

# Treating Opioid Use Disorder in General Medical Settings

Sarah E. Wakeman  
Josiah D. Rich  
*Editors*



Springer

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# Treating Opioid Use Disorder in General Medical Settings

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## Preface

This book is an attempt to demystify and encourage the treatment of opioid use disorder (OUD) in general medical settings, like any other health condition. This change is long overdue. For over a century, OUD has been perhaps the most stigmatized medical condition. During a raging overdose crisis which claimed a predicted 95,230 lives in the past 12-months alone, a majority due to opioids, integration of OUD treatment in medical settings remains uncommon [1, 2]. In the midst of the COVID-19 pandemic, deaths from opioid overdose are accelerating with disproportionately high overdose mortality among Black and Latinx/Hispanic people serving as a brutal reminder of the health harms of structural racism. Despite being exceedingly treatable, the diagnosis and treatment of OUD still is largely not taught in medical school and residency training.

Even when effective treatment for this deadly disease with methadone was discovered in the pivotal studies by Dole and Nyswander in the 1960s and 1970s, it was relegated to tightly federally regulated programs, mostly disconnected from the rest of medicine [3]. These regulations have left methadone treatment siloed and tethered by strict program-centered requirements, which limits access for patients. Patients who are treated in opioid treatment programs also live with the implied or real threat of having their medication dose decreased or stopped to enforce compliance with whatever the program needs, as opposed to what the patient thinks they need. This presents a tremendous challenge to developing and nurturing a therapeutic alliance. With the Drug Addiction Treatment Act (DATA) of 2000, passed nearly 2 decades ago, an opportunity to incorporate treatment for OUD in general medical settings was created through obtaining an X-waiver to prescribe buprenorphine. However, despite free trainings and efforts to incentivize participation, this opt-in model of providing OUD treatment has resulted in less than 7 percent of prescribers waived, leaving huge swaths of the country without access to effective office-based OUD care [4, 5]. In addition, racism has deeply impacted access to buprenorphine, which has been more available to white, commercially insured individuals and in segregated, white neighborhoods [6–9].

With the National Academy of Medicine report on OUD, it is now abundantly clear that a dramatic expansion of capacity of high-quality care using medication treatment for OUD is needed to address the overdose crisis [10]. The lack of understanding of OUD by most medical practitioners left us, and ultimately, our patients, vulnerable to the current overdose crisis. The onset of the first wave of three waves

of the current overdose crisis (prescription opioids to heroin to illicit synthetic fentanyl) was driven by the greed and deception of certain members of the pharmaceutical industry coinciding with a rising tide of social despair. The healthcare system not only enabled this disaster, but also turned its back on patients who developed OUD and on those with chronic pain. Our lack of collective understanding of OUD also fueled often inadequate approaches to address the crisis, relying heavily on racist models of interdiction and criminalization, abruptly denying care to patients with pain, and continuing to funnel patients into an ineffective and costly model of OUD care centered on harmful short-term “detox” and omnipresent calls for more residential treatment beds, with little to no evidence to justify this approach.

This book is an attempt to shine a light on these fallacies and provide the tools to expand OUD treatment into general medical settings where it belongs. People living with OUD are patients with a complex health condition akin to many others managed effectively in medical settings, and we never should have sent them away to another disconnected part of the healthcare system in the first place. The best way to both deal with this current deadly overdose epidemic and to minimize the risk of future crises is to embrace and disseminate care for people with OUD in general medical settings. Addressing the overdose crisis effectively is also not possible without acknowledging and repairing the harms caused by the racist “War on Drugs” which resulted in mass incarceration of Black and Latinx/Hispanic Americans long before the softer, gentler narrative of treatment began to emerge as more white, middle class communities were impacted.

This book begins with three chapters on care models, followed by seven chapters on different care settings and strategies, a chapter on training, and the final four chapters addressing additional unique aspects of caring for people with OUD. The first chapter is an eloquent description of patient centered care and why and how it should be used in the treatment of patients with OUD. Chapter 2 offers an analysis of the historic context of the currently available medication treatments for OUD and the different regulatory structures which sheds light on the various players and divergent interests that have shaped the current treatment environment. Chapter 3 describes the latest evidence for integrated treatment models in primary care. The fourth chapter highlights how to capitalize on the all too often missed “reachable moment” of hospitalization to diagnose, engage, and link to medication treatment for OUD care after discharge. Emergency Departments can serve as a primary linkage site for initiation of treatment for OUD, described in the fifth chapter, which includes strategies to identify, assess, initiate medication, refer, and provide harm reduction and pain management for people with OUD. Because of our drug policies, many individuals with OUD experience criminal legal system involvement and incarceration. Chapter 6 describes the current state of OUD treatment in corrections, the need for advocacy for expanded treatment and linkage post incarceration, and ideally reducing criminal legal involvement through decriminalization of substance use and expanding access to quality treatment with medications for OUD. Chapter 7 describes the use of Project ECHO in detail as a novel model of care expansion for OUD care. Chapter 8 expands the discussion of care of people with OUD to include interprofessional teams. It describes a successful inpatient

consult team model that uses a range of disciplines to offer patients a holistic treatment approach that addresses the biological, psychological, and social components of addiction. Recovery coaches, described in Chapter 9, are an exciting addition to the range of options for recovery support, and are a promising innovative intervention that can be integrated into the medical team. Chapter 10 provides a detailed description of harm reduction strategies that should be incorporated as a critical component of care for people with OUD. Training the next generation of care providers is critical to the long-term success of treatment for people with OUD. Chapter 11 articulates how this can be done at each level of medical education. Chapter 12 makes the strong case for “reverse integration,” that is, incorporating comprehensive medical care into opioid treatment programs to improve outcomes and patient satisfaction while reducing healthcare costs. Racial equity is a pervasive challenge in the field of addiction treatment. Chapter 13 articulates a race equity framework tailored to treatment for OUD. Chapter 14 explores the unique challenges of caring for pregnant and post-partum people with OUD, and the critical need to align public health and policies with the evidence and turn back a disturbing trend towards punitive approaches. Lastly, chapter 15 offers the patient perspective from two experienced journalists, themselves people with a history of addiction, weaving lived experience with a nuanced review of the evidence supporting medication treatment for OUD and not short-term “detoxification” or psychosocial treatment alone.

Among the many tragic tolls of the COVID-19 pandemic has been the marked increase in opioid overdoses in much of the country. This underscores the tremendous need to treat OUD in general medical settings as quickly and effectively as possible. This work is feasible, and importantly it is also deeply rewarding. As internists who are also addiction specialists, we both treat a range of illnesses across the spectrum of medicine. Hands down the most rewarding and among the most treatable conditions we care for is OUD. We hope that this book will provide a roadmap as readers experience the privilege and reward of providing this lifesaving medical care.

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## References

1. Centers for Disease Control. Provisional drug overdose death counts. Available online at <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm> Accessed on 26 August 2021.
2. Agency for Healthcare Research and Quality. Blacks Experiencing fast-rising rates of overdose deaths involving synthetic opioids other than methadone. 2020. Publication No. 20-0032-1.
3. Dole VP, Nyswander ME. Methadone maintenance treatment. A ten-year perspective. *JAMA*. 1976;235(19):2117–9. PMID: 946538.
4. Ghertner R. U.S. trends in the supply of providers with a waiver to prescribe buprenorphine for opioid use disorder in 2016 and 2018. *Drug Alcohol Depend*. 2019 Nov 1;204:107527. <https://doi.org/10.1016/j.drugalcdep.2019.06.029>. Epub 2019 Aug 30. PMID: 31525570.
5. Langabeer JR, Stotts AL, Cortez A, Tortolero G, Champagne-Langabeer T. Geographic proximity to buprenorphine treatment providers in the U.S. *Drug Alcohol Depend*. 2020;213:108131. <https://doi.org/10.1016/j.drugalcdep.2020.108131>. Epub ahead of print. PMID: 32599495.
6. Lagisetty PA, Ross R, Bohnert A, Clay M, Maust DT. Buprenorphine treatment divide by race/ethnicity and payment. *JAMA Psychiat*. 2019;76:979–81.
7. Goedel WC, Shapiro A, Cerdá M, Tsai JW, Hadland SE, Marshall BDL. Association of racial/ethnic segregation with treatment capacity for opioid use disorder in counties in the United States. *JAMA Netw Open*. 2020;3(4):e203711.
8. Hansen H, Siegel C, Wanderling J, DiRocco D. Buprenorphine and methadone treatment for opioid dependence by income, ethnicity and race of neighborhoods in New York City. *Drug Alcohol Depend*. 2016;164:14–21. <https://doi.org/10.1016/j.drugalcdep.2016.03.028>. Epub 2016 May 4. PMID: 27179822; PMCID: PMC5539992.
9. Hatcher AE, Mendoza S, Hansen H. At the expense of a life: race, class, and the meaning of Buprenorphine in Pharmaceuticalized “Care”. *Subst Use Misuse*. 2018;53(2):301–310. <https://doi.org/10.1080/10826084.2017.1385633>. Epub 2017 Nov 21. PMID: 29161171; PMCID: PMC5901978.
10. National Academies of Sciences, Engineering, and Medicine. 2019. Medications for opioid use disorder save lives. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25310>.

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# Contents

- 1 Patient-Centered Care in Opioid Use Disorder Treatment. . . . . 1**  
Darius A. Rastegar
- 2 Opioid Use Disorder Pharmacotherapy: A Historical Perspective on  
How We Practice, and Why . . . . . 9**  
Walter Ling and Steve Shoptaw
- 3 Principles of Integrating Opioid Use Disorder  
Treatment in Primary Care . . . . . 23**  
Tiffany Lu and Chinazo Cunningham
- 4 Reachable Moment: Hospital-Based Interventions . . . . . 43**  
Zoe M. Weinstein and Honora Englander
- 5 Emergency Department Treatment of Opioid Use Disorder . . . . . 57**  
Elizabeth A. Samuels, Edouard Coupet Jr, and Gail D’Onofrio
- 6 Treating Opioid Use Disorder in Correctional Settings . . . . . 77**  
Rachel Simon, Josiah D. Rich, and Sarah E. Wakeman
- 7 Use of the ECHO Model to Support Treatment of  
Opioid Use Disorder . . . . . 91**  
Miriam Komaromy, Judy Bartlett, and Prabhat Chand
- 8 The Power of Team: Introduction to Interprofessional  
Care Teams in Opioid Use Disorder Treatment. . . . . 105**  
Christopher J. Shaw, Jacqueline Bango, Stephen Hayward Keizer,  
and Madeleine Sedlack
- 9 Integrating Recovery Coaches into Primary Care Teams. . . . . 119**  
Martha T. Kane and Windia Rodriguez
- 10 Supporting Any Positive Change: Harm Reduction as an  
Integral Pillar of Opioid Use Disorder Treatment. . . . . 143**  
Kimberly L. Sue

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|           |                                                                                                        |            |
|-----------|--------------------------------------------------------------------------------------------------------|------------|
| <b>11</b> | <b>Training Medical Students, Residents, and Fellows in<br/>Opioid Use Disorder Treatment. . . . .</b> | <b>161</b> |
|           | Kenneth L. Morford, Caroline G. Falker, and Jeanette M. Tetrault                                       |            |
| <b>12</b> | <b>Bringing Primary Care to Opioid Treatment Programs. . . . .</b>                                     | <b>173</b> |
|           | Yngvild Olsen and Angela Mason                                                                         |            |
| <b>13</b> | <b>Incorporating a Race Equity Framework into<br/>Opioid Use Disorder Treatment. . . . .</b>           | <b>189</b> |
|           | Ayana Jordan, Caridad Ponce Martinez, and Jessica Isom                                                 |            |
| <b>14</b> | <b>Caring for Pregnant and Parenting Women with<br/>Opioid Use Disorder . . . . .</b>                  | <b>203</b> |
|           | Mishka Terplan, Caitlin E. Martin, Ashish Premkumar,<br>and Elizabeth E. Krans                         |            |
| <b>15</b> | <b>Care for Opioid Use Disorder in Medical Settings:<br/>Lived Experiences . . . . .</b>               | <b>223</b> |
|           | Zachary Siegel and Maia Szalavitz                                                                      |            |
|           | <b>Index. . . . .</b>                                                                                  | <b>239</b> |

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# Patient-Centered Care in Opioid Use Disorder Treatment

1

Darius A. Rastegar

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## What Is Patient-Centered Care?

Patient-centered care has been defined as “care that is respectful of and responsive to individual patient preferences, needs and values” [1]. Patient-centered (or “person-centered”) care contrasts with the traditional biomedical model of “doctor-centered” or “illness-centered” care that has defined the practice of medicine. The main objectives of patient-centered care are effective communication, partnership, and health promotion [2]. Although a universally accepted definition is lacking, characteristics of patient-centered care include [3, 4] the following:

1. Respect for patient’s values, preferences, beliefs, and expressed needs – that is, recognizing the patient as a person.
2. Shared power and responsibility between patient and clinician.
3. Care that is accessible, continuous, coordinated, and integrated.
4. High-quality information and education for patient and family.
5. Focus on physical comfort and emotional support.
6. Involvement of friends and family when appropriate.

---

## Why Provide Patient-Centered Care?

Providing patient-centered care upholds the fundamental bioethical principles of autonomy, beneficence, and justice. Simply put, patient-centered care is the right thing to do. Therefore, patient-centered care should be the default care model even if it has not been shown to improve outcomes; the burden of proof should be on

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approaches that are not patient centered. Nonetheless, studies suggest that patient-centered care has many benefits. Behaviors consistent with patient-centered care are associated with increased trust in physicians [5] and with improved health outcomes and reduced health care utilization [6]. Moreover, patient-centered attitudes are associated with a reduction in ethnic and racial disparities in care [7] and hold the promise of doing the same for individuals with substance use disorders (SUD).

### How Can Patient-Centered Care Be Applied to Treatment of Individuals with Opioid Use Disorder?

Traditionally, treatment for SUD has been provided by “programs” that are dedicated to addiction treatment and separate from the rest of the health care system. Table 1.1 provides examples of the ways in which “program-centered care” differs from “patient-centered care.”

Historically, addiction treatment has been “program-centered” in that individuals with SUD were expected to seek help in locations dedicated to addiction treatment, demonstrate that they were “ready” for treatment, and agree to the rules and expectations of the program. The treatment itself was generally provided in a group setting with a predetermined treatment protocol and duration of treatment. Failure to follow rules or meet expectations was met with sanctions and could lead to discharge from the program. The goal of treatment was abstinence from illicit substances and, in many programs, abstinence from all drugs – including opioid agonist

**Table 1.1** Comparing program-centered with patient-centered care for substance use disorders

| Program-centered                                                                           | Patient-centered                                                                        |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <i>Treatment initiation</i>                                                                |                                                                                         |
| Patients must approach the program and prove that they are ready.                          | Patients are offered help in a variety of health care and community settings.           |
| Patients may be forced into treatment.                                                     | Treatment is voluntary.                                                                 |
| Patients must agree to rules and expectations prior to starting treatment.                 | There are no pre-conditions for starting treatment.                                     |
| <i>Treatment duration</i>                                                                  |                                                                                         |
| Patients complete treatment after a pre-determined time period or course of treatment.     | There is no pre-determined duration of treatment or endpoint.                           |
| Patients are discharged from the program if they do not follow rules or meet expectations. | Patients are provided help for as long as they need it.                                 |
| <i>Treatment approach</i>                                                                  |                                                                                         |
| Treatment is provided in a group setting with a fixed approach.                            | Treatment plan is tailored to patients’ needs.                                          |
| Treatment entails confrontation and breaking down resistance.                              | Treatment is supportive and encourages positive changes.                                |
| <i>Treatment outcomes</i>                                                                  |                                                                                         |
| Treatment goals are set by the program.                                                    | Treatment goals are flexible and decided upon in collaboration with patients.           |
| Focus is on drug abstinence.                                                               | Focus is on risk reduction, health promotion, improved functioning and quality of life. |

therapy. In these settings, patients would “graduate” once they completed the predetermined duration or stages of treatment.

There are a number of ways in which the principles of patient-centered care can be applied to the treatment of individuals with opioid use disorder (OUD). The first is to make treatment easier to access – this can be done by offering treatment in a variety of settings, including community settings and in a range of health care settings from emergency departments to inpatient units and primary care – that is, “meeting patients where they are” rather than waiting for them to find and engage with specialized treatment programs. The treatment of OUD in hospitals, emergency departments, correctional settings, and general medical care are discussed further in Chaps. 4, 5, 6, and 15.

Another important principle of patient-centered care is that it is voluntary. There is a long tradition of forcing or coercing individuals into drug treatment, with pressure being applied by the criminal legal system, social service agencies, employers, and family members [8]. “Drug courts” are the coercive instrument that has been most studied; while mandated drug treatment is arguably more humane than incarceration and evidence suggests court-mandated treatment is marginally better than incarceration (or probation) with no treatment [9], evidence for long-term impact is lacking [10, 11]. Notably, individuals involved in drug courts are often there because of drug use or possession and this approach has never been scientifically compared with voluntary, supportive, patient-centered treatment. Moreover, coercive treatment is fundamentally at odds with a patient-centered approach and there is some evidence that it may be harmful, particularly when individuals are forced into “drug-free” treatment [12].

OUD treatment can also become more patient-centered by providing help and support for affected individuals without preconditions – that is, “low-threshold treatment” [13]. This would include offering harm reduction services, including syringe distribution/exchange, safe consumption sites, naloxone distribution, and pre-exposure prophylaxis for HIV [14]. Harm reduction is covered in more detail in Chap. 10. Another example of low-threshold treatment is opioid agonist treatment on demand (sometimes referred to as “medication first approach”), where opioid agonist medication is provided without preconditions and is only discontinued if there is evidence of harm [15]. Studies have shown that providing methadone [16] or buprenorphine [17] without any additional services dramatically reduces illicit drug use. Moreover, forcing individuals receiving methadone or buprenorphine into counseling and other forms of treatment (i.e., using the medication to “assist with treatment”) has not been evident to provide significant benefits [18] and may be harmful if it creates a barrier to receiving life-saving medication [19].

Patient-centered care focuses on outcomes that are important to the patient. Traditionally, drug treatment programs have focused on abstinence from illicit substances and sometimes even certain prescribed medications (i.e., buprenorphine and methadone) as their primary treatment goal. In these settings, any use was labeled as a set back and “relapse.” For patients with OUD, patient-centered care would mean developing flexible goals that are decided upon in collaboration with patients and focus on risk reduction, health promotion, improved functioning, and quality of

life rather than drug use. As noted earlier, harm-reduction measures take this approach.

A final patient-centered measure is to use “person-first language” when speaking to and about individuals with SUD. For example, referring to a “person with opioid use disorder” instead of “opioid addict” or “opioid abuser.” Studies have shown that patients with opioid use disorder prefer person-first language when referring to them [20] and that using person-first language helps to mitigate explicit and implicit biases against this stigmatized population [21].

---

## Why Provide Patient-Centered Care for Opioid Use Disorder?

As noted earlier, the primary reason to provide patient-centered care is because it is the right thing to do. Patient-centered care upholds the ethical principles of autonomy (allowing patients to choose), beneficence (offering any and all treatments that would help), and justice (treating patients with substance use disorder like other patients).

Patient-centered care should be provided because this is what patients want. In a study of patients with OUD receiving buprenorphine in a primary care setting, patients reported valuing a number of patient-centered aspects of care, including physicians adopting an accepting rather than confrontational attitude, flexibility in decision-making, and personalized treatment plans and goals developed in collaboration with the patient [22]. In another study of patients receiving buprenorphine in a primary care setting, fewer required visits and briefer counseling was associated with increased satisfaction with care [23].

There is also some evidence that patient-centered care can improve outcomes for individuals with OUD. It is difficult to summarize the evidence for (or against) patient-centered care because of the heterogeneous interventions that can be considered patient-centered but are not generally labeled as “patient-centered care.” As noted earlier, harm reduction strategies are a form of patient-centered care and there is abundant evidence that shows that these strategies help reduce the risks associated with substance use. In addition, developing a therapeutic alliance is a measure that is consistent with patient-centered care; a 2005 review concluded that therapeutic alliance early in treatment is associated with improved engagement and retention in SUD treatment [24]. Flexibility in treatment is also consistent with the patient-centered approach; studies in methadone maintenance programs found that more flexibility in dosing was associated with decreased illicit drug use [25] and improved retention [26]. A 2019 systematic review of patient satisfaction and experience indicators of patient-centered care for people receiving specialist treatment for SUD concluded that “there appeared to be a significant positive relationship between indicators of patient-centered care and improved outcomes” [27].

In one of the few studies that explicitly set out to investigate patient-centered care for OUD, subjects in two methadone programs were randomly assigned to “patient-centered care” or “treatment as usual” [28]. Individuals assigned to

patient-centered care were not required to attend counseling sessions and their counselors served solely as therapists and did not enforce rules. The primary outcome was opioid-positive urine drug tests at 12-month follow-up. There was no significant difference in the primary outcome measure; however, two secondary measures were significantly different: Quality of Life Global score was higher among those assigned to patient-centered care (mean of 3.7 vs. 3.5) and they received significantly lower methadone doses (mean of 71 vs. 77 mg). A limitation of this study was that the “treatment as usual” was more patient-centered than traditional programs and did not discharge individuals from treatment if they did not adhere to rules and expectations. Although this was a “negative” study, the primary outcome was not patient-centered and one could argue that quality of life would have been a more appropriate outcome to focus on. Moreover, this study shows that requiring attendance at counseling sessions and having counselors enforce rules does not improve outcomes.

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## **Are There Any Risks or Limitations to Patient-Centered Care for Opioid Use Disorder Treatment?**

Addiction treatment has traditionally relied on the carrot and stick approach of providing rewards for desirable behavior and sanctions for undesirable behavior. An example of the “stick” approach are drug courts, which was discussed earlier. There is some evidence that behavioral approaches such as providing the “carrot” of positive incentives (i.e., contingency management) are modestly effective at reaching certain goals (usually abstinence from a specific drug) in the short term (while incentives are offered), but evidence for long-term effectiveness is lacking [29]. The behavioral approach runs contrary to patient-centered care principles. Despite this, it is possible that some individuals respond to behavioral approaches and a patient-centered approach focusing on shared decision-making may not be as effective at reaching certain goals. Research comparing these approaches is needed to answer this question. There may be a middle ground of “nudges” toward positive changes through measures such as scheduling more frequent visits when an individual is not doing well. However, more drastic or coercive measures such as discharge from treatment or discontinuation of pharmacotherapy are more likely to be harmful than beneficial.

Patient-centered care and the pursuit of shared decision-making may lead to an attitude where “the patient is always right” and where practitioners acquiesce to patient demands, even those that are potentially harmful. There are situations where a clinician should do what is best for the patient even if this is contrary to the patient’s requests or demands. For example, an individual who is being prescribed opioids for chronic pain may wish to continue receiving these medications after an overdose, but giving in to this demand could put them at risk for further harm and it may be more appropriate to offer a safer alternative such as buprenorphine, even if they are resistant to making this change.

Another potential barrier to patient-centered care when applied to SUD treatment is that decision-making and judgment may be impaired when an individual is intoxicated, withdrawing, or having a strong craving for a substance. This does not absolve clinicians from providing compassionate and effective care, but makes the process of shared decision-making more difficult.

Patient-centered care fits best in the primary care setting where a practitioner is dealing one-on-one with a patient and the care plan can be open-ended and tailored to the patient's values and needs. It is more difficult to apply this approach in the group setting and sometimes the needs of the group may take priority over the needs of an individual. For example, if an individual in a recovery house is using illicit substances, making that person leave would not necessarily be the best for that individual, but may help others in the house maintain a therapeutic community. Despite these competing demands, there are ways in which group treatment can be made more flexible and patient centered.

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## Conclusion

In summary, health care is moving toward a patient-centered approach. Patient-centered care carries the promise that treatment of individuals with OUD can become more compassionate, ethical, and effective. Treatment of SUD in general has lagged behind this trend and there is a need for efforts to provide treatment that is more patient centered and for evidence to support this transformation.

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## References

1. National Research Council. Crossing the quality chasm: a new health system for the 21st century. Washington, DC: National Academies Press; 2001.
2. Constad MK, MacDeermid JC, Bello-Haas VD, Law M. Scoping review of patient-centered care approaches in healthcare. *BMC Health Serv Res.* 2014;14:271.
3. Mead N, Bower P. Patient-centeredness: a conceptual framework and review of the empirical literature. *Soc Sci Med.* 2000;51:1087–110.
4. Barry MJ, Edgman-Levitan S. Shared decision making – the pinnacle of patient-centered care. *N Engl J Med.* 2012;366:780–1.
5. Fiscella K, Meldrum S, Franks P, et al. Patient trust: is it related to patient-centered behavior of primary care physicians? *Med Care.* 2004;42:1049–55.
6. Stewart M, Brown JB, Donner A, et al. The impact of patient-centered care on outcomes. *J Fam Pract.* 2000;49:796–804.
7. Beach MC, Rosner M, Cooper LA, Duggan PS, Shatzer J. Can patient-centered attitudes reduce racial and ethnic disparities in care? *Acad Med.* 2007;82:193–8.
8. Wild TC. Social control and coercion in addiction treatment: towards evidence-based policy and practice. *Addiction.* 2006;101:40–9.
9. Gottfredson DC, Kearley BW, Najaka SS, Rocha CM. The Baltimore City Drug Treatment Court: 3-year self-report outcome study. *Eval Rev.* 2005;29:42–64.

10. Wittouck C, Dekkers A, DeRuyver B, et al. The impact of drug treatment courts on recovery: a systematic review. *ScientificWorldJournal*. 2013;2013:493679.
11. Kearley BW, Cosgrove JA, Wimberly AS, Gottfredson DC. The impact of drug court participation on mortality: 15-year outcomes from a randomized controlled trial. *J Subst Abuse Treat*. 2019;105:12–8.
12. Rafful C, Orozco R, Rangel G, et al. Increased non-fatal overdose risk associated with involuntary drug treatment in a longitudinal study with people who inject drugs. *Addiction*. 2018;113:1056–63.
13. Snow RL, Simon RE, Jack HE, et al. Patient experiences with a transitional, low-threshold clinic for the treatment of substance use disorder: a qualitative study of a bridge clinic. *J Subst Abuse Treat*. 2019;107:1–7.
14. Walley AY, Stancliff S, Perez-Urbano I. Harm reduction, overdose prevention, and addiction medicine. In: Miller SC, Fiellin DA, Rosenthal RN, Saitz R, editors. *The ASAM principles of addiction medicine*. 6th ed. Philadelphia: Wolters Kluwer; 2019. p. 473–81.
15. Winograd RP, Presnail N, Stringfellow E, et al. The case for a medication first approach to the treatment of opioid use disorder. *Am J Drug Alcohol Abuse*. 2019;45:333–40.
16. Schwartz RP, Highfield DA, Jaffe JH, et al. A randomized controlled trial of interim methadone maintenance. *Arch Gen Psychiatry*. 2006;63:102–9.
17. Sigmon SC, Ochalek TA, Meyer AC, et al. Interim buprenorphine vs. waiting list for opioid dependence. *N Engl J Med*. 2016;375:2504–5.
18. Amato L, Minozzi S, Davoli M, et al. Psychosocial combined with agonist maintenance treatments versus agonist maintenance treatments alone for opioid dependence. *Cochrane Database Syst Rev*. 2008;8(4):CD004147.
19. Bentzley BS, Barth KS, Back SE, Book SW. Discontinuation of buprenorphine maintenance therapy: perspectives and outcomes. *J Subst Abuse Treat*. 2015;52:48–57.
20. Pivovarova E, Stein MD. In their own words: language preferences of individuals who use heroin. *Addiction*. 2019;114:1785–90.
21. Ashford RD, Brown AM, Curtis B. Substance use, recovery, and linguistics: the impact of word choice on explicit and implicit bias. *Drug Alcohol Depend*. 2018;189:131–8.
22. Fox AD, Masyukova M, Cunningham CO. Optimizing psychosocial support during office-based buprenorphine treatment in primary care: patients' experiences and preferences. *Subst Abuse*. 2016;37:70–5.
23. Barry DT, Moore BA, Pantolon MV, et al. Patient satisfaction with primary care office-based buprenorphine/naloxone treatment. *J Gen Intern Med*. 2007;22:242–5.
24. Meier PS, Barrowclough C, Donmall MC. The role of the therapeutic alliance in the treatment of substance misuse: a critical review of the literature. *Addiction*. 2005;100:304–16.
25. Havassy B, Hargreaves WA, De Barros L. Self-regulation of dose in methadone maintenance with contingent privileges. *Addict Behav*. 1979;4:31–8.
26. White JM, Ryan CF, Ali RL. Improvements in retention rates and changes in client group with methadone maintenance streaming. *Drug Alcohol Rev*. 1996;15:83–8.
27. Davis EL, Kelly PJ, Deane FP, et al. The relationship between patient-centered care and outcomes in specialist drug and alcohol treatment: a systematic review. *Subst Abuse*. 2020;41:216–31.
28. Schwartz RP, Kelly SM, Mitchell SG, et al. Patient-centered methadone treatment: a randomized clinical trial. *Addiction*. 2016;112:454–64.
29. Ainscough TS, McNeill A, Strang J, Calder R, Brose LS. Contingency management interventions for non-prescribed drug use during treatment for opiate addiction: a systematic review and meta-analysis. *Drug Alcohol Depend*. 2017;178:318–39.



# Opioid Use Disorder Pharmacotherapy: A Historical Perspective on How We Practice, and Why

# 2

Walter Ling and Steve Shoptaw

Even if history doesn't repeat itself, those who ignore its lessons will still suffer.

—Mama Ling

## Introduction

The introduction of methadone maintenance treatment in the 1960s ushered in the modern era of pharmacotherapy for opioid use disorders (OUD) [1]. Four opioid-based medications have since been approved and marketed: methadone, L-alpha-acetylmethadol (LAAM), naltrexone, and buprenorphine [2]. LAAM is not currently available because the manufacturer has discontinued its supply; naltrexone is available in an oral and an injectable form; and buprenorphine is available in several buccal formulations, a subdermal implant, and several subcutaneous injections. In the United States, methadone's availability is limited to highly regulated specialized opioid treatment clinics. Therefore, the available medications for treatment of OUD in general medical settings in the US consist of two formulations of naltrexone and several formulations of buprenorphine. Still, since methadone had played a pivotal role in heralding in the era of modern opioid pharmacotherapy, and, more importantly, its historical evolution continues to determine how we practice OUD pharmacotherapy today, it is where our story begins. In addition, since we are concerned here primarily with the historical events that shaped our current practice, we will

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limit ourselves to providing only brief discussions of the clinical pharmacology of these medications, emphasizing those historical events that are relevant to our discussion.

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## Methadone

Invented by German scientists during World War II (WWII), methadone is a synthetic opioid analgesic with properties similar to morphine. It is quickly absorbed and slowly eliminated after oral administration, with an onset of action within 30 minutes of ingestion and an elimination half-life of about 18–24 hours. After WWII, the pharmaceutical company Eli-Lilly marketed methadone under the trade name Dolophine, used widely as an analgesic in clinical practice in this country.

In the late 1940s, studies at the Addiction Research Center in Lexington, Kentucky, found that methadone prevented symptoms of opioid withdrawal and reduced craving in people with opioid use disorder (OUD). Its long half-life allowed for once daily dosing. Tapering dosages of methadone were commonly given for the management of opioid withdrawal for “detoxification” [3], and by the 1950s, a small number of physicians in several cities were using methadone maintenance as an experimental treatment for heroin addiction, typically conducted under an Investigative New Drug (IND) application except for research work done in New York City by Dr. Vincent Dole and Dr. Marie Nyswander [1]. They were not the first to use methadone as a maintenance treatment, but they were the first to assert that treating heroin addiction with methadone was a legitimate medical practice and did not require an IND. Dole and Nyswander have been rightfully credited with the introduction of methadone maintenance treatment for OUD in this country, subsequently adopted by the rest of the world.

By the early 1970s, several thousand patients were receiving methadone maintenance treatment, notably in cities like New York and Chicago. Contrary to popular belief, many patients with OUD wanted treatment, and methadone stabilized their lives, allowing them to not use illicit opioids and other drugs, maintain employment, and stay out of jail—by not having to commit acquisitive, drug-related crimes. One such program was the State of Illinois’s Drug Treatment Program in Chicago led by Dr. Jerome Jaffe.

Meanwhile, a pilot program in the District of Columbia showed that methadone maintenance significantly reduced street crime [3–5]. That caught the attention of the Nixon administration.

In 1967, the “Summer of Love” when the media began to focus on the youth bohemian counterculture known as the hippy movement, was a period accompanied by significant drug use. In addition, this era was marked by the Vietnam War and the protests against it. In Vietnam, many American soldiers were using heroin and some developed addiction, creating problems when they returned to the US for the military and for the Veterans Affairs Service. The confluence of these events, corresponding with President Richard Nixon running for a second term promising to be a law and order president and to reduce crime, gave rise to the

idea to treat heroin addiction as a means of crime reduction. These political forces led to the establishment of the presidential-appointed cabinet-level Special Action Office for Drug Abuse Prevention (SAODAP), with Dr. Jerome Jaffe as its Director.

Under Dr. Jaffe's leadership, SAODAP initiated the US national methadone treatment system, which continues to be a major treatment modality for patients with OUD. SAODAP's effort has undoubtedly benefited more patients with OUD in the US and worldwide than any other single event in addiction medicine. Many countries adopted the US methadone treatment system and adapted it according to their own understanding and approach toward caring for people with OUD. In 2005, methadone was added to the World Health Organization's list of essential medications. Unlike the adaptations made to this model in other countries, the US system has unfortunately remained an entrenched industry. The history of SAODAP's effort to implement methadone treatment offers many lessons still relevant to our addiction medicine practice today.

From the beginning, methadone had its detractors: some in the recovery community, particularly those running therapeutic communities; law enforcement; and the medical establishment itself. When Jaffe proposed using methadone to treat heroin addiction, the National Institute of Mental Health did not support it. Instead, they wanted to expand psychotherapy, despite the fact that everybody interested in the subject already knew that psychotherapy did not work as treatment for OUD [3, 4].

With opposition coming from multiple quarters, SAODAP had to make compromises to protect methadone maintenance treatment so that it could thrive and be available to patients who wanted treatment. Up until that time, except for the Dole and Nyswander program, the administration of methadone to treat opioid addiction was mostly conducted under IND applications issued by the Food and Drug Administration (FDA), exempting the practice from policies of the Bureau of Narcotics, which considered it illegal to provide any opioid to people addicted to opioids.

Before 1970, the criteria for granting these INDs were rather loose, and in time concerns arose as to whether those applying were all legitimate addiction treatment researchers. Were some of them just money-making outfits exploiting patients? The major concerns were related to fears about the risk of methadone street diversion, accidental poisoning, and iatrogenic methadone addiction. Under mounting pressure from the community and Congress, the FDA proposed new rulings for issuance of INDs in 1970, imposing stringent requirements for treatment admission, limits on dosage, and duration of treatment. These presented serious barriers for patients with OUD seeking treatment.

Given the broader context at the time when SAODAP was proposing to expand methadone treatment throughout the country, it is not surprising that compromises were made just to garner support to move the project forward. Methadone clinics had to agree to urine testing and mandatory counseling that remain as required components of methadone treatment today. Dose limits on medications and limiting the length of treatment are still with us as well.

## Urine Drug Testing

The first large-scale urine drug testing was put in place to detect heroin use in soldiers returning from Vietnam; those who tested positive had to stay behind and undergo medically supervised withdrawal. When Jaffe first proposed the idea of using urine drug testing to reduce heroin use among servicemen in Vietnam, there was strong opposition. At a meeting at the Pentagon, the generals were adamant that forcing soldiers to provide a urine sample was out of the question. Dr. Jaffe was reported to have said in response, “I cannot believe that the mightiest army on earth can’t get its troops to piss in a bottle.” That seemed to have won the argument [5, p. 110]. Testing demonstrated that the rate of heroin addiction among the soldiers was much lower (3–4%) than then believed (10–15%), and that many who dabbled in it could stop when they had reasons to do so.

Clinical urine drug testing began as an assurance to prevent methadone street diversion that could lead to accidental overdoses deaths in people not tolerant to opioids or be sold on the street and theoretically create new OUD. As time would show, accidental overdose rarely occurs, and virtually all the diverted street methadone was bought by people with OUD who wouldn’t, and shouldn’t, have had to do so if treatment had been made, as Jaffe had hoped, available to all those who wanted it. Iatrogenic methadone addiction simply did not exist. The two major arguments for drug testing did not stand the test of time.

Unfortunately, these findings over time did not make the treatment system rethink and limit drug testing to what would be clinically useful. Instead, urine drug testing has grown into a thriving industry of its own. More and more drugs are added to the list tested with little clinical considerations. Test results are often used to blame and punish patients instead of helping them. Billions are spent with little added therapeutic value except to enrich the industry. This is not to say that drug testing is useless, but rather that its practice today is largely unjustified and unhelpful.

## Required Counseling

Counseling by counselors who themselves had a history of addiction was based on the premise that counselors’ shared life experiences could uniquely help patients enter into recovery. This hypothesis was never tested or proven true, despite becoming a routine component of treatment. Instead of serving to extend patient care, counseling grew into a parallel service often in conflict with the physician’s treatment goals. It also, unfortunately, provided the treatment industry excuses to reduce physician’s time with patients by delegating the major therapeutic responsibility to the counsellor. Clinic operators constantly tried to negotiate less required physician time by promoting counselor time. Thus, the counselor became the patient’s gatekeeper of physician access and often exercised control over patients, to their detriment. In a clinical study of buprenorphine plus counselling, most patients rated medications as very helpful, yet only 1% of patients rated counselling as helpful [6]. Yet counseling remains a required part of treatment today. No other medical

practice has such a requirement. Although psychosocial treatments can be helpful, they are most so when they are in service to patients—not just filling a requirement to access medication [6, 7]. Many people in methadone who are recovering from OUD need help with health care, with getting (or keeping) a job, with housing instability, and with managing other life stressors like the burden of correctional supervision. For the most part, these are not what most counselling provides. So, most patients who have jobs and are engaging in prosocial lives experience the requirement for counseling in methadone treatment as a burden—not unlike that experienced by individuals without OUD when dropping their kids off for daycare who are mandated to have a session with the daycare administrator.

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## **LAAM; Levo-alpha-acetylmethadol**

L-alpha-acetylmethadol (LAAM), a congener of methadone with similar opioid activities, is often mistakenly called “long-acting methadone” (LAAM) by methadone patients because the terms sound alike. Its similarity to methadone, however, is far more complex than being clinically “long-acting.” LAAM is a prodrug that is metabolized in the liver into two active metabolites, Nor-LAAM and Di-nor-LAAM, each more potent than the parent compound. Together, a single dose of LAAM can provide an opioid effect similar to methadone that lasts up to 48 hours, about twice that of methadone. It can thus be administered three times a week, with a higher dose on Friday, to achieve similar clinical effects of daily doses of methadone.

LAAM also was synthesized by German scientists during WW II, and became available to US investigators after the War. Early work by Fraser and colleagues had shown that LAAM possesses opioid analgesic properties and can alleviate the opioid abstinence syndrome and block the effects of subsequently administered opioids. Research in its analgesic use was abandoned, however, when it was discovered that the required repeated dosing for analgesia led to accumulation of metabolites that caused respiratory depression, nausea, vomiting, mental confusion, and, in some cases, coma [8, 9].

In the 1960s, a number of studies showed that LAAM could be a treatment for heroin addiction. Dr. Jaffe was familiar with this work when he was appointed to head SAODAP. He decided to roll out methadone immediately to meet the clinical demands and to undertake careful research to show LAAM’s safety and efficacy, and then to bring on LAAM to replace or augment methadone. Since LAAM can be given three times a week, it would alleviate the patient’s need to attend clinic daily for a prolonged period of time, at least for months, during a period critical to their rehabilitation [10–12].

SAODAP supported a number of large-scale clinical studies of LAAM’s safety and efficacy compared to methadone, notably the multicenter VA Cooperative Study [13], the SAODAP Cooperative Studies [14, 15], the Goldstein Cohort Study [16], and others. By 1980, sufficient data had been accumulated to consider application of a New Drug Application. Unfortunately, the first application was deemed insufficient because of technical issues.