Office Based Opioid Treatment (OBOT)—the Workforce Treating Opioid Use Disorder

Lisa de Saxe Zerden, PhD, Brianna Lombardi, MSW, Erica Richman, PhD, Anjalee Sharma, MSW

Research brief, March 2020

Abstract

Background: The current opioid crisis in the United States is a recognized national health emergency. The number of opioid-related deaths has more than quadrupled since 1999. Over 42,000 individuals died from opioid use in 2016 alone. To combat this epidemic, primary care providers are expanding clients' access to care, particularly to medication-assisted treatment (MAT) programs, also referred to as office-based opioid treatment (OBOT). As primary care office-based treatment expands, understanding the workforce needed to effectively deploy this model of care is critical.

Objective: This exploratory analysis had three primary research questions:

1. Which professionals comprise the workforce that provides MAT in primary care?
2. How do OBOT teams communicate about patient care?
3. What are the behavioral components of MAT provided in primary care settings?

Methods: We conducted 20-minute interviews with professionals working in expert OBOT teams across the United States and Health and Human Services regions. Twelve experts from 11 outpatient primary care clinics in several Northeast, mid-Atlantic, Southeast and Midwest states agreed to interviews.

Results & discussion: While every OBOT team must include a DEA-waivered medical provider and there were a few consistent trends in roles, we also found significant variation in team composition and workforce. The primary team components we found were prescriber, behavioral health provider, MAT registry coordinator, other team members and operation staff. Every team had a team member serving as behavioral health provider, most often a social worker (MSW/ LCSW). The most commonly employed psychosocial interventions echoed Fraser and colleagues' (2018) identification of three primary roles performed by social workers on integrated behavioral health teams: individual behavioral health treatment (i.e., motivational interviewing, CBT), case management and referral services. For OBOT teams to function most effectively, purposeful, structured communication and defined meeting times can help ensure well-coordinated team-based MAT from the various professions included on the OBOT team.

Policy implications: As the treatment needs of people with OUD continue to warrant national attention, efforts will need to be targeted toward developing the diverse, team-based workforce needed to address the complexities of collaborative OUD treatment. Improving MAT across primary care settings will require workforce researchers, health systems and educators to recognize how the services provided by different behavioral health providers contribute individually and collectively to comprehensive OBOT practices. Effectively incorporating behavioral health providers' skill sets will require greater understanding of the unique contributions of various types of behavioral health providers, from peer-support specialists to LCSWs.

Office Based Opioid Treatment (OBOT)—the Workforce Treating Opioid Use Disorder

Research brief, March 2020

Background

The current opioid crisis in the United States is a recognized national health emergency. The number of opioid-related deaths has more than quadrupled since 1999 (Centers for Disease Control and Prevention, 2018). Over 42,000 individuals died from opioid use in 2016 alone (Seth, Scholl, Rudd, & Bacon, 2018). In 2017, nearly two million nonelderly adults in the U.S. had an opioid use disorder (OUD) and of these, only 34% received any type of treatment within the past year (Orgera & Tolbert, 2019). Given the increasing severity of OUD, increasing access to effective treatment options remains a critical priority (Knudsen, Abraham, & Roman, 2011; Orgera & Tolbert, 2019).

To combat this epidemic, primary care providers are expanding clients' access to care, particularly to medication-assisted treatment (MAT) programs (Korthuis et al., 2017; Lagisetty et al., 2017; SAMHSA, 2015). Sometimes referred to as office-based opioid treatment (OBOT), primary care MAT programs follow a team-based approach to address opioid use disorder, and include a combination of medication (i.e., Buprenorphine) and behavioral treatments (Lagisetty et al., 2017). Expanding treatment into primary care settings presents a key opportunity to introduce evidence-informed approaches to a setting previously underutilized in the treatment of OUD. Treatment in this setting will potentially engage populations (especially individuals at higher risk for opioid misuse) who may not otherwise receive treatment, potentially improving retention in treatment and promoting positive health outcomes (Ashford et al., 2019).

As office-based treatment expands, understanding the workforce needed to effectively deploy this model of care is critical. Treatment teams are required to include a medical provider with a Drug Enforcement Administration (DEA) waiver to prescribe and monitor MAT (CDC, 2018). However, the optimal or even required mix of professionals involved in providing care in these settings remains unclear (Zerden, Guan, Lombardi, Garcia-Rico, & Sharma, in press). Understanding the skill sets necessary for an effective OBOT workforce, particularly those addressing the psychosocial components of MAT in primary care, can help inform employers and educators of the workforce needed to effectively support OBOT models.

To describe the workforce commonly deployed on MAT teams in primary care and identify the workforce providing the behavioral health components of OBOT, this exploratory analysis had three primary research questions:

1) Which professionals comprise the workforce that provides MAT in primary care?
2) How do OBOT teams communicate about patient care?

3) What are the behavioral components of MAT provided in primary care settings?

Methods

This qualitative study conducted interviews with professionals working in expert OBOT teams across the United States and Health and Human Services regions. Twelve experts from 11 outpatient primary care clinics in several Northeast, mid-Atlantic, Southeast, and Midwest states agreed to interviews. Each interview lasted approximately 20 minutes, and all respondents received a gift card for their participation.

We employed a two-pronged strategy to recruit a convenience sample of expert key informants: first, by conducting purposive sampling by identifying OBOT teams via the academic literature; and second, by using the research team's existing relationships with researchers and practitioners in the field. We developed a semi-structured interview guide that focused on questions in five areas:

1) Title and role of interviewee
2) Composition of OBOT team
3) Communication patterns among team members
4) Psychosocial components of MAT offered and by whom and
5) General patient demographics of the OBOT practice in question.

All interviews were recorded and transcribed with the participant's consent (University of North Carolina at Chapel Hill IRB# 18-2579). Transcripts were checked against audio recordings for accuracy and completeness. We conducted our analyses through an iterative process that followed traditional procedures for qualitative research based in grounded theory (Glaser & Strauss, 1967). This process involved repeated readings of transcripts, thematic code list development, data coding to identify patterns relevant to study objectives, and use of the constant comparison method (Glaser & Strauss, 1967).

Results

Of the 11 clinics represented within the sample, clinical settings varied. Five sites were Federally Qualified Health Centers (FQHCs), four were primary care sites within an academic medical center system, one was an outpatient behavioral health clinic associated with an academic medical center system, and one was a non-teaching public hospital (see Table 1). Interviewees reported a mix of degrees and professions: Five physicians who were trained in family medicine and addiction medicine, five master's-level social workers (MSWs), one clinical psychologist (PhD), and one licensed professional counselor (LPC).

Team Composition and Workforce. Four primary roles within OBOT teams were identified from key informant interviews: Prescriber, Behavioral Health Care Provider, MAT Registry Coordinator, and "Other" Assisting Team Members or Operational Staff (see Figure 1).

Prescribers. The role of the MAT prescriber was clearly identified in all clinics. Ten of the 11 sites had physician prescribers. Of these, six sites had physicians as the sole DEA waivered provider; four sites had physician, nurse practitioners (NPs) and physician assistants (PAs) as the waivered team of DEA waivered prescribers. In one site, the only waivered prescriber was a NP and did not include

Table 1: Workforce Involved in Providing MAT					
Clinic (State)	**Setting/Type of Practice**	**Waivered Providers**	**Behavioral Health Provider***	**MAT Registry Coordinator***	**Other Medical Providers and Support Staff**
1 (NC)	Federally Qualified Health Center	MD	Social Worker (LCSW)	Behavioral Health Coordinator	Medical Assistant
2 (CT)	Primary care located within an academic medical center	MD	Social Worker (LCSW) / Psychologist (PhD)	Co-Medical Director (MD)	Administration / RN / Medical Assistant / MD Resident
3 (NC)	Federally Qualified Health Center	MD	Social Worker (LCSW-A, LCAS)** / Therapist (MA)	Social Worker (LCSW-A, LCAS) / Therapist (MA)	Administration
4 (NY)	Primary care located within an academic medical system	MD / NP / PA	Social Worker (LCSW) / Psychologist (PhD) / Psychiatrist (MD) /Community Health Worker	Treatment Coordinator	Chronic Care Nurse / Pharmacist
5 (NY)	Outpatient clinics associated within a public hospital (non-academic)	MD	None	Physician (MD)	Patient Care Asst / Addiction Counselor / Smoking Cessation Counselor / Medical Assistant
6 (PA)	Primary care located in academic medical center	MD	Social Worker (LCSW)	Medical Secretary / Nurse Coordinator	Peer Navigator / Medical Assistant
7 (PA)	Primary care associated with an academic medical center	MD	Social Worker (LCSW) / Psychologist (PhD) / Psychological Liaison	Psychological Liaison	Administration / Licensed Practical Nurse / Resident / Medical Assistant
8 (CO)	Federally Qualified Health Center	NP	Therapist (LPC)	Nurse Care Manager	None
9 (CO)	Federally Qualified Health Center	MD / NP	Social Worker (LCSW)	Director (PhD)	None
10 (WV)	Outpatient behavioral health clinic associated with academic health system	MD / NP	Social Worker (LCSW) / Therapist (LPC) / Case Manager	Case Manager	Medical Assistant
11 (CA)	Federally Qualified Health Center	MD / NP / PA	Recovery Support Counselor (degree unknown) / Case Manager	Program Manager	None

*Degree indicated if known **Licensed Clinical Addiction Specialist

other types of providers (see Table 1).

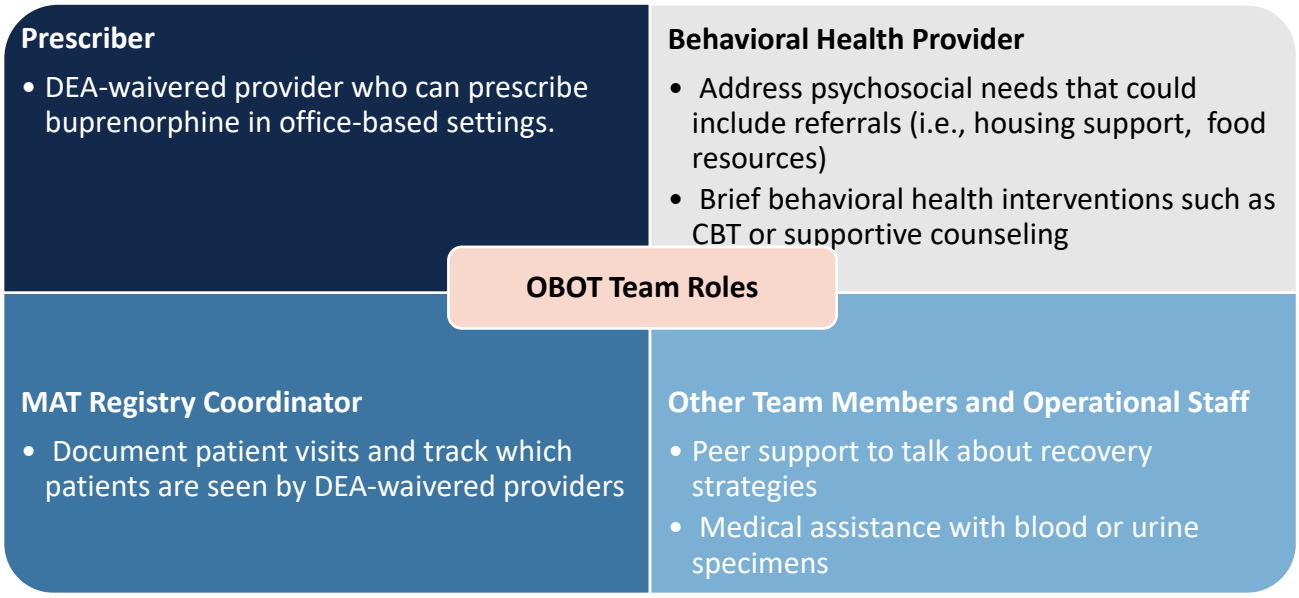
Behavioral Health Providers. In all 11 clinics, the OBOT teams included a team member serving as the behavioral health provider. Social workers (MSW/LCSWs) were the most common type of behavioral health provider, followed by psychologists (PhD), counselors (LPC), addictions counselors (including one smoking cessation specialist), and a peer navigator (for whom no educational background/training information was available). Team members who delivered individual and group behavioral health treatments were most often social workers (MSW/LCSW), psychologists (PhD), and counselors (LPC), with one recovery support Counselor (no educational qualification specified) serving in this capacity. Beyond leading clinical interventions, behavioral health providers also addressed patients' psychosocial needs, often by referring patients to additional resources and coordinating their care. The providers performing psychosocial support and referral tasks were most often social workers,

case managers, and nurse care managers (see Table 2).

MAT Registry Coordinators. To comply with the DEA waiver regulations required to dispense MAT, a regularly updated registry of patients is required. Those responsible for maintaining this registry typically had a job titles such as program manager, nurse coordinator, treatment coordinator, patient coordinator, or behavioral health coordinator. At times the MAT registry coordinator also performed the role of behavioral health provider, highlighting the fact that in some OBOT settings providers performed multiple roles concurrently.

Other Team Members & Operational Staff. Many teams included medical assistants to aid the primary medical providers with blood draws, urinalysis, and other medical aspects of a patient's OBOT visit. Two teams described working with a pharmacist to dispense buprenorphine and other medications that patients needed during their office visits, and one team used peer navigators to help acclimate patients to their treatment

Figure 1. *Four primary roles comprising the OBOT team and examples of services they provide.*



processes. Other providers mentioned in the interviews included a medical secretary and general administrator roles (e.g., front desk staff). However, the degree or educational background for these roles could not be determined (see Table 1).

Team Variation and Psychosocial Treatment Availability. Teams typically included individuals in each of the four roles but some teams only included a prescriber, a behavioral health provider, and a MAT registry coordinator. Of the teams described, physicians were the most common DEA-waivered provider (10 of 11 clinics), licensed clinical social workers were the most common behavioral health provider (9 of 11 clinics), and medical assistants were most likely to serve as the other types of providers or operational support staff (6 of 11 clinics). MAT registry coordinators were inconsistent both in job titles and degrees (see Table 1).

OBOT clinics offering therapeutic behavioral interventions like brief cognitive behavioral therapy (CBT) or dialectical behavior therapy (DBT) were more likely to employ multiple behavioral health providers. Most clinics employed social workers who were all clinically licensed clinical social workers (LCSW). LCSWs were primarily responsible for conducting individual therapy, referring patients to community recovery programs, or providing case management services including assistance with housing, insurance, or crisis situations. Other behavioral health providers were most likely to be PhD-trained psychologists and LPCs. One site had no designated behavioral health provider within the clinic. In this case, the prescriber referred patients to behavioral health providers outside the OBOT clinic who worked within their larger health system.

Behavioral Health Components of MAT in OBOT settings. The behavioral health components of MAT were operationalized differently across sites and included both individual and group treatments, referrals, and case management services (see Table 2). All practices utilized evidence-based individual therapeutic interventions such as brief cognitive behavioral

Table 2. *Behavioral Health Components of MAT.*

Type of Intervention	No. Practices Using
Individual brief therapy/treatment	11
Cognitive behavioral therapy	6
Motivational interviewing	6
Dialectical behavioral therapy	4
Brief therapy	4
Other (ex: Seeking Safety, ACT)	7
Referrals	9
Case/Care management	7
Group treatment	4

therapy (CBT) and motivational interviewing (MI), as well as components of other therapeutic models like acceptance and commitment therapy (ACT) or Seeking Safety (see Table 2). Nine clinics referred patients to resources or treatments (e.g., Narcotics Anonymous/Alcoholics Anonymous, community housing), transportation support services, or additional psychiatric services.

MAT Team-Based Communication. Teams communicated and coordinated patient care in several formal and informal ways. In almost all interviews, teams used electronic health records (EHR) to communicate with other providers about patient care and follow-up treatments, and as a mechanism for messaging team members in between established meetings. However, EHRs were not used as the primary tracking mechanism for MAT-enrolled patients. Eight of the 12 interviewees reported using a MAT-specific registry to track patient care and appointments. This allowed teams to understand patients' participation in MAT treatments and frequency of their appointments and follow-up treatments. Beyond the EHR, interviewees reported frequently using e-mail (outside of the EHR) to communicate with team members. Many found e-mail helpful because team members were often not available to communicate at the same time. For example, some team members worked on certain days and did not always overlap at the same clinic time. Other types of communication included text-messaging on HIPAA-compliant cell phones and the use of a shared space on a server to store notes accessible to all team members. In-person communication occurred with varying frequency, ranging from daily (as needed) to weekly/monthly structured team meetings. Occasionally, in-person opportunities for team-based communication included monthly addictions-focused grand-rounds for all members of the team, not just medical providers, and an addictions-focused journal group, also for all providers involved in care, to further understand MAT services in OBOT settings.

Discussion and Implications

This study focused on understanding the services and workforce configurations of practices providing OBOT. In general, the four most common primary roles of OBOT team members this study identified are consistent with those identified by other studies that have reviewed MAT-models for OUD in primary care OBOT settings (Korthuis et al., 2017). In this sample, the prescribers were consistently physicians. However, this may be a function of NP and PA state scope of practice restrictions that allow prescribing authority (Muench et al., 2019; Spetz et al., 2019). For example, recent research found lower levels of NP participation as part of the OUD treatment workforce associated with scope of practice regulations (Spetz et al., 2019). Within this study, findings shed insight into the behavioral health roles which were fulfilled by a mix of social workers, nurses and other behavioral health professionals. While our study identified 10 out of 11 physician prescribers, again a function of state scope of practice regulations, the behavioral health interventions are likely to vary by provider type and the interventions that are deployed.

A systematic review by Dugosh and colleagues' (2016) noted a dearth of empirical research on the optimal psychosocial interventions to be used in conjunction with MAT practices—an area that requires further investigation.

While every OBOT team must include a DEA-waivered medical provider, there is less regulation or guidance concerning the types of behavioral health providers necessary to optimize OBOT treatment. This study suggests that social workers might be the professionals most commonly working in these roles in OBOT settings. Their ability to provide discrete behavioral health and evidence-based interventions, care management and referrals to community resources (Fraser et al., 2018) makes social workers an ideal fit for OBOT teams (Lombardi et al., 2019; Zerden et al., in press). Other than the inclusion of medical assistants and, occasionally, nurses, the practices examined in this study did not demonstrate a uniform workforce configuration.

Content and Scope of Services Provided. There was significant variation in the disciplinary background of behavioral health providers working on OBOT teams. Including a range of behavioral health professionals on OBOT teams can be a strength, particularly in behavioral health shortage areas (Health Resources and Services Administration, 2019), but it might also be a function of practice size or alignment with an academic health center wherein staffing and resources could include more integrated team members. However, the kinds of addiction treatment and recovery programs likely differ based on the legal scope of practice and training of different types of behavioral health providers. For example, the "person-in-environment" perspective of social work is essential for understanding the systems affecting a person's life, and will likely influence which interventions are implemented and how. A psychologist might be more likely to understand an individual's addiction through the lens of their personal history, whereas a peer provider without this academic background might mobilize shared life experiences to assist patients in their addiction treatment and recovery program. The variation in behavioral health and psychosocial providers likely indicates that other members on OBOT teams are not aware of the full scope of practices deployed either by the non-prescribing providers they work with or within the health systems providing MAT in primary care settings.

Understanding one's own scope of practice and those of one's treatment team is an important component of team cohesion and effectiveness. Role confusion and a lack of knowledge about others team members' professional scope of practice has been shown to impede efficient teamwork (Buche et al., 2017; Brown, Crawford, & Darongkamas, 2000). Professionals might not efficiently delegate tasks among or communicate with team members who have roles they do not understand (Ladden et al., 2013). Increased team communication and clear distinction of roles and responsibilities can improve OBOT care and have been identified as part of behavioral health best practice (Buche et al., 2017).

Additionally, providers' negative perceptions associated with OUD treatment may present as a barrier to MAT implementation (Atterman et al., 2018; Livingston, Adams, Jordan, MacMillian, & Herring, 2018). Previous studies have identified medical providers reluctance to treat OUD patients to many factors, including a lack of expertise in addiction, a lack of allied-health professionals to assist with care, and patient-related factors that cause care providers to presume that this population is too complicated or difficult to work

with (Kennedy-Hendricks et al., 2016; Livingston et al., 2018). The diverse skill sets of MAT prescribers, behavioral health providers, and other OBOT team members overall can help offset some of these barriers identified in treating people with OUD. If OBOT teams were required to be structured in a way that included the diverse skills of multiple team members and clarified these team members' distinct roles in the treatment program, it might improve MAT uptake in OBOT settings and mitigate provider burnout.

Role Flexibility. Findings suggest there is a great deal of role flexibility (skill-mix configuration) among members of OBOT teams. Many team members were often responsible for multiple tasks associated with MAT and OUD care. For example, in two clinics the physician prescribers also directed their clinic and were heavily involved in maintaining and coordinating the patient registry. In two clinics, social workers served as the MAT registry coordinators and provided specific behavioral health and psychosocial interventions. It is also important to note that not every provider was working in the OBOT unit in a full-time capacity and might have had other clinical duties with patients not receiving MAT. Nonetheless, our study shows that OBOT team configuration is important when considering the federal regulations governing patient panels and the number of MAT patients that can be seen. For example, currently, first-time DEA-waivered providers can have a maximum of 30 patients during the first year and, after submitting a second request, can treat up to 100 patients annually in subsequent years (SAMHSA, 2018). Given this more than three-fold increase in year two, having a team member who can track patients receiving MAT and associated follow-up needs is one way to ensure compliance with regulations and size limits associated with having a DEA-waiver.

Assessing how many of the DEA-waivered providers work in conjunction with behavioral health providers can be an important indicator of how many OBOT practices provide comprehensive MAT that includes behavioral health. As the number of DEA-waivered providers increases, they will likely need additional behavioral health professionals to assist with a higher volume of patients to meet their needs for sustained recovery. Given that the number of patients a first-time DEA-waivered physician can manage goes from 30 to 100 patients in their second year, and subsequently up to a maximum of 275 patients annual (U.S. Department of Health and Human Services, 2016), the number and type of team members to support additional MAT patients will also need to be scaled accordingly. However, it is important to note that these patient increases are set for physicians but do not apply to NPs and PAs (Barnett, Lee, & Frank). Future work to align behavioral health workforce training and job placement with DEA-waivered providers will help ensure that clinics are optimally staffed with providers for various roles, and with diverse skill sets that will enable these clinics to more holistically address the needs of patients with OUD.

Interprofessional Education and Communication. Socializing the future workforce to understand and treat addiction can occur through interprofessional education (IPE) that breaks down rigid disciplinary boundaries and trains various providers together to address substance use and addiction. Specifically, this

should include more intentional course work and clinical rotations that include a combination of medical students, residents, and other medical providers such as NPs, or PAs, in tandem with behavioral health providers such as social workers, counselors, and psychology trainees. Slowly, models to include opioid-related curricula are being introduced into medical education (Wallace, Warrier, Kahn, Welsh & Fischer, 2019), but more specific efforts to incorporate this content with an interprofessional lens are necessary. The education of medical and behavioral health providers could occur simultaneously in order to show emerging providers how essential collaborative team-based care and communication skills are to OBOT teams' functioning and the efficient delivery of MAT services. Further, as the number of addiction medicine fellowships continues to increase, partnerships with behavioral health programs at the same institutions could increase opportunities for collaborative learning and fill training gaps within medical training curricula (Schwartz, Frank, Welsh, Blankenship, & DeJong, 2018).

Study Limitations

Our findings are conditioned on several study limitations. First, this study did not assess whether each clinic enrolled the maximum number of patients they could see annually based on federal regulations; this would be valuable for future research to consider. Our findings are also not broadly generalizable as the study sample only included interviewees from 11 clinics across seven states, and most were located in urban areas in eastern cities in the United States. Additionally, data were based on individual interviewee perspectives, and the details they provided about their OBOT workforces were not verified by a second source.

Conclusions

As OBOT expands in primary care settings across the United States, a better understanding of the OBOT workforce required as well as currently deployed is critical. This study identified the roles and functions within the local workforce providing MAT in outpatient primary care (particularly the psychosocial components of treatment) and to understand how OBOT teams communicate. Key informant interviews identified four primary roles that comprise the OBOT team: The Prescriber, the Behavioral Health Provider, the Patient Coordinator, and "Other" Team Members or Operational Staff. A diverse array of behavioral health providers work as members of OBOT teams providing multiple types of behavioral health or psychosocial interventions. The most commonly employed psychosocial interventions echoed Fraser and colleagues' (2018) identification of three primary roles performed by social workers on integrated behavioral health teams: individual behavioral health treatment (i.e., motivational interviewing, CBT), case management and referral services. For OBOT teams to function most effectively, purposeful, structured communication and defined meeting times can help ensure well-coordinated team-based MAT from the various professions included on the OBOT team.

As the treatment needs of people with OUD continue to warrant national attention, efforts will need to be targeted toward developing the diverse, team-based workforce needed to address the complexities of collaborative OUD treatment.

Improving MAT across primary care settings will require workforce researchers, health systems and educators to recognize how the services provided by different behavioral health providers contribute individually and collectively to comprehensive OBOT practices. Effectively incorporating behavioral health providers' skill sets will require greater understanding of the unique contributions of various types of behavioral health providers, from peer-support specialists to LCSWs. The literature on the preferred psychosocial components of MAT remain inconclusive regarding who is responsible for their delivery and requires further examination. Future research on workforce needs, team effectiveness and types of behavioral health interventions is necessary, particularly concerning the psychosocial components of MAT in primary care. Clarifying these issues could provide much-needed guidance in meeting the complex needs of patients with OUD and helping reverse national trends.

References

1. Ashford, R. D., Brown, A. M., McDaniel, J., Neasbitt, J., Sobora, C., Riley, R., Weinstein, L., Laxton, A., Kunzleman, J., Kampman, K., & Curtis, B. (2019). Responding to the opioid and overdose crisis with innovative services: The recovery community center office-based opioid treatment (RCC-OBOT) model. Addictive Behaviors, 98(106031), 1-8. https://doi.org/10.1016/j.addbeh.2019.106031
2. Atterman J., Dormond, M., Schreiber, J., Haffajee, R., Andraka-Christou, B., Singer, P., Haworth, S. M., Foney, D. M., & Pozuelos, S., (2018). Behavioral Health Workforce Implementation Challenges Related to Medication Assisted Treatment. Ann Arbor, MI: Behavioral Health Workforce Research Center. Retrieved from http://www.behavioralhealthworkforce.org/wp-content/uploads/2018/04/Y2FA3P2_MAT-Full-Report.pdf
3. Barnett, M. L., Lee, D. & Frank, R. G. (2019). In rural areas, Buprenorphine waiver adoption since 2017 driven by nurse practitioners and physician assistants. Health Affairs, 38(12), 2048-2056.
4. Brown, B., Crawford, P., & Darongkamas, J. (2000). Blurred roles and permeable boundaries: The experience of multidisciplinary working in community mental health. Health & Social Care in the Community, 8(6), 425-435. https://doi.org/10.1046/j.1365-2524.2000.00268.x
5. Buche, J., Singer, P., Grazier, K., King, E., Maniere, E., & Beck, A. (2017). Primary care and behavioral health workforce integration: Barriers and best practices. Behavioral Health Workforce Research Center, 1(1), 1-16.
6. Centers for Disease Control and Prevention. (2018). Drug overdose deaths. Retrieved from https://www.cdc.gov/drugoverdose/data/statedeaths.html
7. Dugosh, K., Abraham, A., Seymour, B., McLoyd, K., Chalk, M., & Festinger, D. (2016). A systematic review on the use of psychosocial interventions in conjunction with medications for the treatment of opioid addiction. Journal of Addiction Medicine, 10(2), 93-103. https://doi.org/10.1097/adm.0000000000000193
8. Glaser, B. G., & Strauss, A. L. (1967). The discovery of grounded theory. New York, NY: Aldine.
9. Health Resources and Services Administration [HRSA]. (2019). Find Shortage Areas. Retrieved from https://data.hrsa.gov/
10. Kennedy-Hendricks, A., Busch, S. H., McGinty, E. E., Bachhuber, M. A., Niederdeppe, J., Gollust, S. E., & Barry, C. L. (2016). Primary care physicians' perspectives on the prescription opioid epidemic. Drug and Alcohol Dependence, 165, 61-70.

https://doi.org/10.1016/j.drugalcdep.2016.05.010
11. Knudsen, H. K., Abraham, A. J., & Roman, P. M. (2011). Adoption and implementation of medications in addiction treatment programs. Journal of Addiction Medicine, 5(1), 21-27 https://doi.org/10.1097/adm.0b013e3181d41ddb
12. Korthuis, P. T., McCarty, D., Weimer, M., Bougatsos, C., Blazina, I., Zakher, B., Grusing, S., Devine, B., & Chou, R. (2017). Primary care–based models for the treatment of opioid use disorder: A scoping review. Annals of Internal Medicine, 166, 268–278. https://doi.org/10.7326/M16-2149
13. Ladden, M. D., Bodenheimer, T., Fishman, N. W., Flinter, M., Hsu, C., Parchman, M., & Wagner, E. H. (2013). The emerging primary care workforce: Preliminary observations from the primary care team: Learning from effective ambulatory practices project. Academic Medicine, 88(12), 1830-1834. doi: 10.1097/ACM.0000000000000027
14. Lagisetty, P., Klasa, K., Bush, C., Heisler, M., Chopra, V., & Bohnert, A. (2017). Primary care models for treating opioid use disorders: What actually works? A systematic review. PloS one, 12(10), e0186315. https://doi.org/10.1371/journal.pone.0186315
15. Livingston, J. D., Adams, E., Jordan, M., MacMillan, Z., & Hering, R. (2018). Primary care physicians' views about prescribing methadone to treat opioid use disorder. Substance Use & Misuse, 53(2), 344-353.https://doi.org/10.1080/10826084.2017.1325376
16. Lombardi, B. M., Zerden, L. D. S., Guan, T., & Prentice, A. (2019). The role of social work in the opioid epidemic: office-based opioid treatment programs. Social Work in Health Care, 58(3), 339-344. https://doi.org/10.1080/00981389.2018.1564109
17. Orgera, K., & Tolbert, J. The opioid epidemic and Medicaid's role in facilitating access to treatment. Kaiser Family Foundation Issue Brief. Retrieved from: https://www.kff.org/medicaid/issue-brief/the-opioid-epidemic-and-medicaids-role-in-facilitating-access-to-treatment/
18. Muench, U., Spetz, J., Jura, M., Guo, C., Thomas, C., & Perloff, J. (2019). Opioid-prescribing outcomes of Medicare beneficiaries managed by nurse practitioners and physicians. Medical Care, 57(6), 482-489.
19. Schwartz, A. C., Frank, A., Welsh, J. W., Blankenship, K., & DeJong, S. M. (2018). Addictions training in general psychiatry training programs: Current gaps and barriers. Academic Psychiatry, 42(5), 642-647. https://doi.org/10.1007/s40596-018-0950-2
20. Seth, P., Scholl, L., Rudd, R. A., & Bacon, S. (2018). Overdose deaths involving opioids, cocaine, and psychostimulants—United States, 2015–2016. Morbidity and Mortality Weekly Report, 67(12), 349-358. https://doi.org/10.15585/mmwr.mm6712a1
21. Spetz, J., Toretsky, C., Chapman, S., Phoenix, B., & Tierney, M. (2019). Nurse practitioner and physician assistant waivers to prescribe Buprenorphine and state scope of practice restrictions. JAMA, 321(14), 1407-1408.
22. Substance Abuse and Mental Health Services Administration. (2018). Buprenorphine Waiver Management. Retrieved from https://www.samhsa.gov/programs-campaigns/medication-assisted-treatment/training-materials-resources/buprenorphine-waiver
23. Substance Abuse and Mental Health Services Administration. (2018). Legislation, regulations, and guidelines. Retrieved from https://www.samhsa.gov/programs-campaigns/medication-assisted-treatment/legislation-regulations-guidelines#DATA-2000
24. Substance Abuse and Mental Health Services Administration. (2019). Apply for a Practitioner Waiver. Retrieved from https://www.samhsa.gov/medication-

assisted-treatment/buprenorphine-waiver-management/qualify-for-practitioner-waiver
25. U.S. Department of Health and Human Services (2016). Medication Assisted Treatment for Opioid Use Disorders Reporting Requirements. Retrieved from: https://src.bna.com/iRX
26. U.S. Department of Health and Human Services (2018). About the Epidemic. Retrieved from https://www.hhs.gov/opioids/about-the-epidemic/index.html
27. Wallace, P. M., Warrier, S., Kahn, M. J., Welsh, C., & Fischer, M. (2019). Developing an opioid curriculum for medical students: A consensus report from a national symposium. Substance abuse, 1-7. https://doi.org/10.1080/08897077.2019.1635971

Funding for Office Based Opioid Treatment (OBOT)—the Workforce Treating Opioid Use Disorder

This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under Cooperative Agreement U81HP26495-04-00, Health Workforce Research Centers Program. The information, content and conclusions are those of the authors and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.