

PATHWAYS TO CARE:

Treating Opioid and Substance Use Disorders

Sarah A. Wattenberg
Director of Quality and Addiction Services

The dramatic rise in opioid overdose deaths has many drivers. One of them, and the focus of this paper, is a frayed medical-surgical and substance use disorder treatment delivery system that makes access to treatment difficult and is contributing to an erosion of public trust.

The current system is characterized by limited integration between specialty addiction care and the general medical community; low use of evidence-based practices; poorly organized services that often confuse the public; limited, inconsistent, and unpredictable financing; and insufficient workforce capacity to meet consumer demand.

Given this situation, it is no wonder that most substance use disorders (SUDs) in the United States go untreated. In 2016, more than 20 million individuals in the United States had an SUD and 89 percent of individuals who needed treatment did not receive it.1 This is referred to as the treatment gap, and it exists for individuals with all types of SUDs, not just opioid use disorder (OUD)-and it is literally killing us and reducing life expectancy in the United States.

Pathways is a landscape review that presents information about unhealthy substance use and how the treatment delivery system often fails to connect people to treatment; provide the correct evidencebased services; monitor patient recovery during and after treatment; and re-engage patients whose symptoms recur.

This paper emphasizes medications for opioid use disorders (OUDs) for two primary reasons. The first reason is because medications for OUDs are wholly underused across all populations and levels and settings of care—which has subsequently increased rates of overdose, death, hospital admissions, and neonatal abstinence syndrome, and also overburdened the foster care system. The second reason this paper underscores medications for OUDs is because if these medications are used more broadly, they could make a significant dent in our nation's opioid crisis immediately.

Pathways also highlights practice innovations, organizing frameworks, and opportunities to change the status quo in order to strengthen the entire treatment enterprise-and ultimately save lives.

BACKGROUND

More than 63,000 people, or about 174 people per day, died from a drug overdose in 2016, a 21-percent increase from 2015.2 This figure likely underestimates the number of deaths by

63,000 people, or about 174 people per day, died from a drug overdose in 2016

as much as 15 percent to 25 percent.3 About two-thirds of these deaths (42,249) involved an opioid and were largely driven by synthetic opioids (fentanyl and fentanyl analogues) and heroin-heroin deaths increased 533 percent between 2002 and 2016.4 Consistent with this trend,

opioid-related hospital stays increased by more than 150 percent between 1993 and 2012.5 Between 2005 and 2014, opioid-related inpatient stays increased 64.1 percent and opioid-related emergency department (ED) visits by 99 percent.⁶ Most recently, ED visits for opioid overdoses increased by 30 percent between July 2016 and September 2017.7

Many opioid overdose deaths involve another substance, reflecting that individuals with an SUD are often polysubstance users. Between 2005 and 2013, 80 percent of individuals with an opioid use disorder (OUD) had been diagnosed with another SUD,8 and one study found that polysubstance use characterized most fatal and non-fatal overdoses.9 Cocaine-related overdose deaths involving an opioid was 63 percent in 2015, up from 29 percent in 2000.10 More than 30 percent of opioid overdoses involve benzodiazepines.¹¹

In 2010, alcohol was involved in 18.5 percent of opioid pain reliever (OPR)-related ED visits and 22 percent of OPR-related deaths; it was involved in 27 percent of benzodiazepine ED visits and 21 percent of those deaths. 12 Perhaps surprisingly, there are 88,000 alcohol-related deaths each year. 13 If alcohol deaths are added to the opioid death toll, annual death rates rise to 357 deaths per day. Deaths from psychostimulant drug poisoning deaths increased 255 percent from 2005-2015, with 85-90 percent involving methamphetamine between 2010-2015.14

There is a strong relationship among opioids, depression, and suicide. Individuals who misuse prescription opioids are associated with a 40 percent to 60 percent increased risk to experience suicidal ideation.¹⁵ Furthermore, people who administer opioids via injection are 13 times more at risk to die by suicide than the general population. 16 In a study of veterans, the risk of suicide increased more than two-fold for men and more than eight-fold for women in the presence of an OUD.¹⁷ Behavioral health treatment programs can improve these outcomes by providing accurate screening for all substance misuse, mental health conditions, and providing ongoing treatment to ensure improvement and continued stabilization.

Recovery from SUDs is possible. But the rates of recovery are significantly low because individuals do not always access the treatment system. The treatment continuum includes a range of services that can effectively address the spectrum of individual needs. However, the treatment array is not optimally used because of a lack of appropriate clinical assessments that help to define the level and type of care that would most benefit the individual. When individuals do enter the system, they often do not receive evidence-based care, such as medication assisted treatment (MAT), and/or they do not receive appropriate care in a sufficient amount. Nor is care effectively coordinated with appropriate follow-up practices, therefore falling short of managing symptom recurrence ('relapse') and sustaining long term recovery outcomes. Compounding this disjointed system are administrative business practices, such as patient brokering and deceptive advertising, that require more monitoring and enforcement by state regulatory authorities, and accrediting and credentialing bodies.

Also contributing to the treatment gap and recovery is the presence of stigma, which a) keeps people from seeking care, and b) has been found to affect the quality of care provided to

people with SUDs. When asked for reasons why they had not received substance use treatment, 29 percent of individuals reported concerns about others finding out and/or negative perceptions within the community or on the job related to one's substance use problem.¹⁸

Despite the growing science on the impact of substance use on the structure and function of the brain, many continue to view addictions as a moral issue rather than a brain disorder where controllability and causation is mediated through the neuro-functioning of the brain, genetics, and environmental variables. Such bias and negative perceptions can drive negative policy decisions related to insurance, treatment, housing, and job support. 19, 20 Studies have demonstrated that among mental health clinicians, using certain language—including the term substance abuse rather than substance use—can result in negative judgments and a belief in more punitive measures,²¹ and that negative attitudes among health professionals can affect healthcare quality and outcomes.^{22, 23} This growing body of evidence suggests the need for increased awareness and training about the use of language as a cultural competency issue.²⁴

GETTING CARE

Access to care encompasses disease identification; availability of a range of services that competently treat disorders over time and rapidly responds to symptom recurrence; timely linkage and entry to treatment services from multiple referral sources; financial coverage for services; and an adequate network of treatment programs and workforce to supply services.

Screening and Identification

To gain access to care, both the individual and the treatment system need to recognize the need for care. Treatment admissions in the current addiction treatment system rely heavily on selfdiagnosis of disease and self-referral for care, however, this is not probable within the cohort of individuals with SUDs, and, as with other chronic health conditions, should not be expected. Seventy-eight percent of people who have an SUD or need treatment don't recognize that they need treatment.²⁵ Even when a person perceives the need for treatment, they may not seek treatment, with almost 38 percent reporting that they are not ready to stop using drugs.²⁶

To engage greater numbers of individuals who need care into treatment, all elements of the health system must improve the identification of risky substance use and SUDs through screening, brief intervention, or referral. This is ideally done annually in the primary care setting before substance use progresses in severity. However, screening in these settings is low. System improvements and incentives are needed to boost the role and commitment of primary care providers to identify SUDs, intervene when less acute symptomology is present, as well as provide appropriate and viable referrals to specialty care when the disease has increased in severity.

Identification does not have to be confined to primary care. Individuals with alcohol use disorder (AUD) and OUD routinely encounter other parts of the healthcare, social service, and community systems and institutions in large numbers. Among these systems are urgent care, emergency medical services, hospital emergency departments, specialty providers, dentists, pharmacists, law enforcement, fire departments, schools, shelters, and others. In fact, police stations have engaged in efforts across the country to identify and refer individuals to treatment. Instead of arresting and incarcerating individuals with an SUD, Police Assisted Addiction and Recovery Initiative²⁷ programs support any individual who asks for help by immediately taking them to the hospital and/or a recovery program. Fire stations have also begun to facilitate immediate treatment referrals upon request across the country, modeled after Safe Stations in New Hampshire.²⁸

Employers also come in contact with individuals with substance use problems and are increasingly having difficulty hiring workers and maintaining workers because they can't pass drug tests.²⁹ The annual Quest Diagnostics Drug Testing Index®30 in 2016 reported the highest drug

CASCADE OF CARE FOR OPIOID USE DISORDER 25 20 15 x100,000 10 5 0 Engaged in Care OUD OUD Receive Retained/ Medication Abstinent Severe Diagnosed Treatment

Williams, A.R., Nunes, E., Olfson, M. Health Affairs Blog, 2017

positivity rate in twelve years, including increases in cocaine, marijuana, methamphetamine, and heroin, although opioid pain relievers declined. Substance use is affecting labor force participation.³¹ While an employer may choose not to hire someone who fails a drug test, it is an ideal opportunity to refer an individual to treatment, with the potential for future employment serving as a powerful incentive.32 Once hired, employers have difficulty retaining workers due to SUDs. Many employers have employee assistance programs; however, the high demands of the opioid epidemic coupled with low on-demand treatment capacity may be limiting the effectiveness of these systems.

A Cascade of Care ("cascade") model can be applied as an organizing framework to improve identification and outcomes for people with OUDs.^{33, 34} The cascade does this by identifying the junctures of care at which individuals drop out, thereby providing policy direction for service improvement. The cascade has been effective in identifying, treating, and reducing the rate of AIDs-related deaths by half by driving the use of

^{*} The concept could also be applied to individuals with AUD, however there are differences in efficacy for AUD MAT.

anti-retroviral medication. An opioid treatment cascade has been proposed³⁵ seeking to do the same.* Goals could include:

- Identify 90 percent of individuals with an OUD:
- Link 90 percent of identified individuals to treatment and initiate MAT;
- Retain 90 percent of those individuals in treatment minimally for six months; and
- Provide post-treatment supports to assure abstinence at six months and thereafter.

Great strides can be made if the medical and community sectors take collective responsibility for identifying opioid use and referring individuals to care for an assessment and related treatment, as needed. Combating OUD requires consistent success along sequential stages, from screening and detection of OUD, to linkage to care, to medication initiation, and long-term retention. The current medical-surgical and substance use treatment systems must organize themselves toward continuous tracking of all patients who access care for opioid use disorder until they are steadfastly in recovery. The cascade model requires quality monitoring systems that are applied across all levels of care. Providers will need to align with a shared measurement system that spans all settings to ensure successful application of this model.

Availability of Services: Treatment Continuum

The existing continuum of care for individuals with SUDs offers varying levels and types of care in a range of settings commensurate with the severity and acuity of the condition, although all forms may not be available to all individuals in all health and payment systems. From most to least intensive, the following delineates the SUD treatment spectrum:

 Acute/Intensive Inpatient services include emergency room and inpatient hospitalization. These services provide resuscitation from opioid overdoses, medically managed withdrawal, and multidisciplinary stabilization services.

- Individuals with severe SUDs and/or with additional multiple chronic conditions often enter the treatment system through hospital admissions.
- Residential programs provide treatment in the community, either locally or non-locally, and may serve a broad population of individuals or focus on a smaller subgroup, such as adolescents or mothers with children. Services are 24-hour and provide structure, housing, peer affiliation, and clinical services.
- Intensive outpatient and partial hospitalization programs (also referred to as intermediate levels of care or non-medical 24-hour services/settings) provide less structure and fewer hours than inpatient and residential care and often serve as transitional care settings.
- Outpatient care includes clinical therapeutic counseling services, officebased buprenorphine prescribing for OUD and OTPs that provide counseling and methadone, and increasingly other types of MAT.
- · Long Term Recovery/Chronic Care Management services and supports include peer recovery supports services (RSS) during and after treatment, 12-step programs, and sober housing. While not officially part of the healthcare system, RSS significantly boost recovery rates and can be helpful when used in parallel with treatment.

The American Society of Addiction Medicine ASAM Criteria³⁶ provides a method of multidimensional patient assessment that matches patients to specific treatment/placements according to five broad levels of care, ranging from early intervention to medically managed intensive inpatient settings and opioid treatment programs. Many public systems and private insurers are utilizing the ASAM patient placement criteria as a basis for referral, authorization, discharge, and reimbursement for treatment. Alignment with these standards can position providers for a more streamlined integration with public and private payers, while also creating a

more orderly, predictable, and effective rubric for an integrated treatment continuum.

Availability of Services and Medication Assisted Treatment (MAT)

There are three U.S. Food and Drug Administration-approved medications to treat AUD: acamprosate, disulfiram, and naltrexone. Medications to treat OUD or prevent relapse include methadone, buprenorphine, and naltrexone. Medications for both disorders are underused, but perhaps for different reasons. AUD medications have small-effect size with a wide range of variability across individual patients, making it difficult for clinicians to consistently utilize.37 As a result, AUD medication development is currently focusing on the use of precision medicine to determine the subgroups that may be responsive to specific medications. A number of studies are underway, some of which show encouraging results.38 These medications do not have regulatory limitations and are not further discussed.

Opioid Medications/MAT

Related to treatment for OUD, medications in combination with psychosocial services referred to as medication assisted treatment, or MAT— is the gold standard of OUD treatment. Furthermore, total healthcare costs for individuals who receive opioid MAT are almost 30 percent lower than for individuals who do not receive MAT.³⁹ MAT facilitates treatment retention,

Medication assisted treatment, or MAT— is the gold standard of OUD treatment.

decreases drug use, craving, HIV risk behaviors, crime, and recidivism⁴⁰ and should be offered in all settings and at all levels of care. Like many medications, all three OUD medications differ in formulations, administration routes, suggested treatment settings, and ease of use. There are risks and

benefits to each and susceptibility to misuse (and processes to mitigate misuse). However, all medications have demonstrated efficacy for the treatment of individuals with OUDs, have

stronger outcomes for patients than abstinenceonly treatment models or placebo, and predict longer periods of abstinence and recovery. 41, 42, ^{43, 44} It is recommended by the US government and endorsed by several clinical and quality organizations. 45, 46, 47, 48, 49 The Surgeon General has urged broader adoption of MAT throughout the healthcare system.⁵⁰

Methadone is a full agonist medication, has been used for more than 50 years, and has a long and strong evidence base of efficacy. Methadone may only be provided in outpatient OTPs in which counseling must also be provided.⁵¹ Methadone use is limited by a number of factors. Medicaid does not cover medications in OTPs in twelve states. Medicare does not reimburse for MAT provided in OTPs, although providers can bill for physician services. Only non-profit organizations are permitted to provide interim methadone for patients who have been placed on waiting lists for permanent treatment; however, the majority of OTPs (60 percent) are private for-profit entities.⁵² Furthermore, emergency departments that are not registered as an OTP are restricted to providing medications for only three days, which may be inadequate to allow patients to transition to outpatient treatment providers that have long waiting lists; this is especially worrisome when coupled with the regulatory restriction of interim methadone. A final limitation is that methadone typically requires daily dosing and facilities can be inconveniently located due to zoning restrictions. This can result in hardship for individuals with jobs and/or those who rely on public transportation. Drug Enforcement Administration (DEA) regulations constrain broader implementation of 'mobile methadone' vans that could travel to neighborhoods and serve large concentrations of individuals.

Buprenorphine is a partial agonist and is available in a pill, sublingual film, or subdermal implant; a monthly injection was recently approved by the FDA. It has demonstrated efficacy since its introduction in 2002. Buprenorphine is less likely to cause overdose, unless it is used in combination with certain other medicines or substances. The medication may be insufficient to block craving in some patients and it can cause

euphoria in naive users. Buprenorphine may be diverted for its reinforcing properties; however, studies have shown diversion to be primarily for therapeutic purposes^{53, 54} and there are strategies to mitigate diversion risk. Nonetheless, few jails and prisons offer the medication. Buprenorphine may be distributed through OTPs but is most often prescribed in the convenience of officebased settings and is therefore referred to as Office-Based Opioid Treatment (OBOT). While OBOTs do not have to provide counseling, they must have the ability to make referrals.

The Drug Addiction Treatment Act of 2000 (DATA 2000)⁵⁵ that regulates OBOTs has expanded treatment capacity by adding 45,000 certified prescribers to the treatment continuum. However, the full potential for OBOTs to expand treatment has not been realized. Ninety-six percent of states and the District of Columbia do not have sufficient buprenorphine treatment capacity.⁵⁶ In 2016, just over half of U.S. counties had a buprenorphine provider, and 60 percent of rural counties (where there are few inpatient and day treatment resources) did not have any.57 In 2016, patient caseload caps were raised to 275 for certain physicians. However, it is not clear that this will have a substantial impact on expanding capacity in high impact areas, as it appears that the most significant limiting factor in capacity expansion is that most physicians do not treat up to their allowable caseloads. The prescribing pattern suggests the waivers are being used to treat small numbers of existing patients rather than to expand overall treatment capacity. Nurse practitioners and physician assistants became eligible in 2016 to apply for DATA 2000 waivers and hold new promise for treatment expansion.

Injectable naltrexone is an antagonist that blocks opioid receptors and has a long-acting injectable formulation that allows for the convenience of monthly dosing. An individual must be fully "detoxed" from opioids prior to injection for 7 to 10 days. One recent study demonstrated that injectable naltrexone is as effective as methadone and buprenorphine with one important caveat: 25 percent of patients do not make it through the detoxification period to initiate the injection. Developing new approaches related to withdrawal management could facilitate increased initiation of injectable naltrexone. As a relatively new medication, injectable naltrexone does not have the same robust evidence for long-term efficacy as exists for methadone or buprenorphine. Because injectable naltrexone is not susceptible to abuse or diversion, it is being used more widely in jails and prisons prior to community re-entry. The medication is significantly more expensive than the other forms of MAT, potentially resulting in low patient adherence post-release due to financial constraints. OTPs are permitted to prescribe injectable naltrexone; however, many do not.

Underutilization of MAT and opportunities for improvement

All forms of opioid MAT have the potential to reduce overdoses and death as long as individuals adhere to the medication regimen. Larochelle⁵⁸ found that the use of opioid medications reduced overdose deaths by 59 percent for individuals receiving methadone in the year after an overdose, and by 38 percent for those who received buprenorphine. Despite the strong evidence, MAT is not used as frequently as medically indicated across all levels of care. This is referred to as the 'research-to-practice gap.' For example, from 2005-2013, only 19 percent of individuals with an opioid use disorder (OUD) received OUD-specific treatment.⁵⁹ Between 2012 and 2014, fewer than one-third of individuals received an opioid treatment medication in the year after an overdose. 60 In 2016, only 27 percent of specialty addiction treatment facilities offered buprenorphine and 21 percent offered injectable naltrexone, 61 and only 21 percent of outpatient substance use treatment facilities offered opioid maintenance or injectable naltrexone treatment.⁶² Moreover, when prescribed, dosages and/or duration of MAT treatment (two variables that are associated with treatment retention) may be inadequate and lead to treatment drop-out. Treatment retention is highly associated with long-term recovery. 63, 64 Ineffective dosing may contribute to negative experiences and low belief in the efficacy of MAT, confirming negative stereotypes, and further contributing to low levels of use. The MAT research-to-practice gap stands in contrast to 70 percent of individuals with cooccurring psychiatric disorders that receive a psychiatric medication.65

OUD is a leading cause of morbidity and mortality among young people.66 Research on MAT with buprenorphine for adolescents has been found to be effective, 67, 68 but retention for them, as well as emerging adults, is not as strong as for adults, suggesting the need for improved retention strategies. 69, 70, 71 Despite its efficacy, there is limited use of MAT with adolescents⁷²; this may be due to stigma, concerns about diversion, and that less than one-third of specialty addiction treatment programs offer adolescent care.73 Moreover, methadone and buprenorphine regulations limit use with adolescents. The American Academy of Pediatrics recommends physicians to consider the use of MAT with adolescents.74

Low rates of referrals and treatment for OUD, including MAT, may be influencing the high rates of hospitalizations and opioid overdose deaths. For many reasons, hospitals have not provided MAT for opioid-related admissions. However, patients who receive in-hospital buprenorphine induction were more likely to enter OBOT than those who received detoxification alone (72 percent versus 12 percent),75 and more likely to receive SUD treatment within 30 days of treatment initiation.76 Instead, from 2010 to 2014, only 11 percent of privately insured patients received evidence-based MAT within 30 days following discharge for an opioid-related hospitalization; six percent received medication only; and slightly more than 43 percent received counseling only.77 [Of note, 22 percent of patients discharged from opioid-related hospitalizations did have a prescription filled for an opioid pain medication].⁷⁸ There are a growing number of hospitals across the country that have developed innovative responses to better serve individuals with SUDs including buprenorphine induction, 79 use of peer recovery coaches to engage patients in treatment,80 screening, intervening and providing referral in emergency rooms,81 use of 'community benefit' to leverage change,82 provision of addiction consultation services,83 use of statewide electronic data sharing,84 and other effective models.

Between 2004 and 2014, there was a more than five-fold increase in the incidence of infants born with neonatal abstinence syndrome (NAS) due to maternal use of opioids during pregnancy.85 Methadone has demonstrated efficacy for use during pregnancy with improved maternal and fetal outcomes.86 It is now considered the standard of care. In the Maternal Opioid Treatment: Human Experimental Research (MOTHER) project,87 use of buprenorphine demonstrated lower incidence of NAS, shorter treatment time for the neonates, and other positive outcomes, although methadone showed better maternal adherence.88 Nonetheless, negative stereotypes about the use of MAT with this population limit its use. There are few treatment programs for **pregnant women**: only 15 percent of treatment centers offer targeted services, and services are located in only 19 states.89 Moreover, most programs do not accommodate pregnant mothers who have other children and need to bring them to treatment: under 3 percent of all facilities had residential beds for clients' children, and only six percent offered childcare, 90 despite increased retention rates when facilities have more family-focused policies.91

Parental increases in opioid use, overdose, and death have driven increases in the number of children entering foster care. In 2016, there were 92,107 children in foster care due to drug use

by a parent, constituting 34 percent of the circumstances associated with removal; six percent was related to parental alcohol abuse.92 Foster care increases are driven by other factors as well. One challenge preventing reunification of families is that many parents cannot achieve

In 2016, there were 92,107 children in foster care due to drug use by a parent.

full recovery before federal regulatory limits kick-in: children must either be reunified with parents or put up for adoption within 15 consecutive months or 15 non-consecutive months over a 22-month period.93 In many cases, treatment programs have months-long waiting lists, impeding the chances of parental recovery by 15 months. A second challenge is that OUDs and SUDs often

affect nuclear and extended family members, making temporary kinship support less available. A number of states have expanded addiction treatment, piloted programs to include RSS, and support family drug courts that can facilitate more rapid entry to treatment. However, the low volume of family-friendly treatment programs may limit the positive impact of such forward-leaning policies. The Family First Prevention Services Act passed in February 2018 eliminates family reunification time limits and puts forth additional provisions to establish a path for improved services.

There is also slow and insufficient uptake of MAT in the justice system. In 2013, individuals could receive MAT in only one-half of the nation's drug courts due to stigma, diversion concerns, lack of linkages to community treatment providers, inadequate knowledge of the efficacy of MAT, and cost, among other reasons.94 In 2014, individuals from courts and diversionary programs were the least likely to receive agonist MAT in treatment settings.95 Drug courts receiving federal funding are no longer permitted to deny eligibility to individuals using MAT or require tapering of the medication in order to participate.96

It is estimated that 65 percent of individuals in prisons or jails have an SUD, with a large number of them having an OUD.97,98 Bureau of Justice Statistics from 2004 showed that 53 percent of state and 45 percent of federal prisoners have a drug use disorder.99 However, very few jails and prisons offer MAT, 100 despite scientific evidence supporting the efficacy of MAT in jails and prisons, including treatment retention and reduced recidivism. 101, 102 Lack of treatment leads to the resumption of drug use, putting incarcerated individuals at risk when they are released. Ninety-five percent of individuals incarcerated for crimes related to drug use return to drug use within three years of community release and one-third of incarcerated individuals resume substance use within two months post-release. 103 Due to a lower tolerance to opioids after the period of abstinence during incarceration, there is a greater risk for overdose when the individual returns to opioid use at previous levels. Within the two weeks postincarceration, individuals are at greater risk for death by overdose than the general population by more than 100-fold. 104 In response, incarcerated individuals are more frequently being provided with naloxone and training on its use prior to community re-entry. In addition, some jails and prisons are beginning to offer injectable naltrexone prior to release.

Rhode Island offers an example of an effective medication protocol for incarcerated individuals that reduces overdoses upon release and has a subsequent positive impact on the state's overdose death rate.

In 2011, addiction treatment programs provided MAT (buprenorphine or methadone) to fewer than 5 percent of justice-referred individuals with an OUD, while these programs provided it to almost 41 percent of individuals referred from other sources. 105 Programs can support successful community integration by collaborating with jails and prisons as they develop 're-entry plans' and link incarcerated individuals to treatment. Upon admission, community providers can encourage the use of MAT, assure an adequate supply of naloxone, and provide treatment tailored to individuals who have been incarcerated.

Timely Linkage and Coordination

As previously discussed, almost 90 percent of individuals who need treatment do not receive it. Higher levels of detection of SUDs in primary care and linkages to services could improve these numbers. Primary care physicians report reluctance to provide screening, brief interventions, referrals, and MAT in part because of a lack of capacity to provide more intensive services when needed (for instance during MAT induction or when patient symptoms recur), or due to a lack of viable referral sources.

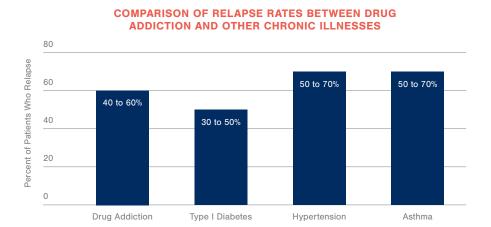
New collaboration and referral models have emerged to address these concerns. 106 The Hub and Spoke Model in Vermont¹⁰⁷ and the Baltimore Collaborative Opioid Prescribing (CoOP) Model¹⁰⁸ establish collaborative relationships between OTPs and primary care providers with bi-directional referrals and communication, consistent with how primary care physicians

interact with specialists for other healthcare conditions. In the CoOP model, the OTP inducts and stabilizes patients and then refers them to OBOTs, with the understanding that patients can return to the OTP if more intense services are required. CoOP was successful in expanding the availability, utilization, and efficacy of OBOTs by allowing OBOT physicians to serve more patients. Moreover, the aggressive outreach, consultation, coordination of care, and bi-directional referrals of such approaches can serve as a successful model for increasing overall primary care screening for SUDs. Such models may also reduce stigma against treating individuals with SUD in primary care settings.

As noted earlier, new referral streams from law enforcement, fire departments, and potentially higher volume of referrals from traditional streams such as hospitals and primary care, are quickly establishing a market demand for immediate treatment access. In response to the growing lethality of drug use, these new referral systems, along with families and policymakers, are driving a new on-demand treatment standard for community-based providers. This drive reflects that if ongoing services, not just assessments, are not obtained within 24-48 hours of request, the brief 'window of opportunity' for people with SUDs may close and result in death. Limitations on daily admissions and restrictions on hours and days for initial contact and admission are now understood to pose a grave threat to individuals with OUDs.

Furthermore, new hotlines and treatment locator technologies are emerging to expedite referrals, including phone apps that collect information about treatment availability, insurance, and type of programming information. As with other industries, technological innovations will likely quicken the pace of change among addiction treatment providers. The Network for the Improvement of Addiction Treatment (NIATx) process **improvement**¹⁰⁹ **model** for treatment programs reduced the time from first patient contact to treatment by 37 percent and from first assessment to first treatment episode by 33 percent. Rates of retention from assessment to second session improved by 18 percent, and to four sessions by 11 percent. With the increasing pressure for a more rapid response by all providers, programs that keep pace will have better sustainability.

Adding volume and speed of referrals will be challenging to the existing system of care that already has difficulty managing a high rate of care transitions and readmissions. Studies have shown that as many as 82 percent of patients had at least one transition between incarceration, treatment, readmission, and recovery over the course of two years, and 62 percent had multiple transitions. 110 Within one



McLellan, A.T., Lewis, D.C., O'Brien, C.P., Kleber, H.D. (2000). Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation. (2000). JAMA, 284(13), 1689-1965

year of treatment discharge, between 40 to 60 percent of individuals with SUDs re-initiate substance use.111 While these rates are similar to and in some cases lower than other chronic conditions, 112 the overall churn suggests that systems of care can expect a high volume of care transitions and should be on guard against losing track of patients across settings.

Patients have historically been blamed for readmissions and treatment "failures." However, cycling through the health system is increasingly considered to represent a failure of the health system at engaging patients and providing the appropriate type, dosage, and duration of treatment. At the same time, it is important to encourage treatment re-entry when appropriate. Under this scenario, readmission rates may also represent success at re-engaging patients with chronic conditions whose symptoms have returned (regardless of whether symptom recurrence is active drug use for someone with an SUD or high blood pressure for someone with hypertension).

The addiction treatment system has been built on an acute model that presupposes a medical 'cure' for diseases once treatment has been administered and the patient is discharged. However, substance use disorders are similar to other chronic conditions for which "cures" do not necessarily exist. 113 Rather, success for a chronic condition is measured over time, not per episode. For individuals with substance use disorders, sustained recovery is typically achieved after three or four episodes of treatment over several years. 114 The conditions are best 'managed' over the long-term with state-of-theart treatment that addresses the 'natural history' of the disorder, is suited to the specific need of the individual and the problem set, monitors adherence to medication and counseling, and provides RSS, including sober housing.

RSS facilitate successful care transitions, engage patients in treatment, support retention, and monitor patients after discharge. Dennis et al., 2007, found that the chances of transitioning from use to recovery went up 1.14 for every nine weeks of treatment received during the year. And

while treatment retention is associated with long term recovery, among patients who started the year in recovery, the major predictor of whether they maintained abstinence was not treatment, but rather their level of self-help group participation the odds of relapse go down with self-help group attendance.

In summary, while coordination and posttreatment monitoring can be challenging, accessing more levels of care may improve chances of recovery, and coordination fosters those linkages. Care transitions need to be appropriate and well-timed. As the cascade of care demonstrates, making timely use of all elements of the system to address different stages of the disease and recovery process are critical. In this model that spans levels and settings of care, providers engage in intentional, sustained, and collaborative referrals, communication, and follow-up monitoring. If transitions are not well-tracked and monitored, patients will fail to make treatment connections and fail to do so in a timely manner, threatening abstinence and potentially life.

Parity and Financing of Treatment

Financing for substance use treatment underpins all access to care. However, almost 38 percent of people with SUDs who felt they needed care but not receive it reported issues related to lack of health insurance coverage, affordability, and inadequate coverage. 115 The majority of treatment is funded by the public system at the state and local levels (29 percent), with Medicaid the highest single payer at 21 percent. 116 After Congress passed the Affordable Care Act, insurance coverage was expanded to 20 million people.117 Some studies indicate that additional expansion of coverage has not led to increased treatment for individuals covered by Medicaid. 118, 119, 120 Thus, for the cohort of individuals with SUD under Medicaid, coverage may be a necessary but not sufficient condition for obtaining treatment.

The opioid epidemic is exerting pressure on **private insurance** to share more proportionately in treatment expenditures. In 2014, private insurance covered 66 percent of the U.S.





Melek, S.P., Perlman, D., Davenport, S. Addiction and mental health vs. physical health: Milliman Research Report. Analyzing disparities in network use and provider reimbursement rates: A quantitative approach to investigating non-quantitative treatment limitations: 42 million lives, three years, state by state analysis. (December 2017).

population¹²¹ but funded only 18 percent of SUD treatment. 122 This is partly, but not fully, accounted

In 2014, private insurance covered 66 percent of the U.S. population¹²¹ however funded only 18 percent of SUD treatment. 122

for by the disproportionate share of individuals with SUD within the Medicaid population. While private insurance spending has improved, in 2012, less than 0.5 percent per member per month was spent on SUD, despite an SUD prevalence rate of 8 percent. 123 This level of coverage mirrors ongoing concerns that have been raised by providers, patients,

family members, and other advocates who have cited inadequate coverage for behavioral health disorders.

The bipartisan Mental Health Parity and Addiction Equity Act (MHPAEA) was intended to shift more costs for behavioral health from the public sector to the private sector and broaden access to treatment. The driving principle of parity is that coverage for behavioral healthcare must be provided comparably to coverage for medical-

surgical conditions. MHPAEA does not specify what specific conditions need to be covered or how much coverage is to be provided, but rather requires that decision-making processes and strategies be similar to strategies employed for the coverage of physical conditions.

Consumers, providers, and family members have reported that health issuers and employers offer insurance products that are not consistent with parity, with high rates of denials, inconsistent application of utilization management between behavioral health and medical-surgical benefits, lack of transparency in decision-making processes, and more burdensome network requirements. 124 A recent study indicates that there has been improvement in behavioral health benefit richness, cost, and utilization.¹²⁵ However, there also has been a greater use of out-ofnetwork providers which is more expensive for consumers and provides lower reimbursement rates for behavioral health providers. 126 Low reimbursement is a disincentive for providers to become part of insurance networks and makes it difficult to attract individuals into the addiction workforce. This has resulted in inadequate

networks of qualified providers to serve the growing need for SUD services, including services related to OUD.

The U.S. Department of Labor (DOL) is responsible for investigations related to employerbased commercial insurance; however, the department lacks sufficient staff and enforcement authority over insurance issuers to impose fines that would drive changes to industry coverage practices. The existing complaint-driven system forces consumers to identify problems and stimulate investigations, a burden that is not easily shouldered by individuals with SUDs or mental health conditions. To realize the vision of parity, DOL requires civil monetary penalty authority.

Some parity issues are structural and embedded in federal regulations that would require a statutory change. The Medicaid Institutions for Medical Disease (IMD) exclusion does not permit reimbursement for short-term, acute behavioral health treatment in facilities with more than 16 beds, except through state 1115 waivers that may be cumbersome. Therefore, low-income Americans do not have access to this level of care which is critical to the treatment continuum for individuals with severe SUD. There are no such exclusions of this type for medical-surgical health conditions.

Public and private payers have undertaken administrative initiatives to reduce the number of individuals on high doses of opioid medications. Reducing opioid prescribing is an important goal and should not be abandoned. However, terminating opioid medications without appropriate tapering and MAT could drive individuals to the illegal drug market, where pills and heroin are laced with fentanyl and fentanyl analogues. Where opioid reduction programs are underway, insurance claims should reflect a concomitant increase in coverage and referrals for SUD assessments and treatment. This will support the nation's collective effort to reduce opioid use and overdose.

An additional concern is the insurance practice of providing reimbursement for out-of-network treatment directly to the member, instead of to the treatment program. Reimbursement checks can be guite significant and such large one-time payments may trigger drug use post-discharge. Consumer requests for payments to be made directly to providers often go unheeded by payers; developing mechanisms to honor such requests will support the long-term recovery of consumers. This practice will additionally support providers who may be unable to collect payments from patients.

Workforce Capacity

Federal workforce projections for the year 2025 are significant: there is an expected **labor shortfall** of up to 250,000 behavioral health workers. 127

There are numerous drivers to the workforce deficit: educational institutions are not producing an adequate volume of new qualified professionals; a lack of addiction training among existing workers across all professional disciplines, such as physicians, psychologists, nurses, physician assistants, social workers, and family counselors; low wages that do not attract workforce entry; and poor use of care extenders, to name several. If Cures Act demonstration pilots permitting buprenorphine prescribing by physician assistants and nurse practitioners is codified, addiction workforce capacity will be expanded in an important way. Gaps could also be addressed through additional SUD education and residencies for physicians, and education and internships for social workers, psychologists, and other types of behavioral health workers. Permitting substance use treatment facilities to be approved sites for the National Health Service Corp could incentivize individuals to enter the addiction treatment field through loan repayment and scholarship benefits.

Lack of training and education also exists for nonprofessional staff, many of whom can provide important, evidence-based care extension in almost all treatment settings, such as peers recovery coaches, health educators, community health workers, and medical assistants. In January 2017, an Executive Order from the president promoted the use of DOL apprenticeships. 128 The apprenticeship program can be used to provide "on-the-job" training for a range of healthcare job classifications, with standard competencies,

	2025 Projections	2025 Projections Scenario One (Baseline)		2025 Projections Scenario Two (Alternative)	
Practitioner	Supply	Demand	Differencea	Demand	Differencea
Psychiatrists	45,210	51,290	-6,080	60,610	-15,400
BH Nurse Practitioners	19,960	8,120	4,840	10,160	2,800
BH Physician Assistants	1,800	1,350	450	1,690	110
Clinical, Counseling, and School Psychologists	188,930	197,150	-8,220	246,420	-57,490
Substance Abuse and Behavioral Disorder Counselors	105,970	98,040	7,930	122,510	-16,540
Mental Health and Substance Abuse Social Workers	109,220	126,160	-16,940	157,760	-48,540
Mental Health Counselors	145,700	138,170	7,530	172,630	-26,930
School Counselors	243,450	257,190	-13,740	321,500	-78,050
Marriage and Family Therapists	29,780	32,220	-2,440	40,250	-10,470

Health Resources and Services Administration/National Center for Health Workforce Analysis; Substance Abuse and Mental Health Services Administration/Office of Policy, Planning, and Innovation. 2015. National Projections of Supply and Demand for Behavioral Health Practitioners: 2013-2025. Rockville, Maryland.

a curriculum, educational training, and on-thejob learning opportunities. The feasibility of the apprenticeship model to train behavioral health/ community health workers in behavioral health in primary care offices has been established. 129

Underlying the issues surrounding the workforce is a fundamental lack of knowledge about the appropriate quantities and mix of medical and addiction professional and nonprofessional workers that would adequately serve the population in need of services. The nature and characteristics of workers will shift, depending on the prevalence and type of SUD. For instance, a high prevalence of OUD requires buprenorphine, OTP and counseling providers, whereas areas with a greater prevalence of methamphetamine use require more counselors trained in cognitive behavioral therapy or contingency-management. More specific knowledge about the ideal workforce would allow policymakers, funders, and others to develop more proactive policies that educate, train, and employ workers more strategically. Practical guidance could offer

constructive assistance and benchmarks to insurance companies and public and private health systems in developing adequate provider networks.

CLOSING

This paper provides a framework for all stakeholders to intervene and help people with SUDs before the condition progresses to its more severe, chronic, and life-threatening stages. Appropriate use of all components and levels of care can collectively arrest escalating substance use and mortality rates if there is a concerted effort to improve early identification; evidencebased assessment and treatment placement; robust linkages and coordination among all levels of care; consistent implementation of science-based treatment practices, including MAT; post-treatment monitoring and readmission management; improvement of insurance coverage and financing; and a rapid expansion of a qualified workforce.

OPPORTUNITIES FOR ACTION

I. Identification and Coordination of Care

- A. Boost the rates of SUD screening by primary care by pursuing specialty/primary care collaboration models; and, within mental health and substance use treatment settings screen for all misused substances, depression, and suicide risk.
- B. Organize health systems according to the opioid treatment cascade to provide ondemand treatment, monitor care transitions across levels of care, and rapidly identify and re-engage patients who experience symptom recurrence.

II. Availability of Services: Treatment Continuum

- A. Implement evidence-based practices through ASAM Criteria assessments and patient matching to levels of care; align programs to ASAM criteria to streamline financing for services.
- B. Promote quality metrics that align with ASAM criteria, the opioid cascade of care, and with coverage and benefit options.
- C. Differentially treat individuals with polysubstance use to address all substances with efficacious treatment.

III. Availability of Services and Medication **Assisted Treatment (MAT)**

- A. Increase access to and use of all FDAapproved medications for OUD and AUD across all populations and in appropriate levels and settings of care.
- B. Modify reimbursement constraints and remove or modify policy barriers and related regulations to improve access to the appropriate level and type of treatment.
- C. Provide naloxone and naloxone training to all individuals diagnosed with an OUD or other SUDs in which drugs are potentially laced with fentanyl and fentanyl analogues before discharge from treatment.

- D. Expand outpatient and residential programs for adolescents, pregnant women, women with children, parents at risk for foster care placements of children, and individuals in diversion programs and re-entering the community from incarceration.
- E. Implement emerging hospital models to provide MAT and RSS to patients with OUD or AUD.
- F. Provide financial support and policy recommendations within the criminal justice system to increase MAT and other evidenced based treatment.

IV. Timely Linkage and Coordination

- A. Support improved primary care SUD screening rates through use of provider and health plan level performance measures.
- B. Expand OBOTs through the replication of specialty-primary care collaboration models.
- C. Expand the number of OTPs.
- D. Use NIATx or other process improvement protocols to adjust treatment programming to implement on-demand (24/7) treatment admissions.
- E. Provide RSS at all levels of care to promote treatment retention, long-term recovery, and early relapse identification and readmission to treatment.

V. Parity and Financing

- A. Improve parity enforcement through support for DOL civil monetary penalty authority and authority to investigate issuers.
- B. Advocate for the repeal of the Medicaid IMD exclusion.
- C. Collaborate with Parity Implementation Coalition to collect and document information about violations, better define parity compliance, and implement enforcement activities.

- D. Collaborate with federal/private insurers on higher reimbursement rates/coverage for all addiction providers; eliminate preauthorization, fail first policies for MAT; cover all FDA-approved medications in any treatment setting by any qualified provider.
- E. Increase awareness and use of Psychiatric Collaborative Care Services codes for the treatment of SUDs, 130 advocate for financing on-demand treatment and full episodes of evidence-based care.

VI.Workforce

- A. Support the expansion of education, training, residencies, and internships for all levels of addiction providers; permit substance use treatment facilities as approved sites for the National Health Service Corp.
- B. Collaborate with the hospitals, labor unions, chambers of commerce, local workforce investment bureaus, and state labor departments to train and hire peers, community health workers, medical assistants, health educators, and others through the DOL apprenticeship program.
- C. Collaborate with insurance companies to cover peers, community health workers, and others; collaborate with states to assure certification and credentialing of those workers.
- D. Permit medical residents (who practice under the supervision of a physician) to prescribe buprenorphine instead of requiring individual DEA registration.

- ¹ Substance Abuse and Mental Health Services Administration (SAMHSA). (2017). Key substance use and mental health indicators in the United States: Results from the 2016 National Survey on Drug Use and Health (NSDUH). (HHS Publication No. SMA 17-5044, NSDUH Series H-52).
- ² Hedegaard H, Warner M, Miniño AM. Drug overdose deaths in the United States, 1999-2016. NCHS Data Brief, no 294. Hyattsville, MD: National Center for Health Statistics. 2017.
- ³ Jones, C.M., Einstein, E., Compton, W.M. (2018) Changes in synthetic opioid involvement in drug overdose deaths in the United States, 2010-2016. Research letter. JAMA 319(17), 1819-1821.
- 4 https://newsletter.samhsa.gov/2017/10/12/samhsa-newdata-mental-health-substance-use-including-opioids/
- ⁵ Owens P.L., Barrett M.L., Weiss A.J., et al. AHRQ Healthcare Cost and Utilization Project (HCUP) Statistical Brief #177. Hospital Inpatient Utilization Related to Opioid Overuse Among Adults, 1993-2012 (2014).
- ⁶ Weiss A.J., Elixhauser A., Barrett M.L., Steiner C.A., Bailey M.K., O'Malley L. Opioid-Related Inpatient Stays and Emergency Department Visits by State, 2009-2014. (2016). Agency for Healthcare Research and Quality, Rockville, MD.
- ⁷ https://www.cdc.gov/vitalsigns/opioid-overdoses/
- 8 Wu. (2016).
- ⁹ Yarborough, B.J.J., Stumbo, S.P., Janoff, S.L., Yarborough, M.T., McCarty, D., Chilcoat, H.D., Coplan, P.M., Green, C.A. (2016). Understanding opioid overdose characteristics involving prescription and illicit opioids: a mixed methods analysis. Drug and Alcohol Dependence. 167, 49-56.
- ¹⁰ Jones, C.M., Baldwin, G.T., Compton, W.M. (2017). Recent increases in cocaine-relation overdose deaths and the role of opioids. Am J Public Health. 107(3), 430-432.
- ¹¹ U.S. Department of Health and Human Services. Benzodiazepines and Opioids. Rev. March 2018. https://www. drugabuse.gov/drugs-abuse/opioids/benzodiazepines-opioids.
- ¹² Jones, C., Paulozzi, L.J., Mack, K.A. (2014). Alcohol Involvement in Opioid Pain Reliever and Benzodiazepine Drug Abuse-Related Emergency Department Visits and Drug-Related Deaths - United States, 2010. Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report. 63(40), 881-885.
- ¹³ Center for Disease Control and prevention. Fact sheets-Alcohol use and your health. https://www.cdc.gov/alcohol/ fact-sheets/alcohol-use.htm and https://nccd.cdc.gov/DPH_ ARDI/default/default.aspx.
- ¹⁴ Department of Justice/ Drug Enforcement Administration. (2017). 2017 National Drug Threat Assessment.
- ¹⁵ Ashrafioun L., Bishop T.M., Conner, K.R., Pigeon, W.R. (2017). Frequency of prescription opioid misuse and suicidal ideation, planning, and attempts. J Psychiatr Res. 92, 1-7.
- ¹⁶ Wilcox H.C., Conner, K.R., Caine, E.D. (2004). Association of alcohol and drug use disorders and completed suicide: an empirical review of cohort studies. Drug Alcohol Depend. 76 Suppl:S, 11-9.

- ¹⁷ Bohnert K.M., Ilgen M.A., Louzon, S., McCarthy, J.F., Katz, I.R. 2017. Substance use disorders and the risk of suicide mortality among men and women in the US Veterans Health Administration. Addiction, 112(7), 1193-1201.
- ¹⁸ NSDUH. (2016). Table 5.53B.
- ¹⁹ Barry, C.L., McGinty, E.E., Pescosolido, B.A., Goldman, H.H. (2014). Stigma, discrimination, treatment, effectiveness, and policy: public views about drug addiction and mental illness. Psychiatric Services. 65(10), 1269-1272.
- ²⁰ Kelly, J.F., Saitz, R.D., Wakeman, S. (2016). Language, substance use disorders, and policy: The need to reach consensus on an "addiction-ary." Alcoholism Treatment Quarterly, 34(1), 116-123.
- ²¹ Kelly, et al. (2016).
- ²² van Boekel, L.C., Brouwers, E.P.M., van Weeghel, J., Garretsen, H.F.L. (2013). Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: Systematic review. Drug and Alcohol Dependence, 131, 23-35.
- ²³ Brener, L., von Hippel, W., von Hippel, C. Resnick, L. Treloar, C. (2010). Perceptions of discriminatory treatment by staff as predictors of drug treatment completion: utility of a mixed methods approach. Drug Alcohol Review, (29), 491-497.
- ²⁴ Wakeman, S.E. (2013). Language and addiction: choosing words wisely. Letter, American Journal of Public Health. 103(4), e1-e2.
- ²⁵ NSDUH. (2016).
- ²⁶ NSDUH. (2016).
- ²⁷ http://paariusa.org/
- ²⁸ https://www.manchesternh.gov/Departments/Fire/Safe-Station
- ²⁹ Cutter C. The opioid crisis is creating a fresh hell for America's employers. (July 26, 2017). https://www.linkedin. com/pulse/opioid-crisis-creating-fresh-hell-americasemployers-chip-cutter/
- ³ http://www.questdiagnostics.com/home/physicians/healthtrends/drug-testing
- ³¹ Smialek J. Yellen says opioid use is tied to declining labor participation. (July 13,17). BloombergPolitics. https://www. bloomberg.com/news/articles/2017-07-13/yellen-says-opioiduse-is-tied-to-declining-labor-participation
- ³² DePillia, L. This company needs workers so bad they are putting them through drug rehab. CNNMoney (New York). May 22, 2018. Retrieved June 23, 2018. http://money.cnn. com/2018/05/22/news/economy/employers-opioid-rehabbelden/index.html
- 33 Williams, R., Nunes, E., Olfson, M. (March 13, 2017). To battle the opioid overdose epidemic, deploy the cascade of care model. Health Affairs Blog.
- 34 Socias, M.E., Volkow, N., Wood, E. (July 13, 2016). Adopting the 'cascade of care' framework: an opportunity to close the implementation gap in addiction care? Editorial. Addiction, Vol.111, 2079-2081.

- 35 Williams et al. (2017).
- 36 https://www.asam.org/resources/the-asam-criteria
- 37 Litten R.Z., Falk, D.E., Ryan, M.L., Fertig, J., Leggio, L. Advances in pharmacotherapy development: human clinical studies. Handbook of Experimental Pharmacology. (Jan 3, 2018).
- 38 Litten et al. (2018).
- ³⁹ Baser, O., Chalk, M., Fiellin, D.A., Gastfriend, D.R. Cost and Utilization outcomes of opioid-dependence treatments. (June 2011) The American Journal of Managed Care 17(Suppl 8:S), 235-48.
- ⁴⁰ Facing addiction. (2016).
- ⁴¹ Power et al. (2005).
- ⁴² ASAM. (2015).
- ⁴³ Krupitsky, E., Nunes, E., ling, W., Illeperuma, A., Gastfriend, D.R., Silverman, B.L. (2011). Injectable extended-release naltrexone for opioid dependence: a double-bind, placebocontrolled, multicenter randomized trial. Lancet, 377, 1506-13.
- ⁴⁴ ONDCP. (2012).
- ⁴⁵ Power, E., Nishimi, R.Y., Kizer, K. Eds. (2005). National quality forum (NQF) evidence-based treatment practices for substance use disorders. Workshop proceedings.
- ⁴⁶ American Society of Addiction Medicine. The ASAM national practice guideline for the use of medications in the treatment of addiction involving opioid use disorder. (May 27, 2015).
- ⁴⁷ National Institute on Drug Abuse. (2012). Principles of drug addiction treatment: a research-based guide.
- ⁴⁸ Centers for Medicare and Medicaid Services. (July 14, 2014). Medication-assisted treatment for substance use disorders. CMS Informational Bulletin.
- ⁴⁹ Office of National Drug Control Policy. (Sep 2012). Medication-assisted treatment for opioid addiction.
- ⁵⁰ Facing addiction. (2016).
- 51 https://www.gpo.gov/fdsys/pkg/CFR-2002-title42-vol1/pdf/ CFR-2002-title42-vol1-part8-subpartB.pdf
- 52 Substance Abuse and Mental Health Services Administration. Rockville, MD. (2011). National Survey of Substance Abuse Treatment Services (NSSATS).
- 53 Facing addition. (2016).
- ⁵⁴ Schuman-Oliver, Z., Albanese, M., Nelson, S., Roland, L., Puopolo, F., Klinker, L., Shaffer, H.J. Self-treatment: illicit buprenorphine use by opioid-dependent treatment seekers. (July 2010). Journal of Substance Abuse Treatment. 39(1),
- 55 https://www.deadiversion.usdoj.gov/pubs/docs/dwp buprenorphine.htm
- ⁵⁶ Jones, C.M., Campopiano, M., Baldwin G., McCance-Katz, E. (August 2015). National and State Treatment Need and Capacity for Opioid Agonist Medication-Assisted Treatment. Am Public Health, 105(8).

- ⁵⁷ Centers for Disease Control and Prevention. Rural Health Policy Brief. Preventing opioid overdoses in rural America. https://www.cdc.gov/ruralhealth/drug-overdose/pdf/Policy-Brief_Opioiod-Overdoses-H.pdf
- ⁵⁸ Larochelle, M.R., Bernson, D., Land, T., Stopka, T.J., Wang, N., Xuan, Z., Bagley, S.M., Liebschutz, J.M., Walley, A.Y. (June 2018). Medication for opioid use disorder after nonfatal opioid overdose and association with mortality. Annals of Internal Medicine.doi:10.7326/M17-3107.
- ⁵⁹ Wu L., Zhu H., Swartz M.S. (2016). Treatment utilization among persons with opioid use disorder in the United States. Drug and Alcohol Dependence, 169, 117-127.
- 60 Larochelle et al. (2018).
- 61 NSSATS, (2016),
- 62 Substance Abuse and Mental Health Services Administration, National Survey of Substance Abuse Treatment Services (NSSATS): 2016. Data on Substance Abuse Treatment Facilities. BHSIS Series S-93, HHS Publication No. (SMA) 17-5039. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2017.
- 63 Power et al. (2005).
- ⁶⁴ Facing addiction. (2016).
- ⁶⁵ Knudsen, H.K., Abraham, A.J., Roman, P.M. (2011). Adoption and implementation of medications in addiction treatment programs. J Addict Med, 5(1), 21-27.
- ⁶⁶ American Academy of Pediatrics Policy Statement. (August 2016). Pediatrics.
- ⁶⁷ Subramaniam,G., Levy, S. (2013). Rev. Sullivan, M.A. 12/20/13. Treatment of opioid-dependent adolescents and young adults using sublingual buprenorphine. Providers' Clinical Support System for Medication Assisted Treatment. Substance Abuse and Mental Health Services Administration.
- 68 Marsch, L.A., Bickel, W.K., Badger, G.J., et al. (2005). Comparison of pharmacological treatments for opioiddependent adolescents: A randomized controlled trial. Arch Gen Psychiatry, 62(10), 1157-1164.
- ⁶⁹ Schuman-Olivier, Z., Weiss, R.D., Hoeppner, B.B., Borodovsky, J., Albanese, M.J. (2014) Emerging adult age status predicts poor buprenorphine treatment retention. (2014). J Substance Abuse Treatment, 47(3).
- ⁷⁰ Dayal, P., Balhara, YPS. A naturalistic study of predictors of retention in treatment among emerging adults entering first buprenorphine maintenance treatment for opioid use disorders. Journal of Substance Abuse Treatment (80).
- ⁷¹ Borodovsky, JT., Levy, S., Fishman, M., Marsch, L. (February 9, 2018). Buprenorphine treatment for adolescents and Young adults with opioid use disorders: A narrative review. Journal of Addiction Medicine.
- 72 Hadland, S.E., Wharam, F., Schuster, M.A., Zhang, F., Samet, J., Larochelle, M. (June 19, 2017). Trends in receipt of buprenorphine and naltrexone for opioid use disorder among adolescents and young adults, 2001-2014. JAMA Pediatrics, published online.

- ⁷³ Pediatrics Policy Statement. (August 2016).
- ⁷⁴ Pediatrics Policy Statement. (August 2016).
- ⁷⁵ Liebschutz, J.M. et al. (2014). Buprenorphine treatment for hospitalized, opioid-dependent patients: A randomized clinical trial. JAMA Intern Med., 174(8). 1369-76.
- ⁷⁶ D'Onofrio, G., O'Connor, P.G., Pantalon, M.V., Chawarski, M.C., Busch, S.H., Owens, P.H., Bernstein, S.L., Fiellin, D.A. (2015). Emergency department-initiated buprenorphine/ naloxone treatment for opioid dependence: a randomized clinical trial. J of the Am Medical Assn, 313(16), 1636-1644.
- ⁷⁷ Ali, M. M., & Mutter, R. (2016). The CBHSQ Report: patients who are privately insured receive limited follow-up services after opioid-related hospitalizations. Substance Abuse and Mental Health Services Administration, Rockville, MD.
- ⁷⁸ Naeger S., Ali, M.M., Mutter R., Mark, T.L., Hughey L. (June 1, 2016). Prescriptions filled following an opioidrelated hospitalization. Psychiatric Services in Advance. ps.psychiatryonline.org.
- ⁷⁹ D'Onofrio. (2015).
- 80 Jack, H., Oller, D., Kelly, J., Madigson, J., Wakeman, S. (October 9, 2017). Addressing substance use disorder in general medical settings: The role, integration, and impact of recovery coaches. Substance Abuse, E-pub.1-8.
- ⁸¹ D'Onofrio, G., Degutis, L.C. (2010). Integrating Project ASSERT: A screening, intervention, and referral to treatment program for unhealthy alcohol and drug use into an urban emergency department. Acad Emerg Med. 17, 903-911.
- 82 http://www.massgeneral.org/cchi/
- 83 Trowbridge, P., Weinstein, ZM., Kerensky, T., Roy, P., Regan, D., Samet, J., Walley, AY. Addiction consultation services-Linking hospitalized patient to outpatient addiction treatment. Journal of Substance Abuse Treatment, 79, 1-5.
- 84 Husainy, H. Taking a grassroots approach to fighting the opioid epidemic. (Jan. 19, 2018). STAT News.
- 85 Winkelman, T.N.A., Villapiano, N., Kozhimannil, K.B., Davis, M.M., Patrick, S.W. Incidence and costs of neonatal abstinence syndrome among infants with Medicaid: 2004-2014. (April 2018). Pediatrics 141(4).
- 86 Fullerton, C.A., Kim, M., Thomas, C.P., Lyman, D.R., Montejano, L.B., Dougherty, R.H., Daniels, A.S., Ghose, S.S., Delphin-Rittmon, M.E. Medication-assisted treatment with methadone: assessing the evidence. (Feb. 1, 2014). Psychiatric Services 65(2), 146-57.
- 87 Jones, H.E., Martin, P.R., heil, S.H., Stine, S.M., Kaltenbach, K., Selby, P., Coyle, M.G., O'Grady, K.E., Arria, A.M., Fischer, G. (Oct 2008). Treatment of opioid dependent pregnant women: clinical and research issues. J Substance Abuse Treatment (35)3, 245-259.
- 88 Jones, H.E., Kaltenbach, K., Heil, S.H., Stine, S.M., et al. (Dec. 9, 2010). Neonatal abstinence syndrome after methadone or buprenorphine exposure. N Engl J Med, 363(24), 2320-2331. doi:10.1056/NEJMoa1005359.
- 89 Patrick, S. Schiff, D. A public health response to opioid use in pregnancy. (March 2017). Pediatrics. Vol 139(3).

- 90 NSSATS. (2016).
- ⁹¹ Patrick. (2017).
- ⁹² Administration for Children and Families, U.S. Department of Health and Human Services. (Oct 2017). Preliminary FY 2016 estimates as of October 20, 2017. The AFCARS Report 24. The AFCARS database is not a mutually exclusive count of circumstances associated with the removal of children.
- 93 Adoption and Safe Families Act of 1997 and its impact on parents with disabilities. https://web.archive. org/web/20150716014729/http://www.ncd.gov/ publications/2012/Sep272012/Ch5#end317. Accessed 5-1-
- 94 Matusow, H. et al., Medication assisted treatment in US drug courts: Results from a nationwide survey of availability, barriers and attitudes. (2012). J. Substance Abuse Treatment, 4.
- 95 Krawczyk, N., Picher, C, Feder, K., Saloner, B. (December 2017). Only one in twenty justice-referred adults in specialty treatment for opioid use receive methadone or buprenorphine. Health Affairs Vol 36(12).
- ⁹⁶ SAMHSA. (March 2015). Grants to expand substance abuse treatment capacity in adult and family drug courts. https:// www.samhsa.gov/grants/grant-announcements/ti-15-002.
- 97 Nat'l Center for Addiction and Substance Abuse at Columbia University. (Feb 2010). Behind bars II: Substance abuse and America's prison population.
- 98 Legal Action Center. (December 2011). Legality of denying access to medication assisted treatment in the criminal justice
- ⁹⁹ Mumola, C., Karberg, J.C. Drug use and dependence, state and federal prisoners. (2004. Rev. 2007). Bureau of Justice Statistics, U.S. Department of Justice.
- ¹⁰⁰ Legal Action Center. (December 2011). Jails and prisons that do not provide MAT may also force individuals to stop MAT 'cold turkey' upon entry. Blanket denials of MAT have been raised as a violation of the American with Disabilities Act, the Rehabilitation Act of 1973, and potentially the Eighth Amendment prohibition on cruel and unusual punishment, and the Fourteenth Amendment Due Process Clause, related to inaccessibility to detoxification without medical supervision or delays in palliative medications.
- ¹⁰¹ Legal Action Center. (2011).
- 102 Matusow. (2012).
- 103 Matusow. (2012).
- 104 Krawczyk. (2017).
- ¹⁰⁵ Krawczyk. (2017).
- ¹⁰⁶ Bridge Clinics <u>http://www.kyforward.com/new-bridge-</u> clinics-uk-uofl-nky-link-emergency-care-opioid-addiction-
- ¹⁰⁷ Hub and Spoke http://blueprintforhealth.vermont.gov/ about-blueprint/hub-and-spoke.
- ¹⁰⁸ Stoller, K.B., Stephens, M.A.C., Schorr, A. (2016).

- Integrated service delivery models for opioid treatment programs in an era of increasing opioid addiction, health reform, and parity. American Association for the Treatment of Opioid Dependence. http://www.aatod.org/wp-content/ uploads/2016/07/2nd-Whitepaper-.pdf.
- 109 NIATx. https://niatx.net/Home/Home. aspx?CategorySelected=HOME.
- ¹¹⁰ Dennis, M., Scott, C.K. Managing Addiction as a Chronic Condition. (2007). Addiction Science & Clinical Practice.4(1),
- ¹¹¹ McLellan, A.T., Lewis, D.C., O'Brien, C.P., Kleber, H.D. (2000). Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation. (2000). JAMA, 284(13), 1689-1965.
- ¹¹² McLellan. (2000).
- ¹¹³ McLellan. (2000).
- ¹¹⁴ Dennis. (2007).
- ¹¹⁵ NSDUH. (2016). Table 5.53B.
- ¹¹⁶ Substance Abuse and Mental Health Services Administration (SAMHSA). Behavioral Health Spending and Use Accounts, 1986-2014. HHS Publication No. SMA-16-4975. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2016.
- ¹¹⁷ Uberio, N., Finegold, K., Gee, E. (March 3, 2016). ASPE Issue Brief. Health insurance coverage and the Affordable Care Act, 2010-2016. https://aspe.hhs.gov/system/files/ pdf/187551/ACA2010-2016.pdf
- ¹¹⁸ Saloner, B., Bandara, S., Bachhuber, M., et al. (2017). Insurance coverage and treatment use under the Affordable Care Act among adults with mental and substance use disorders. Psychiatric Services, 68(6), 542-458.
- ¹¹⁹ Saloner, B. An update on insurance coverage and treatment use under the Affordable Care Act among adults with mental and substance use disorders. (2017). Psychiatric Services, 68(3), 310-311.
- 120 Feder, K.A., Mojtabaia, R., Krawczyka, N., Youngb, A.S., Kealhoferc, M., Tormohlena, K.N., Crumc, R.M. Trends in insurance coverage and treatment among persons with opioid use disorders following the Affordable Care Act. (2017). Drug and Alcohol Dependence 179, 271-274.
- 121 Smith, J.C., Medalia C. Current Population Reports, P60-253, Health Insurance Coverage in the United States: 2014, U.S. Government Printing Office, Washington, DC, 2015.
- ¹²² SAMHSA. (2016). Behavioral health spending and use accounts.
- 123 Thomas, CP., Hodgkin, D., Levit, K., Mark, T. (2016). Drug and Alcohol Dependence, 160, 143-150.
- ¹²⁴ U.S. Department of Health and Human Services (2017). 21st Century Cures Act parity listening session comments. https://www.hhs.gov/programs/topic-sites/mental-healthparity/achieving-parity/cures-act-parity-listening-session/ comments/index.html

- ¹²⁵ Melek, S., Perlman, D., Davenport, S., Matthews, K., Mager, M. Milliman White Paper. Impact of Mental Health Parity and Addiction Equity Act. (November 2017).
- ¹²⁶ Melek, S.P., Perlman, D., Davenport, S. Addiction and mental health vs. physical health: Milliman Research Report. Analyzing disparities in network use and provider reimbursement rates: A quantitative approach to investigating non-quantitative treatment limitations: 42 million lives, three years, state by state analysis. (December 2017).
- 127 Health Resources and Services Administration/National Center for Health Workforce Analysis; Substance Abuse and Mental Health Services Administration/Office of Policy, Planning, and Innovation. 2015. National Projections of Supply and Demand for Behavioral Health Practitioners: 2013-2025. Rockville, Maryland. See report for the methodology that resulted in such a wide-ranging estimate.
- 128 https://www.whitehouse.gov/presidential-actions/3245/
- ¹²⁹ Wennerstrom, A., Hargrove, L., Minor, S., Kirkland, A., Shelton, S. Integrating community health workers into primary care to support behavioral health service delivery: a pilot study. J Ambulatory Care Management 38(3), 263-272.
- ¹³⁰ Unützer, J., Harbin, H., Schoenbaum, M., Druss, B. (May 2013). The collaborative care model: an approach for integrating physical and mental healthcare in medicaid health homes. Centers for Medicaid and Medicare Services. https:// www.medicaid.gov/state-resource-center/medicaid-statetechnical-assistance/health-homes-technical-assistance/ downloads/hh-irc-collaborative-5-13.pdf