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Pharmacists Should Treat Patients Who Have Opioid Use Disorders, Not Police Them

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Abstract

Pharmacists are caught in the throes of a relentless overdose crisis that has already claimed half a million lives and threatens to claim thousands more. The addiction treatment system is fragmented and inadequate to meet demand. Few physicians provide medications for opioid use disorder (MOUDs), the most effective forms of evidence-based treatment, and insufficient treatment options leave patients vulnerable to overdose.

Pharmacists routinely interact with patients who have opioid use disorders, but lack ways to treat them. The primary tools that pharmacists have received to curb the crisis are prescription drug monitoring programs (PDMPs), big data surveillance technologies that pharmacists can use to track patients' drug acquisition patterns. Pharmacists like PDMPs because they help them make decisions efficiently. However, PDMPs are enforcement technologies, not healthcare tools, so pharmacists typically use PDMPs to police patients instead of treat them. Policing patients not only fails to help combat overdose, but can also exacerbate harm.

Informed by a decade's worth of interviews with pharmacists before and after PDMP implementation, I argue that pharmacists should be better equipped to help patients with opioid use disorders. Specifically, clinical and community pharmacists should mobilize to provide MOUDs through collaborative practice agreements with physicians. Studies show that collaborative practice models are effective at reducing the risk of overdose and saving money and physicians' time. And pharmacists have the clinical competencies necessary to provide MOUDs for patients. Pharmacists must overcome legal, economic, and interprofessional barriers to do so, but giving pharmacists the tools to treat patients will affirm their professional commitment to caring for patients and saving lives.

Key points

What was already known:

- The overdose crisis has claimed over half a million lives and overdose rates are skyrocketing during the pandemic, yet addiction treatment options are inadequate.
- Pharmacists are caught in the throes of the overdose crisis and find themselves responsible for deciding who receives access to opioids.
- Key tools that pharmacists use to address the overdose crisis are prescription drug monitoring programs (PDMPs) that track patients' drug acquisition patterns.

What this study adds:

- PDMPs are enforcement technologies, not healthcare tools. Pharmacists who use them without healthcare resources tend to police patients instead of treat them.
- Pharmacists have an opportunity to expand access to addiction treatment by providing medications for opioid use disorder (MOUDs) through collaborative practice agreements with physicians.
- Pharmacists have the clinical capacity and the workforce necessary to provide addiction treatment and save lives.

Facing the Overdose Crisis

Pharmacists are caught in the throes of an overdose crisis that has claimed over half a million lives and threatened many more.¹ In 2019, twenty percent of overdose deaths involved prescription opioids, medications like oxycodone and hydrocodone used to treat pain.² To combat the overdose crisis, state legislatures provided pharmacists with prescription drug monitoring programs (PDMPs), law enforcement surveillance technologies that amass information about patients' medication acquisition patterns.³ However, PDMPs are no substitute for healthcare tools and pharmacists are not police officers. Pharmacists can be an essential force for preventing overdose and saving lives, but only if they seize the opportunity.

Pharmacists are healthcare providers. They go into pharmacy to care for patients and have the clinical training necessary to do so. Yet, efforts to curb the overdose crisis place pharmacists in a policing role that compromises their ability to provide care. Specifically, the widespread adoption of PDMPs encourages pharmacists to closely monitor patients for signs of opioid use disorders (OUDs) and diversion and to refuse to care for those patients. Pharmacies that have adopted this enforcement tool have not equally expanded treatment tools that would enable pharmacists to care for patients who are struggling.

My research shows that pharmacists appreciate PDMPs because they provide critical information that makes their work easier.^{4,5} Yet, PDMPs come at a cost. I find that pharmacists who have PDMPs but lack treatment tools tend to police patients with OUDs and dismiss them from the pharmacy instead of helping them.⁶ In conjunction with the PDMP, pharmacists call physicians to clarify prescriptions and have conversations with patients, but as other researchers have shown, instead of using PDMPs to counsel patients, pharmacists use them to detect “doctor shopping” and “abuse.”⁷ Caught between law, pressure from their employees, and a lack of treatment tools, pharmacists feel they have no other choice. But what if another choice was available? What if pharmacists were poised to help? The good news is that pharmacists are perfectly situated to expand access to care for people with opioid use disorders. At a time when addiction treatment is sorely lacking⁸ and overdose rates are skyrocketing⁹, pharmacists should collaborate with physicians and other healthcare providers to prescribe medications for opioid use disorders (MOUDs). Imagine the good pharmacists could do if they embraced tools to treat, instead of police, patients with OUDs.

Pharmacists face the difficult task of deciding which patients should receive opioids and find themselves caught in an impossible situation. The Federal Controlled Substances Act and corresponding state laws prohibit pharmacists from dispensing medications for non-medical purposes. However, pharmacists lack the patient information and clinical tools necessary to determine whether a patient is using opioids to treat pain, is coping with a substance use disorder, or is planning to sell opioids to others. Not only that, pressure from employers to perform efficiently means that pharmacists must decide quickly, in the 3-4 minutes they have with each patient or risk falling behind. This results in a tension between legal obligations and clinical shortcomings that hampers pharmacists and puts patients at risk.

The Controlled Substances Act requires physicians to prescribe in “good faith” and assigns pharmacists a “corresponding responsibility” to avoid “knowingly” dispensing medications for non-medical purposes (addiction and diversion).¹⁰ State pharmacy practice acts echo these

requirements. Community pharmacists cannot legally diagnose substance use disorders, but how can they obey the Controlled Substances Act without attempting to do so? Pharmacists are in a precarious position because there is no clear path for deciding whether a patient is using a drug non-medically and if they try to diagnose disease, they venture far beyond their scope of practice.

Without clear guidance, pharmacists struggle to determine why patients are using medications and, in the past, had few resources to help them. When I began interviewing pharmacists in 2009, they felt overwhelmed by patients whom they believed were lying to them—claiming to be in pain while behaving in ways that suggested they were not. Pharmacists told me they looked for “red flags” to spot patients whom they believed were using drugs non-medically. They elaborated: “It’s the way they act, the way they look, the ones with the rotted teeth.” It was also the way they talked to the pharmacist. “They are really chatty and have specific demands—they want the bar Xanax, they want specific colors of opioids, that is because they have higher street values.” Patients who traveled a long distance or who wanted to pay cash also raised pharmacists’ suspicions. Other “red flags” that pharmacists noted were patients who often went out of town, whose pain pills were frequently lost or stolen, and who had insurance but wanted to pay cash. Many pharmacists experienced a “gut feeling” that told them something wasn’t right. Several told me, “you can spot them as soon as they walk in the door.” Pharmacists’ assumptions about patients based on their appearance and behavior—often grounded in stereotypes about people who use drugs—affected whether they provided or refused to provide care.^{11–13}

Pharmacists developed tactics to deter patients who exhibited “red flags” from their pharmacies—they ran the prescription through insurance to see when it was last filled, they called pharmacies nearby to gather patient information, and when they felt uncomfortable dispensing, they told the patient the medication was out of stock. These tasks were time-consuming and pharmacists feared making a mistake by dispensing to someone who would misuse the medication or denying medications to a patient in need.¹² They worried that these mistakes could result in the loss of their license and their livelihood. They also felt uncomfortable trying to decide if patients were following the law, a process I call “legal gatekeeping.”^{11,12} Like many other pharmacists I interviewed, Sarah,ⁱ a chain pharmacist in Kansas, told me, “I’m in the business of patient safety, I’m not in the police business . . . that’s the least fun part of my job is being, feeling like you’re a police.”¹²

Prescription Drug Monitoring Programs

Enter the prescription drug monitoring program. At a time when the spotlight of blame shone on healthcare providers, when journalists and enforcement agents labeled physicians “drug dealers in white coats,”¹⁴ when pharmacies and drug manufacturers doled out millions in legal settlements,¹⁵ PDMPs became popular components of healthcare practice. Community pharmacists liked PDMPs because they offered patient information that pharmacists could not easily glean from other sources. Pharmacists, who rarely knew the patient’s diagnosis or course of treatment, could see, with the click of a button, what medications a patient had obtained, where, and from whom, and could use that information to make dispensing decisions quickly and efficiently.⁵ Not only did this please employers for whom speed translates into profit, but it helped pharmacists to fulfill their “corresponding responsibility” under the federal Controlled

Substances Act.¹⁰ Instead of taking the physician's word, a pharmacist could independently determine whether a prescription was appropriate and protect their license in the process.

When I first heard about PDMPs, I thought pharmacists would hate them. I had already interviewed over 100 pharmacists across the nation who bemoaned the little time they had to spend with patients and the stress of feeling constantly behind.^{11,12} A PDMP, I thought, would simply add another task to an already harrowing workload. To my surprise, pharmacists loved them. Pharmacists I interviewed after PDMPs were implemented explained that the database helped them to categorize patients and treat them accordingly. Even though diagnosing patients is not the pharmacist's job and PDMPs are not diagnostic tools, they used the PDMP to determine why patients were using medications. No longer did they have to rely on gut feelings to separate patients in pain from patients with OUDs nor did they have to lie to patients and say the medication was out of stock. They could simply cite the PDMP report to justify refusing to dispense with the added benefit (in their eyes) of deterring the patient from the pharmacy. Parker, a chain pharmacist in South Florida, told patients "we looked at the drug monitoring program and see that you have been filling from multiple doctors."¹⁶ He found that patients left quickly after that. To be sure, pharmacists do not check the PDMP for every patient with an opioid prescription. Doing so would consume an unreasonable amount of time.¹⁷ However, other researchers have found that when pharmacists check PDMPs they find them useful for identifying addiction and diversion.¹⁸

Pharmacists also reported that the PDMP put them in a better position when it came to relationships with physicians and law enforcement. Past experiences of being yelled at or degraded by physicians left many pharmacists hesitant to call when they were concerned about a patient or a prescription.¹² However, armed with PDMPs, pharmacists felt far more comfortable. Not only could they justify the call by citing store policy, but they could also share information about the patient's prescriptions that physicians—less inclined to check the PDMP—did not know.⁵

Before the PDMP, pharmacists called law enforcement about egregious cases where there seemed to be clear evidence of fraud.¹² With the PDMP, pharmacists partnered with law enforcement more frequently.^{6,19} Pharmacists I interviewed reported calling the police on patients they believed were passing fraudulent scripts and law enforcement agents reported getting leads from pharmacists. Joe, a California Sheriff's Deputy told me, "We usually get our tips from pharmacies...when it comes to a patient doctor shopping...we arrested a lady recently who went to 126 physicians in one year and got over 10,000 Dilaudid pills...the pharmacist said 'Hey, I ran a CURES [California's PDMP] report when she came here to fill the script, it's out of control, you're going to need to look at her.' So we did and we arrested her for doctor shopping."⁵ These relationships are dicey, however, since the legal guidance around when to share PDMP information with law enforcement is unclear, varies by state, and can have serious consequences.^{20,21}

With PDMPs available, pharmacists also began to own their professional discretion. They told patients "in my professional judgment I can't fill your prescription" then gave the prescription back.¹⁶ Pharmacists now see legal gatekeeping as part of their job. They engage in what I call an "embrace and reframe" technique—they consider policing patients a way to ensure patient

safety, a key aspect of pharmacy work, instead of rejecting it as something that law enforcement should do.²²

Addiction Treatment Inadequacies and PDMP Harms

PDMPs might make pharmacists' work easier, but they do little to help patients.²¹ That is because PDMPs are enforcement technologies, not healthcare tools. Even if pharmacists try to use the PDMP to differentiate pain from addiction and diversion, pharmacists still lack healthcare resources to help patients with opioid use disorders (OUDs). A handful of pharmacists I interviewed had a list of places to refer patients to addiction treatment, but they knew little about those providers and were ill-prepared to make any kind of referral. Lack of addiction training in pharmacy school also limits pharmacists' ability to care for patients.²³ Further, attempting a warm hand-off would consume pharmacists' already limited time. Instead, pharmacists cast patients with OUDs out of the pharmacy and hoped they found help. This might help explain why policies that require PDMP access are associated with increased heroin overdose deaths and increased overdose deaths overall.^{24,25} Research suggests that turning patients away from prescription opioids makes them more likely to purchase illegal opioids which increases likelihood of overdose and death. As a tool commonly used to justify declining to fill certain prescriptions, the PDMP may have helped to foster patients' transition to heroin and synthetic fentanyl use.^{26,27}

Pharmacy has an addiction problem, but it is not alone. Cultural stigma towards addiction runs deep. Addiction is an incompletely medicalized condition, one that gets framed alternatively as "sickness" and "badness."²⁸ Though many call it a disease, it certainly isn't treated like one. The addiction treatment system in the United States is highly fragmented and rarely evidence-based. Only 11% of people with OUDs receive any form of treatment⁸ and for those fortunate enough to get access, care is often expensive and even harmful.²⁹ Abstinence-based in-patient programs, what many imagine to provide the highest standard of care, often provide little in the way of actual treatment so when they release patients with a lowered drug tolerance, patients who use again risk overdose and death.³⁰ Physicians, too, have failed to tackle addiction as a medical problem. Medical schools offer little to no training on addiction and the number of addiction specialists are few.³¹

In this context where resources pale in comparison to need, pharmacists interact with patients with OUDs regularly because they are the ultimate gatekeepers to opioids.¹¹ Pharmacists find themselves frustrated with these patients, sometimes because they internalize popular myths about people who use drugs like the idea that they are manipulative or dangerous, and sometimes because they think that denying patients care will help them hit "rock bottom" and motivate them to get help.

Replacing Policing with Treatment

Imagine for a moment how pharmacists' attitudes might change if they could easily care for these patients instead? What if pharmacists could prescribe evidence-based treatments for opioid use disorders? If, instead of fighting with a patient over their refusal to dispense opioids, they were prepared to help? The most effective evidence-based treatments for OUDs are methadone

and buprenorphine. Research shows that these medications reduce the likelihood of overdose and reduce the likelihood of serious opioid-related acute care.³² Yet they are extremely difficult to access because physicians rarely prescribe them and pharmacists rarely dispense them.

Due to legal restrictions created in the 1970s, methadone is only administered and dispensed at federally certified opioid treatment programs.³³ However, buprenorphine, a newer medication, can be prescribed at a hospital or clinic and dispensed in a pharmacy. Still, buprenorphine prescribing is inadequate. This is partly due to federal law that restricts the physician's patient load to 30 in the first year and 100 thereafter and requires 8 hours of training for physicians who are not certified in addiction medicine.³⁴ As a result, less than 10% of primary care physicians have an X-waiver, a special dispensation from the Drug Enforcement Administration that allows them to dispense opioids to treat addiction.³⁵ Of the physicians with an X-waiver, most see far fewer than their allotted patient load.^{36,37} In April 2021, the Department of Health and Human Services amended the guidelines to remove the training requirements as long as the practitioner keeps their patient load below thirty,³⁸ but it is not yet clear if or how this will expand access. The irony here is striking. Physicians straight out of medical school can prescribe powerful opioids like oxycodone for pain, but they must navigate strict restrictions to prescribe less powerful opioids to treat addiction. U.S. pharmacies often do not carry buprenorphine, further limiting patient access.^{39,40,41}

Pharmacies can carry buprenorphine, and they should. However, pharmacists can do even more to help patients in need. Recent studies have shown that pharmacists are quite effective at managing patients on buprenorphine. A NIDA-funded study published in *Addiction* last January shows that when community pharmacists provided buprenorphine through collaborative practice agreements with physicians, patients adhered to treatment regimens and reported high levels of satisfaction.⁴² These findings echo other studies that show how clinical pharmacists' management of opioid use disorders can save money⁴³ and free up physician time.⁴⁴ These studies demonstrate that pharmacists can effectively treat patients with opioid use disorders. The National Association for Boards of Pharmacy has a new initiative urging pharmacists to do their part to prevent overdose deaths by helping to expand MOUDs.⁴⁵ These promising approaches should be implemented widely with the help of community pharmacy leadership.

Pharmacists are the most available healthcare providers. Pharmacists keep long hours, work on weekends, and work in communities with few or no physicians. Pharmacists have also proven their clinical competence by providing flu and COVID vaccines, monitoring blood pressure, treating HIV/AIDS, and providing MOUDs. Some pharmacies have proven their commitment to reducing overdose deaths by carrying naloxone.^{46,47} There are 224,000 pharmacists in 60,000 community pharmacies the United States.⁴⁸ By contrast, there are only 3,200 addiction specialists⁴⁹ and fewer than 100,000 providers have X-waivers.⁵⁰ It takes an average of four and a half times longer for patients to drive to an opioid treatment program than to drive to a pharmacy.⁵¹ The situation is especially bleak in rural areas. Seventy-one percent of rural counties lacked a single publicly available MOUD provider in 2017,³⁶ 85.4% of people living outside large metro counties had to drive more than 30 minutes each day to reach an opioid treatment program, and 36.8% had to drive more than 60 minutes.⁵¹ With few physicians to provide MOUDs, patients face treatment bottlenecks that pose high risks of overdose and death.

Collaborative practice approaches can eliminate bottlenecks by harnessing pharmacists' full potential.

A Call to Action

Clinical and community pharmacists should mobilize to provide MOUDs through collaborative practice agreements. Despite widespread misinformation about buprenorphine diversion, buprenorphine is extremely safe and difficult to misuse.⁵² It is effective even without additional talk therapy as medication-first studies have shown.⁵³ Alongside methadone, it is the best tool available to fight overdose and save lives.³² Studies show that providing buprenorphine even without additional services reduces the use of illicit opioids and intravenous drugs which, in turn, reduces the risk of overdose and death.^{54,55} Pharmacy leaders agree. The American College of Clinical Pharmacy,⁵⁶ the American Journal of Health-System Pharmacy,⁵⁷ and ASHP⁵⁸ have all urged pharmacists to provide MOUDs.

Collaborative Practice Agreements (CPAs) empower pharmacists to provide medication therapy to patients through a protocol with a prescriber. Currently, 48 states allow pharmacists and prescribers to enter into CPAs and at least 21 enable pharmacists to initiate medication therapy.⁴⁷ Pharmacists have successfully expanded access to MOUDs through a variety of CPA models. A popular approach is to task a clinical pharmacist with managing MOUDs after the patient's initial visit with the prescriber.⁵⁹ Another burgeoning model involves transferring patients in office-based buprenorphine treatment programs to specially-trained pharmacists at community pharmacies.⁴² Under each model, pharmacists receive support from DATA-waivered physicians. Both clinical and community-based programs have proven successful for managing patients with opioid use disorders. Further, evidence from other countries such as Canada, Australia, and the United Kingdom reveal that community pharmacies can successfully dispense methadone.^{60,61}

To be sure, empowering pharmacists to provide MOUDs requires overcoming significant legal, economic, and inter-professional barriers. Currently, most pharmacists cannot legally prescribe medication and some states do not permit the provision of controlled substances through a collaborative practice agreement.⁶² Methadone provision is restricted by federal law. In many states, pharmacists cannot bill insurance for their services because they are not recognized as healthcare providers.^{63,23} The economic model of pharmacy depends on getting the most prescriptions out in the shortest amount of time, so it would be a major shift for pharmacies to enable pharmacists to care for patients with OUDs. However, if pharmacists could treat patients and charge for an office visit, employers would be more amenable. Legal changes to the Narcotic Addiction Treatment Act would permit pharmacies to dispense methadone and would change the focus of the law from preventing diversion to providing methadone to treating OUDs.⁶¹ The federal government has relaxed methadone restrictions somewhat during COVID by allowing patients to take doses home instead of come to the clinic each day. Some experts support continuing this practice after the pandemic is over, and changes of this kind could pave the way for pharmacists to provide methadone.⁶⁴

Perhaps the biggest barrier is physician resistance. Physicians have spent decades protecting their professional territory from competitors, including pharmacists.^{65,66} However, despite a handful of physicians pushing hard to expand access to addiction treatment and efforts to incorporate

MOUD training into medical education,⁶⁷ physicians writ large have indicated that they are not interested in taking up this mantle. At the current rate of uptake, it will take years for MOUD-trained physicians to become the norm. Yet, physicians continue to receive a disproportionate share of blame for the opioid crisis, something that leaves them feeling frustrated at work and vulnerable to law enforcement. This is also what might make them more receptive to pharmacists providing MOUDs.

By collaborating with physicians and other health professionals like nurse practitioners and physician assistants, pharmacists can ease interprofessional tensions and make a meaningful impact on a crisis that has consumed America for the last two decades. Instead of using PDMPs to police patients and deny them care, pharmacists can stake their claim on MOUDs, treatment tools that are effective, but underused. Overdose rates are rising as the pandemic exacerbates the isolation and economic insecurity known to drive drug use,⁶⁸ yet remedies are shrinking.⁶⁹ Pharmacists are the best equipped healthcare providers to step into the breach. The time to act is now. People's lives depend on it.

References

1. Understanding the Epidemic | Drug Overdose | CDC Injury Center. Published March 19, 2020. Accessed March 8, 2021. <https://www.cdc.gov/drugoverdose/epidemic/index.html>
2. [National Institute on Drug Abuse] (last). Overdose Death Rates. National Institute on Drug Abuse. Published January 29, 2021. Accessed March 8, 2021. <https://www.drugabuse.gov/drug-topics/trends-statistics/overdose-death-rates>
3. Prescription Drug Monitoring Programs (PDMPs) | Drug Overdose | CDC Injury Center. Published June 10, 2020. Accessed March 8, 2021. <https://www.cdc.gov/drugoverdose/pdmp/states.html>
4. This Is Your Country on Drugs. Radcliffe Institute for Advanced Study at Harvard University. Accessed March 8, 2021. <https://www.radcliffe.harvard.edu/news-and-ideas/this-is-your-country-on-drugs-2>
5. Harvard University. *Examining the Opioid Epidemic's Impact on Professional Work* | Liz Chiarello || Radcliffe Institute.; 2019. Accessed March 8, 2021. <https://www.youtube.com/watch?v=McuVCDVvzeQ>
6. Chiarello, Elizabeth. Shared Technology, Competing Logics: How Healthcare Providers and Law Enforcement Agents Use Prescription Drug Monitoring Programs to Combat Prescription Drug Abuse. Presented at the: Law and Society Association; 2017; Mexico City, Mexico.
7. Green TC, Mann MR, Bowman SE, et al. How does use of a prescription monitoring program change pharmacy practice? *Journal of the American Pharmacists Association*. 2013;53(3):273-281. doi:10.1331/JAPhA.2013.12094
8. National Institute on Drug Abuse. *Drug Facts: Treatment Statistics*.; 2011. https://www.drugabuse.gov/sites/default/files/drugfacts_treatmentstats.pdf
9. Coronavirus Disease 2019. Centers for Disease Control and Prevention. Published December 21, 2020. Accessed March 8, 2021. <https://www.cdc.gov/media/releases/2020/p1218-overdose-deaths-covid-19.html>
10. *Federal Comprehensive Drug Abuse Prevention and Control Act of 1970*. Vol 21.; 1970.
11. Chiarello E. How organizational context affects bioethical decision-making: Pharmacists' management of gatekeeping processes in retail and hospital settings. *Social Science & Medicine*. 2013;98:319-329. doi:10.1016/j.socscimed.2012.11.041
12. Chiarello E. The War on Drugs Comes to the Pharmacy Counter: Frontline Work in the Shadow of Discrepant Institutional Logics. *Law soc inq*. 2015;40(01):86-122. doi:10.1111/lsi.12092

13. Chiarello, Elizabeth. The 'Deserving Patient': How Constructions of Patients' Moral Worth Influence Pharmacists' Care Provision. In: ; 2013.
14. Lembke A. *Drug Dealer, MD: How Doctors Were Duped, Patients Got Hooked, and Why It's So Hard to Stop*. JHU Press; 2016.
15. Meier B. *Pain Killer: An Empire of Deceit and the Origin of America's Opioid Epidemic*. 2nd edition. Random House; 2018.
16. Chiarello, Elizabeth. Punitive Treatment: How Technology for Combatting the Opioid Crisis Is Blurring Healthcare-Enforcement Boundaries. Presented at the: Radcliffe Institute for Advanced Study; 2019; Cambridge, MA.
17. Upton C, Gernant SA, Rickles NM. Prescription drug monitoring programs in community pharmacy: An exploration of pharmacist time requirements and labor cost. *Journal of the American Pharmacists Association*. 2020;60(6):943-950.
18. Pett RG, Mancl L, Revere D, Stergachis A. Prescription drug monitoring program use and utility by Washington State pharmacists: A mixed-methods study. *Journal of the American Pharmacists Association*. 2020;60(1):57-65. doi:10.1016/j.japh.2019.09.016
19. Fleming ML, Barner JC, Brown CM, Shepherd MD, Strassels SA, Novak S. Pharmacists' training, perceived roles, and actions associated with dispensing controlled substance prescriptions. *Journal of the American Pharmacists Association*. 2014;54(3):241-250. doi:10.1331/JAPhA.2014.13168
20. Brushwood DB. Unauthorized police access to PDMP data. *Pharmacy Today*. 2013;19(7):49. doi:10.1016/S1042-0991(15)31271-8
21. Oliva JD, RPS Submitter SH. *Dosing Discrimination: Regulating PDMP Risk Scores*. Social Science Research Network; 2021. doi:10.2139/ssrn.3768774
22. Chiarello, Elizabeth. The Trojan Horse: How Enforcement Technology Changes Healthcare Practice. *Under review*. Published online 2021.
23. Bratberg J. Pharmacy: Addressing substance use in the 21st century. *Substance Abuse*. 2019;40:1-14. doi:10.1080/08897077.2019.1694618
24. Kim B. Must-access prescription drug monitoring programs and the opioid overdose epidemic: The unintended consequences. *Journal of Health Economics*. 2021;75:102408. doi:10.1016/j.jhealeco.2020.102408
25. Pitt AL, Humphreys K, Brandeau ML. Modeling Health Benefits and Harms of Public Policy Responses to the US Opioid Epidemic. *Am J Public Health*. 2018;108(10):1394-1400. doi:10.2105/AJPH.2018.304590

26. Martins SS, Ponicki W, Smith N, et al. Prescription drug monitoring programs operational characteristics and fatal heroin poisoning. *International Journal of Drug Policy*. 2019;74:174-180.
27. Fink DS, Schleimer JP, Sarvet A, et al. Association Between Prescription Drug Monitoring Programs and Nonfatal and Fatal Drug Overdoses. *Ann Intern Med*. 2018;168(11):783-790. doi:10.7326/M17-3074
28. Deviance and Medicalization: From Badness to Sickness: Peter Conrad, Joseph W. Schneider: 9780877229995: Amazon.com: Books. Accessed March 8, 2021. <https://www.amazon.com/Deviance-Medicalization-Sickness-Peter-Conrad/dp/0877229996>
29. Hampton R. *American Fix: Inside the Opioid Addiction Crisis - and How to End It*. All Points Books; 2018.
30. Saloner B, McGinty EE, Beletsky L, et al. A Public Health Strategy for the Opioid Crisis. *Public Health Rep*. 2018;133(1_suppl):24S-34S. doi:10.1177/0033354918793627
31. Lembke A, Humphreys K. The Opioid Epidemic as a Watershed Moment for Physician Training in Addiction Medicine. *Acad Psychiatry*. 2018;42(2):269-272. doi:10.1007/s40596-018-0892-8
32. Wakeman SE, Larochelle MR, Ameli O, et al. Comparative Effectiveness of Different Treatment Pathways for Opioid Use Disorder. *JAMA Netw Open*. 2020;3(2):e1920622. doi:10.1001/jamanetworkopen.2019.20622
33. Treatment I of M (US) C on FR of M, Rettig RA, Yarmolinsky A. *Federal Regulation of Methadone Treatment*. National Academies Press (US); 1995. Accessed March 8, 2021. <https://www.ncbi.nlm.nih.gov/books/NBK232105/>
34. Davis CS, Carr DH. Legal and policy changes urgently needed to increase access to opioid agonist therapy in the United States. *International Journal of Drug Policy*. 2019;73:42-48. doi:10.1016/j.drugpo.2019.07.006
35. McBain RK, Dick A, Sorbero M, Stein BD. Growth and Distribution of Buprenorphine-Waivered Providers in the United States, 2007–2017. *Ann Intern Med*. 2020;172(7):504-506. doi:10.7326/M19-2403
36. Haffajee RL, Lin LA, Bohnert ASB, Goldstick JE. Characteristics of US Counties With High Opioid Overdose Mortality and Low Capacity to Deliver Medications for Opioid Use Disorder. *JAMA Netw Open*. 2019;2(6):e196373. doi:10.1001/jamanetworkopen.2019.6373
37. Stein BD, Sorbero M, Dick AW, Pacula RL, Burns RM, Gordon AJ. Physician Capacity to Treat Opioid Use Disorder With Buprenorphine-Assisted Treatment. *JAMA*. 2016;316(11):1211. doi:10.1001/jama.2016.10542
38. Practice Guidelines for the Administration of Buprenorphine for Treating Opioid Use Disorder. Federal Register. Published April 28, 2021. Accessed June 16, 2021.

- <https://www.federalregister.gov/documents/2021/04/28/2021-08961/practice-guidelines-for-the-administration-of-buprenorphine-for-treating-opioid-use-disorder>
39. It's The Go-To Drug To Treat Opioid Addiction. Why Won't More Pharmacies Stock It? NPR.org. Accessed March 8, 2021. <https://www.npr.org/sections/health-shots/2019/08/13/741113454/its-the-go-to-drug-for-opioid-addiction-so-why-won-t-more-pharmacists-stock-it>
 40. Hill LG, Loera LJ, Evoy KE, et al. Availability of buprenorphine/naloxone films and naloxone nasal spray in community pharmacies in Texas, USA. *Addiction*. 2021;116(6):1505-1511. doi:<https://doi.org/10.1111/add.15314>
 41. Kazerouni NJ, Irwin AN, Levander XA, et al. Pharmacy-related buprenorphine access barriers: An audit of pharmacies in counties with a high opioid overdose burden. *Drug and Alcohol Dependence*. 2021;224:108729. doi:10.1016/j.drugalcdep.2021.108729
 42. Wu L, John WS, Ghitza UE, et al. Buprenorphine physician–pharmacist collaboration in the management of patients with opioid use disorder: results from a multisite study of the National Drug Abuse Treatment Clinical Trials Network. *Addiction*. Published online January 11, 2021:add.15353. doi:10.1111/add.15353
 43. DiPaula BA, Menachery E. Physician–pharmacist collaborative care model for buprenorphine-maintained opioid-dependent patients. *Journal of the American Pharmacists Association*. 2015;55(2):187-192. doi:10.1331/JAPhA.2015.14177
 44. Mailloux LM, Haas MT, Larew JM, DeJongh BM. Development and implementation of a physician-pharmacist collaborative practice model for provision and management of buprenorphine/naloxone. *Mental Health Clinician*. 2021;11(1):35-39. doi:10.9740/mhc.2021.01.035
 45. Presidential Initiative | Medication-Assisted Treatment. National Association of Boards of Pharmacy. Accessed March 8, 2021. <https://nabp.pharmacy/about/presidential-initiative/>
 46. Jones CM, Lurie PG, Compton WM. Increase in Naloxone Prescriptions Dispensed in US Retail Pharmacies Since 2013. *Am J Public Health*. 2016;106(4):689-690. doi:10.2105/AJPH.2016.303062
 47. Green TC, Dauria EF, Bratberg J, Davis CS, Walley AY. Orienting patients to greater opioid safety: models of community pharmacy-based naloxone. *Harm Reduct J*. 2015;12(1):25. doi:10.1186/s12954-015-0058-x
 48. Green TC, Bratberg J, Finnell DS. Opioid use disorder and the COVID 19 pandemic: A call to sustain regulatory easements and further expand access to treatment. *Substance Abuse*. 2020;41(2):147-149. doi:10.1080/08897077.2020.1752351
 49. 21 million Americans suffer from addiction. Just 3,000 physicians are specially trained to treat them. AAMC. Accessed March 8, 2021. <https://www.aamc.org/news-insights/21-million-americans-suffer-addiction-just-3000-physicians-are-specially-trained-treat-them>

50. Practitioner and Program Data. Accessed March 8, 2021.
<https://www.samhsa.gov/medication-assisted-treatment/practitioner-resources/DATA-program-data>
51. Kleinman RA. Comparison of Driving Times to Opioid Treatment Programs and Pharmacies in the US. *JAMA Psychiatry*. 2020;77(11):1163. doi:10.1001/jamapsychiatry.2020.1624
52. Doernberg M, Krawczyk N, Agus D, Fingerhood M. Demystifying buprenorphine misuse: Has fear of diversion gotten in the way of addressing the opioid crisis? *Substance Abuse*. 2019;40(2):148-153. doi:10.1080/08897077.2019.1572052
53. Winograd RP, Presnall N, Stringfellow E, et al. The case for a medication first approach to the treatment of opioid use disorder. *The American Journal of Drug and Alcohol Abuse*. 2019;45(4):333-340. doi:10.1080/00952990.2019.1605372
54. Sigmon SC, Ochalek TA, Meyer AC, et al. Interim Buprenorphine vs. Waiting List for Opioid Dependence. *New England Journal of Medicine*. 2016;375(25):2504-2505. doi:10.1056/NEJMc1610047
55. Oleskiewicz TN, Ochalek TA, Peck KR, Badger GJ, Sigmon SC. Within-subject evaluation of interim buprenorphine treatment during waitlist delays. *Drug and Alcohol Dependence*. 2021;220:108532. doi:10.1016/j.drugalcdep.2021.108532
56. Coon SA, Hill LG, Hutchison RW, et al. Mobilizing pharmacists to address the opioid crisis: A joint opinion of the ambulatory care and adult medicine practice and research networks of the American College of Clinical Pharmacy. *JACCP: JOURNAL OF THE AMERICAN COLLEGE OF CLINICAL PHARMACY*. 2020;3(8):1493-1513. doi:https://doi.org/10.1002/jac5.1331
57. Peckham AM, Ball J, Colvard MD, et al. Leveraging pharmacists to maintain and extend buprenorphine supply for opioid use disorder amid COVID-19 pandemic. *American Journal of Health-System Pharmacy*. 2021;78(7):613-618. doi:10.1093/ajhp/zxab003
58. Expand Pharmacists' Ability to Treat Opioid Addiction - ASHP. Accessed May 28, 2021.
<https://www.ashp.org/443/Advocacy-and-Issues/Whats-New/Opioid-Action>
59. DeRonne BM, Wong KR, Schultz E, Jones E, Krebs EE. Implementation of a pharmacist care manager model to expand availability of medications for opioid use disorder. *American Journal of Health-System Pharmacy*. 2021;78(4):354-359. doi:10.1093/ajhp/zxaa405
60. Calcaterra SL, Bach P, Chadi A, et al. Methadone Matters: What the United States Can Learn from the Global Effort to Treat Opioid Addiction. *J GEN INTERN MED*. 2019;34(6):1039-1042. doi:10.1007/s11606-018-4801-3
61. Joudrey PJ, Edelman EJ, Wang EA. Methadone for Opioid Use Disorder—Decades of Effectiveness but Still Miles Away in the US. *JAMA Psychiatry*. 2020;77(11):1105. doi:10.1001/jamapsychiatry.2020.1511

62. Collaborative Practice Agreements and Pharmacists' Patient Care Services: A Resource for Pharmacists. :8.
63. Provider Status for Pharmacists: It's About Time. Pharmacy Times. Accessed March 8, 2021. <https://www.pharmacytimes.com/view/provider-status-for-pharmacists-its-about-time>
64. More Flexible Methadone Access Should Continue Post-Pandemic. Accessed May 28, 2021. <https://pew.org/3emKNp0>
65. Freidson E. *Profession of Medicine: A Study of the Sociology of Applied Knowledge*. Reprint edition. University of Chicago Press; 1988.
66. Starr P. *The Social Transformation of American Medicine: The Rise Of A Sovereign Profession And The Making Of A Vast Industry*. Basic Books; 2008.
67. Zerbo E, Traba C, Matthew P, et al. DATA 2000 waiver training for medical students: Lessons learned from a medical school experience. *Subst Abus*. 2020;41(4):463-467. doi:10.1080/08897077.2019.1692323
68. Slavova S, Rock P, Bush HM, Quesinberry D, Walsh SL. Signal of increased opioid overdose during COVID-19 from emergency medical services data. *Drug and Alcohol Dependence*. 2020;214:108176. doi:10.1016/j.drugalcdep.2020.108176
69. A New Addiction Crisis: Treatment Centers Face Financial Collapse. NPR.org. Accessed March 8, 2021. <https://www.npr.org/sections/health-shots/2020/06/15/865006675/a-new-addiction-crisis-treatment-centers-face-financial-collapse>

Endnotes

ⁱ All names used in this article are pseudonyms to protect the participant's confidentiality.