

Opioid Crisis: Strategies and Approaches

The Crisis

For nearly two decades there has been a significant increase in opioid use, overdose, and related deaths in Missouri and across the United States.ⁱ Since 1999, Missouri has experienced a 273 percent increase in the number of overdose deaths, and a 67 percent increase in drug-related deaths involving opioids.ⁱⁱ Between 2006 and 2015, Missouri saw a 138 percent increase in hospitalizations and emergency department visits due to opioid misuse or abuse. While opioid-related deaths continue to rise both nationally and in Missouri, the rate of increase has recently started to slow in the state. From 2016 to 2017, there was a 4.7 percent increase in opioid-related deaths compared to a 35 percent annual increase in 2016.ⁱⁱⁱ

In response to the increase in opioid use, overdose, and death, state and national stakeholders have deployed a range of strategies to address the crisis. A review of the literature on ways to address the issue reveal an emerging list of comprehensive, evidence-based approaches that have been effective at reducing the incidence of opioid use, misuse, and death. Mirroring the multifaceted nature of the crisis and the multitude of factors that have contributed to the epidemic, these strategies involve numerous stakeholders, including local and state governments, the federal government, the public health sector, and the criminal justice system, among others.

Below is a collection of some of the most prominent strategies and approaches employed in communities across the country and in Missouri.

Response to the Crisis

Across the country, response efforts have largely focused on targeting either the supply or demand for opioid drugs. Efforts have focused on reducing access to prescription opioid drugs through enhanced monitoring, as well as changes to clinical practices and guidelines and state laws that target high-prescribing providers. The public health and medical communities have increased their research on and support for medication-assisted treatment, an evidence-based intervention that is shown to successfully reduce opioid dependence and allow individuals with opioid-use disorder (OUD) to lead normal lives and utilize non-opioid alternatives to pain management.

New research on the effectiveness of opioid drugs in treating OUD and advancements in pain-management standards have shaped the public health and medical communities' approach to the opioid crisis. Recent studies on the effectiveness of opioids on chronic pain find that opioids are most effective in treating short-term pain and that alternative, non-opioid drugs may be more effective at treating long-term, chronic pain. As a result, states, professional health care

organizations, and other provider stakeholders have also put in place new guidelines around pain management, prescribing, education, and licensing.

Strategies and Approaches

Harm-Reduction Strategies

Harm reduction is a strategy that attempts to reduce the negative consequences of drug use for the individual. Studies show that harm reduction approaches reduce morbidity and mortality associated with OUD. Studies show that some harm reduction approaches, such as needle exchange programs and syringe services programs offer broader societal and economic benefits, such as reduced interaction with the criminal justice system and reduced police activity in communities in which individuals with OUD reside. Medication-assisted treatment, naloxone access, and syringe-services programs are three prominent harm reduction-approaches that have been implemented in communities and states across the country. These strategies are also considered to be among the most effective.

Medication-Assisted Treatment

Medication-Assisted Treatment (MAT) is an evidence-based intervention that involves physician-administered opioids that are used to treat opioid dependence and addiction. The treatment is in combination with other supports, such as behavioral therapies and counseling.

Medications administered as part of MAT include methadone, buprenorphine, and naltrexone. These medications, which are a form of opioid drug, help to “normalize the brain chemistry, block the euphoric effects of opioids, relieve physiological cravings, and normalize body functions without the negative effects of the abused drug.”^{iv}

MAT medications are administered by a physician and individuals undergoing such treatment are monitored by a health care professional throughout their treatment. MAT medications are prescribed based upon a patient’s individual medical needs. Studies show that more than 70 percent of individuals receiving MAT experience reduced addiction and other improved health outcomes.^v Some individuals are able to recover completely from addiction.^{vi}

Despite the growing number of providers certified to participate in MAT, barriers to access remain. Many of the certified physicians never take on patients for MAT due to stigma or trepidation around the area of treatment. Additionally, some regions of the state have an existing shortage of providers to administer the treatment. Ninety-eight percent of counties in Missouri are designated as Health Professional Shortage Areas (HPSAs). Ninety seven percent of the state’s counties are mental health HPSAs. These shortages exacerbate the need for access to MAT treatment for most of the rural communities in the state.

MAT is governed by federal regulations that require the accreditation and certification of opioid treatment programs (OTPs). Currently, there are 15 OTPs in Missouri.

Naloxone Access

Naloxone hydrochloride (naloxone) is an opioid-overdose antidote that is used to reverse the process of overdosing. Naloxone is considered an “antagonist” to opioid drugs and when taken blocks and reverses the effects of opioid drugs. Naloxone can be taken by injection or via a nasal spray.

Naloxone was first approved as an injectable overdose reversal drug by the Federal Drug Administration (FDA) in 2012. In 2015, the FDA approved a nasal spray that could be more easily used. Initially, in most states naloxone was only available to paramedics, emergency department physicians, and other first responders. In response to the opioid crisis, states have now widened access to naloxone.

In 2016, Missouri enacted a law that allows licensed pharmacists and pharmacy technicians to sell and dispense naloxone. The law also allows patients to purchase the antidote without a prescription. Prior to the enactment of the law, patients were able to access naloxone with a prescription. To date, every U.S. state has enacted a law that facilitates widespread distribution and use of naloxone.^{vii}

Studies show that access to naloxone is effective at reducing opioid-related deaths.^{viii} However, other studies find that expanded access to naloxone may result in other moral hazards, such as increased opioid use. In one study, it was found that expanded access to naloxone led to more opioid-related emergency department (ED) visits and more opioid-related theft.^{ix} That study also found no reduction in opioid-related deaths. In the study, a geographic comparison found that the Midwest experienced the worst effects, including a 14 percent increase in opioid-related mortality in that region.^x

Syringe Services Programs

Syringe services programs (SSPs) are a harm reduction approach that aims to decrease the individual and societal effects of intravenous drug use. Studies find that safe injection sites, needle exchange programs, and other SSP approaches are effective at reducing the effects of the substance use disorder on the individual, their families, and communities. SSPs are considered clinically and cost-effective.

SSPs reduce the risk of infectious diseases, particularly the human immunodeficiency (HIV) and hepatitis C (HCV) viruses. Two studies found reductions in HCV and HIV infections by as much as 50 percent and 80 percent, respectively.^{xi} SSPs are also increasingly being looked at as a way to reduce rates of methicillin-resistant staphylococcus aureus (MRSA), an antibiotic resistant staph infection that has increased as the number of injection drug users have increased.^{xii}

Because of the reduction in HCV, HIV, and other blood-borne infections, SSPs may also reduce health care costs related to ED utilization and public spending related to interaction with the criminal justice system and incarceration. SSPs may also reduce

neonatal abstinence syndrome. According to one study, for every dollar invested in SSPs, there is a \$3.50 to \$7.00 return.^{xiii}

Despite a common concern that SSPs attract criminal activity to communities, studies find the opposite – a reduction in crime in those areas. SSPs also improve security for public safety professionals by significantly reducing needle sticks.

Additionally, SSPs are an important entry point into substance abuse treatment and other mental health services. Studies show that SSPs increase the chances of treatment entry and retention among individuals who engage in the services.^{xiv} SSPs also help reduce the fear of stigma and criminalization associated with intravenous drug addiction, factors that discourage individuals from seeking treatment and engaging in the health care system. Because individuals engaging with SSPs often have access to on-site supports and peers, SSPs also reduce overdose deaths.^{xv}

There are currently over 250 SSPs operating across the country.^{xvi} Twenty states have legalized SSPs, including Kentucky and Indiana, and additional states have legally operating SSPs within certain cities. SSPs have been implemented in a variety of ways. Models include fixed-site exchange programs, mobile or street-based programs, home delivery or peer-based exchange programs, or integrated syringe exchange programs that are embedded into existing services.

Missouri law does not allow for the legal establishment of SSPs. According to statute 195 and 579, prohibited drug paraphernalia includes “syringes, needles, or objects used for injecting controlled substances.” Missouri law also prohibits the “sale or distribution of syringes or needles if intended for the use of controlled substances” and the “possession of drug paraphernalia and controlled substance, including residue that could present in paraphernalia.”^{xvii} Because of this, any effort to reduce the spread of infectious disease and connect injection drug users to services by providing them with a clean needle or syringe is illegal and punishable under the law.

Safe Prescriber Strategies

Another promising approach to limit the supply of prescription opioids and reduce opioid dependence is to modify the behavior and practices of opioid prescribers. The practices and tools that involve this aim are called safe prescriber strategies. Research on the effects of safe prescribing strategies show that they are particularly effective at modifying prescriber behavior. Some approaches, because of their impact on the availability of opioid drugs, have also been effective at altering the behavior of individuals seeking opioid drugs. For example, some studies find that drug monitoring programs are effective at reducing “doctor shopping,” the practice of seeking multiple prescribers to prescribe opioid drugs. However, there is also growing concern about the unintended effects of safe prescriber strategies, in particular prescriber strategies employed in isolation of other complementary efforts.

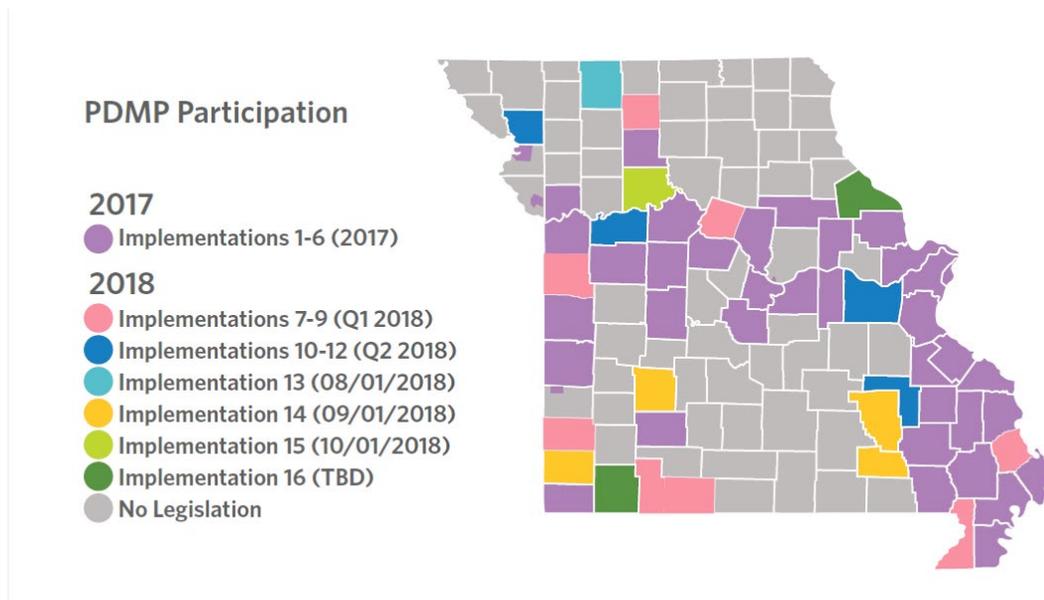
Prescription Drug Monitoring Programs (PDMPs)

PDMPs are databases that track the prescription of opioid-based drugs and allow prescribers, pharmacists, law enforcement, or other approved persons access to help identify instances of “doctor-shopping” among patients. State and local laws determine

viewing and reporting privileges and responsibilities. For example, in Kansas, prescribers and pharmacists have access to a database of controlled substance prescriptions to state residents by in-state and out-of-state pharmacies. State law requires pharmacists to document prescription dispensing data on every written controlled substance prescription.

A best practice for PDMPs is to be accompanied by other efforts, such as interoperability agreements between bordering states and other electronic health record systems. Interoperability allows prescribers access to prescribing data in other states, and it is considered an important way to reduce doctor shopping across state lines. It helps providers identify patients who may be abusing opioids and who need treatment. Another best practice is mandatory prescriber reporting. Studies show that PDMPs have been most effective in states that require doctors to use a PDMP prior to prescribing an opioid.

Missouri is currently the only state without a traditional PDMP. In the absence of a state program, in 2016, St. Louis County created a county-level PDMP that now includes 58 additional counties. St. Louis County's PDMP currently covers approximately 92 percent of the state's providers and 80 percent of the state's population.



On July 17, 2017, Governor Eric Greitens established a statewide monitoring program that allows the Missouri Department of Health and Senior Services to identify instances of overprescribing and to make recommendations for action by licensing boards or law enforcement. Unlike PDMPs, this program does not allow doctors, pharmacists, and other health care providers access to the database. Currently, the state monitors prescriber behavior and issues letters to providers who have demonstrated prescriber behavior that is considered clinically suboptimal. In cases in which a prescriber's behavior cannot be justified, state officials may submit a referral to the applicable licensure and regulatory boards.^{xviii}

Studies show that PDMPs are particularly effective in reducing doctor-shopping and modifying prescriber behavior. In an analysis of a national survey of PDMP utilization in 24 states, implementation of a PDMP resulted in a more than 30 percent reduction in the rate of prescribing opioid analgesics and other pain medication.^{xix} PDMPs are also associated with a reduction in opioid-related deaths, improved prescriber confidence, and a reduction in the diversion of opioids. In one study evaluating the effectiveness of PDMPs, implementation of a PDMP is associated with an overall reduction in opioid-related death by 1.12 per 100,000 population. A greater reduction in opioid-related deaths (1.55 per 100,000) was found in states with more robust PDMPs, i.e., programs that included four or more drug schedules and programs that updated their data on a weekly basis.^{xx}

A growing body of research shows that rigorous and comprehensive PDMPs are associated reductions in opioid-related deaths and opioid use, and that effective PDMPs are often accompanied by other interventions such as naloxone access and other efforts.

Prescriber Education (Academic Detailing)

There has also been a growing call for the practice of academic detailing between pharmacists and physicians. Developed in the 1980s, academic detailing involves a collaborative approach between pharmacists and physicians to inform treatment. With input from pharmacists, physicians are able to make evidence-informed decisions regarding the safety of a pain drug before prescribing.

Evaluative studies on the effects of academic detailing on the treatment of chronic conditions such as atrial fibrillation and chronic obstructive pulmonary disease show positive health outcomes for the patient and improved physician prescriber behavior.

Studies on academic detailing on the treatment of chronic pain and other conditions in which opioid medications may be prescribed also show promising outcomes, including reduced opioid prescriptions and other modified treatments that reduce the introduction of opioid medications.^{xxi}

Other Strategies

Good Samaritan Laws

States have also attempted to reduce opioid deaths by modifying criminal statutes. One tool has been the implementation of “good Samaritan laws,” which provide partial or full immunity to individuals seeking opioid-related addiction assistance from law enforcement. These laws also typically provide immunity to others who contact law enforcement on behalf of a friend or family member who needs help or who may be experiencing an overdose.

In 2017, the Missouri Legislature passed, and the Governor signed into law, a good Samaritan Law that allows those who call 911 seeking assistance for themselves or others overdosing on an opioid to receive immunity from a possession charge. The bill does not

protect individuals from being charged for other offenses not related to the opioid incident.

Elimination of “Pill Mills”

The rise in prescribed opioids was also intensified by an increase in doctor offices with relaxed prescribing standards, and in the most extreme cases, no prescribing standards. These offices became known as “pill mills,” because of the ease in which opioid-addicted persons could access opioid drugs. According to the Centers for Disease Control, pill mills are “pain management clinics where providers operate outside the boundaries of standard medical practice by prescribing large quantities of opioids and other controlled substances with minimal medical oversight.”

In response to the opioid crisis and due to the prevalence of such physician offices, states across the country began to pass laws to regulate pill mills. As a result, the number of pain management clinics have decreased in recent years due to the tightening in medical guidelines and state regulations. However, given the lack of uniformity in guidelines and state regulations, pill mills still exist.

The exact number of pill mills operating in Missouri is unknown, but the state’s lack of a statewide PDMP, coupled with the relatively recent implementation of other interventions and approaches, suggests that they have operated in the state for quite some time. The 2017 implementation of the prescription monitoring program is in part aimed at identifying and reducing pill mill operations.

Evaluative studies suggest that when combined with other efforts, stringent state laws eliminating pill mills are effective at reducing addiction, misuse, and the illegal use of prescription opioids. In a 2015 study monitoring opioid prescriptions before and after the implementation of a statewide PDMP law in Florida, along with the closure of state pill mills, significant reductions in opioid prescribing were found among providers who had high baseline levels of opioid prescribing and utilization.^{xxii} A study in Texas that focused solely on the effect of a pill mill law found significant reductions in prescribing, dose, volume, and pills dispensed in the state following the implementation of the law.^{xxiii}

Other State Efforts

In addition to the aforementioned approaches, state policymakers continue to explore other ways to expand treatment and reduce the supply of opioids. Between July and December of 2017, the Missouri Department of Health and Senior Services hosted a series of opioid summits across the state. Summits were held in Springfield, Cape Girardeau, Joplin, Poplar Bluff, Kirksville, Kansas City, St. Joseph, Columbia, and the city of St. Louis. During the 2018 session of the Missouri General Assembly, several opioid-related measures passed and were signed into law. Among them were measures to expand MO HealthNet (Medicaid) benefits for pregnant women to provide substance abuse treatment for up to one year after giving birth, a seven-day supply limit on opioid prescriptions, and the authorization of new disposal receptacles for unused controlled substances.

As policymakers and other stakeholders seek new strategies and solutions to the opioid crisis, research on the efficacy of opioid interventions and other approaches will be critical to informing community, state, and federal responses.

ⁱ “Missouri Department of Health and Senior Services.” *Missouri Department of Health & Senior Services*, health.mo.gov/data/opioids/death-toll.php.

ⁱⁱ Trends in Hospital Utilization for Opioid Overuse and Drug-Dependent Newborns in Missouri: Implications for Prescription Drug Monitoring Interventions,” Missouri Hospital Association, 2015

ⁱⁱⁱ Trends in Hospital Utilization for Opioid Overuse and Drug-Dependent Newborns in Missouri.”

^{iv} American Society of Addiction Medicine (2015), “National Practice Guidelines for the Use of Medications in the Treatment of Addiction Involving Opioid Use.

^v Walsh (2015). “Medication and Counseling Treatment.” Medication and Counseling Treatment | SAMHSA - Substance Abuse and Mental Health Services Administration, 15 June 2015, www.samhsa.gov/medication-assisted-treatment/treatment#medications-used-in-mat.

^{vi} Ibid.

^{vii} Doleac (2018). The Moral Hazard of Lifesaving Innovations: Naloxone Access, Opioid Abuse, and Crime.” Available at SSRN: <https://ssrn.com/abstract=3135264> or <http://dx.doi.org/10.2139/ssrn.3135264>

^{viii} Ibid.

^{ix} Ibid.

^x Ibid.

^{xi} Centers for Disease Control and Prevention.(2015). HIV infection, risk, prevention, and testing behaviors among persons who inject drugs—national HIV behavioral surveillance: Injection drug use, 20 U.S. cities, 2012. HIV Surveillance Special Report 11. Revised edition.

^{xii} Jackson et al (2018), “Invasive Methicillin-Resistant Staphylococcus Aureus Infections Among Persons Who Inject Drugs — Six Sites, 2005–2016,” Centers for Disease Control.

^{xiii} Nguyen et. al (2014). Syringe exchange in the United States: A national level economic evaluation of hypothetical increases in investment.” *AIDS and Behavior*, 18(11): 2144–2155. doi: 10.1007/s10461-014-0789-9

^{xiv} Aspinall (2014). “Are needle and syringe programmes associated with a reduction in HIV transmission among people who inject drugs: a systematic review and meta-analysis,” *International Journal of Epidemiology*, 43(1):235-48.

^{xv} Hagan (2000). “Reduced injection frequency and increased entry and retention in drug treatment associated with needle-exchange participation in Seattle drug injectors” *Journal of Substance Abuse Treatment*. Vol 19, No. 3.

^{xvi} “HIV/AIDS.” Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 31 July 2018, www.cdc.gov/hiv/risk/ssps.html.

^{xvii} CSR § 195.010 (k)

^{xviii} Patrick et. al (2016) “ Implementation Of Prescription Drug Monitoring Programs Associated With Reductions In Opioid-Related Death Rates,” *Health Affairs*, Vol 35, No. 7.

^{xix} Ibid.

^{xx} Ibid.

^{xxi} Trotter (2017) “Educational Outreach to Opioid Prescribers: The Case for Academic Detailing.” *Pain Physician Journal*. 20(2S):S147-S151

^{xxii} Lyapustina (2016). “Effect of a “pill mill” law on opioid prescribing and utilization: The case of Texas.” *Journal of Drug Alcohol Dependency*. 159: 190-197.

^{xxiii} Ibid.