


# What Contributes to Sustainability? Examining Access to Medications for Opioid Use Disorder in Low-Adopting VHA Facilities



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## ABSTRACT

**BACKGROUND:** Successful implementation can increase the availability of evidence-based treatments but continued patient access can be threatened if there is not deliberate focus on sustainment. Real-world examples are needed to elucidate contributors to sustainability.

**OBJECTIVE:** We examined sustainability of outcomes of a study which tested a 12-month external facilitation intervention. The study evaluated change in access to medications for opioid use disorder (MOUD) in Veterans Health Administration (VHA) facilities in the lowest quartile of MOUD prescribing.

**DESIGN:** Convergent mixed-methods design.

**PARTICIPANTS:** Thirty-nine providers and leaders from eight VHA facilities.

**APPROACH:** Thirty-minute post-implementation telephone interviews explored whether barriers identified pre-implementation were successfully addressed, the presence of any new challenges, helpfulness of external facilitation, and plans for sustaining MOUD access. Interviews were analyzed using a rapid turn-around approach. VHA administrative data were used to characterize the facilities and assess their ratio of patients with an OUD diagnosis receiving MOUD (MOUD/OUD ratio) at the end of a 9-month sustainability period.

**KEY RESULTS:** Commonly reported contributors to sustained MOUD access included national attention on the opioid epidemic, accountability created by study participation, culture shift in MOUD acceptability, leadership support, and plans to build on initial progress. Frequently reported barriers included staffing issues and lack of MOUD-devoted time; the need to overhaul existing policies, practices, and/or processes; and fear and anxiety about MOUD prescribing. All facilities either maintained MOUD/OUD ratio improvement ( $n=2$ ) or further improved ( $n=6$ ) at the end of sustainability.

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Facilities with the highest and lowest ratio at the end of sustainability used a team-based approach to MOUD delivery; however, organizational setting differences may have impacted overall MOUD access.

**CONCLUSIONS:** Ensuring stable and consistent staff, and sufficient time dedicated to MOUD are critical to sustaining access to evidence-based treatment in low-adopting facilities. This study highlights the importance of investing in local, system-level changes to improve and sustain access to effective treatments.

**KEY WORDS:** Sustainability; access; medications for opioid use disorder; Veterans

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Improving Veterans' access to quality health care is a priority for the Veterans Health Administration (VHA). This has been demonstrated through various initiatives aimed at increasing the availability of evidence-based treatments for pervasive conditions among Veterans.<sup>1</sup> To execute these initiatives, VHA has trained its workforce to deliver evidence-based treatments (EBTs), redesigned clinics, and/or provided resources such as consultants and clinician- and patient-facing materials.<sup>2</sup> This has led to availability of EBTs across VHA, but clinician adoption of and patient engagement in these treatments is not consistent—some VHA facilities have sustained high utilization of EBTs, while others continue to lag or struggle to maintain initial adoption and engagement. Thus, while initial implementation of EBTs in VHA has been successful, there is a significant threat to sustained, consistent access to these effective treatments.

Sustainability of innovations has been defined as the “general continuation and maintenance of a desirable feature of an initiative and its associated outcomes as well as the process

taken to adapt and develop in response to emerging needs of the system.”<sup>3</sup>(pg2) Sustainability of practices in healthcare settings remains an understudied area of implementation science, and has been touted as a critical gap in the opportunity to maximize research investments and healthcare outcomes associated with EBTs.<sup>4</sup> Based on a systematic review of existing sustainability theories and frameworks, Lennox and colleagues developed a comprehensive framework for understanding factors and processes that impact sustainability. The Consolidated Framework for Sustainability Constructs in Health Care brings together six constructs that have some evidence of impacting sustainability: initiative design and delivery; negotiating initiative processes; the people involved; resources; organizational setting; and external environment.<sup>3</sup> On the surface, these constructs do not necessarily differ from those within established implementation frameworks,<sup>5,6</sup> but there may be nuance in how they impact implementation versus sustainability. For example, the Integrated Promoting Action of Research Implementation in Health Services posits that successful implementation is the result of several factors including the innovation (i.e., the practice or program being implemented).<sup>5</sup> Relatedly, the Lennox framework says that the initiative’s design and delivery can also affect sustainability. In both frameworks, the practice/program is important, but perhaps the evidence for the practice/program is more important during implementation while other factors about the practice/program such as the ability to adapt it to a changing environment are more important to sustainability. Thus, frameworks, theories, and models are important starting points to growing knowledge in sustainability, but empirical investigations are needed to illuminate real-world examples of theorized contributors to sustainability.<sup>7</sup> In this study, we examined the sustainability of effective treatments for opioid use disorder.

The opioid epidemic remains one of the most challenging public health crises in the USA. VHA has initiated several efforts over the past decade to improve Veterans’ access to medication treatment for opioid use disorder (MOUD). MOUD, including formulations of buprenorphine, methadone, and naltrexone, is the most strongly recommended treatment for OUD.<sup>8</sup> MOUD is often delivered in specialized clinics (e.g., methadone clinics); however, formulations of buprenorphine and naltrexone can be provided in outpatient settings which can increase access to these medications. To capitalize on the opportunity to provide these life-saving medications, VHA has invested in promotional opportunities, webinars, provider listings, resource guides, and monitoring systems to increase the provision of MOUD in VHA outpatient settings.<sup>9</sup> However, despite these efforts, there remains vast variability in the uptake of MOUD across VHA facilities, with access as low as 1% among patients with OUD at some facilities.<sup>10</sup>

The Advancing Pharmacological Treatments for Opioid Use Disorder (ADaPT-OUD) study delivered external

facilitation, an evidence-based implementation strategy,<sup>11</sup> to improve the provision of MOUD in eight VHA facilities in the lowest quartile of MOUD/OUD performance among all VHA facilities. Prior to receiving external facilitation, leaders and clinicians at these facilities reported a perceived need for MOUD access, but also cited competing demands that interfere with increasing MOUD access and lack of clarity on the policies and processes with respect to prescribing MOUD outside of specialty substance use disorders clinics. Furthermore, they believed that rurality challenged the ability to hire and retain staff with the appropriate knowledge and credentials.<sup>12</sup> After 12 months, there was a significant increase in the ratio of patients with OUD receiving MOUD at the intervention facilities, rising from an average of 18% to 30%.<sup>11</sup> While the external facilitation intervention effectively improved MOUD access during the implementation phase, it was time-limited and facilities’ ability to sustain their gains without study resources was unknown. Sustainability of these improvements is critical given the negative sequelae associated with OUD. Guided by the Consolidated Framework for Sustainability Constructs in Health Care, we examined factors that could contribute to sustainability of MOUD in the ADaPT-OUD facilities and whether these factors were cross-cutting or unique to specific facilities based on their MOUD/OUD performance during the sustainability phase.

## METHODS

Details of the ADaPT-OUD study are described elsewhere,<sup>13</sup> but briefly, the eight low-adopting facilities first participated in pre-intervention interviews to assess local barriers/facilitators, formed a local implementation team, and received a site visit for action planning and training/education. Together, these activities informed tailoring of the external facilitation intervention. Following the site visit, facilities received 12 months of external facilitation which included monthly coaching calls, cross-facility quarterly community of practice calls, and as-needed consultation to work on goals set during the site visit.<sup>12</sup> Since a single VA facility is made up of one large medical center and smaller community-based outpatient clinics, goals could include changes within the medical center and/or outpatient clinics. After 12 months, each facility participated in an interpretive formative evaluation which included semi-structured interviews.<sup>14</sup> These interviews evaluated progress made over the 12 months, identified plans for sustainability, and explored factors that might impact those plans. In addition to the qualitative interviews, the MOUD/OUD ratio (ratio of patients with an OUD diagnosis receiving MOUD which includes formulations of buprenorphine, methadone, and injectable naltrexone) was assessed for each facility prior to the site visit (baseline), after the 12-month external facilitation (post-intervention),

and 9 months thereafter (sustainability). The current study, a part of the larger ADaPT-OD study, is a convergent mixed-methods study that merges facility-level quantitative data (MOUD/OD ratio) following the 9-month sustainability period with findings from post-intervention interviews with the goal of enhancing the interpretation of the quantitative sustainability outcomes.<sup>15</sup>

## Quantitative

**Sample** Details about site selection can be found elsewhere.<sup>13</sup> Briefly, eligible facilities ( $N=35$ ) were VHA facilities in the lowest quartile of performance on the MOUD/OD ratio ( $<21\%$  of patients with an OUD diagnosis receiving MOUD) as of October 2017. The 35 facilities were stratified based on their median MOUD/OD ratio (low  $<15\%$ ; high =  $15\text{--}21\%$ ) and their median number of patients who had a diagnosis of OUD but did not have an MOUD prescription (i.e., “actionable patients”; low  $<472$ ; high  $\geq 472$ ). These stratifications helped ensure that there was adequate variability and representation among the sites. Two sites were initially randomly selected from each of the four resulting strata. However, since participation was voluntary, if a facility declined participation, a replacement facility with similar MOUD/OD ratio and actionable patients was randomly selected. The remaining sites in that stratum were put in the control site pool to be matched to each of the two intervention sites in that stratum.

**Facility Characteristics** Using VHA administrative databases, the following variables were extracted to characterize the participating facilities—rurality and complexity. VHA categorizes rurality as urban, rural, highly rural, and insular island. Facility complexity is an indicator of the nature of services provided in VHA facilities. It is categorized into five groups (highest, high, mid-high, medium, and low) using national data regarding availability of complex clinical programs (e.g., ICU care, transplant, neurosurgery), location, research dollars, and workload (patient load and acuity).<sup>16</sup>

**Sustainability** To measure sustainability, we extracted the MOUD/OD ratio 9 months after each facility concluded 12 months of external facilitation. MOUD/OD ratio was

available on a quarterly basis through one of VA’s clinical support portals.

## Qualitative

Following the 12-month external facilitation intervention for the facility, clinicians who provided direct care to patients with OUD and leaders within the eight low-adopting VHA facilities were invited to participate in 30-minute, semi-structured, audio-recorded telephone interviews. Participants were invited for up to 2 months following the conclusion of external facilitation. Interviews were audio-recorded and professionally transcribed or recorded using detailed notes if the participant preferred. Interviews explored whether barriers identified during the pre-implementation phase were successfully addressed, the presence of any new challenges, helpfulness of the external facilitation intervention, and plans for sustaining MOUD provision following the withdrawal of study resources.

Interviews were analyzed using a rapid turn-around approach.<sup>17</sup> First, a templated summary form was created using the six constructs from the Consolidated Framework for Sustainability Constructs in Health Care framework (initiative design and delivery; negotiating initiative processes; the people involved; resources; organizational setting; and external environment) as well as a construct documenting Future Plans. We operationalized these constructs as shown in Table 1.

The qualitative team (PEA, NB, MEK, and HAS) then summarized two transcripts using the summary template and met to resolve discrepancies and revise the template. This process was repeated for two more transcripts and discussed until consensus was reached on the template. The remaining transcripts/notes were divided among the team such that each transcript/note was summarized by one member using the finalized summary template. The team met weekly to resolve questions. When all interviews were summarized, a facility-level matrix was created to summarize information by domain for each facility. The team completed a matrix for two facilities together to identify and resolve discrepancies. The remaining six facilities were then divided among individual staff to complete a matrix for each. When all matrices were complete, the team met to provide their impressions of the matrix contents to identify themes. All study

**Table 1** Examples of Constructs Used to Organize Interview Data

Construct	Example
External environment	Influence of outside forces; urgency; impact of innovation on other organizations
Future plans	Goals and plans for MOUD implementation after the ADaPT-OD project
Initiative design and delivery	Feedback about ADaPT-OD study intervention (e.g., site visits)
Negotiating initiative processes	Defining aims and shared vision; roles/responsibilities of those involved; incentives
Organizational setting	Ability to fit initiative into organization; competing priorities; organizational values
Resources	Funding; infrastructure like space; having enough staff; having enough time
The people involved	Leadership support; taking ownership of the initiative; patient preferences; staff involvement

**Table 2 Facility Characteristics**

% of patients with OUD receiving MOUD	No. of actionable patients	
	Low (< 472 patients)	High (≥ 472 patients)
Low (< 15%)	Facility A1	Facility C1
	Rural	Urban
	Low complexity*	Low complexity*
	Facility A2	Facility C2
High (15–21%)	Rural	Urban
	Medium complexity*	Low complexity*
	Facility B1	Facility D1
	Urban	Urban
	Low complexity*	Highest complexity*
	Facility B2	Facility D2
Urban	Urban	
Medium complexity*	High complexity*	

\*Complexity is categorized in 5 groups (highest, high, mid-high, medium, and low) based on volume of patients, number of high-risk patients, and presence of complex clinical programs and research/education infrastructure

procedures were approved by the VA Central Institutional Review Board.

## RESULTS

A full description of the eight low-performing facilities can be found in Hagedorn et al. (2022).<sup>11</sup> As shown in Table 2, the facilities were denoted by the four strata (A, B, C, and D). A quarter of the facilities ( $n=2$ ) were rural, and half were characterized as low complexity ( $n=4$ ).

All eight facilities improved or maintained initial gains in their MOUD/OD ratio between the conclusion of the 12-month external facilitation intervention and 9 months thereafter (i.e., the sustainability period; Table 3). Specifically, Facility B1 and Facility B2 stayed relatively the same during the sustainability period (< 1% improvement in MOUD/OD ratio) while all other sites had a 3% to 8.2% improvement during the same period.

Eighty-four providers and leaders from these facilities were invited to participate in an interview. Forty-six invitees (3–9 per facility) completed an interview, 31 were

not reached, and 7 refused. One interview included two participants for a total of 45 interviews. Six interviews (five from Facility D1 and one from Facility A2) were excluded from analysis due to lost recordings. Thirty-nine interviews were analyzed. Below, we present all themes by the Lennox et al. sustainability constructs, starting with themes that were common across the facilities. We then present themes based on the 9-month sustainability period MOUD/OD ratio.

## Common Themes

**External Environment/Initiative Design and Delivery** Many facilities reported that initial buy-in from their leaders and providers to increase access to MOUD was sparked by the national attention of the opioid epidemic and/or the ADAPT-OD project. One MOUD prescriber shared that the national attention “[let] leadership know this is something that needs to be supported for all the right reasons and holding them accountable.” Another leader shared that a cultural shift began after the ADAPT site visit:

It really help[ed] bring on board our primary care colleagues and helping them embrace that rather than having them view it as just a mental health issue. That was really tremendously helpful.

**Resources** Staffing issues were by far the most reported challenge to MOUD implementation and sustainability. This included turnover of staff and leaders, provider shortages (e.g., a clinic with just one prescriber), and position vacancies. One consequence of these issues was either more work for remaining providers or the facility not being able to meet the demand for MOUD (e.g., sole psychiatrist covering multiple locations). One prescriber encapsulated how staffing issues can have a significant impact:

Primary Care, I think, was really interested in doing it. I think Dr. XXXX was really, really gung-ho about doing it. The problem is he was pulled to be Acting Chief of Staff when we lost our Chief of Staff. He was a major one that would have pulled everyone together to get it goin’. After he was pulled, you didn’t have anybody really to push it...to develop it.

**Table 3 MOUD/OD Ratio at Post-intervention and 9-Month Sustainability**

Facility	Post-intervention MOUD/OD	Post-sustainability MOUD/OD	Quarter associated with post-sustainability MOUD/OD	Difference
A1	18.2%	23.7%	October to December 2019	+5.5%
A2	26.2%	34.4%	April to June 2020	+8.2%
B1	35.9%	36.5%	October to December 2019	+0.6%
B2	42.4%	42.6%	October to December 2020	+0.2%
C1	26.1%	29.8%	April to June 2020	+3.7%
C2	31.3%	34.3%	July to September 2020	+3.0%
D1	26.1%	32.5%	October to December 2020	+6.4%
D2	33.5%	37.1%	January to March 2021	+3.6%

Time was universally cited as a factor that impacted MOUD implementation and sustainability. Several facilities reported a lack of “protected” time that played out in various ways. Facilities reported that staffing issues sometimes meant that the remaining staff had to take on additional patients and/or duties. Lack of time was also defined as a lack of dedicated time for OUD/MOUD-related activities (e.g., trainings, meetings). Finally, there was also a perception that there was not enough time available to initiate patients on MOUD and conduct the follow-up monitoring. As one leader shared,

I think that it’s just providers think—like in regards to primary care doing inductions and starting patients on Suboxone—it’s still that unknown and the feeling that it would be too time consuming kind of thing.

Some facilities combated the time issue by carving out time for staff to provide MOUD and/or hold ongoing meetings focused on MOUD implementation. One facility explained,

we took a full time [primary care] provider and cut his panel in half and made him 50 percent pain provider. So, that’s probably number one, we start[ed] from primary care to make this work and gave him time to make it work.

**Negotiating Initiative Processes** Facilities reported a need to invest in widespread and/or large-scale changes to successfully implement and sustain MOUD. Specifically, facilities reported changes to clinic policies, practices, and processes. These included developing new standard operating procedures around MOUD provision, redefining MOUD eligibility, making MOUD services available same-day, defining/revising clinical roles to provide MOUD, and establishing local meetings focused on MOUD implementation. For example, one facility increased access to MOUD by changing their policy about which patients with OUD are eligible for buprenorphine/naloxone—i.e., removing exclusions such as polysubstance abuse, and requiring group therapy attendance. Another facility streamlined the induction process within their mental health clinic. At another facility, leadership incorporated routine mentorship to increase providers’ comfort with MOUD through twice-weekly local meetings in the Addictions Clinic that leveraged local expertise. Staff at another facility changed their admission process to their substance use disorder residential treatment program to increase MOUD availability.

There had to be some case reviews done before the patients got here. Because if they showed up for a weekend admission and no one was aware and there wasn’t someone on station that could prescribe and they didn’t have medications on hand, there was a concern about continuity of care for patients that were already on Suboxone.

**The People Involved** Fear and “anxiety” among the staff about providing MOUD were universally reported as significant barriers. Specifically, staff were concerned that buprenorphine/naloxone would be “dangerous” if patients were using other substances or that patients would divert or misuse MOUD. Some anxiety was relieved by changes described above (e.g., regular meetings with local MOUD experts) and/or gaining experience with MOUD. “*Seeing how it works and seeing the worst fears were not being realized*” helped to increase comfort with using MOUD. All facilities reported there was leadership support for MOUD implementation. Leaders demonstrated support by offering pay-for-performance incentives, sharing their personal expertise in MOUD with staff, blocking clinics for training, and reviewing and approving policies.

**Organizational Setting** All facilities reported they were participating in other initiatives simultaneously with ADaPT-OUD. For some, these initiatives were viewed as “complementary” to ADaPT-OUD and helped to support their work to increase access to MOUD. One facility also reported that since ADaPT-OUD included “personal[ized] engagement,” they needed to take advantage of the opportunity and “put more of our eggs in that basket” versus work on other initiatives. For others, it was sometimes difficult to distinguish the goals of the various initiatives and/or the other initiatives competed for staff time and financial resources. One facility shared about the challenge of managing simultaneous initiatives:

Oh we have significant competing matters... we are implementing [a new electronic medical record system] which has taken away probably 20 percent of our providers’ time...so it’s really pulled resources and then you know when you compete that with the budget constraints there just wasn’t the man power to move a lot of initiative forward.

All facilities also reported having an eye on the future of continued MOUD access improvement. Facilities reported that they wanted to continue to reduce barriers (e.g., fill staff vacancies, hire staff with MOUD experience) and/or improve upon positive changes made during ADaPT-OUD (e.g., expand clinic hours, increase MOUD provision in primary care clinics and community outpatient clinics, develop telehealth access to increase MOUD reach).

### Themes Based on Sustainability MOUD/OUD Ratio

There were no clear themes that differentiated facilities based on their level of change during the 9-month sustainability period (i.e., facilities with a < 1% improvement vs. those with larger improvements). However, there were differences between the facilities with the highest (42.6%; Facility B2) and the lowest (23.7%; Facility A1) MOUD/OUD ratio at the

end of the sustainability period. Specifically, changes made to clinical practices/processes (i.e., Negotiating Initiative Processes) differed. At Facility B2 (highest MOUD/OD), staff attributed much of its success to eliminating their “strict” MOUD eligibility criteria. As one provider explained,

And the numbers have increased, and I think that is mostly due to removing some of the barriers [in our acute psychiatric unit]. Especially like the barriers that we had in place prior. You know, the strict barriers that they had to do group...it was kinda like it was an old school way.

A1 (lowest MOUD/OD ratio) reported making significant adjustments to how they executed inductions. One prescriber explained that being a rural facility in a large state meant,

you have patients in remote areas [and] the weather is a big issue for patients in the winter to travel from big distances to come here. And the other is the fact that they have to be in withdraw[al] when they come so that is difficult for patients that are coming from six hours away.

To accommodate travel distance at this facility, patients had the option of completing their induction over a 3-day period and using lodging that was provided. Thus, at B2, changes may increase access for existing patients who were not considered MOUD-eligible while changes at A1 may assist new patients to present for MOUD.

Notably, there were also similarities between Facility B2 and Facility A1 in Negotiating Initiative Processes. Both reported that they revised clinical roles and took a “team approach” to MOUD provision. Namely, they brought together a multi-disciplinary team and each person had a role in treating patients with MOUD (e.g., nurse conducted follow-up contacts with patients; clinical pharmacist checked administrative data to track patients). In addition, in terms of The People Involved, both facilities reported that they had a key person who was significantly involved. At Facility A1, the Chief of Staff spent “multiple” hours during implementation building support and reviewing and approving policies needed to make MOUD available. At Facility B2, it was a prescriber whose

biggest role was assisting in the [substance abuse residential] unit and doing the inductions. ‘Cuz I felt very comfortable in doing that and the provider in the unit did not so I would go down there and I would help [them] do the Suboxone inductions and the notes.

## DISCUSSION

This study was a mixed-methods investigation of contributors to the sustainability of MOUD in eight VHA facilities that were in the lowest quartile of performance on the

MOUD/OD ratio prior to engaging in the ADaPT-OD implementation study. This study found that all eight facilities improved their MOUD/OD ratio during the 9-month sustainability period, with improvements ranging from 0.2 to 8.2%. The highest MOUD/OD ratio was 42.6% and the lowest was 23.7% at the end of the 9 months.

Commonly reported contributors to MOUD access were elicited from the interviews. The most prominent themes included the national attention on the opioid epidemic and the ADaPT-OD study led to accountability and culture shift with respect to MOUD provision; staffing issues and lack of time were the most challenging resource issues; facilities believed an overhaul in existing policies, practices, and/or processes was necessary; fear and anxiety about MOUD prescribing were prominent among staff while leaders showed their support in various ways; and an eye towards future plans included building on progress made during the ADaPT-OD study.

Overall, the facilities in this study made significant changes to increase and maintain higher levels of MOUD provision. These included challenging and changing long-standing beliefs about which patients are eligible for MOUD and creating teams that included multi-disciplinary personnel. This is an important finding because prior to the ADaPT-OD study, VHA has invested in several efforts to increase MOUD provision across its facilities. These generally included mandates, training, and resources. While these strategies have been successful implementation strategies at increasing the rate of MOUD provision within VHA nationally,<sup>18</sup> after a decade, 25% of VHA facilities had an MOUD/OD ratio less than 21%. This study suggests that the ADaPT-OD external facilitation provided the spark and mechanism for these low-adoption facilities to make necessary changes to practices, processes, or policies.

Staffing issues and time limitations were prominent barriers to sustainability in this study. Problems with staffing are considered a critical contributor to the inability to sustain healthcare practices, particularly since healthcare practices often include and/or depend on staff involvement. A recent scoping review showed that workforce turnover is a significant threat to the sustainability of evidence-based programs.<sup>19</sup> MOUD delivery is a provider-delivered treatment and not a self-management intervention. The staffing issues reported in this study included turnover, vacancies, and shortages that also affected time available dedicated to MOUD implementation. Pascoe and colleagues found that staffing issues can be addressed by several strategies including the use of champions or volunteers.<sup>19</sup> We found that a couple of facilities had at least one person who spent focused time on spreading the use of MOUD. This is similar to having a champion which is defined as individuals who dedicate themselves to supporting and driving through an implementation.<sup>18</sup> In addition, facilities in this study also reported plans to change hiring practices (i.e., targeting staff

with MOUD experience for future hires) as another method of addressing staffing issues related to sustaining MOUD. This could presumably reduce or eliminate the need to train new staff in the clinical innovation.

Hesitation around participating in a new clinical innovation was found in this study and has been shown in prior research to affect sustainability. For MOUD specifically, nearly 49% of prescribers with a US Drug Enforcement Administration “x-waiver” (a required license to prescribe buprenorphine for OUD) had not used their waiver to prescribe buprenorphine in the VA and nearly 24% felt it necessary to attend additional training to encourage them to use their x-waiver or prescribe buprenorphine.<sup>20</sup> This study found that reducing barriers and gaining experience with prescribing contributed to some, and presumably sustained, reduction in fear and anxiety about MOUD.

While the interview questions did not ask respondents to specify which clinics were affected by the facilitators/barriers they reported, some respondents did share this information spontaneously (e.g., lack of time to provide MOUD to patients within primary care, streamlined induction process in mental health clinic; removal of strict criteria for receiving MOUD in an acute psychiatric unit). It is possible that facilitator/barrier variation exists by clinic, particularly substance use disorder clinics (SUD) versus non-SUD clinics (e.g., hesitation among staff is likely higher in non-SUD clinics) and is an important empirical question.

Surprisingly, there were no notable differences between the facilities that made smaller improvements in MOUD access after the sustainability period compared to the other facilities. The facilities with the highest and lowest MOUD/OUD ratio at the end of the sustainability period both reported using a team-based approach to MOUD delivery; however, differences in the organizational setting may have significantly impacted their overall MOUD access. Facility B2 is classified as “urban” and medium complexity facility and Facility A1 is classified as “rural” and low complexity. As reported, being a rural facility meant long travel times for patients to receive their care including MOUD. In addition, being low complexity meant having smaller volume of patients and perhaps fewer providers. Together, it is possible Facility A1 had a lower MOUD/OUD ratio given difficulties patients experienced in presenting to the facility for treatment. Furthermore, the option of a 3-day MOUD induction is likely a resource-intensive strategy that may be difficult to sustain long-term. Of note, external facilitation for this study occurred prior to the COVID-19 pandemic; however, 6 of the 8 facilities’ sustainability period occurred during the pandemic, and since then, telehealth availability has increased and thus may have reduced travel time and contributed to sustainability of MOUD access.<sup>21</sup>

There were limitations to the study methodology. The interviews were conducted at the end of the ADaPT-OUD external facilitation intervention and not at the end of the

9-month sustainability period, so it is unknown whether there were additional experiences that may have contributed to MOUD sustainability. For instance, the COVID-19 pandemic led to the loosening of the regulations for MOUD prescribing and may have made it easier to expand access to MOUD.<sup>21</sup> This may have contributed to improvements found in this study, although there is also evidence that the common barriers to MOUD prescribing were constant throughout the pandemic.<sup>22</sup> Also, the current sample included low-adoption facilities only. It is possible themes would differ at medium- and high-adoption facilities. In addition, all facilities in this study sustained the innovation, and while this is a positive outcome, we did not have non-sustainers to inform if there were any differential factors affecting their progress. Future research should examine factors that may be unique to sustainers versus non-sustainers. Finally, this study was conducted in VA facilities only. While it is possible that the experience of sustaining MOUD access in other large health-care systems would be similar, overlap with and divergence from this study need empirical investigation.

## CONCLUSION

Proctor and colleagues called the lack of sustainability research “one of the most significant translational research problems of our time” given that implementation science tends to focus on early adopters.<sup>4</sup> This study illuminates the perspectives of late-adopters about what factors were central to their ability to make and maintain progress in patients’ access to care. Findings echo the importance of resources such as staff, champions, and time and leadership support to implementation and bring to bear their potential impact on sustainability. This study also highlights the larger-scale changes that are necessary for low-adoption facilities to enact and maintain change.

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## Declarations

**Conflict of Interest** The authors declare that they do not have a conflict of interest.

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