Evaluation of a Program Designed to Support Implementation of Prescribing Medication for Treatment of Opioid Use Disorder in Primary Care Practices

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ABSTRACT

PURPOSE Offering medication for opioid use disorder (MOUD) in primary care can increase access to effective opioid use disorder treatment and help address the US opioid crisis. We describe a primary care office-based opioid treatment program and addiction consultation service model designed to support small, rural clinics to increase their capacity for MOUD.

METHODS This is an evaluation of an intervention to increase clinic capacity to offer MOUD. The intervention consists of a standardized curriculum, addiction medicine consultants, practice facilitation, and financial incentives. Fifteen Colorado primary care practices participated from January 2022 through January 2023. Primary outcomes included overall change in the number of active buprenorphine prescriptions and implementation of MOUD milestones before and after the intervention.

RESULTS The mean number of active buprenorphine prescriptions in the 3 months preceding the intervention (baseline) increased from 2.1 (SD = 7.7) to 11.3 (SD = 11.2) at 13 months. Adjusted means from the Poisson model demonstrated significant improvement over time ($P < .001$). Mean implementation of MOUD milestones ranged from 23% to 40% at baseline and grew to 84% to 93% by the end of the program ($P < .001$).

CONCLUSIONS This model supported primary care practices that were initially doing little to no MOUD prescribing, to prescribe at significantly higher levels by the end of the program. This scalable model for addiction consultation in primary care settings illustrates how education and support to clinical teams can help practices makes changes, especially those with limited MOUD experience.

Ann Fam Med 2025;23:44-51. https://doi.org/10.1370/afm.3190

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VISUAL ABSTRACT

Annals Early Access article

Conflicts of interest: authors report none.

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INTRODUCTION

The age-adjusted death rate involving synthetic opioids increased more than 10-fold (from 1 to 11.4 per 100,000 deaths) from 2013 to 2019.[1] Only 21.5% of people with opioid use disorder (OUD) received medication (ie, buprenorphine, naltrexone, methadone) from 2009 to 2013,[2] and this decreased to 13% from 2013 to 2019.[3] In Colorado, only about one-half of people with OUD received treatment with buprenorphine and more than one-fifth of counties lacked a clinician who actively prescribed buprenorphine in 2019.[4] Waiver activity and removal of the X-waiver requirement have increased medication for OUD (MOUD) prescribers in the United States but a shortage remains.[5-7] Only 10% to 28% of primary care clinicians prescribe MOUD.[8,9] Barriers to providing addiction treatment in primary care include limited access to treatment resources (eg, psychosocial services), clinician stigma, perceived low patient demand, training, and lack of confidence in treating complex patients with OUD.[8,10]

Existing MOUD models have not adequately addressed these barriers. Most US opioid treatment programs (OTP) or methadone clinics operate at 80% capacity or greater.[11] Federal regulations require extensive certification and audits for OTPs[12] and access can be challenging because patients must travel to the OTP site for daily supervised medication administration.[13] Many areas, especially rural communities, do not have OTPs.[14] Integrating MOUD into primary care settings can increase patient access to effective OUD treatment.[14] The Agency for Healthcare Research and Quality outlined the following 4 elements of MOUD models in primary care:

(1) MOUD pharmacotherapy, (2) clinician and community education, (3) coordination of treatment with other health and psychological needs, and (4) psychosocial services.[14] Prescriber education may include continuing medical education, teleconferences, technical assistance, consultation, or mentoring.[14] Addiction medicine consult services have emerged to address challenges in access to OUD treatment.[15-17] Benefits of these services include engagement with primary care; increase in treatment uptake; and decreases in substance use, disease severity, and hospital readmissions.[18,19] Adding addiction consult services to the practice can offer clinicians increased variety and may support clinician retention.[20] Embedded addiction medicine consult services have been implemented in ambulatory settings, but this can be difficult in medically underserved regions (eg, rural areas).[21,22]

We describe a primary care office-based MOUD implementation and addiction consultation service model designed to support small, rural clinics called Integrated Support for MOUD. The intervention consists of care team education using a standardized MOUD curriculum, access to addiction medicine consultants, practice facilitation, and financial incentives. Practice facilitation has been used to effectively implement a variety of evidence-based interventions,[23] including training primary care teams to increase capacity to offer treatment for OUD.[24,25] We highlight findings that demonstrate how the Integrated Support for MOUD program addresses the gap between OUD treatment need and availability, guided by 2 aims: (1) compare the number of active buprenorphine prescriptions in participating practices at the beginning and end of the program; and (2) compare implementation ratings of MOUD milestones in participating practices at the beginning and end of the program.

METHODS

We describe evaluation results from a Colorado primary care practice intervention supporting MOUD implementation. This program was authorized by Senate Bill 21-137 (CRS § 23-21-808) and used federal American Rescue Plan Act dollars. The Colorado Multiple Institutional Review Board determined this was not human subjects research.

Intervention

Integrated Support for MOUD was a multicomponent intervention to increase the capacity of primary care practices to offer MOUD and promote buprenorphine prescribing from January 2022 through January 2023. It consisted of monthly team meetings and ad hoc communication with an external practice facilitator following a structured implementation guide based on conceptual frameworks for implementation of primary care practice improvement and opioid management efforts.[24,26,27] Milestones were developed to guide practices in implementing policies, workflows, and information systems aligned with the frameworks. This guide consisted of 3 core aims: (1) build your team, (2) engage and support patients, and (3) connect with recovery support services (full implementation guide available at https://bit.ly/3Ac2cPC). Practice facilitators used the implementation guide to help practices prioritize areas for improvement; accomplish action items for milestones; and identify relevant policy templates, workflows, sample patient agreements, registry templates, screening tools, and training opportunities.

Additionally, practices had access to an addiction medicine physician with subject matter expertise on opioid management acquired during a 1-year addiction medicine fellowship. The addiction medicine consultant was available through monthly virtual forums, site visits as requested, e-mail, and telephone. The addiction medicine consultant provided primary care teams with guidance on how to develop and refine clinical policies on MOUD; educated primary care practice staff on harm reduction strategies, buprenorphine, and urine drug screening; and addressed how to respond to widespread presence of fentanyl or methamphetamine, among other topics (Table 1).

Financial Incentives

Participating practices earned financial incentives up to $4,000 for each core aim achieved (maximum of $12,000) based on program milestones reached. Practice facilitators earned up to $9,900 consisting of $2,000 for each of the 3 core aims achieved by the practices they supported and $300 per monthly field note.

Evaluation Design

This evaluation was guided by the RE-AIM evaluation framework for translating research into practice, specifically the

Table 1. Topics Covered by the Addiction Medicine Consultant to Assist Primary Care Practices

Develop and refine clinical policies on MOUD
How to responding to positive urine drug screenings
Determine when it is appropriate to refer patients to other treatment facilities
Incorporate telehealth into induction workflows, especially in rural areas
Treat and support MOUD patients who use substances or relapse multiple times
Educate primary care practice staff on harm reduction strategies, buprenorphine, and urine drug screening
How to approach the topic of MOUD with patients on chronic opioid treatment
How to respond to widespread presence of fentanyl or methamphetamine
Plan for induction in cases where fentanyl is present
Support the roles of nurses, care coordinators, and behavioral health clinicians in MOUD treatment (ie, when to initiate contact with patients, how often to reach out, and how best to support MOUD patients)
Understand license regulations related to buprenorphine prescribing

MOUD = medications for opioid use disorder.

individual-level dimension of effectiveness and the setting-level dimension of implementation. Effectiveness refers to the the intervention's effect on key behavioral change outcomes.[28] Our measure of effectiveness was the number of unique patients prescribed buprenorphine. Implementation refers to participants' use of the intervention and the extent to which intervention components are implemented as intended.[28] We measured implementation using practice ratings of MOUD-related milestones and the number of interactions (meetings, teleconferences, and telephone calls) with practice facilitators.

Participants and Setting

Fifteen Colorado primary care practices participated. Practices were recruited through the Practice Innovation Program and Colorado Health Extension System, a collaborative of key partners from the University of Colorado, practice transformation organizations, Colorado's Behavioral Health Administration and Department of Health Care Policy and Financing (Medicaid), and other state organizations that support health care practices in the state. Practices were eligible if they prescribed MOUD to fewer than 10 patients before the project. We targeted recruitment to independent practices (to facilitate rapid adoption of policies and workflows), practices in rural areas, and those serving patients on Medicaid (to build capacity for MOUD among patients most in need of access).

Data Sources

Practice facilitators held meetings with practice teams to complete quarterly milestone attestation checklists measuring progress toward 16 program milestones that encompassed the 3 core aims. Milestone rating discussions had representation from multiple roles that included clinicians, clinical staff (eg, registered nurses, medical assistants, licensed practical nurses), and administrative leadership, to ensure input from individuals familiar with all aspects of workflows, policies, and practices. Practices were rated on each milestone with a 4-point scale ranging from 1 (implementation not started) to 4 (implementation completed).

Practice facilitators completed monthly semi-structured field notes to document the number and type of interactions (eg, in-person meeting, Zoom [Zoom Video Communications, Inc] telephone call) with each practice, meeting attendees, and descriptions of implementation progress. Practices reported the number of unique patients with active buprenorphine prescriptions from electronic health records or MOUD registries on a quarterly basis. Milestone attestation checklists and field notes were collected using Qualtrics web-based survey software (Silver Lake Technology Management, LLC).

Table 2. Descriptive Statistics for Practice Characteristics and Outcome Measures (N = 15)

Practice characteristics	Statistics	No. of practices
Organization type, %		
Hospital or health system owned	20.0	3
FQHC	26.7	4
Clinician-owned solo or group practice	46.7	7
Other	6.7	1
Practice specialty, %		
Family medicine only	73.3	11
Family medicine in combination with other specialties[a]	13.3	2
Internal medicine only	6.7	1
Other[a]	6.7	1
Number of clinicians, %		
1	33.3	5
2	40.0	6
3+	26.7	4
Rural location, %	60.0	9
Outcome measures		
Total number of practice facilitator interactions per practice, mean (SD) range	33.3 (14.3) 12-60	15
Remote (virtual or conference call) meetings	9.7 (3.4) 2-14	
In-person meetings	1.1 (2.5) 0-7	
E-mails	21.9 (13.3) 3-47	
Telephone calls	0.5 (1.2) 0-4	
Number of active buprenorphine prescriptions, mean (SD) range		15
0 months	2.1 (7.7) 0-30	
6 months	4.9 (9.8) 0-37	
13 months	11.3 (11.2) 0-44	
Core aim 1 completion, % (range)[b]		15
0 months	40.0 (4.8-71.4)	
6 months	79.7 (52.4-100.0)	
13 months	93.0 (76.2-100.0)	
Core aim 2 completion, % (range)[b]		15
0 months	22.7 (0.0-40.0)	
6 months	56.9 (26.7-93.3)	
13 months	83.6 (66.7-100.0)	
Core aim 3 completion, % (range)[b]		15
0 months	28.3 (0.0-66.7)	
6 months	57.2 (33.3-100.0)	
13 months	93.3 (75.0-100.0)	

FQHC = Federally Qualified Health Center; PF = practice facilitator.

[a] Other specialties include internal medicine, pediatrics, mixed primary care, psychiatry, nurse-led primary care.

[b] Core aims are: (1) build your team; (2) engage and support patients; (3) connect with recovery support services.

Analysis

We calculated descriptive statistics for practice characteristics, program activity measures, buprenorphine prescribing, and milestone implementation ratings. The implementation ratings were transformed from a range of 1 to 4 to a range of 0 to 3 by subtracting 1. This facilitated regression model interpretation by aligning a 0 rating with no activity. Completion scores were calculated for each core aim by summing ratings for all milestones within that core aim and dividing by the maximum possible score for that core aim. We then calculated each core aim's mean completion score across all 15 practices. Practice scores for all 3 core aims were summed to generate a total score and divided by the maximum possible of 48 (16 milestones with a maximum score of 3 each) to calculate each practice's overall score. We also calculated a mean completion score using all practices' total scores at each time point. Implementation rating scores are reported as a percentage. We included time in core aims models as a categorical variable consisting of 5 approximately quarterly time points (baseline, 3, 6, 9, and 13 months). We report mean buprenorphine prescriptions and percent completion for each aim at baseline, midpoint (6 months), and program completion (13 months).

A mixed-effects linear model was fit to examine changes in MOUD milestone implementation over time for each core aim, using percent implementation as the outcome. Buprenorphine prescription counts over time were modeled using a generalized linear mixed-effects Poisson model with log link, as the outcome was a count variable that displayed overdispersion and high positive skew. All models included fixed effects of time, practice medical specialty, and organization and random intercept of practice to account for repeated measures within practice. Regression models were adjusted for multiple comparisons using Bonferroni's method; P values less than .0125 were considered statistically significant. We used clinician-owned practices as the reference group in analyses to facilitate comparisons between independent practices and other organizational structures. Data analyses were performed using SAS software version 9.4 (SAS Institute, Inc).

RESULTS

Practices represented varying organizational structures, though most were clinician-owned. Practices were primarily family medicine, rural, and small (1 or 2 clinicians). Practice facilitators most commonly interacted with practices by e-mail (mean = 21.9 e-mails per practice) or virtual, web-based meeting, or conference call (mean = 9.7 meetings per practice) (Table 2).

The mean number of active buprenorphine prescriptions in the preceding 3 months increased significantly from 2.1 (SD = 7.7) at baseline to 11.3 (SD = 11.2, P <.001) at 13 months. Mean completion of core aim 1 (build your team) grew significantly from 40% at baseline to a final score of 93% (P <.001). Mean completion of core aim 2 (engage and support patients) increased significantly from 23% to a final score of 84% (P <.001). Mean completion of core aim 3 (connect with recovery support services) expanded significantly from 28% to a final score of 93% (P <.001). Changes in completion scores for all core aims were significant between each individual time point (P <.001 for all) (Table 2).

Practices increased mean completion scores for all of the MOUD milestones by the end of the program (Table 3). Changes in completion scores for all core aims were significant (P <.001) between each individual time point (Table 4, Supplemental Figure 1, Supplemental Figure 2).

DISCUSSION

In this report we describe the implementation of MOUD prescribing in 15 Colorado primary care practices. Our model used monthly clinical education forums, practice facilitation with core aims, and access to an addiction medicine physician for clinical support to increase prescribing activity and organizational capacity. Practices demonstrated significant increases in MOUD prescribing after 13 months of program participation. Adding to previous research, we also noted that obtaining a X-waiver was not sufficient to increase buprenorphine prescriptions, but providing education for clinicians was helpful for increasing prescriptions.[29] Significant changes in implementation ratings for each core aim reflect practices' progress on implementing workflows and policies related to MOUD.

Practices increased implementation scores for core aim 1 (build your team) from a mean of 40% at baseline to 93% upon program completion. This aim addressed practice infrastructure that supports the entire care team's ability to provide MOUD through activities such as empowering both clinicians and staff to champion MOUD implementation, and ensuring that all are aware of policies that reflect evidence-based guidelines for MOUD. Development of capacity among clinical and non-clinical staff, in addition to physicians, is critical for primary care practices to implement MOUD. Multidisciplinary teams are a common element of MOUD models in primary care, and including non-prescriber staff can help to relieve physicians' workload.[30]

Mean implementation scores for core aim 2 (engage and support patients) also increased, from 23% at program start to 84% at program end. This reflects patient-related capacity such as active outreach to patients regarding the availability and benefits of MOUD, use of screening tools to identify patients who may benefit from MOUD, and prompt appointment access for MOUD induction and maintenance visits. Enhancing patient outreach and access are important for practices that offer MOUD because up to 87% of people with OUD do not receive evidence-based treatment.[2,3] Prescribers have highlighted the need to increase patients' awareness of the availability of MOUD treatment.[31] Universal screening for OUD in emergency department settings has resulted in increased MOUD prescribing,[32] suggesting that

Table 3. Mean MOUD Milestone Implementation Ratings at Program Start and End (N = 15)

Milestones	Baseline		Final	
	Mean	SD	Mean	SD
Core aim 1: Build your team				
1.1: Leadership in this clinic is committed to providing MOUD and communicates consistently its aims within meetings, case conferences, e-mails, internal communications, and celebrations of success.	1.9	0.6	3.1	0.7
1.2: Practice identifies champions (ie, RN, clinician, MA, etc) responsible for practice change related to MOUD. Practice has dedicated resources (protected time, EHR, functionality, etc) to meet and engage in practice change.	2.4	1.0	3.3	0.7
1.3: Eligible clinicians have obtained their DEA X-waiver allowing them to prescribe buprenorphine for treatment of OUD.	3.2	1.1	3.6	0.9
1.4: Clinicians and staff have received training in the last 2 years on patient-centered, empathic communication emphasizing patient safety, destigmatization, and harm reduction.	1.6	0.7	2.8	0.9
1.5: Comprehensive policies regarding MOUD that reflect evidence-based guidelines exist, have been recently updated, and have been discussed with all clinicians and staff.	2.1	1.0	2.7	0.7
1.6: Formal signed patient agreements regarding MOUD exist, align with current policies, and are consistently used with all patients on MOUD.	1.9	1.1	2.9	0.9
1.7: Practice uses a registry or other system to proactively track & monitor patients prescribed MOUD to ensure their safety.	2.3	1.0	2.9	0.8
Core aim 2: Engage and support patients				
2.1: Care plan documentation templates align with current policies and are consistently used for people on MOUD.	1.5	0.5	2.1	0.7
2.2: Practice communicates to its patients about the benefits of MOUD through flyers, posters, and other appropriate outreach.	1.1	0.3	1.7	0.7
2.3: Practice consistently uses screening tools and other workflows to identify opioid misuse, diversion, and addiction.	2.3	1.0	3.0	0.7
2.4: Workflows exist and are used to provide prompt access to patients for MOUD inductions and routine maintenance appointments. Practice prescribes MOUD for at least 10 new patients since the start of the project.	1.9	0.9	2.4	0.7
2.5: Harm reduction strategies are identified, implemented and tracked as a part of the routine care for patients with OUD.	1.5	0.5	2.1	0.5
Core aim 3: Connect with recovery support services				
3.1: Practice communicates with at least 3 local professional organizations about the availability of MOUD services in the clinic.	1.7	0.7	2.2	0.8
3.2: Policies and workflows are implemented to identify people who may benefit from higher levels of care for their OUD or other mental and behavioral health needs. Hand offs to appropriate specialists and treatment facilities are coordinated and tracked.	1.8	0.7	2.3	0.7
3.3: Patients are provided information about community resources for recovery services, including in-person or virtual.	1.8	0.8	2.3	0.7
3.4: Practice defines and implements workflows to assess social needs of those on MOUD (housing, transportation, food insecurity, etc) and to refer patients to appropriate resources to address identified needs.	2.1	0.9	2.5	0.7

DEA = Drug Enforcement Administration; EHR = electronic health record; MA = medical assistant; MOUD = medications for opioid use disorder; OUD = opioid use disorder; RN = registered nurse.

Note: Implementation rating scale: (1) not started = no work has started on activity at the practice; (2) just beginning = work is started and there is minor progress on the activity; (3) actively addressing = substantial work is done and activity is almost complete; and (4) completed = activity is fully and regularly implemented at the practice.

widespread screening could help reach people with OUD who have not been reached by current models.

Also increased were the mean implementation scores for core aim 3 (connect with recovery support services) which rose from 28% to 93%, reflecting connections to community resources to address patients' health care, behavioral health, and social needs. This is important because mental health diagnoses are fairly common among people with OUD,[33] making up the majority of patients in some treatment programs.[34] Despite this, people with mental health diagnoses are less likely to receive OUD treatment.[35] Additionally, people seeking treatment for OUD are commonly affected by social determinants of health related to transportation, unemployment, finances, and food insecurity,[36] emphasizing the need for mental health and psychosocial resources.

Practices' ability to implement MOUD was supported by access to an external addiction medicine physician for consultation to supplement clinician and team education, a unique element of this model. Most models include clinicians with experience caring for patients with OUD and an educational

component.[14] Lack of prescriber knowledge and confidence managing OUD are barriers to offering MOUD among primary care physicians,[22] even those who have obtained the X-waiver.[9,31] Having access to tailored consultation is a particularly important element of support for MOUD implementation among primary care prescribers with limited MOUD experience. Our findings demonstrate that integrated support for MOUD curriculum can help primary care practices implement measurable changes in capacity to identify patients for MOUD, build multidisciplinary teams to deliver MOUD, and connect patients to medical, behavioral, and psychosocial resources to support their treatment.

The extent to which financial incentives motivated practices to achieve observed improvements in MOUD implementation in this program is unclear. Primary care clinicians have highlighted financial incentives as a motivator for offering MOUD,[37] but the effectiveness of financial incentives varies across professional roles (advanced practice providers vs primary care clinicians) and organizational setting (community clinics vs medical centers).[38] Financial incentives may be particularly effective among prescribers with higher levels of stigma toward MOUD care,[39] but when compared with other potential incentives, primary care clinicians rate reduced workload, protected time, and clinical resources more highly than financial incentives.[38] Implementation programs that do not include financial incentives have been effective in increasing the capacity for MOUD care,[40] indicating that additional research is needed to understand the specific contribution of financial incentives to MOUD implementation. Sustainable funding strategies for financial incentives for practices and access to an external addiction medicine consultant need exploration.

Limitations

This was a descriptive evaluation without a control or comparison group, and no conclusions about causation can be made. We did not examine patient-reported outcomes. Completion of milestones was self-reported, which may have introduced bias in the implementation ratings. Financial incentives may have limited generalizability and sustainability. We collected limited information about practice characteristics to minimize reporting burden on participants, but this prevented us from incorporating information about the number of prescribers and volume of patient visits during program implementation to contextualize the extent of reported prescribing increases. Finally, this evaluation focused on limited elements of the RE-AIM framework, specifically effectiveness and implementation. Future research should explore the reach, representativeness, adoption, and maintenance of this model to enhance translation of effective MOUD treatment into primary care.

Table 4. Regression Models of Change Over Time in Buprenorphine Prescribing and Completion of Integrated Support for MOUD Program Aims, 2022-2023 (N = 15)

Outcome	B	SE	*P* Value[a]
No. of active buprenorphine prescriptions			
Time			
0 months	ref	ref	< .001
6 months	0.84	0.21	< .001
13 months	1.67	0.19	< .001
Specialty			
Non–family medicine	ref	ref	.92
Family medicine	−0.12	1.21	...
Organization type			
Clinician-owned	ref	ref	.83
FQHC	0.28	0.98	...
Hospital or health system owned	0.92	1.05	...
Other	−0.13	1.58	...
Core aim 1 completion			
Time			
0 months	ref	ref	< .001
3 months	0.28	0.06	< .001
6 months	0.40	0.06	< .001
9 months	0.49	0.06	< .001
13 months	0.53	0.06	< .001
Specialty			
Non–family medicine	ref	ref	.18
Family medicine	−0.11	0.08	...
Organization type			
Clinician-owned	ref	ref	.95
FQHC	0.01	0.06	...
Hospital or health system owned	−0.03	0.07	...
Other	−0.03	0.10	...
Core aim 2 completion			
Time			
0 months	ref	ref	< .001
3 months	0.20	0.05	< .001
6 months	0.34	0.05	< .001
9 months	0.50	0.05	< .001
13 months	0.61	0.05	< .001
Specialty			
Non–family medicine	ref	ref	.99
Family medicine	0.00	0.07	...
Organization type			
Clinician-owned	ref	ref	.56
FQHC	−0.03	0.06	...
Hospital or health system owned	−0.08	0.06	...
Other	−0.09	0.09	...

continues

FQHC = Federally Qualified Health Center; ref = reference group; SE = standard error.

[a] Outcomes from multiple regressions were adjusted for multiple comparisons using Bonferroni's method; *P* values < .013 were considered statistically significant.

Table 4. Regression Models of Change Over Time in Buprenorphine Prescribing and Completion of Integrated Support for MOUD Program Aims, 2022-2023 (N = 15) *(continued)*

Outcome	B	SE	*P* Value[a]
Core aim 3 completion			
Time			
0 months	ref	ref	< .001
3 months	0.16	0.06	.013
6 months	0.29	0.06	< .001
9 months	0.59	0.06	< .001
13 months	0.65	0.06	< .001
Specialty			
Non–family medicine	ref	ref	.67
Family medicine	0.03	0.07	...
Organization type			
Clinician-owned	ref	ref	.14
FQHC	−0.12	0.06	...
Hospital or health system owned	0.00	0.06	...
Other	0.03	0.10	...

FQHC = Federally Qualified Health Center; ref = reference group; SE = standard error.

[a] Outcomes from multiple regressions were adjusted for multiple comparisons using Bonferroni's method; *P* values < .013 were considered statistically significant.

CONCLUSION

This model supported a group of primary care practices doing little to no MOUD prescribing, to begin prescribing at significantly higher levels and build capacity in workflows and policies to support MOUD by the end of the 13-month program. Clinical teams need support beyond removal of the X-waiver requirement to feel confident serving this patient population, and this scalable model for addiction consultation in primary care settings illustrates how education and support to clinical teams, especially those with limited experience, can help practices make tangible changes.

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Key words: buprenorphine; opioid-related disorders; primary health care; program evaluation; substance-related disorders

Submitted May 10, 2024; submitted, revised, August 10, 2024; accepted August 20, 2024

Funding support: Evaluation funded by Colorado Department of Human Services through Behavioral Health Administration, contract #19 IHJA 119467.

Previous presentations: Poster presentation at the American Society for Addiction Medicine 2024 Annual Meeting; April 5, 2024; Houston, Texas; and partial, preliminary evaluation results poster presentation at University of Colorado-Colorado State University Summit; August 16, 2023; Denver, Colorado.

Supplemental materials

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