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INDIANA UNIVERSITY
RICHARD M. FAIRBANKS
SCHOOL OF PUBLIC HEALTH

research brief

March 2019

19-H03

Medication-Assisted Treatment in Indiana

Summary

- Opioid misuse and addiction continues to affect many Americans.
- Medication-assisted treatment (MAT) using methadone, buprenorphine, or extended-release naltrexone in combination with behavioral therapy is the most effective intervention for opioid use disorders (OUDs).
- Despite its effectiveness, methadone to treat OUDs is not widely available. Buprenorphine is more accessible, as it can be prescribed by medical doctors, nurse practitioners, and physician assistants who have received specialized training and obtained a waiver from the DEA. Naltrexone is a non-narcotic and can be prescribed by any healthcare professional who has prescription privileges.
- Approximately 664 healthcare providers in Indiana are authorized to prescribe buprenorphine. Despite the availability of prescribers, the negative consequences related to opioid use disorders continue to climb in Indiana.
- Buprenorphine may not be having the impact it could, both nationally and locally, as a large percentage of healthcare workers who are authorized to prescribe buprenorphine either do not prescribe it or prescribe it to far fewer patients than they could.
- The reasons for not prescribing buprenorphine are numerous and include a lack of time, lack of adequate reimbursement, burdensome paperwork requirements, a lack of knowledge of substance use disorders, and a general reluctance to work with persons who have opioid use disorders.
- To enhance the use of buprenorphine and other forms of MAT, policy makers could consider encouraging medical schools to enhance their curriculum to include more training on substance use disorders; encourage the Substance Abuse and Mental Health Services Administration to eliminate or at least reduce the paperwork requirements and fees associated with buprenorphine prescribing; ensure that insurance coverage is available for all forms of MAT; and work to decrease the stigma surrounding persons with opioid use disorders and the medications that are used to treat them.



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Opioid misuse and addiction continues to be a significant public health problem, contributing to an ever increasing number of overdose deaths and costing the nation over \$504 billion annually [1]. The current issue brief will describe the benefits of medication-assisted treatment (MAT) on opioid misuse and related consequences.

Prevalence of Opioid Use Disorders

Opioid use disorder (OUD) is best conceptualized as a chronic, relapsing disorder of the brain characterized by increasing levels of problematic opioid use and negative physical, social, and other consequences. Sustained use of opioids often results in dependence, a condition where the body essentially needs opioids to function and without them, a person will experience unpleasant withdrawal symptoms. In some people, continued long-term use can lead to addiction, a pattern of severe and compulsive drug seeking where an individual spends the majority of his or her time using the drug or trying to acquire it [2, 3].

Many people in the United States initially developed an OUD through the use of prescription analgesics either from long-term use for treating chronic pain or through deliberate misuse. As the availability of these drugs has declined, some individuals turned to heroin, which, in recent years, has become more accessible, potent, and cheaper. Due to its greater availability, the first experience with opioids for many individuals is now heroin or even stronger, illicitly manufactured synthetic opioids, such as Fentanyl [4]. The National Survey on Drug Use and Health (NSDUH) estimated that in 2017, just over two million U.S. residents 12 years of age or older (0.8% of population) had an opioid use disorder with 1.7 million suffering from prescription pain reliever use disorder and 0.7 million from heroin use disorder [5]. OUDs are associated with many serious adverse outcomes including fatal and nonfatal overdoses, transmission of HIV and hepatitis, criminal activity, lost productivity, and premature death. During 2017, a total of 62,604 Americans died from an opioid-related drug

overdose; more than in any other year since the epidemic started in the early part of the century [6].

There are currently no prevalence estimates for OUD in Indiana. However, data from the 2017 NSDUH suggest that approximately 4.9% of Hoosiers 12 years of age or older had misused prescription opioids and 0.4% had used heroin at least once in the past year; rates that are similar to those seen in the rest of the country [5]. Assuming that Indiana's OUD rate is close to the national rate (0.8%), we estimate that nearly 44,000 Hoosiers 12 years of age or older are suffering from an opioid use disorder; although this figure is likely an underestimate as the NSDUH does not include misuse of synthetic opioids in its calculations [5]. Most people cannot recover from OUDs without the help of treatment. While treatment for opioid use disorders can take the form of psychotherapy or 12-step support groups such as Narcotics Anonymous, these approaches by themselves rarely result in successful outcomes [7, 8]. The most efficacious, evidence-based, and recommended form of treatment for OUD is medication assisted treatment (MAT) which combines specific FDA-approved medications and psychosocial interventions to help individuals enter and maintain recovery [2, 3, 9-12].

Medication-Assisted Treatment

MAT combines medication with psychosocial interventions so that persons with OUDs can return to living more stable lives. In the United States, there are currently three pharmaceuticals approved for treating OUD: methadone, buprenorphine, and naltrexone.

Methadone

Methadone is a synthetically produced opioid which has been used to treat OUD since the late 1960s. Methadone is classified by the U.S. Drug Enforcement Agency as a Schedule II narcotic due to its high potential for misuse. Pharmacologically, methadone is a full opioid agonist and functions by binding to specific opioid receptors in the brain.



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Unlike many other opioids, methadone enters the blood stream slowly and produces little to no euphoric effect, especially at the doses used for treatment. When given according to recommended guidelines, methadone can reduce drug cravings, prevent withdrawal symptoms, and block the effect of other opioids that a person may ingest. Because individuals on methadone experience a reduction in drug seeking behavior, they are typically able to become more fully functioning members of their families and society in general. Most of methadone's side effects are relatively innocuous; however, one significant concern is that when taken at high doses, methadone can lead to respiratory depression which in extreme cases can result in death [2, 12-15].

Extensive research has shown that when properly administered, persons taking methadone stay in treatment longer, stop or greatly decrease their use of illicit opioids, engage in less drug-related crime, reduce their level of HIV-risk-related behaviors such as drug injection or prostitution, and have a significantly lowered risk of death, especially from overdose [12-14, 16-19].

Despite methadone's benefits, a number of factors have limited its widespread use. Because of its Schedule II classification, methadone treatment is highly regulated and can only be provided through federally-recognized opioid treatment programs (OTPs). The number of OTPs across the nation is relatively small and most operate in urban settings, making access challenging for persons in rural or remote areas. Treatment at OTPs is typically reserved for individuals considered to have a serious level of OUD [12, 20]. Caseloads in most OTPs are limited and waiting lists of up to two years are not uncommon, a factor which places persons on these waiting lists at increased risk for death [21]. Other factors that limit access to methadone

treatment are requirements that persons report to the OTP daily to receive their medication, agree to random urine screens, and participate in regular psychotherapy or risk termination from treatment [12].

Buprenorphine

In order to expand access to MAT, the federal government passed the Drug Addiction Treatment Act (DATA) in 2000. DATA gives physicians and other approved providers the ability to prescribe Schedule III medications to treat substance misuse from community settings, such as private offices, hospitals, or community health centers [22]. The first, and so far only drug, to receive DATA approval is buprenorphine. Buprenorphine is considered a partial opioid agonist. As such, it has properties that are less intense than those of a full agonist such as methadone. Like methadone, buprenorphine works by binding to certain opioid

receptors in the brain, which reduces drug cravings and prevents withdrawal symptoms. Buprenorphine exits the blood stream slowly, allowing for daily or sometimes less frequent dosing. Buprenorphine has

other characteristics that make it an attractive alternative to methadone. Unlike methadone, whose effect increases in relation to the dose, buprenorphine's effect plateaus at approximately 16 milligrams. This property of buprenorphine reduces the likelihood of misuse and significantly lowers the risk of respiratory depression. Because of the way buprenorphine binds to opioid receptors, it is able to block the effects of other opioids that a person may ingest and, in some cases, can actually initiate withdrawal in persons who have recently used opioids. Buprenorphine does pose some abuse potential if pills are crushed and injected. To prevent such misuse, the most common form of the product used in the U.S. combines buprenorphine

Approximately 4.9% of Hoosiers 12 years of age or older had misused prescription opioids and 0.4% had used heroin at least once in the past year; rates that are similar to those seen in the rest of the country



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with naloxone. When taken orally, naloxone has no impact on the action of buprenorphine. However, if someone were to crush and then inject the medication, the naloxone would lead to immediate opioid withdrawal [23-26].

Physicians have had the ability to prescribe buprenorphine for OUD since 2002. Revisions to the Drug Addiction Treatment Act in 2016 extended these prescribing privileges to physician assistants (PAs) and advanced practice nurses (APNs). In order to prescribe buprenorphine as part of MAT, providers need to apply for a waiver; this includes completing a required training (8 hours of training for physicians and 24 hours for PAs and APNs). Also, prescribers must comply with DEA-approved guidelines for record-keeping and agree to DEA audits. All providers are allowed to treat up to 30 patients for the first year and may then apply to increase their patient limit to 100. Physicians may subsequently increase their maximum patient caseload to 275 after one year of holding a 100-patient limit waiver [22].



Naltrexone

Naltrexone has been FDA-approved to treat both opioid and alcohol use disorders. Unlike methadone and buprenorphine, naltrexone is not a narcotic. Being an opioid antagonist, the drug binds to opioid receptors without activating them, thereby, effectively blocking the receptors and

preventing any opioid-induced effects, such as euphoria. Because naltrexone blocks all effects of opioids in the body, it is also effective in reducing a person's risk of opioid overdose.

Naltrexone is not a drug that has been restricted by the DEA and can be prescribed by any physician without additional training or certification [2, 13, 27]. Naltrexone is available in an oral form for daily use and in an injectable, extended-release, formulation that is administered on a monthly basis. A drawback to naltrexone treatment is that it can only be started after a person has gone through opioid detoxification, otherwise, he or she will experience immediate opioid withdrawal symptoms [13, 27]. Naltrexone has been studied less than either methadone or buprenorphine. Oral naltrexone has been found to be ineffective in the treatment of OUD due to poor compliance with daily dosing [28]. Extended-release naltrexone has been shown to be effective in reducing opioid use compared to no treatment and performs similarly to buprenorphine [29-33]. Because naltrexone is not a controlled substance, it is gaining increasing use in criminal justice settings where concerns over diversion, negative attitudes toward methadone and buprenorphine, and preferences for abstinence-based treatment are common [34-36]. Among persons who begin treatment in correctional settings, naltrexone has been shown to reduce opioid use once these individuals return to the community; however, naltrexone has not been shown to reduce the likelihood of future arrests or re-incarceration [37, 38].

Impact of MAT on Outcomes

Of the three drugs approved for MAT, buprenorphine is currently the most widely used. Significant research has been conducted to determine how well buprenorphine works in reducing the negative consequences associated with OUD. Most research has focused on the impact of buprenorphine on overdose-related mortality, retention in treatment, the use of illicit opioids, risk behaviors related to the transmission



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of HIV and HCV; and criminal behavior. Because methadone treatment is considered by many to be the “gold standard” for MAT, much of the research on buprenorphine has used methadone as a comparison.

Mortality

Several studies which have looked at the impact of MAT on mortality have compared methadone and buprenorphine to no treatment. The conclusion of these studies is that persons who are receiving MAT have a significantly reduced risk of death from overdose as well as from other causes compared to persons who receive no treatment. Buprenorphine and methadone were found to be equally effective in reducing mortality among persons suffering from OUDs with the risk of death dropping more the longer people remained in treatment [39-41].

Retention in Treatment

The impact of MAT on keeping people in treatment is important as the longer someone stays in treatment, the more likely it is that they will be able to stabilize their life, learn new coping skills, get physically healthier, and have a better chance at sustained recovery. People who receive MAT stay in treatment for longer periods of time, compared to those who don't receive MAT. Studies show that higher doses of buprenorphine are better at keeping people in treatment compared to lower doses; however, when compared to methadone, methadone is more effective at retaining persons in treatment than either low or high doses of buprenorphine [42, 43]. Methadone's advantage in retaining people in treatment may not be seen in actual practice; however, as many physicians do not follow recommended dosage guidelines for methadone [14].

Reduction of Illicit Opioid Use

Reducing the use of illicit opioids is a critical step for achieving sustained recovery. Research shows that when persons are receiving buprenorphine or methadone, their use of illicit opioids decreases significantly. Results from studies comparing

buprenorphine to methadone are somewhat varied with some showing methadone as more effective while others report that buprenorphine and methadone are equally as effective in suppressing illicit opioid use. The primary difference in these studies is the use of higher or lower doses of buprenorphine. Higher doses of buprenorphine are more effective than lower doses at reducing illicit opioid use [44-48]. Again, in real-world clinical settings, little difference may be noted between methadone and buprenorphine due to physician prescribing practices [14].

HIV and HCV

MAT is an important tool in reducing the transmission of HIV and hepatitis C. Compared to persons not in treatment, those receiving buprenorphine have a significantly lower risk of acquiring HIV [49]. The lowered risk is due primarily to a decrease in HIV-risk-related behaviors among treated individuals. Persons receiving either methadone or buprenorphine are less likely to engage in injection drug use, share injection equipment, have multiple sexual partners, or exchange sex for drugs or money [49-52].

Buprenorphine can also help stop the spread of the hepatitis C virus (HCV). Individuals who inject drugs and are subsequently treated with buprenorphine, have a significantly lower rate of HCV infection compared to those who do not receive treatment [53]. Among individuals who have already contracted HCV, the use of buprenorphine is associated with a greater likelihood of being referred for care, receiving an HCV-specific evaluation, being offered HCV treatment, and consequently receiving it [54].

Criminal Behavior

Individuals suffering from OUD often engage in criminal activities as a means to obtain money for drugs. Three long-term follow-up studies of persons who were receiving either buprenorphine or methadone found that during treatment, persons on these medications had significantly fewer



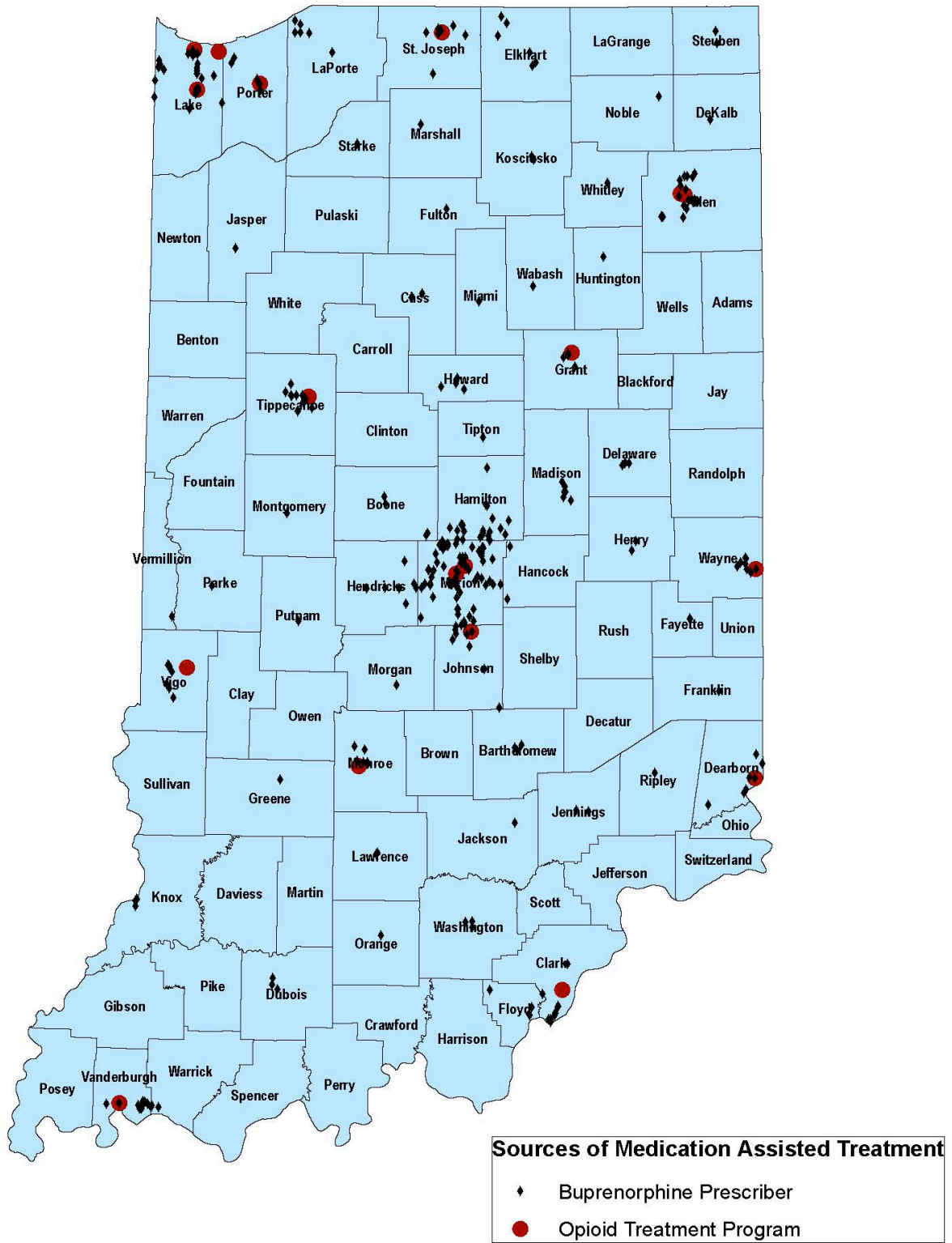
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Map 1. Medication-Assisted Treatment in Indiana





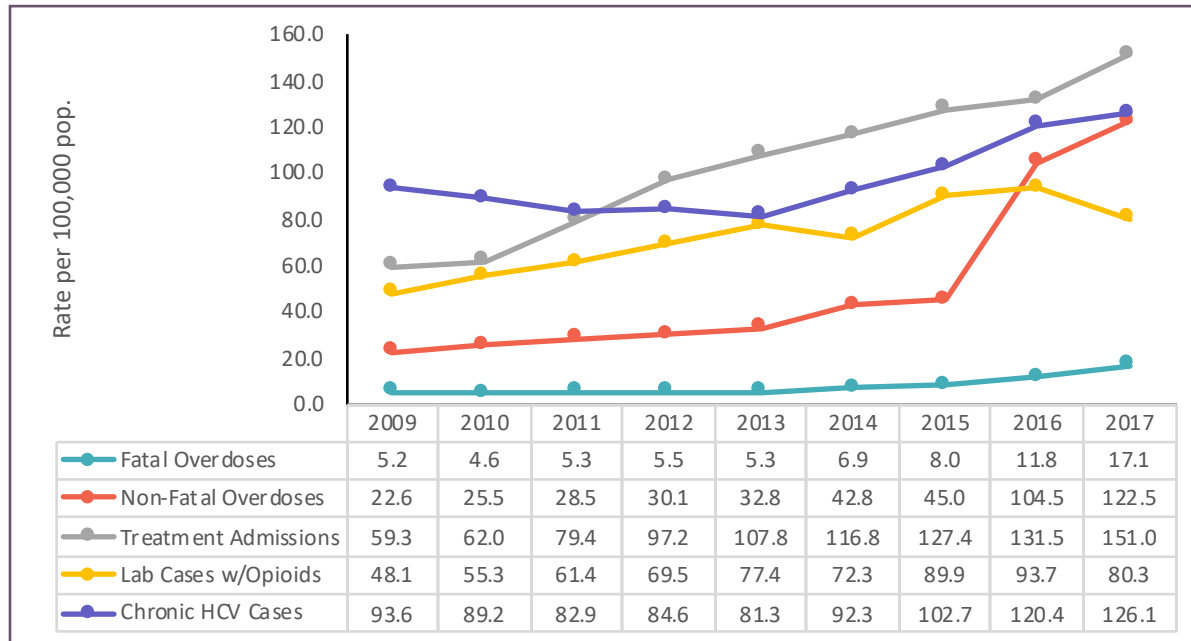
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Figure 1. OUD-related consequences in Indiana



Sources: Overdose and HCV data, ISDH; Treatment admission data, Indiana Department of Mental Health and Addictions; Lab cases with opioids, Indiana State Police.

criminal convictions and engaged in less criminal activity than during periods when they were not in treatment. In no study were any differences noted in rates of criminal activity among persons that favored the use of methadone over buprenorphine [55-57].

Other Benefits

Treatment with buprenorphine has also been tied to other benefits. Individuals receiving treatment are more likely to be in some form of psychosocial therapy, be employed, have fewer visits to the emergency department, show improvement in their OUD, and overall be functioning more effectively in their day-to-day lives [47, 48, 58].

MAT in Indiana

The goal of expanding access to MAT, and to buprenorphine in particular, is to bring about a decrease in the rate of OUD-related consequences,

especially overdose deaths. Access to methadone has increased locally in recent years with 18 OTPs now operating in the state (see Map 1). Since 2002, the number of professionals able to prescribe buprenorphine in Indiana has risen from 17 to approximately 664, i.e., a current rate of 9.9 prescribers for every 100,000 Hoosiers [59]. Despite this growth, compared to other states, Indiana, ranks 25th in the country for the availability of buprenorphine prescribers and 34th in the country for opioid-related deaths¹ [6, 59].

In Indiana, opioid-related consequences continue to climb despite the increase in MAT. In 2017, the state reported an overdose rate of 17.1 deaths per every 100,000 people, the highest ever recorded. 2017 also saw record rates of non-fatal overdoses, cases of chronic hepatitis-C infection, and substance use treatment admissions where opioid use was indicated (see Figure 1).

¹Lower numbers on rankings indicate a lower rate of providers and a higher rate of overdose deaths.



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Access to Buprenorphine

Distribution of Providers

While increasing the number of buprenorphine prescribers is an important step in building capacity, so too is having them strategically distributed throughout the country. Ideally larger concentrations of providers would be present in high-need areas, such as counties that have high rates of fatal opioid overdoses, regardless of where these areas are located. While this type of growth has happened in some states, the general pattern across the nation is for the rate of prescribers to be considerably higher in urban rather than rural areas with a large number of US counties having no buprenorphine-waivered physicians. Consequently, in many parts of the country, including many counties in the Midwest, a mismatch exists where the need for opioid treatment is high but the availability of providers is low or nonexistent [60-64]. As noted above, Indiana's distribution of providers reflects the national pattern with more providers located in urban areas and significantly fewer practicing in areas with a high need for them.



Lack of Prescribing

It is estimated that approximately half of all people with an OUD could be receiving treatment if waived providers were prescribing to their maximum capacity [65]. Unfortunately, in many cases, waived providers may hold a waiver but choose not to use it. For example, in one survey of rural physicians who held waivers, 53% were not currently treating any patients with buprenorphine [66].

Another study of waived physicians who were and were not on SAMHSA's directory found that 20%-35% were not actively prescribing with a third study reporting that most waived physicians have months where they write no buprenorphine prescriptions whatsoever [67, 68]. Among healthcare professionals who do prescribe buprenorphine, the majority practice below their treatment capacity with most seeing fewer than 30 patients at any given time [10, 67-71]. Additionally, for the patients they do treat, many providers are providing them with buprenorphine for periods of less than two months and at dosages that are below recommended guidelines, practices that can prevent patients from receiving the full benefit of the drug [70, 72].

Barriers to Prescribing

Physicians who choose not to obtain a waiver or choose not to prescribe buprenorphine to their maximum capacity cite a number of barriers. The most commonly reported barriers to prescribing are lack of knowledge and training in treating addictions, a lack of access to addiction experts for consultation purposes and insufficient time to add buprenorphine prescribing to their workload [71, 73-78]. Other barriers that physicians noted as reasons for not choosing to prescribe buprenorphine are lack of adequate insurance reimbursement, concerns about diversion of medication, beliefs that persons addicted to opioids are difficult to work with and cannot be trusted, a belief that drugs for OUD simply replace one addiction for another, and a lack of desire to deal with the cumbersome regulations and oversight imposed by the federal government [65, 73, 74, 76, 77, 79]. Medical providers who choose not to obtain waivers cite similar barriers.

Success Stories

Although the barriers noted above seem daunting to overcome, two examples show how increasing the supply of providers and improving access to treatment can lead to significant drops in overdose deaths and other OUD-related consequences.

City of Baltimore



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During the early 1990's, the city of Baltimore, Maryland had one of the highest rates of heroin overdose deaths in the country. Starting in 1998, city officials and public health agencies worked together to increase funding for substance use treatment and subsequently implemented a number of novel approaches to expand access to methadone, such as easing restrictions on where methadone clinics could be located and the use of interim methadone treatment (i.e., methadone which is provided without counseling if there are waiting lists). These efforts led to a significant increase in the number of residents receiving methadone. Once buprenorphine became available in 2002, the city subsidized the training expenses for physicians who wished to obtain a buprenorphine waiver, implemented buprenorphine programs in drug treatment programs and community health centers, included buprenorphine in its Medicaid drug formulary, and enrolled as many people as possible into Medicaid. The enhanced capacity which came about from these efforts resulted in a significant rise over time in the number of people receiving buprenorphine. By 2009, over 15,000 people were on some form of MAT, an increase of 276% from 1995. The overall impact of increasing access to MAT, and buprenorphine in particular, was a drop of over 50% in the number of overdose deaths in the city [80, 81].

France

At approximately the same time that Baltimore was experiencing its problems, France was struggling with similar issues of increasing heroin use and overdose deaths. Access to methadone was restricted to three treatment centers in the country and, as in the US, was highly regulated. In 1995, France approved buprenorphine for the treatment of OUD. To encourage use of and access to buprenorphine, the French government

established relatively lax regulations which allowed any physician to prescribe buprenorphine with no requirement for additional training. Additionally, the French healthcare system classified OUD as a chronic health condition, meaning physicians would be reimbursed 100% when they cared for someone with this diagnosis. These factors accounted for rapid and widespread growth in the

use of buprenorphine throughout the country. At the same time, the French government relaxed restrictions on methadone, making it available in opioid

treatment centers across the country, allowed patients to receive their daily dose at pharmacies, and gave family physicians the authority to monitor patients on methadone from their office once patients had been stabilized. These initiatives led to a rapid increase in the number of individuals receiving MAT to the point that by 2006, over two thirds of opioid-dependent individuals in France were in treatment, most of whom were using buprenorphine. Among persons who receive MAT, decreases have been noted in injection drug use, needle sharing, polysubstance use, as well as improvements in employment, housing and other indicators of social functioning. At the population level, MAT expansion lead to a 74% decrease in opioid-related deaths in France in the first four years after buprenorphine was introduced [82-84].

The rates of OUD and their related consequences continue to rise at both the national and local levels.

Recommendations

The rates of OUD and their related consequences continue to rise at both the national and local levels. MAT is a highly effective, evidence-based form of treatment, shown to decrease opioid use, criminal behavior, drug injecting, needle sharing, and death from overdose. Although methadone has been used to treat opioid use disorders for decades, the restrictions imposed on it by the federal government prevent widespread use. Buprenorphine was introduced in 2002 in order to increase access to MAT by allowing



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healthcare professionals to treat persons with OUD in their offices. Despite increases in the number of physicians who are able to prescribe buprenorphine, there are still barriers to accessing this form of treatment. The following recommendations may help encourage greater expansion of the buprenorphine workforce and greater utilization of buprenorphine by waived providers.

- Provide physicians, physician assistants, and advanced practice nurses with greater training on substance use disorders, addiction, and medication-assisted treatment as part of their standard medical education. Nearly 50% of waived providers are psychiatrists while only 3% are family physicians, the group of providers with whom most individuals suffering from an OUD will likely have contact [61]. In one survey of family physicians, the majority expressed a willingness to prescribe buprenorphine but believed they needed more education, training, and support from other prescribers before they would feel comfortable doing so [75]. Providers, especially those in remote areas, may benefit from continuing educational support in the form of Project ECHO (Extension for Community Healthcare Outcomes) which can virtually connect front-line practitioners with experts in the field to provide mentoring, practical knowledge, and support for the use of buprenorphine [85, 86].
- At the federal level, SAMHSA could consider eliminating or reducing the fees associated with training as this may be a barrier for some providers. Alternatively, Indiana might consider following the lead of Baltimore, MD, and reimburse providers for the expenses they incurred in obtaining their waiver. Another option would be to eliminate the need for a waiver in order to prescribe buprenorphine, which would allow all doctors to do so, and remove the need for a patient limit, so that doctors can prescribe to as many patients as they wish [87].
- In many surveys, physicians reported that treating patients with buprenorphine required a significant time investment due to increased record keeping demands and the need to be prepared for unannounced DEA audits [74, 88]. SAMHSA and the DEA could remove or at least streamline the additional record keeping requirements currently in place as a way to make it more likely that waived providers will actually prescribe.
- Indiana policymakers could work to ensure that buprenorphine remains on the Medicaid preferred drug formulary, remove any preauthorization requirements for MAT drugs as these create additional burden for physicians and delay services, and encourage widespread enrollment of eligible people who may need treatment into Medicaid system [87].
- At the local, state, and national level, efforts need to be made to reduce stigma around OUD and medication-assisted treatment. A reason commonly cited by physicians for not wanting to prescribe buprenorphine was the belief that persons with OUD are difficult, will misuse or divert their medication, will drive their other patients away, and will essentially turn them into “drug dealers” [74, 77, 79].



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Appendix I

To determine the severity of a county's opioid-related problems, we created a composite index of opioid indicators which could be used to rank counties from lowest to highest in severity. Table 1 describes the variables used to create the composite index.

Table 1. Variables used to create composite index of OUD consequences

Consequences		Source
Opioid-related overdose deaths, 2016-2017	Rate per 100,000	Indiana State Department of Health
Non-fatal opioid-related emergency department visits, 2017	Rate per 100,000	Indiana State Department of Health
Non-fatal opioid-related inpatient hospitalizations, 2017	Rate per 100,000	Indiana State Department of Health
Drug lab investigations for opioids, 2017	Rate per 100,000	Indiana State Police
Substance Abuse Treatment Admissions where Opioid Use was reported, 2017	Rate per 100,000	Indiana Division of Mental Health and Addictions



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OUD Severity Scores by County²

We created the index following methods developed by the University of Wisconsin to produce its annual County Health Rankings. In order to standardize the variables, each rate was converted to a z score. The ranking was determined by summing the z scores and sorting them from lowest to highest. Low scores represented few opioid-related problems while higher scores represented more significant problems [89]. According to the table below, Spencer County exhibited the least opioid-related problems (Rank 1), while Wayne County displayed the most (Rank 92) in Indiana.

County	Rank
Spencer	1
Warren	2
Carroll	3
LaGrange	4
Martin	5
Daviess	6
Tipton	7
Benton	8
Fountain	9
Noble	10
Orange	11
Dubois	12
Knox	13
Perry	14
Greene	15
Clay	16
Brown	17
Adams	18
Steuben	19
Whitley	20
Owen	21
Jefferson	22
Crawford	23
Gibson	24
Lawrence	25
Hamilton	26
Elkhart	27

County	Rank
Marshall	28
Posey	29
Sullivan	30
Ohio	31
Pike	32
Putnam	33
Jasper	34
Henry	35
Fulton	36
DeKalb	37
Decatur	38
Hendricks	39
Vigo	40
Franklin	41
Parke	42
Allen	43
Monroe	44
Wells	45
Clinton	46
Harrison	47
Cass	48
Boone	49
Newton	50
Union	51
White	52
Huntington	53
Hancock	54

County	Rank
Johnson	55
Kosciusko	56
Ripley	57
Rush	58
Porter	59
Lake	60
Miami	61
Vanderburgh	62
Tippecanoe	63
Washington	64
Switzerland	65
Dearborn	66
Pulaski	67
Montgomery	68
Bartholomew	69
Madison	70
LaPorte	71
Floyd	72
Warrick	73
Scott	74
Shelby	75
St. Joseph	76
Grant	77
Morgan	78
Jennings	79
Jackson	80
Clark	81

County	Rank
Wabash	82
Howard	83
Vermillion	84
Blackford	85
Delaware	86
Marion	87
Randolph	88
Starke	89
Fayette	90
Jay	91
Wayne	92

²Higher numbers on the rank indicate greater severity of OUD consequences



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