. Screening allows clinicians and patients to identify risk factors for a condition; however, its results are not conclusive of a diagnosis.

Several different tools can be used in various treatment settings to screen patients for OUD. The National Institute on Drug Abuse has cataloged several validated tools for assessing opioid use, alcohol use, and other substance use-related issues, including:<sup>87</sup>

- Screening to Brief Intervention (S2BI)
- Brief Screener for Alcohol, Tobacco, and Other Drugs (BSTAD)
- Tobacco, Alcohol, Prescription Medication, and Other Substance Use (TAPS)
- NIDA Drug Use Screening Tool: Quick Screen (NMASSIST)
- CAGE-AID
- CRAFFT
- Drug Abuse Screen Test (DAST-10)
- Drug Abuse Screen Test (DAST-20: Adolescent Version)

### Box 2.2 DSM-5 Criteria for Opioid Use Disorder

The American Psychiatric Association developed the DSM-5 handbook to provide a standardized approach to diagnosing mental and behavioral disorders.<sup>90</sup>

The DSM-5<sup>91</sup> characterizes an OUD as the persistence of at least two of these 11 criteria over 12 months:

- opioids taken in larger amounts for longer than intended;
- persistent desire or unsuccessful efforts to lessen or control opioid use;
- excessive time spent on obtaining and using the opioid, or recovering from its effects;
- craving or strong desire to use opioids;
- recurrent opioid use resulting in the failure to fulfill major obligations at work, school, or home;
- continued use despite persistent or recurrent social and interpersonal problems caused or exacerbated by the effects of opioids;
- giving up or reducing important social or occupational activities because of opioid use;
- recurrent opioid use in physically hazardous situations;
- continued opioid use despite knowledge of persistent or recurrent physical or psychological problems it has likely caused or exacerbated;
- tolerance, defined by either (a) a need for increased amounts of opioids to achieve desired effects or (b) diminished effect with continued use of the same amount of opioid; and
- withdrawal, meaning due to either (a) characteristic opioid withdrawal syndrome or (b) the same (or related) substance taken to relieve or avoid withdrawal symptoms.

According to the DSM-5, the more criteria that are met, the greater the severity of OUD.<sup>91</sup>

## 2.3 Engaging in Care

The term “engagement in care” has many definitions.<sup>92</sup> In this document, it refers to a patient’s motivated interest in resolving a health care issue (here, an interest in receiving treatment for OUD) and commitment—given freely and without duress—to discuss, explore, and initiate beneficial treatment modalities, all in partnership with a healthcare professional.

Enhancing linkages to care for OUD often requires a view of health care that considers every interaction as an opportunity for engagement. The Canadian Mental Health Association has promoted this way of thinking with the motto, “Every door is the right door.”<sup>93</sup> From this perspective, engagement in care should not be about getting patients in need to the right place; rather, it’s about identifying patients in need in every place where healthcare, social services, or other service-based interactions exist. Research has shown that engaging patients in evidence-based treatment for OUD is more successful when:

- Entry into treatment is voluntary.<sup>94</sup>
- People have access to multiple FDA-approved MOUDs, as some will fare better on one medication than on others.<sup>95</sup>
- Delays in initiating treatment, such as those caused by prior authorization requirements, are avoided or removed.<sup>96</sup>
- Initiation of MOUD occurs immediately (instead of providing a referral to community care for ongoing treatment).<sup>97</sup> With coaching from a health care professional, allowing for induction onto buprenorphine to be completed at home, without clinical supervision, is a viable option for most people.<sup>98–101</sup>

Emerging evidence shows that peer-recovery models, in which a trained person with lived experience of a substance use disorder acts as both a form of social support and a patient navigator, are easily integrated into existing services (both mobile and brick and mortar). These models can increase patient engagement in OUD-related care.<sup>102–104</sup> A collaboration between Lifespan Health System and Anchor Recovery in Rhode Island is one of the longest running peer-recovery partnerships for linkage to OUD care in the United States.<sup>85,105</sup>

## 2.4 Initiating MOUD

In the United States, buprenorphine may be prescribed by physicians, nurse practitioners (NPs), physician assistants (PAs), Clinical Nurse Specialists (CNSs), Certified Registered Nurse Anesthetists (CRNAs), and Certified Nurse-Midwives (CNMs) according to regulations set by SAMHSA.<sup>106</sup> These eligible prescribers may offer buprenorphine induction

from their office or, alternatively, may write a short-term buprenorphine prescription and instruct patients on proper home induction.<sup>100,107</sup> Methadone can only be dispensed or administered from SAMHSA-certified opioid treatment programs (OTPs).<sup>108</sup> Naltrexone can be prescribed by any healthcare professional who is licensed to prescribe medicines in the state in which they practice and who is operating within their scope of practice.<sup>109</sup> OTPs can also dispense or administer buprenorphine and naltrexone and are not subject to patient limits for buprenorphine. In 2021, the U.S. Department of Health and Human Services published buprenorphine practice guidelines that waive the training requirement for practitioners who wish to prescribe buprenorphine under the 30-patient limit.<sup>110</sup>

As with any healthcare concern, not all MOUD initiation needs or circumstances are alike. The following items should be considered when planning MOUD initiation:

- All patients should have access to the full spectrum of FDA-approved MOUDs, as no single medication is perfect for every person.<sup>48</sup>
- Treatment with opioid agonist MOUDs is protective against death even when patients have a history of fentanyl exposure and even if abstinence from opioid use is not achieved.<sup>111</sup>
- Timely access to MOUD is a strong predictor of retention in treatment.<sup>112,113</sup>
- MOUD initiation during periods of high stress (e.g., post-overdose) requires careful attention to patients’ needs and desires to ensure they do not feel coerced into taking medication they do not want.<sup>114</sup>
- Medically supervised withdrawal (detoxification) does not, by itself, constitute evidence-based treatment for OUD and may increase a patient’s risk of overdose if not immediately followed by initiation of MOUD.<sup>115–117</sup> Medically supervised withdrawal units can be repurposed as “medication initiation units,” where patients are provided with a warm handoff (a transfer in care that is completed in person in front of the patient and, when appropriate, the patient’s family) to community care for ongoing treatment with MOUD upon discharge.<sup>118</sup> Medically supervised withdrawal is associated with high rates of return to substance use and is not recommended during pregnancy.<sup>9</sup>
- People living with OUD face various barriers to treatment, including poor treatment from healthcare professionals. Expanding opportunities to access MOUD from other trusted service providers (such as SSPs) outside the traditional clinic or medical setting is important.<sup>119,120</sup>

## 2.5 Long Term Retention in Treatment with MOUD

Treatment with opioid agonist MOUD reduces the risk of fatal overdose.<sup>6,7</sup> Further, each MOUD has additional benefits, which may include the following: reducing opioid use,<sup>2,121,122</sup> preventing HIV transmission,<sup>123</sup> improving birth outcomes for pregnant people and newborns,<sup>124</sup> and preventing viral hepatitis transmission.<sup>125</sup> Outcomes are stronger the longer someone is retained in care.<sup>36,126</sup> Therefore, patients must receive the information, services, and support they need to remain in effective, evidence-based forms of care. The following items can be considered when supporting retention in MOUD treatment:

- The amount of time someone remains on MOUD is often based on the quality of care or services received when treatment began.<sup>127</sup>
- Patients taking methadone who receive a daily dosage of 60mg or higher stay in treatment longer than patients who receive dosages below 60mg per day.<sup>128,129</sup>
- Higher daily dosages of buprenorphine are associated with better treatment retention.<sup>130,131</sup>
- Engaging in social supports or behavioral health interventions alongside MOUD does not consistently improve treatment outcomes and may not be an appropriate requirement or pre-requisite for MOUD.<sup>132,133</sup>
- OUD is a chronic, relapsing disease. Those living with OUD are likely to return to substance use or to drop out of treatment multiple times along their path to recovery. Each subsequent re-enrollment in treatment for patients who had previously dropped out results in better retention and outcomes.<sup>129</sup>

## 2.6 Treatment Outcomes

Treatment goals pursued through MOUDs may vary among patients. The last decade has seen a new emphasis on patient-centered outcomes, which center the needs, preferences, and beliefs of individual patients in medical treatment and research.<sup>134,135</sup> Similarly, Dan Bigg, an early pioneer of naloxone

distribution for overdose prevention, has observed that person-centered services designed to empower those who use drugs or are living with a substance use disorder will support “any positive change as a person defines it for [themselves].”<sup>136</sup> In the context of OUD-related health care, “any positive change” in the health, wellbeing, or quality of life of the person affected may be considered a desirable treatment outcome. Several factors may be considered when setting treatment goals:

- Numerous meaningful end points by which treatment can be considered successful or effective exist. These end points may include changes in drug use behavior or patterns of use; change in disease status (using the diagnostic criteria for OUD); and self-reported outcomes—positive benefits of treatment as reported by the patient.<sup>137,138</sup>
- The most important outcome for any effort to treat OUD is survival. Treatment with opioid agonist MOUD has been shown to be effective in reducing mortality even without full abstinence from illicit substances or when substance use is intermittent.<sup>138</sup> This mortality protection effect remains strong even if a patient experiences intermittent exposure to fentanyl while on MOUD.<sup>111</sup>

## 2.7 Building a Recovery-oriented System of Care (ROSC)

The term “system of care” does not refer to a replicable model of health care delivery, but rather to a spectrum of community and interagency collaborations that provide effective culturally and linguistically appropriate support to help people function and thrive throughout their lives.

Recovery-oriented systems of care (ROSCs) are coordinated systems that provide alternatives to acute care models to address the full range of concerns related to substance use in communities. They provide necessary clinical care and other support structures, such as peer support, recovery support services, transportation assistance, social support, and childcare. Though they may be composed of different healthcare infrastructures and partnerships, all ROSCs are guided by the principle that there are many different pathways to recovery.<sup>139,140</sup>

## Box 2.3 Additional Resources for Clinicians offering MOUD

### **American Society of Addiction Medicine National Practice Guideline for the Treatment of Opioid Use Disorder<sup>141</sup>**

This treatment guideline is for clinicians, health systems administrators, criminal justice system administrators, and policymakers. The guidelines are regularly updated and offer practical and evidence-based recommendations for patient assessment, OUD diagnosis, and treatment, with additional suggestions for specific medications, psychosocial treatment in conjunction with MOUD, and care for special or vulnerable populations.

### **American Society of Addiction Medicine Standards of Care for the Addiction Specialist Physician<sup>142</sup>**

This document offers practical guidance for healthcare professionals engaged in the diagnosis of substance use disorders, treatment planning, treatment initiation, care coordination, and continuing care management for persons with substance use disorders.

### **SAMHSA Treatment Improvement Protocol 63<sup>54</sup>**

This Treatment Improvement Protocol (TIP) offers clinically relevant descriptions of the three FDA-approved medications for OUD (methadone, buprenorphine, and naltrexone), including mechanism of effect, route of administration, adverse effects, possible drug-drug interactions, and more. It also provides best practices for collaborating with counselors and other ancillary behavioral health care professionals and resources available to patients living with OUD and their families.

### **Prevention Research Synthesis Criteria for Evidence-Based Interventions for Linkage to, Retention in, and Re-engagement in HIV Care<sup>143</sup>**

Program evaluation is one of the three key components of evidence-based strategy, along with the expert opinions of clinical professionals and the values, desires, and perspectives of people affected or targeted by the program.<sup>144</sup> In this resource, the Centers for Disease Control and Prevention offers suggestions for assessing linkage to care, including outcomes for program evaluation.

# 3. Opportunities for Linkage to Care



## 3.1 Primary Care

Screening for OUD, linkage to MOUD, and long-term treatment with MOUD can all be delivered in primary care settings, including in rural and resource-limited areas. Induction onto MOUD followed by a warm handoff to a long-term MOUD prescriber—or offering long-term MOUD with the same primary care physician or advanced practice provider (PCP)—can be integrated into routine primary care.

### Why this is a promising opportunity?

As healthcare professionals who form long-term relationships with many of their patients and who are well-positioned to provide long-term support for chronic conditions, PCPs may be positioned to earn the trust of patients in ways that other specialists or short-term care providers are not. Trust between patients and their health care professionals is associated with greater uptake of preventative screening,<sup>145</sup> improved adherence to medications,<sup>146</sup> and better patient knowledge of prescribed medications.<sup>147</sup> PCPs are also better positioned to identify chronic or emergent OUD, as Prescription Drug Monitoring Programs (PDMPs) and other tools available to short-term care providers cannot identify all OUD cases.<sup>148</sup> This integration can reduce the stigma surrounding pharmacologic treatments for OUD and increase the likelihood of engagement and retention in care.

### Linkage to care via primary care settings works best when:

- The primary care setting is welcoming, nonjudgmental, respectful, and empathetic.<sup>5</sup>
- Screening for OUD is universal: all patients receiving services from a primary care practice are screened for opioid use using a validated screening tool, not tested through urine or blood toxicology.<sup>5</sup>
- Patients reporting polysubstance use, previous substance use treatment, or co-occurring mental disorders are assessed to determine whether higher levels of treatment or more substantial support in treatment engagement are needed.<sup>149,150</sup>

- Medical issues often associated with opioid use or other substance use (including, but not limited to infectious, renal, hepatic, and cardiovascular concerns) are recognized as such and followed with screening, assessment, and appropriate care.<sup>5</sup>
- High risk patients are identified, trained to respond to overdose, and provided with naloxone.<sup>151,152</sup>
- MOUD, when indicated, is provided at the index visit—the visit when OUD is identified—and patients begin induction onto MOUD immediately,<sup>153</sup> or, in the case of home induction, as soon as reasonably possible.<sup>154–156</sup>
- Ongoing MOUD is integrated into primary care rather than offered through referral to a specialist or outside facility.<sup>157,158</sup>

### What the research says:

- People living with a diagnosed substance use disorder report greater willingness to enter treatment in a primary care setting than in a specialty care setting.<sup>159</sup>
- Multiple studies have shown office-based opioid treatment with buprenorphine/naloxone to be effective, with most patients retained in care after 12 months.<sup>160,161</sup>
- Multidisciplinary care models are care collaborations that allow PCPs, addiction specialists, and nonphysician health care professionals to coordinate the management of MOUD. They are effective strategies for delivering MOUD in primary care settings and do not require additional staff training to be implemented successfully.<sup>162</sup>
- Patients receiving methadone from a SAMHSA-certified OTP with an on-site PCP are more likely to engage with their PCP and less likely to visit the emergency department or to undergo inpatient hospitalization, compared to those who receive only methadone with no integrated primary care services.<sup>157</sup>
- Patients living with HIV who were offered buprenorphine through their regular PCP at an infectious disease clinic were almost twice as likely to initiate MOUD compared to patients who were referred to OUD care elsewhere.<sup>163</sup>

## Examples of these principles in practice:

- The state of Vermont has centralized the management and support of MOUD services through a state-level “hub and spoke” model. In this model, treatment admission and induction onto MOUD is carried out by well-equipped “hub” facilities, often located at centers of excellence or other large healthcare institutions in more populated areas. Patients are then connected to “spokes” (typically independent PCPs) in their own communities for ongoing management if and when it is deemed best for them to receive less structured forms of care.<sup>164</sup> Other states are now adapting the hub and spoke model based on Vermont’s success.<sup>165–167</sup>
- Project Extension for Community Healthcare Outcomes (Project ECHO) is a novel method for connecting community PCPs with expert training and academic learning communities through televideo technologies. Project ECHO was originally developed at the University of New Mexico Health Sciences Center in Albuquerque and has been used by health care systems across the United States and Canada to link primary care clinics in rural areas with centralized health systems for training and mutual support.<sup>168–170</sup>
- The state of Oregon developed 16 coordinated care organizations (CCOs) to provide comprehensive care to residents enrolled in the Oregon Health Plan (Medicaid). Each CCO consists of a comprehensive network of local PCPs and other service providers that are all managed and financed under a global budget which coordinates care across services, including integrated care, and promotes cost savings.<sup>171,172</sup>
- Women’s Health Associates and the John D. Stoeckle Center for Primary Care Innovation at Massachusetts General Hospital developed a model for group visits for patients receiving MOUD. PCPs schedule appointments lasting 1 to 2 hours with as many as 12 patients at a time. This practice allows clinicians to see more patients, spend more time with each one, and to bill for more patient interactions than would otherwise be possible, thus resolving cost-of-care issues that frequently arise for community PCPs. Patients benefit from more face-to-face interaction with their PCP and from receiving social and behavioral support simultaneously with primary care.<sup>173</sup>

## 3.2 Emergency Departments

Many people living with OUD depend on emergency departments (EDs) for urgent care needs. They may use this healthcare setting after some type of trauma, including a nonfatal overdose.<sup>174,175</sup> They may also present with an

injection-related bacterial or fungal infection or with an illness unrelated to their OUD—all cases in which a person’s history of substance use can be missed.<sup>176</sup> Though an ED cannot be a source of long-term care for OUD, it can be an entry point into care, providing patients with immediate access to MOUD, including supervised induction onto medication if preferred, and a warm handoff to a longer-term care provider.

### Why this is a promising opportunity:

Screening for OUD in the ED may identify patients who could benefit from MOUD who would not be screened elsewhere. In addition, patients who are provided MOUD on demand in the ED are often better retained in long-term care.<sup>153</sup> Further, patients offered MOUD in the ED are twice as likely to accept the offer of treatment compared to patients offered links to care through other health care professionals.<sup>113</sup>

### Linkage to care via EDs works best when:

- The ED setting is welcoming, nonjudgmental, respectful, and empathetic.<sup>5</sup>
- Referral to community care is conducted through a warm handoff (a transfer in care that is completed in person in front of the patient and, when appropriate, the patient’s family).<sup>177</sup>
- Patients at higher risk are identified, trained to respond to overdose, and provided with naloxone prior to discharge.<sup>178</sup>
- A trained peer recovery coach is available to consult with the patient if the patient desires.<sup>104</sup>
- Successful strategies developed elsewhere in the United States are identified, adapted, and reproduced. Examples of effective “road maps” for linkage to care in EDs have been developed by experts in addiction and emergency medicine:
  - The National Institute on Drug Abuse has endorsed a buprenorphine treatment algorithm developed by Yale University School of Medicine for initiating MOUD in the ED.<sup>179–181</sup> The algorithm recommends supervised induction onto medication for persons with a Clinical Opiate Withdrawal Scale (COWS) score of 8 or higher; home induction for those with lower withdrawal scores; higher buprenorphine dosing for persons with more severe OUD; and linkage to ongoing care via warm hand-offs, rather than referral.<sup>182</sup> The Yale University School of Medicine has also produced a protocol for home induction of buprenorphine following linkage to MOUD at an ED.<sup>183</sup> This team has also found that high dose (>12mg) buprenorphine induction in the ED is safe and well tolerated in patients with untreated OUD.<sup>184</sup>

- The Bridge to Treatment program, a federally funded program in California (also discussed in Section 4.3), has developed a treatment algorithm that recommends supervised induction onto buprenorphine for persons with COWS scores of 8 and above or of 6 and above when paired with at least one objective sign of withdrawal. The algorithm also calls for allowing a patient to return to the ED in 72 hours for additional doses following the initial induction and short-term prescription.<sup>185</sup>
- At-home induction of buprenorphine is feasible, and evidence of its benefit for patients is growing.<sup>186</sup>

Patients are provided instructions about how to initiate buprenorphine treatment at home and are then transferred to a long-term care provider in the MetroHealth system for the continuation of care.<sup>188</sup>

- Physicians in the psychiatric ED of the University of Maryland Medical Center in Baltimore, Maryland have been inducing patients with OUD onto buprenorphine treatment since 2003. Today, 11 EDs in Maryland offer buprenorphine induction, and similar services at 18 additional EDs across the state are planned.<sup>189</sup>
- The American College of Emergency Physicians has created a point-of-care tool designed for bedside use by emergency physicians caring for patients with OUD. The tool provides clear guidance on naloxone use in the ED, indications and contraindications for MOUD, MOUD induction strategies, management of precipitated withdrawal, and strategies for linkage to ongoing care. The tool is available through a website or a mobile app.<sup>190</sup>

## What the research says:

- Strong evidence supports the ED as an important and effective locus of intervention for various substance use concerns including OUD, illicit opioid use, and prescription opioid misuse.<sup>187</sup>
- A Rhode Island study showed that integrating the services of a peer recovery coach in the ED significantly increased the uptake of overdose education and naloxone distribution and doubled the likelihood of a patient accepting referral to community-based MOUD treatment upon discharge.<sup>104</sup>
- A study on the effects of ED-initiated buprenorphine/naloxone treatment in the Yale New Haven Hospital compared this strategy to referral or brief intervention. Among those offered their first dose of buprenorphine/naltrexone in the ED, 78 percent were still engaged in MOUD treatment at 30 days compared with 37 percent in the referral group and 45 percent in the brief intervention group.<sup>113</sup> A later evaluation with a larger cohort showed that treatment retention at 2 months was 74 percent in the group initiated at the ED compared to 53 percent of those referred to treatment elsewhere.<sup>97</sup>

## 3.3 Inpatient Hospitalization

More than 34 million hospital admissions were recorded in the United States in 2017.<sup>191</sup> Of those, approximately 1 million involved persons living with OUD.<sup>192</sup> Further, nearly half a million hospitalizations were due to injections or injuries related to OUD, such as infective endocarditis or septicemia, and this estimate does not include additional hospitalizations that occur due to overdose or entry into medically supervised withdrawal (detoxification).<sup>193</sup> Still more hospital admissions involve people who are living with OUD but are receiving treatment for other, possibly unrelated conditions at the time. Many of these hospitalizations may provide an opportunity to initiate treatment onsite.

### Why this is a promising opportunity:

Clinicians and support staff providing care to inpatients have extended close contact with patients. People living with OUD who are admitted to inpatient care may be offered medically supervised detoxification (such as a 5-day taper with opioid agonist medications) to alleviate their withdrawal symptoms,<sup>118</sup> creating an opportunity to discuss long-term MOUD options. Physicians and other advanced practice providers working within hospital networks may also be uniquely positioned to recommend and initiate MOUD onsite within the hospital network as soon as a patient is admitted.<sup>194</sup> Providing inpatient MOUD induction supports the patient through the remaining hospitalization as they complete treatment for the admitting illness. Inpatient addiction consult services can also support patient needs and reduce rates of hospital re-admission.<sup>195</sup>

## Examples of these principles in practice:

- Yale New Haven Hospital was the first institution to systematically evaluate patient outcomes following MOUD treatment in its ED in 2015.<sup>113</sup> Since offering this treatment option, investigators have found that patients who started MOUD in the ED were twice as likely to remain engaged in treatment 30 days after discharge.<sup>97</sup>
- Emergency physicians at MetroHealth Medical Center in Cleveland, Ohio have begun offering OUD screening to patients presenting with opioid overdose. If treatment with MOUD is indicated and patients provide consent, they are provided with a peer counselor and a 3-day prescription for buprenorphine, which may be picked up at the hospital pharmacy after discharge.



## Linkage to care via inpatient hospitalization works best when:

- The hospital setting is welcoming, nonjudgmental, respectful, and empathetic.<sup>5</sup>
- Complex financial and systems needs associated with large hospitals are integrated into planning and implementing improved linkage-to-care services.<sup>196</sup>
- Patients with OUD are screened to assess risk behaviors and severity of substance use disorders so they can be triaged into the level of care appropriate for them.<sup>197</sup>
- Any intervention provided to the patient is followed by continued MOUD after discharge, as short-term medically supervised detoxification is strongly associated with return to substance use.<sup>118</sup>
- Patients at higher risk of overdose are identified, trained to respond to overdose, and provided with naloxone prior to discharge.<sup>178</sup>

## What the research says:

- A study in Boston randomized 663 inpatients with OUD to receive one of two interventions: (1) induction onto buprenorphine/naloxone treatment and dose stabilization while in inpatient care, followed by a transition to office-based opioid therapy (i.e., MOUD continued by a community physician); or (2) medically supervised detoxification using a 5-day taper of buprenorphine/naloxone during the hospital stay, followed by a referral to care. Seventy-two percent of those who received induction and dose stabilization in the hospital were successfully linked with evidence-based care after discharge, compared to only 12 percent of those who received the taper.<sup>194</sup>
- A nested cohort study was conducted within the same Boston-based controlled trial (above) with those who received induction and dose stabilization while under inpatient care. It revealed that past use of diverted buprenorphine/naloxone for self-management of withdrawal was associated with interest in receiving buprenorphine/naloxone-based treatment when offered.<sup>198</sup>
- A 2004 study of more than 1,000 patients with a history of injection drug use admitted to an HIV/AIDS hospital ward showed that providing methadone to inpatients reduced the odds of those patients leaving against medical advice by about half.<sup>199</sup>
- Another Boston study of 113 previously hospitalized patients with OUD and a history of injection drug use showed that neither referral upon discharge nor induction onto medication and stabilization during inpatient care followed by transfer to community MOUD care reduced

rates of injection. This indicates that patients with a history of injection drug use may need a higher level of care than provided by either of these interventions alone.<sup>197</sup>

## Examples of these principles in practice:

- Boston Medical Center operates the Faster Paths to Treatment program, which initiates people living with OUD who are hospitalized for other conditions onto MOUD. This program facilitates induction for people in residential treatment programs in the community who request or would benefit from MOUD. Patients are immediately stabilized on buprenorphine or connected to an OTP for methadone and then actively transitioned to a PCP or other long-term care provider. Patient navigators assist in connecting with care and continuing treatment.<sup>200</sup>
- The University of Kentucky's UK HealthCare system has established the First Bridge Clinic, a low-barrier MOUD program that serves people receiving emergency or inpatient care at any one of the university's network hospitals. The clinic offers medication management, nurse care navigation, peer support services, and overdose education and naloxone distribution.<sup>201</sup>
- California's Bridge to Treatment program (also discussed in Section 4.2) supports participating hospitals looking to start or expand MOUD.<sup>202</sup> As part of the program, the California Health Care Foundation offers publicly available webinars, toolkits, and guidelines to support hospitals seeking to improve OUD treatment across hospital departments.<sup>203</sup>
- A team from Oregon Health and Science University developed a protocol for conducting a population needs assessment to inform better care for substance use disorders in the hospital setting. The Improving Addiction Care Team (IMPACT) intervention includes integrated substance use counselors, rapid paths to treatment for substance use disorders (including MOUD), and enhanced residential treatment options.<sup>196</sup> The team has published the medication protocols, risk assessment tools, and other key pieces of implementation design.<sup>204</sup>
- The University of Texas at Austin Dell Medical Center has responded to high prevalence of hospitalized patients with OUD by developing and implementing the "B-Team" (Buprenorphine Team), consisting of an internal medicine Physician Assistant, a palliative care advanced practice nurse, and the attending psychiatry physician. The "B-Team" evaluates patients, initiates buprenorphine during hospitalization, counsels on OUD and harm reduction, and provides linkage to ongoing care in outpatient treatment programs. Early data show that nearly two-thirds of the patients initiated onto buprenorphine by the "B-Team" during hospitalization continue to receive outpatient MOUD after discharge. The development and implementation of the "B-Team" was inspired by California's Bridge to Treatment program (above).<sup>205</sup>

## 3.4 Syringe Services Programs

Injection drug use and associated complications remain major public health concerns in the United States and elsewhere. Syringe services programs (SSPs) are essential public health programs for reducing infectious disease transmission, preventing overdose, and facilitating linkage to care for OUD.<sup>32,206</sup> SSPs, sometimes called “needle exchange,” “syringe access,” or “syringe exchange” programs, provide access to clean and sterile equipment used for preparing and consuming drugs. They also offer tools for preventing and reversing opioid overdose (such as naloxone and fentanyl test strips), screening and referrals to care for infectious disease, safer injection education, and tools for preventing bacterial and viral infection commonly associated with injection. Linkage to MOUD from an SSP may take various forms, including warm handoffs to partnering MOUD prescribers with ongoing patient navigation or peer support, co-located (or closely located) SSP and MOUD services, and integrated SSP and MOUD care with onsite medication induction and continuation of care.

### Why this is a promising opportunity:

Stigma against people who use drugs is a major barrier to treatment—even across diverse populations of those seeking care.<sup>207–209</sup> SSPs provide low-threshold, nonjudgmental, person-centered care that meets people “where they’re at.”<sup>210</sup> Staff and volunteers at SSPs are poised to build lasting, trusting relationships where participants feel supported and free from social judgment. People contemplating treatment may be more likely to ask SSP staff and volunteers for assistance because of these supportive relationships, and SSP resources can ensure that such requests for linkage to care are successful. The frequency and consistency of SSP interactions also facilitate linkage to care. Should an SSP participant decide to seek treatment or other healthcare services, they have frequent, low-barrier opportunities to ask for that assistance. These interactions may occur on a monthly or even a weekly basis—more frequently than a participant may see a PCP or other health care professional. Further, SSPs may be able to successfully engage people who are unhoused or who are at higher risk of overdose by offering novel overdose prevention strategies like drug checking and access to fentanyl test strips.<sup>211,212</sup> New opportunities for engagement create, in turn, new opportunities for linkage to care, as regular engagement with an SSP is a known predictor of participation in treatment.<sup>213</sup> Since 2016, federal funds may be used to support SSPs, with the exception of use of funds to purchase supplies used directly in the injecting process.<sup>214</sup> As of April 7, 2021, federal funds may be used to purchase fentanyl test strips.<sup>215</sup>

### Linkage to care through SSPs works best when:

- SSP setting is welcoming, nonjudgmental, respectful, and empathetic.<sup>5</sup>
- SSP staff and volunteers can build meaningful and trusting relationships with participants over time.<sup>206</sup>
- Effective case management is provided to facilitate linkage and entry into treatment.<sup>216</sup>
- SSP participants have access to qualified health insurance plans and are supported in initiating and completing enrollment.<sup>217</sup>
- Linkage to care is bundled with linkage to other services that alleviate common barriers to treatment success, including housing support and transportation assistance.<sup>216,218</sup>
- The basic operation of SSPs (especially providing access to sterile injection equipment, most clients’ primary incentive for visiting the SSP<sup>219</sup>) is unencumbered by drug paraphernalia laws that criminalize possession of safer use supplies (like syringes or fentanyl test strips),<sup>220–222</sup> insufficient funding,<sup>223</sup> intrusive or intimidating police presence,<sup>224,225</sup> one-for-one mandates or other limits on syringe distribution,<sup>221</sup> or other restrictions that limit the program’s ability to meet participants’ needs.

### What the research says:

- A study of 436 people served by 17 different SSPs in Washington state showed that nearly 4 out of 5 SSP participants reported having interest in reducing or ceasing their substance use.<sup>120</sup>
- A study in Baltimore revealed that those who participated in SSP services were between 1.4 and 3.2 times more likely to enter detoxification, compared to their peers who did not participate in the SSP.<sup>217</sup>
- A similar study conducted recently among 440 people who inject drugs in Baltimore showed that those who participated SSP services were 1.7 times more likely to enter treatment for a substance use disorder compared to their peers who did not participate in the SSP.<sup>206</sup>
- Seattle researchers found that people who inject drugs and participated in SSP services were more likely to remain engaged in treatment for a substance use disorder compared to their peers. They were also 2.8 times as likely to report a 75 percent or higher reduction in injection and 3.5 times more likely to stop injecting altogether.<sup>226</sup>

- People referred to treatment from an SSP may enter into care with more severe OUD than their peers, indicating that they may benefit from additional supports while entering and remaining in care.<sup>227</sup>
- A study of people linked to buprenorphine through an SSP in Philadelphia between 2011 and 2014 showed that comorbidities requiring additional services in tandem with MOUD were common in this population, including high rates of HIV (33%), anxiety (78%), depression (71%), and homelessness (20%).<sup>228</sup>
- Some studies investigating the relationship between SSP participation and entry into treatment in Baltimore revealed that female gender is associated with higher rates of entry into care for substance use disorders through an SSP compared to male gender.<sup>120,229</sup>

## Examples of these principles in practice:

- The Eastern Band of Cherokee Indians has recently established hepatitis C prevention as a top ten public health priority, opening the Tsalagi Public Health SSP to serve the tribal community in 2018. In addition to offering safe injection supplies, naloxone, and testing for HIV and hepatitis C, the SSP is successfully linking participants to many different community services. As of January 2020, nearly 1 in 14 participants at the SSP have accessed treatment for substance use disorders.<sup>230</sup>
- Prevention Point Philadelphia, an SSP in Philadelphia's Kensington neighborhood, offers MOUD through their Stabilization Treatment and Engagement Program (STEP). People receiving MOUD through STEP work with a care manager and a Certified Recovery Specialist onsite and receive behavioral and mental health services offsite. The clinic is open 6 days per week, provides transportation services, and does not require insurance or identification at intake, making it a model low barrier program.<sup>231</sup> Despite the high prevalence of medical and behavioral comorbidities, poverty, and homelessness in this patient population, STEP has achieved a retention rate of 56 percent at 12 months with rates of MOUD adherence above 90 percent.<sup>228</sup>
- The Howard Center Safe Recovery program in Burlington, Vermont launched a low-barrier buprenorphine program in their SSP in October 2018. A triage system determines whether patients initiated through the SSP can be transitioned to the hub-and-spoke system or should receive ongoing MOUD care through the Howard Center's healthcare clinics.<sup>232,233</sup>
- The Scott County Partnership, Inc. in Indiana developed a "one-stop shop" model that features a centralized SSP with onsite treatment initiation and linkage with community-based healthcare professionals for ongoing care.<sup>234</sup> Having a licensed MOUD prescriber onsite as part of an integrated mental health clinic is key to this and many similar programs' success.<sup>159,168</sup>
- The Boston Health Care for the Homeless Program (BHCHP) and Access, Harm Reduction, and Overdose Prevention Education (AHOPE) conduct street outreach in tandem. A mobile clinic and SSP access point staffed with clinicians and outreach workers from both agencies serve residents around the Boston metro area. The collaborative harm reduction program offers syringe access services and immediate access to buprenorphine-based treatment. It also provides same-day scheduling of follow-up appointments for MOUD continuation at BHCHP's brick and mortar clinic and peer support for filling the initial prescription that same day.<sup>235</sup>
- In 2017, Public Health-Seattle and King County, Washington implemented a buprenorphine induction co-located with a local SSP. This program provides ongoing MOUD to a patient population characterized by unstable housing or homelessness and polysubstance use.<sup>236</sup>
- The San Francisco Department of Public Health's Street Medicine team provides low-barrier MOUD with buprenorphine in SSPs and homeless shelters throughout the city. The program has been helping unhoused and other structurally vulnerable persons with untreated substance use disorders. About 25 percent of those provided MOUD through this program were retained on buprenorphine for at least 12 months, and an additional 17 percent received medication during multiple observation periods with gaps in care in between.<sup>237</sup>

## 3.5 Prenatal and Postpartum Care

Prenatal healthcare professionals may offer wrap-around care for pregnant people through a collaborative care model that brings prenatal clinicians, mental health specialists, and case managers together to provide care for pregnancy and OUD in a single setting.<sup>238,239</sup> Postnatal healthcare professionals can assist patients in continuing MOUD after delivery by offering appropriate supports and making warm handoffs to long-term care if patients cannot stay with the same MOUD prescriber. Where feasible, family-centered care that includes children and family members in treatment and provides family-based clinical care can be an effective strategy for supporting the health and wellbeing of not only the pregnant parent, but the entire family.<sup>240</sup>

### Why this is a promising opportunity:

Pregnancy may increase certain risks of OUD, such as neonatal opioid withdrawal syndrome (NOWS) (sometimes called neonatal abstinence syndrome or NAS) for the infant<sup>241</sup> or heighten the risk of overdose in the postpartum parent—which can be significantly reduced with MOUD.<sup>242</sup> In addition, pregnancy may be a factor in a person’s motivation to seek help or change.<sup>243</sup>

Prenatal and postnatal care that considers and supports the parent-infant dyad as a whole can be an efficient and highly effective venue for linking people living with substance use disorders to life-saving, evidence-based care.

**SAMHSA offers detailed guidance for providing care to pregnant and postpartum people in their guide *Clinical Guidance for Treating Pregnant and Parenting Women with Opioid Use Disorder and their Infants*.**<sup>9</sup>

### Linkage to care through prenatal and postnatal care works best when:

- The prenatal and postpartum care settings are welcoming, nonjudgmental, respectful, and empathetic.<sup>5</sup>
- Verbal screening for substance use disorders with a validated tool is universal for all pregnant people seeking prenatal care—beginning at the first prenatal visit.<sup>244</sup>
- Care is approached through nonpunitive means and when the parent doesn’t feel at risk of legal repercussions (including the involvement of child protective services and the risk of forcible removal of their children<sup>245</sup>) for disclosing substance use during pregnancy.<sup>246</sup>
- Care is delivered through a collaborative care model with supportive care providers (e.g., counselors, social workers, patient navigators) working in tandem with physicians.<sup>238,239</sup>

- Pregnant patients with OUD are not forced to withdraw from opioids,<sup>247</sup> but are instead maintained on opioid agonist medications, preferably buprenorphine/naloxone if acceptable to the patient.<sup>246</sup> Methadone is a safe option if a patient preference.<sup>248</sup>

### What the research says:

- Not enough scientific evidence exists to assess the safety of naltrexone use during pregnancy or the effects of intrauterine exposure on the fetus to support the use of naltrexone during pregnancy.<sup>9</sup>
- Withdrawal from opioids—including medically supervised tapering—is not recommended for pregnant people as it is associated with a high rate of return to substance use.<sup>247</sup> One study showed that nearly 85 percent of pregnant people with OUD in the United States are unsuccessful in their attempts to withdraw from opioids and to maintain abstinence from substance use, unsupported by medication, for the duration of their pregnancies.<sup>44</sup>
- State and local laws categorizing substance use as “prenatal child abuse” are associated with lower rates of treatment with MOUD for pregnant people with OUD.<sup>246</sup>
- Pregnancies maintained on buprenorphine/naloxone may display a more responsive fetal heart rate<sup>45</sup> and higher trough movement<sup>249</sup> compared to those maintained on methadone.
- Patients managing postpartum pain may require higher doses of MOUD than normal (up to 47 percent higher with buprenorphine/naloxone<sup>250</sup> and 70 percent higher with methadone after cesarean delivery).<sup>251</sup> Research has shown no differences in intrapartum pain or analgesia requirements.<sup>250,251</sup>
- NOWS is a normal and manageable condition among neonates delivered by patients receiving MOUD.<sup>252</sup> Importantly, a pregnant person’s dosage of an opioid agonist MOUD is not a predictor of the severity or length of NOWS symptoms in their newborn.<sup>253,254</sup>
- NOWS symptoms can be lessened through a “rooming-in” model of post-partum care that places parents and neonates in the same room during hospitalization. Rooming-in maximizes skin-to-skin contact and minimizes outside stimulation, both of which improve the management of NOWS and reduce admissions to the neonatal intensive care unit.<sup>255,256</sup>
- There is little research on treatment outcomes among trans men who are living with OUD during pregnancy; qualitative research among trans men who are seeking pregnancy or who have given birth post-transition suggests that feelings of social isolation and poor knowledge and awareness of gender affirming health needs among the healthcare team are common concerns.<sup>257–259</sup>

## Examples of these principles in practice:

- In 2017, the National Perinatal Association published a position statement on managing perinatal substance use. It advocates using harm reduction models that welcome “Any Positive Change” when providing care for pregnant and parenting people who use drugs; the decriminalization of perinatal substance exposure; and effective linkage to MOUD for people who are living with OUD and are ready to seek treatment.<sup>260</sup>
- Perinatal quality collaboratives (PQCs) are networks of multidisciplinary teams working to promote best practices in perinatal care, including screening and treating pregnant or parenting people with OUD and newborns showing symptoms of NOWS. The Illinois PQC has both obstetric and neonatal initiatives for pregnant or parenting people and newborns affected by opioids. The toolkit, updated in January 2019, includes quality improvement and data resources, and screening tools.<sup>261</sup> The toolkit has information for family education, pre-delivery planning, treatment, and safe care.<sup>262</sup>
- Ohio state’s Maternal Opiate Medical Support (MOMS) initiative provides treatment to patients who use opioids during and after their pregnancy through a medical care home model. This initiative includes access to residential treatment for parents and their children up to 12 years of age.<sup>240</sup>
- In 2020, the American Academy of Pediatrics published a clinical statement on NOWS. The statement offers guidance on the management of infants with opioid exposure, including clinical presentation, assessment, treatment, and discharge.<sup>263</sup>

## 3.6 Outpatient Mental Health and Behavioral Health Services

Substance use disorders are closely linked to other mental disorders. According to SAMHSA’s 2020 National Survey on Drug Use and Health (NSDUH), approximately 37.9 million adults met the diagnostic criteria for a past-year substance use disorder, including alcohol and tobacco use disorders; of those, about half, or approximately 17 million, simultaneously experienced some form of mental illness.<sup>264</sup> Further, NSDUH data from 2015 to 2017 reveals that, among adults with past-year OUD, 64.3 percent experienced some form of mental disorder in the past year and 26.9 percent experienced a serious mental disorder.<sup>265</sup> Research has shown that the difficulty of obtaining treatment for substance use disorders and mental disorders from two fragmented treatment systems is a significant barrier to both forms of care.<sup>266–268</sup> These challenges can be reduced by implementing treatment programs tailored to the unique needs of persons with co-

occurring substance use and mental disorders. In addition, those who already have a history of engaging with mental health or behavioral health professionals are more likely to engage in treatment for OUD.<sup>269</sup> Integrating screening and linkage to care protocols for both mental and behavioral health services can, therefore, significantly increase access to MOUD for patients experiencing co-occurring disorders.

## Why this is a promising opportunity:

The social stigma surrounding other mental illness is high, and the stigma against substance use and substance use disorders is even higher.<sup>270</sup> Because co-occurring substance use disorders and other mental illness affect many patients seeking mental health care, mental health professionals are in a unique position to link patients with OUD to MOUD while treating mental health co-morbidities that may be associated with substance use.<sup>265</sup> The proportion of people who are seeking treatment for OUD and present with unresolved psychiatric concerns at intake is on the rise, increasing from 17 percent to 34 percent between 2000 and 2012.<sup>271</sup>

## Linkage to care in outpatient mental health and behavioral health services works best when:

- The mental health and behavioral health setting is welcoming, nonjudgmental, respectful, and empathetic.<sup>5</sup>
- Treatment services for OUD and other mental disorders are integrated and co-located.<sup>272</sup>
- Services for co-occurring mental disorders are established prior to the initiation of treatment for OUD.<sup>273</sup>

## What the research says:

- The Health Care for Reentry Veterans program at the Veterans’ Health Administration found that 77 percent of people in their care with a diagnosed mental disorder were successfully connected to mental health care, whereas 37 percent of people diagnosed with a substance use disorder were successfully linked with substance use-related care, suggesting that linkage to the former is often more successful than linkage to the latter.<sup>274</sup> Researchers attributed this finding to the different stigmas attached to mental and substance use disorders.
- A large Massachusetts study of nearly 8,000 women who inject drugs showed that participants who engaged in mental health services were significantly more likely to engage in evidence-based treatment for OUD compared to their counterparts who had no history of engaging in mental health care.<sup>275</sup>
- Members of minority racial and ethnic groups are less likely to access both substance use and mental health disorder treatment compared to their white counterparts.<sup>276</sup>

## Examples of these principles in practice:

- The Boston Health Care for the Homeless Program offers integrated, co-located behavioral health services alongside primary care and services for substance use disorders in its comprehensive healthcare facility in Boston's South End. Professionals working across healthcare specialties collaborate and participate in case conferences for all patients, giving special attention to those who seek treatment for OUD and screen positive for depression.<sup>277</sup>
- The 2014 Protecting Access to Medicare Act provided the framework for establishing Certified Community Behavioral Health Clinics (CCBHCs), which provide comprehensive mental and substance use disorder services to vulnerable people with complex clinical and social needs. This qualifies the clinics for enhanced Medicaid reimbursements. In 2016, SAMHSA awarded demonstration grants to eight states (Minnesota, Missouri, New Jersey, New York, Nevada, Oklahoma, Oregon, and Pennsylvania) to establish clinics offering 24-hour mobile crisis teams, screening and diagnosis, outpatient mental health and substance use services, primary care, case management, peer and family support services, and more. These services will be paid for whether each state's Medicaid program already covers them.<sup>278</sup> In Oregon, for example, 12 CCBHCs were certified by 2019, adding more than 250 full time staff to their collective workforce, providing service to more than 50,000 people, and increasing the availability of MOUD by making at least one of these medications available at most of the clinics.<sup>279</sup>

## 3.7 Health Care Settings During Incarceration and Community Supervision

There is great need for effective, evidence-based treatments for substance use disorders for people involved in the criminal justice system. Available data on people under community supervision indicates that as many as 40 percent of male probationers aged 18–49 and 38 percent of male parolees aged 18–49 are also living with a substance use disorder.<sup>280</sup> Effective linkage to care for these individuals includes universal screening for OUD and overdose risk; diversion from incarceration to community-based care; initiation or continuation of MOUD during incarceration; support for MOUD initiation during incarceration or community supervision; MOUD continuation post-release and during community supervision; and overdose education and naloxone distribution.<sup>281</sup>

## Why this is a promising opportunity?

Linking persons with OUD to evidence-based treatment while incarcerated or while under community supervision brings correctional health care in line with current medical standards for treating OUD. It reduces illicit drug use, overdose risk, and rates of drug-related crime and increases engagement with other essential forms of health care.<sup>282–285</sup> Linkage to MOUD through the criminal justice system is also a proven, highly effective strategy for preventing fatal overdose,<sup>286</sup> a significant risk faced by formerly incarcerated persons immediately following release.<sup>287</sup>

Racialized minorities in the United States already experience markedly lower access to MOUD, in general, compared to their white counterparts.<sup>22</sup> These disparities may be exacerbated by the reality that Black persons and people from other minority groups living with OUD are statistically more likely to be incarcerated, where MOUD is often inaccessible. Black persons represent 13 percent of the national population, yet constitute nearly 40 percent of those incarcerated.<sup>13,288</sup> In addition, nearly half of all persons in federal prisons and about 15 percent of persons in state prisons have been sentenced for drug-related offenses.<sup>13,288</sup> Therefore, developing new strategies for linking all persons involved in the criminal justice system to timely, high-quality, evidence-based care with MOUD is key to curbing the opioid overdose epidemic.

**SAMHSA provides detailed guidance about providing MOUD in criminal justice settings in their guide, *Use of Medication-Assisted Treatment for Opioid Use Disorder in Criminal Justice Settings*.**<sup>289</sup>

## Linkage to care in health care settings during incarceration and community supervision works best when:

- The health care setting during incarceration, pre-release procedures, and community supervision are welcoming, nonjudgmental, respectful, and empathetic.<sup>5</sup>
- Treatment with MOUD is uninterrupted for those receiving care prior to incarceration.<sup>290</sup>
- MOUD can be initiated in criminal justice settings.<sup>291</sup>
- Persons have access to all FDA-approved MOUD. This choice is essential, as some fare better (or worse) on one of these drugs than on the others.<sup>95</sup>
- Dosages of opioid agonist MOUD are not restricted. For example, methadone dosages in excess of 60 mg may be needed to retain patients in treatment and to generate reduction in illicit opioid use in community

care settings.<sup>292</sup> Evidence does not support using lower dosages in incarcerated settings.

- An effective system for referral and linkage to care is in place so that persons on MOUD can receive a warm handoff to other clinics or prescribers to continue their care, without interruption, upon release.<sup>293</sup>
- MOUD is offered with evidence-based psychosocial counseling; however, according to SAMHSA's best practices for providing MOUD in criminal justice settings, no justification exists for denying access to MOUD because psychosocial services are unavailable or because someone is unwilling to engage in those services.<sup>289</sup>
- Community practitioners who provide MOUD meet with people who are incarcerated prior to their release to assess health care and social support needs to ensure a smooth transition to community care, which should begin immediately upon release.<sup>289</sup>

## What the research says:

- Rhode Island observed a 12 percent decrease in overdose fatalities state-wide within 1 year of initiating a new MOUD program in all state adult correctional facilities compared to the previous year. Two-thirds of the decrease are attributed to deaths prevented by universal MOUD access in correctional facilities.<sup>286</sup>
- Multiple studies have shown that MOUD in correctional facilities is associated with reduced heroin use, syringe sharing, and criminal activity, and a higher probability of receiving treatment upon release.<sup>282–285</sup>
- Forced withdrawal from methadone during incarceration reduces the likelihood that people already receiving treatment with MOUD prior to incarceration will re-engage in treatment after release.<sup>294</sup>
- A study conducted at Rikers Island Correctional Facility revealed that persons with OUD who were given buprenorphine while incarcerated for 10–90 days were more likely than those given methadone to continue treatment with MOUD after release.<sup>295</sup>
- Baltimore researchers found that persons who received methadone while incarcerated stayed in treatment for an average of 166 days in the year following their release. Those who received only counseling but no MOUD engaged in treatment for an average of 23 days following release and were more likely to test positive for opioids a year later.<sup>296</sup>
- On average, people who would be eligible to initiate MOUD while in jail present with more severe substance use profiles than their counterparts in the general population.<sup>297</sup>

- A survey of existing literature showed a strong association between treatment with methadone and reductions in recidivism; a moderate association between treatment with buprenorphine and reductions in recidivism; and no association between long-acting naltrexone and reductions in recidivism. All comparisons were made against non-medication groups.<sup>298</sup>

## Examples of these principles in practice:

- Rikers Island Correctional Facility, New York City's jail, has been providing opioid agonist MOUD to inmates with OUD since 1987.
- The Philadelphia Department of Prisons (PDP) has been providing MOUD to jail inmates for more than 12 years. Ninety five percent of persons receiving methadone through PDP returned to treatment in community-based clinics after release.<sup>289</sup>
- In 2016, Rhode Island became the first state to implement MOUD with all three FDA-approved medications (methadone, buprenorphine, and naltrexone) for all jailed or incarcerated people presenting with OUD. Some people continued the medications they were receiving prior to incarceration; others initiated MOUD for the first time in correctional facilities.
- Several community Centers of Excellence in MOUD were established to promote transitions and referrals of incarcerated people upon release.<sup>286</sup>
- In 2017, the Los Angeles County Department of Health Services' Correctional Health Services (CHS) received funding from the California Health Care Foundation to establish an OTP in the county jail system and to provide MOUD to persons remanded to county jails. By April 2018, 319 people in Los Angeles County were receiving treatment from CHS.<sup>299</sup> CHS representatives made site visits to Rikers Island Correctional Facility in New York City and Rhode Island correctional facilities for technical assistance planning this program.
- The New Jersey Department of Corrections (NJDOC) and Department of Human Services recently renovated the state's Mid-State Correctional Facility to operate as a treatment center for incarcerated people living with various substance use disorders. NJDOC has been providing about 100 people with MOUD each month since opening this program.<sup>289</sup>
- In November 2018, the National Commission on Correctional Health Care and the National Sheriffs' Association jointly released a set of best practices and guidelines for implementing jail-based MOUD.<sup>300</sup>

# 4. Best Practices Across Populations



## 4.1 Recently Incarcerated Persons

Incarceration and subsequent release increase a person's risk of opioid overdose. This occurs as a result of abstinence from opioids commonly experienced while incarcerated followed by a lack of social and financial support upon reentry into the community.<sup>287</sup> Recent evidence shows that unintentional overdose is the leading cause of death among formerly incarcerated people, with the highest risk occurring soon after release.<sup>70,301–303</sup> An estimated 2.3 million persons are currently incarcerated in the United States, of whom approximately 1.3 million are held in state prisons and approximately 630,000 are held in county jails.<sup>304</sup> Within that very large population, available estimates indicate that 58 percent of those incarcerated in state prisons and the 63 percent sentenced in local jails meet the criteria for a substance use disorder.<sup>\*,114</sup>

Most people who are incarcerated in the United States cannot access MOUD. Though treatment with MOUD during incarceration greatly improves linkage to care upon release, only 30 of the country's 5,100 jails and prisons offered MOUDs to people who were incarcerated or in custody in 2017.<sup>307</sup> Though drug courts are a growing strategy for diverting people accused of nonviolent offenses who are living with substance use disorders away from incarceration, drug courts prolong people's involvement in the criminal justice system, and as many as half of all drug courts do not allow participants access to MOUD under any circumstances.<sup>308</sup> Many drug court systems that do allow access to MOUD limit that access to pregnant people or only allow its use for a short-term taper (detoxification),<sup>308</sup> which increases overdose risk.<sup>115–117</sup>

The synergy between incarceration and overdose, OUD, and access to MOUD is exacerbated by racial and ethnic disparities in the criminal justice system.<sup>13,288</sup> Non-Hispanic Black people are incarcerated at a rate per capita more than twice that of Hispanic people and more than six times that of non-Hispanic white people.<sup>309</sup> In addition to the harms that embodied racism may cause to physical and emotional well-being,<sup>310</sup> members of racial and ethnic minority groups may have poor experiences with healthcare professionals or institutions. Those experiences may include lower quality community-based care for OUD,<sup>311</sup> inadequate pain management,<sup>312</sup> and other forms of discrimination in health care settings<sup>313</sup> that hinder MOUD access during, after, and beyond the context of incarceration.

## 4.2 Tribal Communities and Indigenous Persons

American Indian and Alaska Native (AI/AN) persons experience a disproportionately high rate of opioid overdose mortality compared to the general population. Between 1999 and 2016, the rate of fatal opioid overdose among AI/AN persons rose from 2.9 to 13.9 per 100,000 nationwide, with rates in some regions reaching 47.6 per 100,000.<sup>314</sup> By 2020, the nationwide rate of all fatal drug overdose among AI/AN persons rose to 29.8 per 100,000—higher than any other demographic group.<sup>315</sup> Still, these statistics reflect only a portion of the burden carried by AI/AN communities. Conducting epidemiological surveys among AI/AN populations may be challenging due to the statistical limitations of smaller sample sizes and limitations of the cultural validity of available screening tools,<sup>316,317</sup> resulting in underestimations of opioid overdose mortality in this population by as much as 40 to 50 percent.<sup>318,319</sup>

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\* The study referenced here measured the rates of “substance dependence or substance abuse” in this population. These terms were used in the Diagnostic and Statistical Manual of Mental disorders, 4th Edition (DSM-IV), published in 2000.<sup>305</sup> This entry was updated in the 5th edition (DSM-5), renamed “substance use disorder” and given slightly different clinical criteria.<sup>91</sup> As the correspondence between these two diagnoses is very high,<sup>306</sup> we here use the current and less stigmatizing term “substance use disorder” in lieu of “substance abuse.”



AI/AN communities face structural barriers to evidence-based treatment for OUD such as limited control over the scope of direct healthcare services provided by the Indian Health Service on tribal lands;<sup>314</sup> high clinician turnover in tribal communities;<sup>320</sup> lack of familiarity with MOUD among substance use treatment programs available to tribal communities;<sup>321</sup> and stigma or prejudice in medical facilities outside of tribal lands.<sup>320</sup>

AI/AN communities have also experienced historical traumas, which are associated with substance use.<sup>322,323</sup> Meaningful responses to intergenerational trauma are being pioneered by AI/AN scholars such as Maria Yellow Horse Brave Heart, who developed the Historical Trauma Response approach to community-based healing.<sup>323,324</sup> Brave Heart's scholarly work demonstrates direct links between disproportionate rates of substance use disorders, anxiety disorders, and suicidal ideation and the numerous historical traumas experienced by these communities.<sup>323</sup>

Fortunately, acknowledging the impact of these historical traumas on entire nations creates new opportunities for research and intervention models that build on the existing strengths of tribal communities and promote community empowerment.<sup>324</sup> Adopting a resiliency framework that prioritizes (re)claiming indigenous culture and identity is effective in mitigating the negative impacts of psychological stressors<sup>325</sup> and increasing overall social wellness<sup>326</sup>—including access and uptake of mental and behavioral health services<sup>327</sup>—in tribal communities.

Tapping into the innate strengths of tribal communities, including the unique administrative capacities rooted in Tribal Sovereignty, is necessary to implement effective responses to OUD and increase uptake of MOUD both in communities that maintain tribal sovereignty and among AI/AN people living outside of tribal lands. Ideally, MOUD can be integrated into local practices and rooted in indigenous culture and spirituality instead of simply “plugging in” elements of indigenous spirituality into pre-existing secular modalities of treatment with MOUD. In addition, it is helpful to adapt program models to acknowledge and validate culturally meaningful treatment outcomes that may differ from biomedical definitions of MOUD success.<sup>320</sup> The U.S. Indian Health Service is working to support tribal responses to opioid overdose and OUD through technical assistance, resource sharing, and collaboration with tribal communities.<sup>328</sup>

One of many examples of these approaches in action is the Muckleshoot Behavioral Health Program (serving members of the Muckleshoot Tribe of the Coast Salish peoples in the

Pacific Northwest region of the United States). The program has successfully integrated current science and research on substance use disorders into a traditional socio-cultural healing framework. The clinic refers clients to work training programs and the tribal college; offers music lessons; holds beading workshops; hosts a drum circle at local dance events; and facilitates volunteer opportunities for clients with tribal elders. In addition to these important offerings, half of the clinic's patients receive buprenorphine/naloxone and another third receive naltrexone.<sup>314</sup>

## 4.3 People Living with Past Trauma

Consensus is growing that experiences with psychological trauma are “the expectation, not the exception”<sup>329</sup> for persons with OUD. Further, chronic post-traumatic stress disorder and chronic pain are positively associated,<sup>330</sup> which indicates that psychological trauma is prevalent in populations at risk of OUD and among those currently living with OUD.

Psychological traumas can produce complex syndromes that affect patients socially, psychologically, and biologically.<sup>331</sup> Trauma symptoms may include feelings of disempowerment and socio-emotional disconnection from others.<sup>332</sup> These experiences may diminish a patient's capacity to develop meaningful therapeutic relationships with healthcare professionals. Persons who have experienced trauma risk becoming re-traumatized if clinicians are not trained or equipped to serve them appropriately and foster a sense of safety at all stages of their interaction.<sup>333</sup> This is especially true for women and gender minority patients.<sup>334</sup>

In 2013, Vivian Brown and colleagues developed a tool to help a variety of service providers assess the quality of their trauma-informed services and overall preparation for meeting trauma-specific needs. The tool consists of a simple checklist that covers domains such as client sense of safety, client choice and agency, service policies, trauma screening and assessment, service planning, staff training, and administrative support. It helps program leaders identify potential triggers in their programming or services (e.g., could a loud and crowded waiting room cause clients with severe trauma histories to have upsetting and/or disproportionate reactions to the environment), and plan and implement both large and small quality improvement strategies.<sup>329</sup>

**SAMHSA offers detailed guidance on trauma-informed care in their guide *Trauma-Informed Care in Behavioral Health Services*.**<sup>335</sup>

## 4.4 Adolescents

Though opioid use and OUD are less common among adolescents than in the adult population,<sup>336</sup> adolescents who need MOUD may face unique challenges in accessing this form of care. Research on the relationships between opioid exposure in adolescence and later cognitive and behavioral outcomes is limited. Evidence exists, however, that misuse of prescription medications during adolescence is associated with greater risk of a substance use disorder in adulthood.<sup>337</sup> Further, though more research is needed to fully understand the impact of opioid use on the developing brain, limited evidence suggests that other (non-opioid) forms of substance use may negatively impact certain cognitive functions over time.<sup>338</sup>

The American Academy of Pediatrics recommends that adolescent patients be given regular screening at each annual physical exam,<sup>339</sup> though the U.S. Prevention Services Task Force has recently concluded that evidence is insufficient to support this recommendation.<sup>340</sup> Low rates of screening among adolescents are often the result of clinicians' own perception of low risk in their patient population,<sup>341</sup> and screenings, when they do occur, often rely on a healthcare professional's clinical judgement rather than a validated screening tool.<sup>342</sup> Further, substance use disorders among adolescents are often comorbid with other mental health concerns such as bipolar disorder,<sup>343</sup> which may complicate efforts to identify and treat OUD among pediatric patients.

Adolescents also experience many barriers to MOUD that are not typical among their adult counterparts.<sup>344</sup> For example, federal age restrictions limit the prescription of buprenorphine for OUD to patients 16 years or older.<sup>345</sup> While methadone can be dispensed from OTPs to youth under the age of 18, the U.S. Code of Federal Regulations requires documentation that the patient has failed two previous attempts at abstinence-based treatment or withdrawal management and has written consent from a parent or guardian.<sup>346</sup> Parents of adolescent OUD patients may also hold the false perception that medications should only be used in OUD treatment as a last resort.<sup>82</sup> Finally, access to MOUD is significantly lower for female adolescents compared to their male counterparts and for Hispanic and non-Hispanic Black adolescents compared to their white counterparts.<sup>347</sup> As a result, 2.4 percent of adolescents in treatment for heroin use disorder receive MOUD—less than one-tenth of the medication coverage currently achieved among adults.<sup>348</sup>

**The National Institute on Drug Abuse offers guidance on the treatment of substance use disorders among adolescents in their guide *Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide*.**<sup>349</sup>

**The American Academy of Pediatrics offers guidance on treatment with MOUD in adolescents in their guide *Medication-Assisted Treatments of Adolescents with Opioid Use Disorders*.**<sup>350</sup>

## 4.5 Transgender and Gender Minority Populations

Transgender and gender minority people experience higher rates of psychological distress and post-traumatic stress disorder compared to people who identify with the gender to which they were assigned at birth (cis-gender), which puts them at higher risk of illicit substance use.<sup>351</sup> Transgender and gender minority people who use drugs are at heightened risk of opioid-related harms, often presenting with more severe substance use disorders and frequently presenting with comorbid mental disorders.<sup>352</sup> Illicit substance use is much more prevalent in this population compared with their cis-gender counterparts.<sup>353</sup>

Many transgender and gender minority people experience economic and interpersonal discrimination, the root of many barriers to care. The healthcare system regularly fails to provide appropriate care as a result of cis-gendered assumptions about patient populations embedded in its infrastructure, such as gender-specific access or gendered segregation within treatment facilities, residential programs, and outpatient support groups.<sup>354</sup> Structural and interpersonal discrimination also reduces access to health insurance, leaving more transgender and gender minority people uninsured than is typical across the entire adult population.<sup>355,356</sup>

Even small steps taken can have a positive impact on the relationship between healthcare professionals and patients who are transgender and gender minority people:

- Use the name and pronouns used by the patient whether or not they align with those assigned at birth.
- If you are unsure about what name or pronouns to use, don't guess. Politely ask. If you have trouble remembering correct pronouns, use "they/them."
- Document the patient's name and pronouns in their chart as they are given by the patient, whether or not they align with those assigned at birth.
- Use an anatomy inventory when taking medical history, rather than making assumptions about a patient's anatomy based on gender presentation or physical appearance.
- Avoid asking questions about identity, anatomy, sexual or romantic activity, or anything else that are driven by curiosity.<sup>357</sup>

**The World Professional Association for Transgender Health (WPATH) offers detailed guidance for providing care to transgender and other gender minority persons in their guide *Standards of Care for the Health of Transgender, Transsexual, and Gender-Nonconforming People*.**<sup>358</sup>

## 4.6 Sex Workers

People who engage in commercial sex work or transactional sexual relationships often experience stigma from the general population and from healthcare professionals.<sup>359</sup> This can directly and negatively affect sex workers living with OUD, as anti-sex work stigma has been shown to mediate the relationship between sex work and substance use, increasing the association between the two.<sup>359</sup> Further, sex work and substance use disorder are sometimes (though not always) experienced synergistically, with sex work serving as a pathway into substance use and substance use serving as a pathway into sex work.<sup>360-364</sup>

Myths, stereotypes, and misunderstandings about the realities of sex work can be significant barriers to care. Lifetime prevalence of both sexual assault and sexual trauma is higher among those with a history of sex work.<sup>365</sup> Nevertheless, recognizing that not all people engaged in sex work share these experiences is important.

People engaged in commercial sex work or transactional sexual relationships deserve effective, compassionate care. Healthcare professionals can strive to maintain a client-centered system of care when treating patients involved in sex work, even if they do not share the same values. They may also seek training or support for addressing personal biases against sex work and adopt harm reduction approaches in their practice by meeting patients “where they’re at” and by acknowledging “Any Positive Change” in a patient’s health or wellbeing as a success.<sup>366</sup>

# 5. Barriers and Facilitators of Treatment Access



## 5.1 Known Barriers to Treatment Access

### Prescriber- and systems-level barriers to providing MOUD

MOUD must be available before anyone can be linked to it. The barriers healthcare professionals face in offering MOUD are well documented, and disproportionately affect rural areas across the United States.<sup>367</sup> The total number of waived buprenorphine prescribers more than doubled in the past few years, growing from approximately 38,000 in 2017 to nearly 110,000 in 2021.<sup>368,369</sup> Despite this rapid growth, the availability of buprenorphine in rural areas has varied over the past decade. In 2012, 33% of U.S. rural counties did not have a single buprenorphine prescriber practicing within county limits; that number grew to 44% of rural counties in 2017 and then fell again to 37% of rural counties in 2020.<sup>368,370</sup> Despite these changes, residents of more than one third of the United States' rural areas and more than half of small, remote rural areas have no local access to buprenorphine for OUD.

However, healthcare professionals across the United States face common challenges regardless of their practice location.<sup>371</sup> At the prescriber level, misunderstanding about the efficacy of MOUD<sup>372</sup> as well as concerns about visit time, medication diversion, and qualifications to treat complex substance use disorders are consistently reported as barriers that affect willingness to offer MOUD within one's healthcare practice.<sup>367,371,373</sup> At the local level, many healthcare professionals perceive low levels of institutional support, lack of access to both mental health and psychosocial services, and lack of specialized care professionals or backup supports for particularly complex cases as barriers to offering MOUD.<sup>367,371,373</sup> Difficulty coordinating care within and among hospital systems is also a challenge.<sup>374</sup> Finally, at the national level, Medicaid reimbursement procedures (including the level of reimbursement) and concerns about Drug Enforcement Agency intrusion into medical practices are what healthcare professionals report as factors that hamper their ability and willingness to offer MOUD.<sup>367,373,374</sup>

Despite the widespread impact of these prescriber- and system-level barriers to providing MOUD, a growing body of literature offers novel approaches and best practices for overcoming them and for providing high-quality treatment to those living with OUD. For instance, the Massachusetts Collaborative Care Model (based on a linkage to care program first developed at Boston Medical Center) has successfully increased MOUD capacity through collaborative care partnerships with community health clinics.<sup>375</sup> A Colorado study found that community outreach and education to reduce stigma among healthcare professionals facilitated the expansion of MOUD across communities.<sup>374</sup> Massachusetts General Hospital developed a protocol for group visits for MOUD patients, which resolves the need to find additional psychosocial support and allows for higher reimbursement rates.<sup>366,173</sup> In addition, simple interventions for prescriber support, such as academic detailing with a specialist, improved opioid prescription practices for analgesia,<sup>376</sup> and similar strategies may support and facilitate the provision of MOUD as well.

### Stigma

Fear of stigma and judgment from healthcare professionals discourages help seeking for OUD and other substance use-related concerns.<sup>378</sup> Women and people with persistent mental illness are more likely to experience such stigmas, which may further discourage treatment seeking or contribute to early dropout from care.<sup>379</sup> Beyond the healthcare system, stigma can also lead to broader systematic barriers. It may, for example, foster public support for punitive rather than public health responses to opioid use<sup>83</sup> and discourage prescribers from offering treatment for OUD in their medical practice.<sup>380,381</sup> People who use drugs or who are living with OUD may also face challenges posed by internalized stigma and fear of stigma from friends, family, and the broader community. Some scholars have argued that stigma is so central to public perceptions of substance use disorder that the internalization of stigma (i.e., the feeling that you are worthless or undeserving because you use drugs) is a key component of the bio-social process through which substance use disorders develop.<sup>382</sup> Internalized stigma complicates the presentation and treatment of OUD. It has been shown to worsen social functioning,<sup>383</sup> substance use problems,<sup>384</sup> and the depressive symptoms stemming from internalized HIV-related stigma.

## Demographic and economic barriers

Certain populations are at higher-than-average risk of poor engagement in treatment with MOUD or early drop out. Those who may be at increased risk includes persons with OUD who are:

- younger;
- male;
- members of a minority racial or ethnic group;
- living with more than one substance use disorder;
- living with a co-occurring mental disorder;
- enrolled in a fee-for-service Medicaid plan;
- survivors of past overdose; or
- admitted to a hospital as an inpatient soon after initiating care.

Further, studies have shown that women living with OUD are, on average, less likely than their male peers to have the financial resources to pay for MOUD.<sup>387</sup> These financial barriers can, in turn, be mitigated or exacerbated by the form of care to which an individual has access. For example, patients receiving methadone to treat OUD are significantly less likely than patients receiving buprenorphine to find and begin new employment while in treatment, due largely to the logistical constraints (e.g., daily observed dosing onsite) imposed by OTP regulations.

## Insufficient treatment capacity

The need for MOUD outpaces current treatment capacity in the United States. Though nearly 500,000 PCPs—and many more NPs and PAs—are currently practicing in the United States,<sup>389</sup> fewer than 110,000 clinicians are registered as prescribers of buprenorphine for OUD as of October, 2021.<sup>369</sup> Studies suggest that about one in eight registered buprenorphine prescribers are prescribing the medication often enough to be near their patient limit, and as many one quarter of prescribers, despite being specially waived to do so, are not prescribing buprenorphine at all.<sup>390,391</sup>

## Incarceration

Incarceration is a primary risk factor for opioid overdose.<sup>70,392</sup> Periods of incarceration can also disrupt or discourage treatment seeking. A source of this discouragement is often forced withdrawal when incarceration begins. People who have been formerly incarcerated become less interested in initiating MOUD after release out of fear that they will again have to experience painful withdrawal.<sup>393,394</sup> Due to this deterrent effect, being formerly incarcerated is independently associated with not receiving treatment on the outside.<sup>395</sup>

## Health insurance coverage and policies

States that expanded Medicaid observed, on average, a 70 percent increase in Medicaid-covered buprenorphine prescriptions, a 50 percent increase in buprenorphine spending, and a marked increase in overall treatment capacity.<sup>396</sup> Failing to qualify for Medicaid in non-expansion states is thus a significant barrier to MOUD. In addition, many forms of health insurance limit access to MOUD through prior authorization requirements.<sup>397</sup> These policies often leave patients waiting for several days between when they first see a clinician and when they can begin treatment.<sup>398</sup>

## Public concerns about opioid medication diversion

Local leaders or public health authorities may worry that increasing access to buprenorphine, an opioid agonist medication, could pose a public health risk.<sup>399</sup> Evidence supports that increased opioid prescribing is associated with higher levels of prescription opioid misuse.<sup>400</sup> However, studies have shown that diversion or illicit use of buprenorphine is primarily driven by high demand for OUD treatment—often to self-treat opioid withdrawal symptoms—in an environment where access to MOUD is low.<sup>401–403</sup> Moreover, buprenorphine diversion in a community where access to MOUD has recently increased could be an indicator that access to treatment does not yet meet the demand for care among local residents with OUD.

# 5.2 Known Facilitators of Treatment Access

## Integrated OUD/HIV treatment

When patients with OUD are also living with HIV, the efficacy of MOUD can be increased through integration with HIV treatment in a single location. Integrated MOUD and HIV care has also been shown to increase the protective effect of MOUD against death from overdose and other causes.<sup>404</sup> Integrated care doesn't necessarily mean offering MOUD in HIV clinics. Stand-alone HIV care can also serve as an effective bridge to care for OUD if a system for linking it is successfully established.<sup>405</sup> However, studies have shown that an integrated care design—in which HIV care and MOUD are collocated—can be effective at improving outcomes, especially for women.<sup>406</sup>

## Nonjudgmental medical support

Patients receiving MOUD often highlight the importance of empathetic, nonjudgmental support for meeting their treatment goals.<sup>378</sup> Ensuring a nonjudgmental treatment atmosphere and fostering mutual or peer support as part of a comprehensive system of care is important, as patients consistently name these as key facilitators of their retention in care.<sup>407</sup> Numerous resources are available to assist health care and other service providers in developing a nonjudgmental approach. Language guides, which offer practical advice for reducing OUD-related stigma through compassionate communication, are available. These guides include resources produced by former Director of the Office of National Drug Control Policy Michael Botticelli<sup>408</sup> and the online magazine *The Fix*.<sup>409</sup> More detailed training guides that address stigma against substance use disorders in the context of treatment are available from the Addiction Technology Transfer Centers Network<sup>410</sup> and the National Harm Reduction Coalition.<sup>411</sup>

## Low-barrier access to one's preferred medication

Personal experiences with and attitudes toward different medications shape each person's preferences and willingness to engage in treatment with MOUD.<sup>412,413</sup> Positive experiences receiving a specific medication for OUD in the past are associated with better retention in care.<sup>407</sup> Likewise, entry and retention in care can be significantly improved by ensuring patients have access to the medications they prefer.

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