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Educational Program Focused on Medication-Assisted Treatment to Improve Healthcare Providers' Knowledge of Managing Opioid Use Disorder in Primary Care Setting

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Executive Summary: Staff Education Project

Educational Program Focused on Medication-Assisted Treatment to Improve Healthcare Providers' Knowledge of Managing Opioid Use Disorder in Primary Care Setting

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Summary

This Doctor of Nursing Practice (DNP) project is a staff education project focused on enhancing healthcare providers' knowledge of managing opioid use disorder (OUD) through medication-assisted treatment (MAT) in a primary care setting. The practice problem focuses on the lack of provider knowledge and persistent misconceptions about MAT. Primary care providers often feel ill-equipped to manage OUD, due to inadequate formal training and report insufficient understanding of MAT medications, regulatory requirements, and patient management strategies, contributing to underutilization of MAT, even in settings where patient need is high. Given the ongoing opioid epidemic and the important role that primary care providers play in comprehensive care, this educational intervention is both timely and critical. The purpose of this project was to evaluate the impact of an educational intervention on improving healthcare providers' knowledge and readiness to implement MAT for OUD in primary care. The project aimed to address identified gaps in provider training, enhance clinical competency in MAT, and support the integration of evidence-based practices for managing OUD within the organization.

A pre- and post-test design was used to evaluate changes in knowledge among 20 healthcare providers. These 20 providers completed a 10-question multiple-choice assessment before and after a brief PowerPoint presentation. Findings indicated an overall improvement in knowledge with the average score increasing from 8.25 (pre-test) to 9.35 (post-test). Of the 20 participants, 16 demonstrated knowledge improvement following the educational presentation. This project supports providers to better serve patients affected by OUD with empathy and evidence-based care.

Background

Opiate use disorder (OUD) is a pressing health issue that continues to affect millions in the United States. According to the Centers for Disease Control (CDC, 2024), opioid overdoses were responsible for over 81,000 deaths in 2020, exacerbating the opioid crisis. Medication-assisted treatment (MAT) has emerged as the gold standard of care. MAT, which combines pharmacological treatment with behavioral therapies, has emerged as an evidence-based solution to manage OUD (Maglione et al., 2020). Despite its effectiveness, MAT is underutilized, often due to healthcare providers' misconceptions, lack of training, and stigma surrounding addiction (Haffajee et al., 2020). This project aims to address these gaps by educating healthcare providers, focusing on improving knowledge about MAT. Given the national urgency surrounding the opioid crisis, integrating MAT-focused education into healthcare training and continuing education programs may enhance providers' preparedness in the primary care setting. Provider attitudes toward individuals with OUD also play a significant role. Prior research also shows that providers bias and lack of training reduce the likelihood of MAT being offered for those patients seeking treatment (Haffajee et al, 2020). Stigmatizing beliefs such as viewing addiction as a moral failing rather than a chronic disease negatively influence provider willingness to treat (Haffajee et al., 2020). Conversely, providers who understand OUD as a chronic, relapsing condition are more likely to offer compassionate, ongoing care (Phelan et al., 2023).

In addition to stigma, system-level and regulatory challenges further compound provider hesitancy. These include limited institutional support, time constraints, a lack of multidisciplinary teams, and confusion around regulatory policies for prescribing

medications like buprenorphine (Campopiano von Klimo et al., 2024; Lowe et al., 2022). According to Barbieri (2023), even when providers are interested in offering MAT, logistical issues in primary care—such as appointment availability and coordination—can deter consistent engagement.

The educational intervention to enhance healthcare providers' knowledge of MAT for OUD is supported by substantial Level I and Level II evidence. According to the hierarchy of evidence, Level I evidence includes systematic reviews and meta-analyses of randomized controlled trials (RCTs), while Level II evidence includes individual RCTs or well-designed quasi-experimental studies.

Maglione et al. (2020) conducted a comprehensive systematic review (Level I) that evaluated the effects of MAT on functional outcomes. Their findings demonstrated that MAT not only improves clinical endpoints such as reduced opioid use and overdose risk, but also enhances social functioning, employment outcomes, and quality of life. This strongly supports MAT as a cornerstone of OUD treatment.

Deyo-Svendsen et al. (2020) provide Level II evidence through a real-world implementation study in a rural family medicine setting. The study showed that with structured support and provider education, MAT can be successfully integrated into primary care, leading to expanded access for underserved populations.

Haffajee et al. (2020) contributed mixed-method evidence that highlighted persistent provider-level barriers, including stigma, lack of training, and misconceptions about MAT efficacy. This aligns with findings by Campopiano von Klimo et al. (2024), whose systematic review (Level I) identified physician reluctance and stigma as major barriers to effective OUD treatment, further underscoring the need for educational

interventions. Educational interventions that directly address these concerns have been shown to increase provider's willingness to prescribe MAT and reduce negative attitudes toward patients with OUD (Parish et al 2023). Moreover, the provider's willingness is often influenced by personal experience. Those with prior exposure to addiction medicine or with personal or familial connections to substance use disorders tend to demonstrate more positive attitudes and a greater readiness to treat OUD (Oesterle et al., 2019; Barbieri, 2023). Jaffe et al. (2024) also found that societal perceptions are gradually shifting toward broader acceptance of MAT, which may positively influence provider perspectives over time.

Stigma and lack of preparedness are recurring themes in literature. Klusaritz et al. (2023), Lowe et al. (2022), and Phelan et al. (2023) show that stigma not only affects patients but also impedes clinician readiness to offer MAT, even when clinical guidelines recommend it. Piscalko et al. (2024) and Jaffe et al. (2024) further reinforce this by highlighting the knowledge-stigma gap between both providers and the public. This body of Level I and Level II evidence clearly supports the implementation of staff education programs as an evidence-based strategy to enhance MAT adoption, reduce provider stigma, and improve health outcomes for individuals with OUD in primary care. The project promotes positive social change by reducing stigma, increasing treatment availability, and contributing to health equity and inclusion for vulnerable populations affected by substance use disorders.

Staff Education Project Development

The project was conducted at a Federally Qualified Healthcare Facility (FQHC). A total of 20 healthcare providers (physicians, nurse practitioners, and physician

assistants) participated in the project. Inclusion criteria included licensed staff, providers that have given consent for participation, and providers that have not received formal training or certification on MAT. Exclusion criteria staff members outside of the clinical provider group, and individuals that decline to participate. These criteria ensured that the educational intervention targeted the appropriate audience. For this staff education project, the ADDIE Model was used. This model ensured that the project was responsive to identify needs and deliver MAT staff education intervention. For this project, the healthcare providers volunteered to take part in the educational project. The intervention included a pre-test to assess baseline knowledge, followed by a power point presentation. Immediately afterward, participants completed a post-test with the same questions from the pre-test. Results were collected through pre- and post-test scores and analyzed using descriptive statistics. The educational content covered several key topics relevant to the use of MAT for OUD. These included: (a) an overview of the medications used in MAT, such as methadone, buprenorphine, and naltrexone; (b) the integration of pharmacologic treatment with behavioral therapy as a comprehensive approach to OUD management; (c) strategies for overcoming stigma and misconceptions associated with MAT; and (d) the essential role of healthcare providers in implementing MAT within primary care settings.

This project demonstrates how targeted education can reduce stigma and improve understanding of treatment modalities for OUD. Implications include expanding MAT education and training in primary care settings, improving access to effective treatment for patients with OUD.

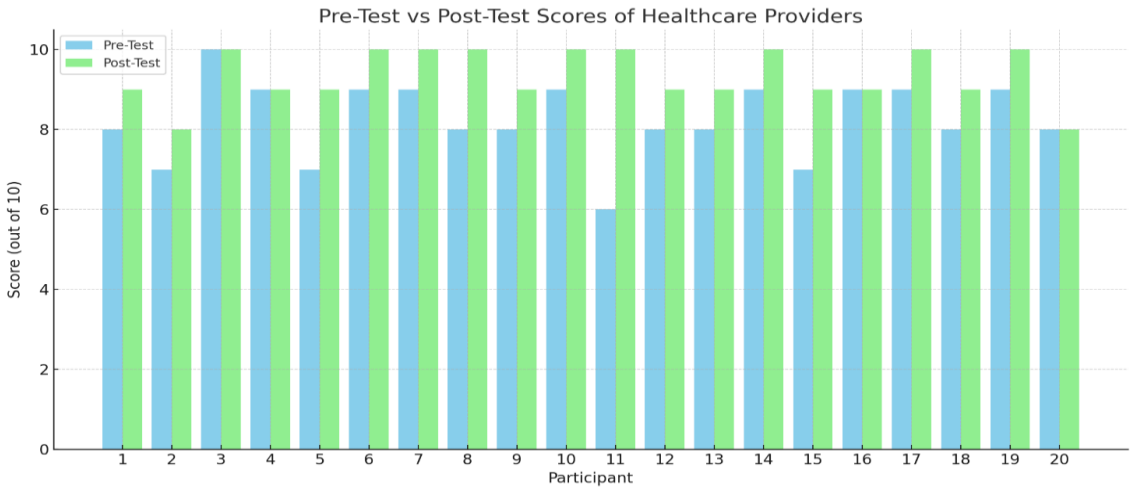
Results

Pre-test scores indicated moderate baseline knowledge, with an average of 8.25 out of 10 correct responses across all participants. In contrast, post-test scores demonstrated a substantial improvement, with the average rising to 9.35 out of 10, representing a 11.39% increase in correct responses overall.

A paired-samples *t* test was conducted to assess the impact of the educational intervention on healthcare providers' knowledge of MAT. There was a statistically significant increase in scores from the pre-test ($M = 8.09$) to the post-test ($M = 9.22$), $t(19) = 5.42$, $p < .001$. The effect size was very large ($d = 1.55$), indicating a substantial improvement in MAT-related knowledge following the intervention. Figure 1 bar chart shows each participant's pre and post test scores. The blue line represents pre-test scores, and the green line shows the post-test scores, illustrating the overall improvement in provider knowledge.

Figure 1

*Pre-test and Post-Test Results by Participant (*N = *20)*



The 20 selected healthcare providers, presented with a diverse range of clinical backgrounds and experiences. These differences influenced performance on the pre- and post-intervention knowledge assessments in notable ways. Two providers with prior experience in behavioral health settings demonstrated high baseline knowledge, each scoring 10 out of 10 on the pre-test. This aligns with existing literature suggesting that exposure to behavioral health environments enhances familiarity with MAT and substance use disorder (SUD) care practices (Jaffe et al., 2024; Klusaritz et al., 2023). These individuals maintained high scores post-intervention, reinforcing the value of behavioral health experience in early MAT proficiency. A recent nurse practitioner graduate, with limited clinical exposure to MAT, initially scored lower on the pretest but showed one of the greatest improvements, achieving a perfect score post-intervention. This supports the need for targeted education among new providers, as knowledge and confidence in managing OUD are often underdeveloped in entry-level training programs (Piscalko et al., 2024; American Association of Colleges of Nursing [AACN], 2021). A primary care provider with over 20 years of experience scored moderately on the pre-test (7/10), indicating knowledge gaps likely due to lack of prior formal MAT training. However, the provider improved to a score of 9/10 post-intervention, demonstrating that even long-standing clinicians benefit from updated, evidence-based education (Maglione et al., 2020; Haffajee et al., 2020).

The study results demonstrate that a brief, targeted educational intervention can meaningfully improve healthcare providers' knowledge in understanding of MAT for OUD. The intervention successfully addressed misconceptions, improved understanding of MAT approach, and emphasized its effectiveness as a long-term treatment strategy

(Oesterle et al., 2019). Beyond the local setting, this project contributes to national efforts to combat the opioid epidemic. As the Centers for Disease Control and Prevention (CDC, 2024) and National Institute on Drug Abuse (NIDA, 2022) emphasize, expanding MAT access through primary care is critical to addressing overdose deaths and treatment gaps. This project offers a scalable model that other healthcare systems can adopt to overcome similar barriers (Deyo-Svendsen et al., 2020; Biesiada et al., 2024).

Conclusions

This project demonstrated that a structured educational intervention can significantly improve healthcare providers' knowledge of MAT, while addressing misconceptions and enhancing the delivery of MAT in clinical settings. By increasing provider knowledge, the project contributes to reducing stigma and improving patient care. The educational intervention not only had a positive impact on knowledge but also empowered providers to confidently offer MAT as part of a comprehensive treatment plan for OUD. Providers reported greater confidence in their ability to evaluate patients for MAT eligibility, initiate treatment plans, and engage in informed decision-making regarding pharmacologic interventions. Clinical leadership reported positive feedback regarding the educational PowerPoint, with several providers expressing increased confidence in managing patients seeking treatment for OUD. By normalizing MAT within the primary care setting and clarifying providers' roles in its delivery, the educational program fostered a culture of openness, competence, and collaboration. This shift not only supports improved patient care but also aligns with broader organizational goals to expand access to evidence-based treatment and reduce the public health burden of OUD. The adoption of similar initiatives could be used in the future to support positive

social change by promoting access to treatment. This project highlights the vital role of provider education in closing practice gaps and enabling primary care teams to deliver high-quality, patient-centered OUD treatment.

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