

# Exploring the Collaborative Role of Pharmacists and Social Workers in Medication-Assisted Treatment (MAT) for Substance Use Disorders: A Multidisciplinary Approach to Enhancing Patient Outcomes

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## Abstract

**Background:** Medication-Assisted Treatment (MAT) for opioid use disorder (OUD) is most effective when it combines pharmacological intervention with psychosocial support. This study investigates the impact of interdisciplinary collaboration between pharmacists and social workers in improving patient outcomes in a MAT program within a tertiary hospital.

**Methods:** A mixed-methods study was conducted with 150 patients receiving MAT. Quantitative data on medication adherence, relapse rates, and treatment retention were collected over 12 months, and semi-structured interviews were conducted with patients, pharmacists, and social workers. Data were analyzed using descriptive statistics and thematic analysis.

**Results:** Patients receiving both pharmacist and social worker support showed higher medication adherence (85%) and treatment retention (75%) and lower relapse rates (10%) compared to those receiving only pharmacist support or no interdisciplinary support. Qualitative analysis revealed that collaboration improved communication, problem-solving, and holistic patient care.

**Conclusion:** Interdisciplinary collaboration between pharmacists and social workers significantly improves patient outcomes in MAT programs. Hospitals should prioritize structured collaboration to enhance the effectiveness of MAT in treating OUD.

**Keywords:** Medication-Assisted Treatment, Opioid Use Disorder, Pharmacists, Social Workers, Interdisciplinary Collaboration, Patient Outcomes.

## Introduction

Substance use disorders (SUDs), particularly opioid use disorder (OUD), have posed significant public health challenges globally over the past two decades. The introduction of Medication-Assisted Treatment (MAT), which combines pharmacological interventions like methadone, buprenorphine, and naltrexone with counseling and behavioral therapies, has proven to be a highly effective strategy in managing opioid addiction. Research shows that MAT significantly reduces opioid cravings, diminishes withdrawal symptoms, and improves retention in treatment programs, ultimately decreasing the rates of relapse and overdose deaths (Stoller et al., 2016; Dole et al., 1976).

Pharmacists play a pivotal role in the implementation and success of MAT programs. Their responsibilities extend beyond the mere dispensing of medications to include patient counseling, medication management, monitoring for potential drug interactions, and ensuring adherence to treatment protocols (McLellan et al., 2000). The involvement of pharmacists in MAT has expanded over the years, with many now working closely with interdisciplinary teams to provide comprehensive care to patients battling opioid addiction (Viktil and Blix, 2008).

Similarly, social workers are essential to addressing the psychosocial components of addiction. By providing counseling, case management, and connecting patients to vital community resources, social workers help address the underlying social determinants of health that often hinder recovery, such as homelessness, unemployment, or lack of access to healthcare (Brady et al., 2013). Together, pharmacists and social workers create a multidisciplinary team that addresses both the medical and psychosocial needs of patients in MAT programs, fostering an environment conducive to recovery (Broyles et al., 2013).

This collaboration between pharmacists and social workers is critical for improving patient outcomes in MAT. By working in tandem, they can enhance treatment adherence, reduce relapse rates, and support patients holistically throughout their recovery journey (Nadeau, 2014). This paper aims to explore the joint role of pharmacists and social workers in MAT programs, examining the impact of their collaboration on treatment success and long-term patient outcomes.

## Literature Review

### Medication-Assisted Treatment (MAT) Overview

Medication-Assisted Treatment (MAT) is widely regarded as the gold standard for treating opioid use disorder (OUD). It involves the use of medications such as methadone, buprenorphine, and naltrexone, combined with behavioral therapies and counseling, to provide a comprehensive approach to treating opioid dependence (Stoller et al., 2016). Numerous studies have demonstrated that MAT significantly reduces opioid use, improves patient retention in treatment, and decreases the risk of overdose and other health complications associated with opioid use (McLellan et al., 2000; Dole et al., 1976).

The effectiveness of MAT has been supported by research showing that when patients are treated with a combination of pharmacotherapy and psychosocial support, they experience better outcomes compared to those receiving only behavioral therapies (Broyles et al., 2013). Studies also suggest that integrating MAT into public health strategies has been instrumental in managing the opioid crisis, offering a sustainable approach to long-term recovery (Viktil and Blix, 2008).

### Role of Pharmacists in MAT Programs

Pharmacists have been recognized as essential healthcare providers in the implementation and success of MAT programs. Their role goes beyond dispensing medications to include patient counseling, monitoring for drug interactions, and managing medication adherence (Viktil and Blix, 2008). Pharmacists are uniquely positioned to ensure the safe administration of MAT medications, and their knowledge of pharmacotherapy enables them to play a critical role in preventing medication misuse and managing adverse effects (McLellan et al., 2000).

Recent studies have also highlighted the expanding role of pharmacists in MAT programs. For example, in settings where opioid treatment programs (OTPs) are established, pharmacists are increasingly involved in patient education and counseling, ensuring that patients understand the risks and benefits of their

medications and adhere to their treatment plans (Dole et al., 1976). This proactive involvement of pharmacists has been shown to reduce the risk of relapse and improve long-term patient outcomes (Viktil and Blix, 2008).

#### Role of Social Workers in MAT Programs

While pharmacists address the medical management of opioid addiction, social workers play an equally important role in providing psychosocial support. Social workers help patients navigate the social determinants of health that can hinder their recovery, such as housing instability, lack of access to healthcare, and unemployment (Brady et al., 2013). By addressing these barriers, social workers ensure that patients are better equipped to maintain long-term recovery.

Social workers also provide counseling and case management services, helping patients cope with the emotional and psychological aspects of addiction (Broyles et al., 2013). Studies show that when social workers are involved in MAT programs, patients are more likely to remain engaged in treatment and adhere to their recovery plans (Nadeau, 2014). The combination of medical and psychosocial care provided by pharmacists and social workers has been shown to improve overall treatment outcomes (Brady et al., 2013).

#### Interdisciplinary Collaboration in MAT Programs

The integration of pharmacists and social workers in MAT programs exemplifies the effectiveness of interdisciplinary collaboration. Research suggests that when healthcare providers from different disciplines collaborate, patient care is improved, and treatment outcomes are enhanced (Broyles et al., 2013). For example, a study by Nadeau (2014) found that interdisciplinary teams, including pharmacists and social workers, were able to reduce opioid relapse rates by addressing both the medical and psychosocial needs of patients.

Moreover, interdisciplinary collaboration fosters better communication among healthcare providers, leading to more coordinated care for patients. Pharmacists and social workers can share critical information about patients' progress, enabling them to adjust treatment plans as needed (Viktil and Blix, 2008). This approach has been shown to improve medication adherence, reduce the risk of relapse, and support long-term recovery (McLellan et al., 2000).

#### Challenges and Opportunities for Improvement

Despite the proven benefits of interdisciplinary collaboration in MAT programs, challenges remain. One of the primary barriers is the lack of structured communication between pharmacists and social workers, particularly in settings where these professionals may work in separate locations (Brady et al., 2013). Additionally, the stigma associated with opioid addiction continues to pose challenges to patient engagement, making it essential for healthcare providers to work together to create a supportive and non-judgmental environment for patients (Broyles et al., 2013).

Opportunities for improving MAT programs include developing standardized protocols for communication between pharmacists and social workers, as well as expanding training programs that emphasize the importance of interdisciplinary collaboration (Nadeau, 2014). By fostering a team-based approach to care, MAT programs can continue to improve outcomes for patients struggling with opioid addiction.

## Methodology

### Study Design

This study was conducted as a mixed-methods research project at a tertiary hospital that has an established Medication-Assisted Treatment (MAT) program for opioid use disorder (OUD). The study utilized both quantitative and qualitative approaches to evaluate the collaborative role of pharmacists and social workers in the hospital's MAT program. The research aimed to assess patient outcomes, adherence to treatment, and the effectiveness of interdisciplinary collaboration between pharmacists and social workers in improving recovery rates.

### Setting and Population

The study took place in a tertiary hospital with a dedicated MAT clinic. Participants included patients diagnosed with opioid use disorder and enrolled in the hospital's MAT program, as well as the healthcare providers directly involved in their care, specifically pharmacists and social workers.

### Eligible participants were:

- Patients: Adults (18 years and older) diagnosed with OUD who were receiving either methadone, buprenorphine, or naltrexone as part of the MAT program. Exclusion criteria included patients with concurrent severe psychiatric disorders or those who had dropped out of the MAT program within the first month of enrollment.
- Healthcare Providers: Licensed pharmacists and social workers who had at least six months of experience working in the hospital's MAT program.

### Sampling

A purposive sampling method was used to recruit both patients and healthcare providers. The final sample included 150 patients enrolled in MAT and 10 healthcare professionals (5 pharmacists and 5 social workers). Informed consent was obtained from all participants, and ethical approval was granted by the hospital's Institutional Review Board (IRB).

### Data Collection

#### Quantitative Data:

For the quantitative component, data was collected from patient medical records, including information on medication adherence, relapse rates, and treatment completion over a 12-month period. Variables included:

- Medication adherence: Assessed through pharmacy refill records and the percentage of prescribed doses taken as documented during monthly follow-up appointments.
- Relapse rates: Defined as self-reported opioid use or confirmed opioid use through random urine drug tests.
- Treatment retention: Measured as the duration of continuous engagement in the MAT program.

Surveys were also administered to assess patient satisfaction with the care received from both pharmacists and social workers, utilizing a validated 5-point Likert scale.

#### Qualitative Data:

Semi-structured interviews were conducted with both patients and healthcare providers. Interviews with patients focused on their experiences with the MAT program, perceptions of the support provided by pharmacists and social workers, and factors influencing their adherence to treatment. Interviews with

pharmacists and social workers explored their perspectives on interdisciplinary collaboration, the challenges they faced in delivering care, and their views on the overall impact of their roles in the MAT program.

All interviews were audio-recorded, transcribed verbatim, and analyzed using thematic analysis to identify recurring themes related to the impact of collaboration between pharmacists and social workers on patient care.

### Data Analysis

#### Quantitative Analysis:

Data from patient records and surveys were analyzed using descriptive statistics to summarize demographic information and key outcome variables (e.g., adherence, relapse rates, and treatment retention). A chi-square test was performed to assess the relationship between interdisciplinary collaboration and treatment retention. Additionally, a logistic regression model was used to determine predictors of successful treatment completion, considering variables such as frequency of pharmacist or social worker interactions and patient demographics.

#### Qualitative Analysis:

The qualitative data were analyzed using NVivo software. Thematic analysis was conducted to identify key themes from the interviews. Two independent researchers coded the transcripts, and discrepancies were resolved through discussion. Major themes included perceptions of care, barriers to treatment adherence, and the importance of support systems provided by pharmacists and social workers.

### Ethical Considerations

Ethical approval for the study was obtained by the ethics committee. All participants provided informed consent before participating in the study. Patient confidentiality was maintained by anonymizing all data, and interview transcripts were stored securely. Only the research team had access to the data, and the findings were presented in aggregate to protect participant identities.

### Limitations

This study was limited by its setting in a single tertiary hospital, which may reduce the generalizability of the results to other healthcare settings. Additionally, the self-reported nature of some qualitative data may have introduced recall bias or social desirability bias.

### Quantitative Results

The quantitative findings from this study demonstrated significant differences in treatment outcomes based on the level of interdisciplinary support provided to patients in the MAT program.

**Table 1: Comparison of Key Treatment Outcomes Across Groups**

Variable	Pharmacist & Social Worker Support (%)	Pharmacist Support Only (%)	No Interdisciplinary Support (%)
Medication Adherence	85%	70%	55%
Relapse Rate	10%	25%	40%
Treatment Retention	75%	60%	50%

### Medication Adherence

Patients receiving both pharmacist and social worker support demonstrated significantly higher adherence to their medication regimen (85%) compared to those with only pharmacist support (70%) and those receiving no interdisciplinary support (55%).

### Relapse Rates

The lowest relapse rates were observed among patients receiving both pharmacist and social worker support (10%), followed by those receiving only pharmacist support (25%). Patients with no interdisciplinary support had the highest relapse rate at 40%.

### Treatment Retention

Treatment retention, defined as the percentage of patients who remained engaged in the MAT program for at least 12 months, was also higher in patients receiving both types of support (75%), compared to those with only pharmacist support (60%) and those without interdisciplinary support (50%).

### Qualitative Results

Thematic analysis of the interviews revealed several key themes and sub-themes related to the collaborative role of pharmacists and social workers in MAT programs. Below are the themes, sub-themes, and illustrative quotes from participants.

#### Theme 1: Holistic Care in MAT

Participants consistently emphasized the benefits of receiving care that addressed both their medical and social needs. Patients noted that the support they received from both pharmacists and social workers helped them manage not only their medication but also the underlying social challenges they faced.

- Comprehensive Support: Many patients expressed appreciation for the holistic approach, as one patient shared, "The combined support from my pharmacist and social worker helped me not only with the meds but also with dealing with life challenges" (Patient 1).
- Emotional and Practical Assistance: Another patient highlighted how social workers provided practical help, stating, "My social worker helped me find stable housing, which made sticking to my treatment much easier" (Patient 3).

#### Theme 2: Collaboration between Professionals

Healthcare professionals involved in the study described the positive impact of collaboration between pharmacists and social workers in managing patient care.

- Effective Communication Between Disciplines: A social worker remarked, "We have regular meetings with the pharmacists, and this helps us ensure that we're all on the same page regarding the patient's care plan" (Social Worker 2).
- Team-Based Problem Solving: Pharmacists and social workers noted that their collaboration often led to creative problem-solving, with one pharmacist commenting, "We often brainstorm solutions together when a patient is struggling with adherence. It's a collaborative effort" (Pharmacist 4).

#### Theme 3: Challenges in Interdisciplinary Care

While the collaboration was generally perceived as beneficial, both pharmacists and social workers acknowledged certain challenges.

- Time Constraints: Social workers, in particular, noted the difficulty of balancing their caseloads with the

need for regular interdisciplinary meetings, as one shared, "Sometimes it's hard to find the time for detailed meetings with the pharmacist, given our caseloads" (Social Worker 5).

- Lack of Resources: Pharmacists also mentioned limitations, with one stating, "We could do even more if we had more resources, like additional social services or access to mental health professionals" (Pharmacist 2).

#### Theme 4: Impact on Patient Outcomes

Patients reported that the interdisciplinary support they received positively affected their treatment outcomes.

- Improved Adherence: One patient said, "Before, I was missing doses and not caring. Now, with their support, I stick to the plan" (Patient 4).

- Reduced Relapse: Another patient explained, "With both of them checking in, I feel more accountable. It's easier to stay on track" (Patient 2).

### Discussion

The findings from this study highlight the critical role that interdisciplinary collaboration between pharmacists and social workers plays in improving outcomes for patients enrolled in a Medication-Assisted Treatment (MAT) program for opioid use disorder (OUD). Both the quantitative and qualitative data underscore the positive impact of this collaboration on key metrics such as medication adherence, relapse rates, and treatment retention.

#### Improved Medication Adherence

The quantitative results revealed that patients who received both pharmacist and social worker support had significantly higher medication adherence rates (85%) compared to those receiving only pharmacist support (70%) or no interdisciplinary support (55%). This finding aligns with previous research that demonstrates the benefits of a comprehensive approach to addiction treatment, where both pharmacological and psychosocial components are addressed simultaneously (McLellan et al., 2000; Viktil and Blix, 2008). The collaborative efforts of pharmacists and social workers likely contributed to these higher adherence rates by ensuring that patients not only received the necessary medications but also had access to the social support needed to overcome barriers to adherence, such as housing instability and lack of access to healthcare (Brady et al., 2013).

#### Reduction in Relapse Rates

The study also showed a clear reduction in relapse rates among patients who received interdisciplinary support. Only 10% of these patients experienced relapse during the study period, compared to 25% of those with pharmacist-only support and 40% of those without interdisciplinary support. This is consistent with existing literature, which highlights the importance of social workers in providing emotional and practical support that helps patients cope with the challenges of maintaining recovery (Broyles et al., 2013). By addressing the underlying social determinants of health, such as employment, family dynamics, and mental health, social workers play a key role in reducing the likelihood of relapse (Nadeau, 2014). Pharmacists, on the other hand, ensure that patients are well-informed about their medications, reducing the risk of misuse or discontinuation.

#### Enhanced Treatment Retention

The retention of patients in the MAT program was also significantly higher among those receiving interdisciplinary support, with 75% of these patients remaining in treatment for at least 12 months,

compared to 60% in the pharmacist-only group and 50% in the no-support group. Treatment retention is a critical factor in the success of MAT programs, as longer engagement in treatment is strongly associated with better long-term recovery outcomes (McLellan et al., 2000). The combination of medical and psychosocial support provided by pharmacists and social workers likely contributed to these higher retention rates by addressing both the biological and emotional needs of patients, fostering a more supportive environment for recovery.

#### Qualitative Insights: The Value of Collaboration

The qualitative data further supports the quantitative findings by shedding light on the specific ways in which pharmacist and social worker collaboration benefits patients. Patients frequently cited the holistic care they received as a critical factor in their success. The thematic analysis revealed that both pharmacists and social workers contributed to addressing not only the medical aspects of opioid use disorder but also the social and emotional challenges that often accompany it. This is consistent with other studies that emphasize the importance of addressing both the clinical and psychosocial needs of patients in MAT programs (Brady et al., 2013).

Healthcare professionals involved in the study also highlighted the importance of regular communication and joint problem-solving in improving patient care. The interdisciplinary meetings and consultations allowed for a more comprehensive understanding of each patient's needs, leading to more tailored and effective treatment plans. However, the study also revealed some challenges, such as time constraints and limited resources, which are common barriers in interdisciplinary care (Broyles et al., 2013). Addressing these challenges through better resource allocation and streamlined communication protocols could further enhance the effectiveness of pharmacist-social worker collaboration.

#### Implications for Practice

The results of this study have important implications for the design and implementation of MAT programs. The significant differences in patient outcomes between those who received interdisciplinary support and those who did not suggest that MAT programs should prioritize collaboration between pharmacists and social workers. Ensuring that patients have access to both medical and social support may improve adherence, reduce relapse, and increase treatment retention, ultimately leading to better long-term recovery outcomes.

To optimize these collaborative efforts, hospitals and clinics should consider implementing structured interdisciplinary protocols that facilitate regular communication and joint decision-making between pharmacists, social workers, and other healthcare providers. Additionally, expanding training opportunities for healthcare professionals to work in interdisciplinary teams could further enhance the quality of care provided in MAT programs.

#### Limitations

While this study provides valuable insights into the benefits of interdisciplinary collaboration in MAT programs, there are some limitations that should be noted. First, the study was conducted in a single tertiary hospital, which may limit the generalizability of the findings to other healthcare settings. Second, the qualitative data is based on self-reported experiences from patients and healthcare providers, which may be subject to recall bias or social desirability bias. Future research could address these limitations by conducting similar studies in multiple healthcare settings and using additional objective measures of collaboration and patient outcomes.



## Conclusion

This study demonstrates the crucial role of interdisciplinary collaboration between pharmacists and social workers in improving outcomes for patients with opioid use disorder enrolled in MAT programs. The combined efforts of these professionals in addressing both the medical and psychosocial needs of patients lead to improved medication adherence, reduced relapse rates, and higher treatment retention. As MAT programs continue to evolve, integrating and enhancing interdisciplinary care should be a key focus to maximize patient recovery and long-term success.

## References

1. Brady, K. T., Haynes, L. F., Hartwell, K. J., & Killeen, T. K. (2013). Substance use disorders and anxiety: a treatment challenge for social workers. *Social work in public health, 28*(3-4), 407-423.
2. Broyles, L. M., Conley, J. W., Harding Jr, J. D., & Gordon, A. J. (2013). A scoping review of interdisciplinary collaboration in addictions education and training. *Journal of addictions nursing, 24*(1), 29-36.
3. Dole, V. P., & Nyswander, M. E. (1976). Methadone maintenance treatment: A ten-year perspective. *Jama, 235*(19), 2117-2119.
4. McLellan, A. T., Lewis, D. C., O'Brien, C. P., & Kleber, H. D. (2000). Drug dependence, a chronic medical illness: implications for treatment, insurance, and outcomes evaluation. *Jama, 284*(13), 1689-1695.
5. Nadeau, L. (2014). All for one, one for all: Interdisciplinary collaboration in the treatment of addictions. *Canadian Journal of Addiction, 5*(3), 23-27.
6. Stoller, K. B., Stephens, M. C., & Schorr, A. (2016). Integrated service delivery models for opioid treatment programs in an era of increasing opioid addiction, health reform, and parity. *American Association for the Treatment of Opioid Dependence (AATOD)*.
7. Viktil, K. K., & Blix, H. S. (2008). The impact of clinical pharmacists on drug-related problems and clinical outcomes. *Basic & clinical pharmacology & toxicology, 102*(3), 275-280.