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Adoption of Buprenorphine Medication-Assisted Treatment by Veterans Administration Prescribers in the Behavioral Health Clinic: a Quality Improvement Project

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DNP Final Project

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Abstract

BACKGROUND: The Portland Veterans Health Administration (VHA) provides acute treatment for opioid use disorder through the Substance Abuse Treatment Program (SATP) and Opioid Treatment Program (OTP). Upon completion of SATP/OTP access to maintenance treatment with buprenorphine medication assisted treatment (MAT) was limited by the lack of buprenorphine waiver trained providers in the behavioral health clinics. The aim of this project was to increase Veterans' access to buprenorphine MAT by increasing the number of providers with waiver training in the behavioral health clinic. The project was set in the behavioral clinic at the Portland VHA and participants included psychiatrists and nurse practitioners.

METHODS: The Institute for Healthcare Improvement (IHI) Model for Improvement was used for this project. Plan Do Study Act (PDSA) cycles were used to evaluate and test interventions.

INTERVENTION: Behavioral health clinic prescribers were asked to complete a 10-question questionnaire in an effort to identify the perceived barriers to obtaining buprenorphine waiver training. The results from the questionnaire and additional educational content based on those findings were presented at scheduled staff meetings. At the conclusion of the presentations the participants were asked if the information provided influenced their perceptions regarding obtaining the buprenorphine waiver training. Participants were asked to communicate when they had registered for the buprenorphine waiver training if it occurred prior to April 2018.

RESULTS: There was a 50% response rate for the questionnaire. Barriers to obtaining buprenorphine waiver training at the Portland VHA were similar to those described in the literature: lack of time; sentiment that it won't make a difference (in work); lack of financial reimbursement, institutional support and concern for increased work burden. The post-presentation questionnaire identified that four respondents were currently waiver trained and one

was certified; four had not changed their mind and would not register for the waiver training; five reported contemplating registering for the training; and two had changed their mind and would register for the training. As of April 2018, two individuals had registered for the waiver training, and one indicated intentions to register for the training.

CONCLUSIONS: This improvement science project was conducted using the Institute for Healthcare Improvement (IHI) Model for Improvement, and resulted in a 14% increase in providers who registered for the buprenorphine waiver training by April 2018. Further efforts to increase access to buprenorphine MAT at the Portland VHA are needed. Policy change, increased institutional support, and financial incentives will increase access to MAT.

Keywords: behavioral health, buprenorphine, medication assisted treatment (MAT), opiates, quality improvement, substance abuse treatment program, Veterans

Introduction

The U.S. opioid epidemic is recognized as a national public health crisis. The morbidity and mortality associated with opiates has been steadily increasing since 1999. Deaths from drug overdose quadrupled between 1999 and 2014 (CDC.gov, 2016). Of the drug overdose deaths occurring in 2016 66% involved an opioid (CDC.gov, 2016). From 2014 to 2015 drug overdose deaths increased by 11.4%, a continued trend observed from 1999 (Rudd, Seth, David and Scholl, 2016). The opioid crisis has affected the Veteran population equally, if not more.

Chronic pain, a result of military training and combat, impacts half of Veterans using the Veterans Healthcare Administration (VHA; Gellad, Good & Shulkin, 2017). Despite efforts to decrease opiate prescriptions to Veterans, nearly 25% of Veterans receiving outpatient care in the VHA were prescribed an opioid in 2012 (Gellad et al, 2017). Narcotic prescriptions written by military physicians quadrupled between 2001 and 2009, and a Department of Defense study showed that the Veteran rate of prescription drug misuse was over two and a half times the civilian population (11.7% and 4.4% respectively; National Council on Alcohol and Drug Dependence, 2015). Recent efforts in both the VHA and civilian sectors have focused on addressing the opioid epidemic including the use of buprenorphine medication assisted treatment (MAT).

The Federal Government has initiated legislation in an effort to increase access to medication treatment for opioid use disorder (OUD). In 2002 Buprenorphine and buprenorphine-naloxone MAT was approved for use as an office-based treatment by the U.S. Food and Drug Administration (FDA) (Thomas, Fullerton, Kim, Montejano, Lyman, Dougherty… & Delphin-Rittmon, 2014). This legislation was followed in 2013 with additional regulatory changes that included allowing 30-day dispensing of buprenorphine as take home

doses (Polydourou, Ross, Coleman, Duncan, Roxas, Thomas… & Hansen, 2017) and buprenorphine prescribing by non-addiction specialists upon completion of required training. The latest effort to expand access to treatment of OUD was the passage of the Comprehensive Addiction and Recovery (CARA) Act in 2016, allowing nurse practitioners and physician assistants to prescribe buprenorphine for opioid addiction upon completion of 24-hours of training (ASAM, 2016; Substance Abuse and Mental Health Service Association (SAMHSA; 2016).

The VHA has also mounted a response to the Veteran opioid crisis. In 2008, the VHA issued a mandate to treat all patients with OUD (Oliva, Harris, Trafton, Gordon, 2012). Despite efforts to increase access to MAT, the VHA consistently treated 27% of Veterans with OUD with MAT over the years (Oliva et al, 2012). The stagnant percentage has been attributed to the parallel increase in the number of Veterans with opiate addiction. Although the VHA recognizes that increased access to MAT, particularly office-based is important, there are barriers to providing office based MAT including a lack of providers who obtain the buprenorphine waiver training.

Access to buprenorphine MAT at the Portland VHA, and in general, is limited. Treating OUD with MAT is a complex and time-consuming endeavor, one that many providers are unwilling and unable to provide. There are few providers at the Portland VHA who prescribe buprenorphine MAT outside of the Substance Abuse Treatment Program (SATP) and Opioid Treatment Program. Two factors account for this fact. The first is a policy that dictates where buprenorphine MAT is initiated. Currently a Veteran must be enrolled in the Substance Abuse Treatment Program (SATP) and Opioid Treatment Program to receive buprenorphine MAT. Once a Veteran is deemed stable in their recovery they may transfer out of the program to a

behavioral health provider for maintenance buprenorphine MAT. The second factor is the dearth of prescribers in the behavioral health clinic that meet the Federal requirements to treat OUD using buprenorphine MAT. Access to buprenorphine MAT is limited by a Portland VHA policy limiting buprenorphine MAT to treatment programs, and by the lack of providers available for maintenance treatment after discharge from said programs. The latter issue is the focus of this quality improvement project.

Buprenorphine office-based opioid treatment has not been readily adopted at the Portland VHA, particularly by the behavioral health providers. The reasons for this are not well understood. The IHI Model for Improvement was used as the framework for this quality improvement project to increase the number of providers who obtain the buprenorphine waiver training and increase Veterans' access to buprenorphine MAT.

Aims

The purpose of this improvement science project was to increase Veterans access to buprenorphine MAT at the Portland VHA behavioral health clinic. The primary objectives were to identify the perceived provider barriers to obtaining the buprenorphine waiver training; implement subsequent interventions; and increase the number of buprenorphine waived prescribers in the behavioral health clinic at the Portland VHA by April 2018. Two PDSA cycles were conducted during this project. In an effort to understand the problem, and describe the perceived provider barriers and facilitators to obtaining the buprenorphine waiver training, a questionnaire was administered to the psychiatrists and nurse practitioners working in the behavioral health clinic at the Portland VHA. Data was analyzed and presented to local VHA leadership. The second cycle included the provision of educational presentations to the providers in an effort to influence and potentially change the local culture around buprenorphine MAT

prescribing. The primary outcome measure was to increase the number of providers who registered for the buprenorphine waiver training by 14% by April 2018. A secondary outcome included expanding awareness regarding the need for increased access to MAT at the Portland VHA.

Methods

The IHI Model of Improvement was used as the framework for this project, using the Plan Do Study Act (PDSA) cycles to test the interventions and plan for the next steps. The Model for Improvement is a simple, yet powerful tool for accelerating improvement (IHI.org, retrieved April 18, 2018). The model guides the improvement initiative with questions that define the project aims and outcome measures, and provides a method for testing changes using PDSA cycles.

The behavioral health clinic provides mental health care to Veterans with mental health diagnosis and substance use disorders. Of the 50 permanent providers, 8 are psychiatrists, 10 are psychologists, 6 are psychiatric mental health nurse practitioners (PMHNP), 2 are registered nurses, and the remainder are social workers. The providers in the behavioral health clinic are divided into eight multidisciplinary clinic teams based on the focus of care they provide. There are four clinical teams that provide general mental health care. The remaining clinical teams have specialty foci of Post-Traumatic Stress Disorder (PTSD), Geriatric-Psychiatry Service, Dialect Behavioral Therapy treatment program, and Substance Abuse Treatment.

In the behavioral health clinic one provider was prescribing buprenorphine MAT in the SATP clinic. Both the primary care and behavioral health clinics were initially included in the planning phase of the project. After conversations with clinical leaders, however, the decision was made to focus on the behavioral health clinic providers. The behavioral health clinic was

designed so that providers had lower patient volumes and longer appointment times, and allowed for the flexibility in scheduling longer appointments required for buprenorphine MAT. Furthermore, a satellite SATP clinic was located within the behavioral health clinic, which allowed for increased communication and relationships between SATP and the behavioral health teams. In total, fourteen psychiatrists and PMHNPs were included in this quality improvement project.

The VHA is a large healthcare system with a mission to provide care for Veterans with respect, integrity, commitment, advocacy and excellence (VA.gov, retrieved April 27, 2018). The providers in the behavioral health clinic are deeply committed to providing the highest quality of care to their Veterans. The previous Secretary of Veterans Affairs, Bob McDonald, summarized this sentiment as "caring for Veterans is the most noble mission there is" (Bob McDonald, 2016). To measure the perceptions of the behavioral health providers regarding the treatment of Veterans with OUD, and to better understand their perceived barriers to obtain the buprenorphine waiver training a questionnaire was administered. Open ended feedback via discussions with individuals was also elicited throughout the course of this initiative in an effort to ensure the questionnaire captured the appropriate perceptions and concerns.

Interventions

Two primary interventions were used in the effort to increase the number of buprenorphine waiver trained providers in the Portland behavioral health clinic. A questionnaire was administered to identify the perceived barriers to obtaining the waiver training. Presentations were made at the psychiatry and nurse practitioner staff meetings and included the results from the questionnaire, information related to the VHA opioid problem and the need for buprenorphine prescribers at the VHA, and information regarding how to obtain the waiver

training with subsequent credentialing at the VHA. Attendees were then asked if the presentation had affected their thoughts about obtaining buprenorphine waiver training. Finally, providers were asked to self-report by April 2018, if they had registered to take the buprenorphine waiver training

Questionnaire

A questionnaire, designed to elicit the perceived barriers and facilitators to buprenorphine MAT, was administered. Qualitative and quantitative questions were utilized in order to gain a greater understanding of the thoughts and feelings related to buprenorphine treatment practices and barriers to obtaining the waiver training. Questions were asked to identify providers' perceptions related to buprenorphine MAT use in the office based setting; providers' comfort with prescribing buprenorphine; and perceived barriers to obtaining the waiver training. This was the first phase of the PDSA cycle used in this quality improvement project. The intent was to identify the areas for system improvement and to identify the provider barriers regarding buprenorphine MAT. A secondary intention was to simply increase awareness about buprenorphine MAT. The questionnaire was designed by the primary author, and then reviewed by VHA and Oregon Health & Sciences University (OHSU) Nursing Practice Researchers. Lead nurse practitioners and psychiatrists were also given the opportunity to provide input regarding the questions.

The questionnaire was completed anonymously by each participant using Survey Monkey. There were no individual identifiers associated with the questionnaire other than role. There was no tracking of who completed the survey. No personal health information was collected.

The questionnaire was administered once in February 2018 and participants were given

two weeks to respond. After two weeks, a reminder email was sent asking for participation with an additional week allowed for straggler responders. Questionnaire data was collected and organized within Microsoft Excel. Analysis requiring the use of SPSS, Version 24, was not indicated due to small number of participants. The findings from the questionnaire were presented with additional information, based upon the findings, at scheduled staff meetings. Because there were so few respondents the question asking for role identification was not reported in the results section to protect the respondent's identities.

Presentations

The survey results, and educational information based upon those results, were presented at both the psychiatry and the PMHNP scheduled staff meetings in March and April 2018 respectively. The educational information included the prevalence of the opioid epidemic at the VHA, specific information on the logistics of obtaining the waiver training, and the process for VHA certification was presented. The goal of the intervention was to increase awareness of buprenorphine MAT, provide information about the current perceived barriers and facilitators of providers, and to offer information that would encourage a change in perceptions of buprenorphine MAT, if not a change in practice. At the end of each presentation a short questionnaire was administered to determine if the information provided had been influential in changing provider's mind about obtaining the waiver training. In addition, informal interviews with individual PMHNPs and psychiatrists, and VHA leadership, were conducted in an effort to evaluate the intervention.

Self-Reported Waiver Training

Providers were asked to self-report by April 2018 when they had registered for the buprenorphine waiver training. Providers were invited to self-report in an effort to prevent the

appearance of any type of pressure to register for the training. The intent of this quality improvement project was to increase the number of buprenorphine waiver trained providers to increase access to MAT treatment for Veterans with OUD. An outcome measure of a 14% (two) increase in providers who registered for training at the completion of the project was determined to be achievable and realistic.

Ethical Considerations

Prior to implementation, the project was submitted for review by both the VHA and OHSU Institutional Review Boards (IRB). Once it was deemed "not research" the project commenced. The anonymous questionnaire addressed the concepts related to respect for participants, beneficence and justice. No personal health information was collected, and responses to the survey were generalized to all providers.

Results

Questionnaire

The results of the questionnaire identifying VHA providers' perceived barriers, and facilitators, to obtaining buprenorphine waiver training are presented in Figure 1. They included lack of time to take the training (4 responses); the sentiment that it won't make a difference (in their work; 3); and lack of financial reimbursement, lack of institutional support, and concern for increased work burden (2). VHA prescribers were ambivalent regarding having confidence in their abilities to prescribe buprenorphine MAT (6 reported neutral, 1 disagreed). VHA providers tended to agree or had neutral feelings that Veterans with OUD were a difficult population to treat (3 agreed, 4 neutral). These findings are reflective of the identified barriers reported in the literature.

VHA providers also identified possible facilitators related to obtaining the waiver training. Five respondents indicated that they felt a responsibility to treat Veterans with OUD while two reported feeling neutral. Respondents also felt that office-based buprenorphine MAT was an effective treatment modality (6). Five respondents indicated that they would like to get the waiver training, which is an encouraging finding.

Figure 1. Questionnaire & Results:

Q1. Role: Deemed NA		
Q2. I feel that I have a responsibility to treat Veterans with Opioid Use Disorder		
Disagree	0.00%	0
Neutral	28.57%	2
Agree	71.43%	5
Q3. In general, I have confidence in my ability to care for veterans with Opioid Use Disorder		
Disagree	14.29%	1
Neutral	85.71%	6
Agree	0.00%	0
Q4. I feel that veterans with Opioid Use Disorder are a difficult population to treat.		
Disagree	0.00%	0
Neutral	57.14%	4
Agree	42.86%	3
Q5. Overall, I feel that buprenorphine medication assisted treatment is an effective treatment modality for opioid use disorder.		
Disagree	0.00%	0
Neutral	14.29%	1
Agree	85.71%	6
Q6. I believe that treatment of Opioid Use Disorder with buprenorphine medication assisted treatment is appropriate in the outpatient, office-based setting		
Disagree	0.00%	0
Neutral	14.29%	1
Agree	85.71%	6
Q7. I believe that treatment of Opioid Use Disorder with buprenorphine medication assisted treatment is appropriate only in inpatient or outpatient substance abuse treatment programs		
Disagree	85.71%	6
Neutral	14.29%	1
Agree	0.00%	0
Q8. I would like to obtain the buprenorphine waiver training		
Disagree	14.29%	1
Neutral	14.29%	1
Agree	71.43%	5
Q9. Personal barriers to obtaining the waiver training include (check all that apply)		
I don't have time to take the training	57.14%	4
I don't know how to access the training	14.29%	1
I am not comfortable prescribing buprenorphine	14.29%	1
I don't feel it is important to the organization that I obtain it	14.29%	1
I don't think it will make a difference in my work	42.86%	3
I think it will increase my workload	28.57%	2

I don't think it is effective treatment	0%	0
I feel that there is inadequate training for providers	0%	0
There is lack of institutional support	28.57%	2
There is no one to supervise/mentor me with this treatment	0%	0
There is lack of financial incentive (for example: no step raise for more work)	28.57%	2

Q.10 I am not interested in prescribing buprenorphine in my practice. Please explain:
"cautiously interested"
"I have a specialty practice"
"I don't know if I am or not"
"I am interested"
"I am currently pursuing training"

Post Presentation Survey

Fifteen respondents completed the survey, and results are presented in Figure 2. Four participants had not changed their mind and would not register for the waiver training; five reported that they were contemplating registering for the training; and two had changed their mind and would register for the training. Overall, the intervention succeeded in positively influencing half of the providers' minds regarding obtaining the waiver training.

Figure 2. Post Presentation Questionnaire

15 total responses between the psychiatry and PMHNP meetings.

Compared to before this educational program about buprenorphine waiver training I:

__**2**__ have changed my mind and will likely register for the buprenorphine waiver training

__**5**__ am contemplating registering for the buprenorphine waiver training

__**4** __ have not changed my mind regarding obtaining the buprenorphine waiver training and will not register

*An additional **4** providers self-reported currently waiver trained status, and therefore, did not change their mind.

Self-Reported Waiver Training

The primary outcome measure was met. As of April 2018, two individuals had registered for, and were completing, the online buprenorphine waiver training coursework. A third individual announced an imminent intent to register for the training, but had not done so by the designated date for self-report.

Discussion

Over the course of this quality improvement initiative there was a perceptible shift in the behavioral health clinic sentiment related to buprenorphine waiver training. The behavioral health clinic providers' perceived barriers and facilitators to obtaining the waiver training were identified and presented to staff. The primary outcome was met and two providers had registered for the waiver training by April 2018.

The questionnaire was the initial intervention and the first PDSA cycle. It provided valuable information regarding the nature of the problem, increased awareness about the issue, and informed the following intervention. The VHA providers' perceptions regarding buprenorphine MAT are consistent with those found in the literature (Table 1). The literature details the physician barriers to prescribing buprenorphine which include lack of clinical time and interest; inadequate training; lack of institutional support; lack of psychosocial support; concerns about reimbursement and regulatory requirements; and negative attitudes towards addiction treatment, including stigma ((DeFlavio, Rolin, Nordstrom, & Kazal, 2015; Duncan, Mendoza, Hansen, 2016; Hutchinson, Catlin, Andrilla, Baldwin, & Rosenblatt, 2013; Molfenter, Sherbeck, Zehner, Quanbeck, McCarty, Kim & Starr, 2015; Suzuki, Ellison, Connery, Surber, & Renner, 2014).

Table 1. Evidence Table: Provider and Patient Barriers, Literature Review

Provider Barriers	Patient Barriers
Lack of Training/Lack of Staff Training DeFlavio et al, (2015) Duncan et al, (2015) Hutchinson et al, (2015) Molfenter et al (2015) Suzuki et al, (2014) **Lack of Time/Interest** DeFlavio et al, (2015) Duncan et al, (2015) Hutchinson et al, (2015) Molfenter et al (2015) Suzuki et al (2014) **Lack of Institutional Support** Duncan et al, (2015) Hutchinson et al, (2015) Molfenter et al (2015) Suzuki et al (2014) **Lack of Psychosocial Support** Hutchinson et al (2015) Molfenter et al (2015) **Reimbursement Concerns** Hutchinson et al, (2015) Molfenter et al (2015) **Regulation Issues** DeFlavio et al, (2015) Molfenter et al (2015) **Difficult Population to Treat/Stigma** DeFlavio et al, (2015) Molfenter et al (2015) Suzuki et al, (2014)	**Access to Physician/Site** Manhapra et al (2016) Oliva et al (2011) Sohler et al (2013) **Lack of Education/Awareness/Treatment Options** Duncan et al (2016) Fox et al, (2016) Kourounis et al (2016) Teruya et al (2014) Yarborough et al, (2017) **Treatment Goals/Design Unclear** Kourounis et al (2016) Yarborough et al, (2017) **Racial Demographic Factors** Manhapra et al (2016) Sohler et al (2013) **Financial Barriers** Kourounis et al (2016) **Avoiding Stigma** Yarborough et al, (2017) **Prior Experiences** Fox et al, (2016) Yarborough et al, (2017)

VHA providers' perceptions regarding buprenorphine MAT are similar to their counterparts described in the literature. However, positive findings were identified in the VHA questionnaire. VHA providers reported having a sense of responsibility to treat Veterans with OUD. The also were ambiguous about the statement that Veterans are a difficult population to treat. Finally, six providers stated they would like to get the training. These findings are not surprising given the context of the situation. The mission of the VHA is to provide excellent care to all Veterans, a commitment carried out on a daily basis in the behavioral health clinic.

The second intervention included a presentation at the scheduled staff meetings. The presentation included the results from the questionnaire and information based on those results. The post-presentation questionnaire was administered to determine if perceptions regarding obtaining the waiver training had changed as a result of the intervention. Because the presentations were made at the scheduled psychiatry and PMHNP meetings, participants practicing outside of the behavioral health clinic were invited to answer the post presentation questionnaire. As a result, additional providers learned about the improvement project and the need for increased buprenorphine MAT. Half of the respondents reported that they had been positively influenced by the information provided in the presentation and were at least contemplating obtaining the waiver training.

One unexpected finding was the self-reported identification of four waiver-trained providers who were not prescribing buprenorphine. It is not uncommon for providers to obtain the waiver and not prescribe buprenorphine. A PDSA Cycle focused on VHA providers with the waiver training who are not prescribing may be warranted in an effort to increase access to buprenorphine MAT.

Limitations

There were limitations to this quality improvement project. First, there was a 50% response rate (7 of 14) for the questionnaire. An ideal response rate of 80% would have increased representativeness of the providers' perceptions and decreased nonresponse bias. However, given the small number of participants a 50% response rate exceeded expectations. The small scope of the project is a factor for generalizing the findings, however, the applied interventions and defined outcome measures were appropriate for the project.

Conclusion

Between September 2017 and May 2018, a local level quality improvement initiative was implemented in an effort to increase access to buprenorphine MAT in the behavioral health clinic at the Portland VHA. The VHA providers' perceived barriers to obtaining buprenorphine waiver training were identified; increased awareness for the need for buprenorphine MAT with a concomitant shift in perceptions occurred; and two providers had registered for the waiver training at the commencement of the project. Two PDSA cycles were completed and the outcome measure was met. Despite these accomplishments, more must be done.

The intent of this improvement project was to bring attention to the need for increased access to buprenorphine MAT at the Portland VHA. The interventions employed should serve as the foundation for a continued focus on this important problem.

The proposed "next steps" would include addressing the need for policy change at the Portland VHA, and a continued focus on quality improvement interventions to increase access to office based buprenorphine MAT. Using quality improvement methods will influence VHA policy. A pilot project to evaluate buprenorphine MAT in the behavioral health clinic would provide valuable information to inform policy change to increase access to MAT. Additional

interventions could focus on increasing financial incentives and addressing culture change, both of which were identified as barriers in the behavioral health clinic. An intervention focused on the providers who have the waiver training and are not prescribing should also be considered.

The VHA has implemented multiple strategies in an effort to address the Veteran opioid epidemic. Continued focus on addiction treatment is necessary. Increasing access to buprenorphine MAT is an important and obvious method to treat Veterans with OUD.

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