

A Scoping Review of Healthcare Workers' Perspectives of Outpatient Provision of Methadone

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Conflicts of Interest

- The authors have no conflicts of interest

Background: Opioid Epidemic and Methadone

- Inappropriate use of prescription opioids, heroin, and illicitly-manufactured fentanyl has significantly escalated opioid use disorder (OUD) over the past 20 years^{1,2} and has resulted in substantial morbidity and mortality in the United States (U.S.)³⁻⁷
- Access to medications for opioid use disorders (MOUD) is a crucial public health strategy in confronting the opioid epidemic⁸⁻¹¹
- Approved in 1972, methadone maintenance treatment (MMT) is an evidence-based treatment¹² that combines daily methadone dosing with counseling and behavioral therapies.^{13,14}
- Research has consistently shown MMT is effective for OUD treatment,^{15,16} yet, despite its known safety and efficacy, only 1 out of 10 people with an OUD receive MMT¹⁷
- **Since its approval, methadone has been one of the most stringently regulated medical treatments and has also been one of the most controversial, misunderstood, and stigmatized MOUD.¹⁷ As a result, multiple barriers exist that limit access to care for individuals with an OUD.**

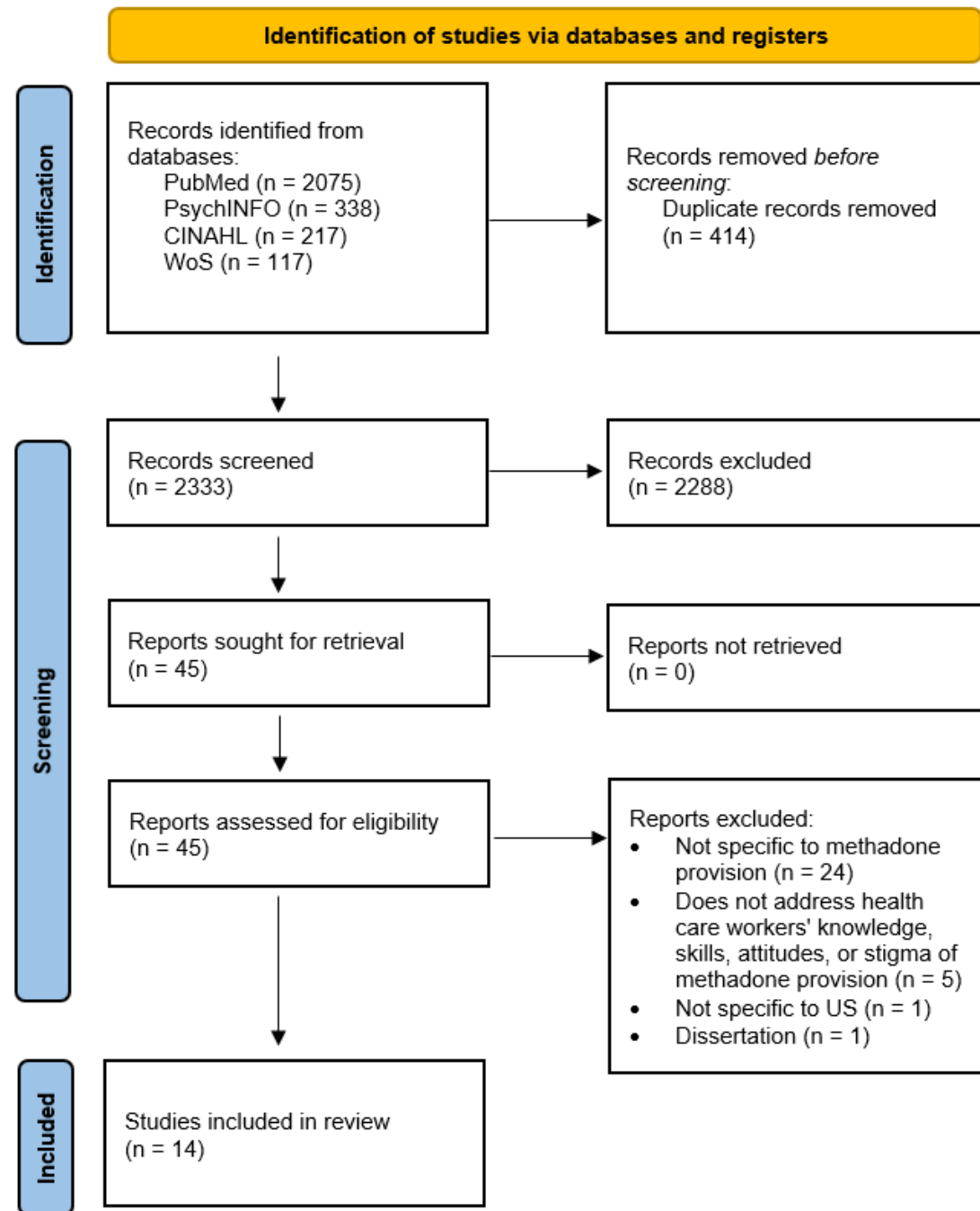
Background: Call to Action

- A recent Call to Action by the National Institute on Drug Abuse outlined research priorities to expand methadone treatment access for individuals with an OUD, including administration and dispensing from a community pharmacy¹⁸
- Treatment expansion priority areas focus on four domains: patient, treatment, system, and assessment
- One priority is to optimize educational and support structures, including training to provide methadone across healthcare settings (e.g., primary care, opioid treatment programs (OTPs), pharmacies) and healthcare workers (HCWs)
- Before hybrid design implementation studies focusing on methadone expansion can be conceptualized, proposed, developed, and evaluated, it is essential that optimal educational and support structures exist across healthcare settings and for different HCWs (e.g., providers, nurses, counselors, pharmacists, social workers)

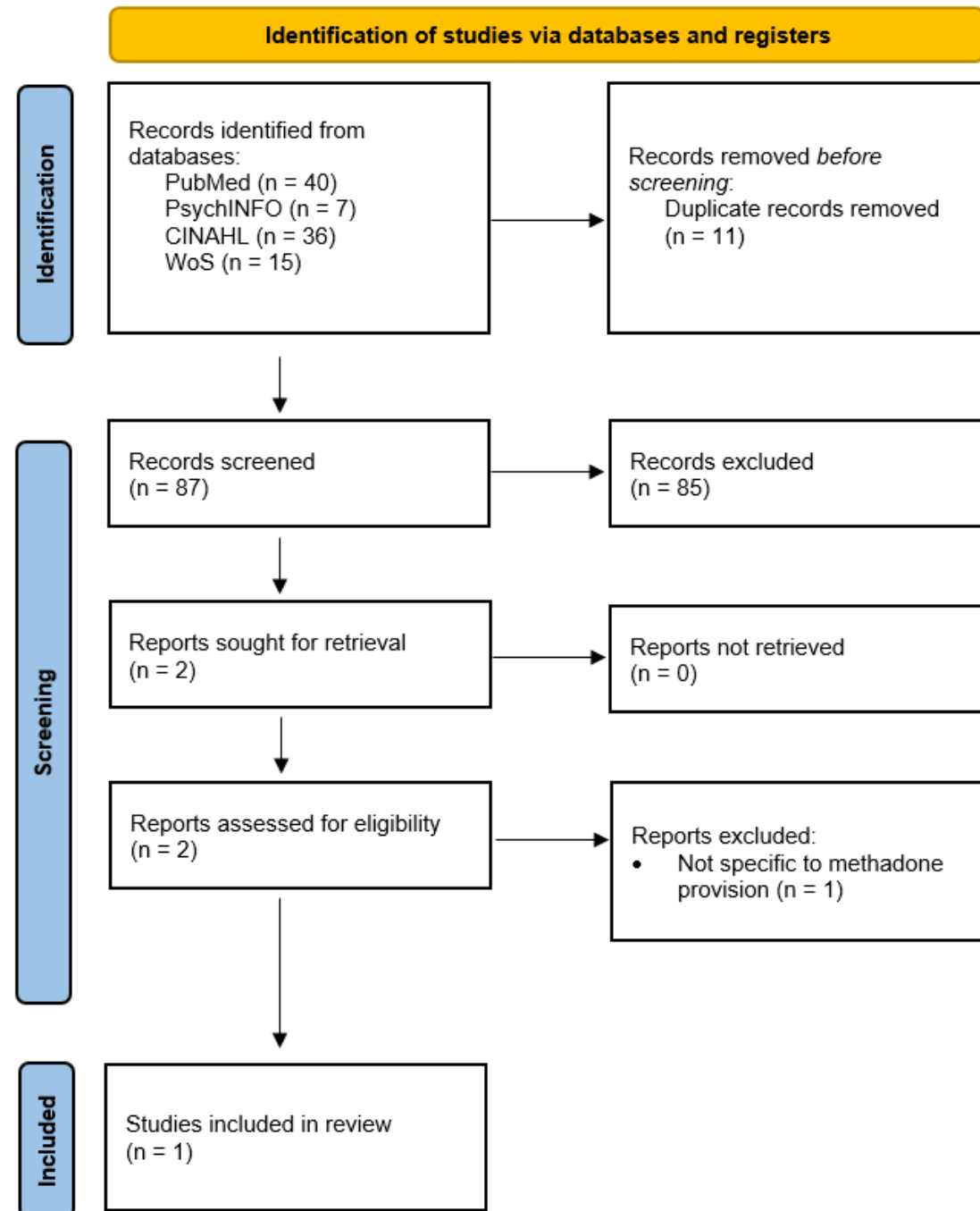
- To address the issue related to methadone and to better understand potential barriers to MMT, we conducted a scoping review focused on HCWs' knowledge, attitudes, and stigma related to the provision of methadone in outpatient settings¹⁸
- Our scoping review seeks to answer the following question:
What are HCWs' knowledge, attitude, and stigma as it pertains to provision of methadone?
- As an opportunity for comparison, it was also important to determine how pharmacists, as a separate group of healthcare professionals, differ regarding these same issues.

- We applied the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR)¹⁹ guidelines for reporting our scoping review
- Prior to initiating our review, a protocol outlining our planned research questions, inclusion criteria, and search strategy (keywords and research databases) was developed.
- The protocol was updated in response to unique circumstances and changes were documented.
- The following electronic databases were used for the literature searches: PubMed, APA PsycInfo, CINAHL, and Web of Science.
- Search terms and MeSH headings included keywords related to **methadone, HCWs, and outpatient settings**, as well as **knowledge, attitudes, and stigma**.

PRISMA Flow Diagram - Initial Search (2010 to 2022)



PRISMA Flow Diagram - Secondary Search (Jan 2022 - Feb 2023)



Article Characteristics

Article Characteristics	n (%)
Methadone focus	
Methadone only	8 (57.1%)
Methadone along with other MAT	6 (42.9%)
Data collection period	
Pre-COVID data	10 (71.4%)
March 2020-February 2023	2 (14.3%)
Both time periods	2 (14.3%)
Methods used to evaluate methadone-specific issues	
Quantitative	3 (21.4%)
Qualitative	8 (57.1%)
Mixed methods	1 (7.1%)
Case study	1 (7.1%)
Review	1 (7.1%)
Data collection	
Survey	3 (21.4%)
Interviews	8 (57.1%)
Mixed-methods	1 (7.1%)
Literature acquisition	2 (14.3%)
Article focus	
Attitudes	13 (92.9%)
Stigma	11 (78.6%)
Knowledge	2 (14.3%)
Setting	
OTP/MTP	4 (28.6%)
Specialty addiction treatment clinics	3 (21.4%)
Community pharmacy	2 (14.3%)
Multiple settings	5 (35.7%)

Of the 14 identified articles, only 2 (13.3%) involved a direct assessment of healthcare professionals' knowledge about methadone-involved MOUD

Author/ Article	HCW Focus	Key Findings
Bride et al. (2013) ²⁰ Social Workers' Knowledge and Perceptions of Effectiveness and Acceptability of Medication Assisted Treatment of Substance Use Disorders	Social workers/ counselors	<ul style="list-style-type: none"> 81% of counselors indicated knowledge of methadone; no statistically significant differences when social workers were compared to other counselors Social workers' knowledge about methadone/MAT was not affected by education, tenure, or whether methadone was used in their treatment program However, a greater amount of training was associated with a higher degree of knowledge about methadone
Davenport et al. (2020) ²¹ Indiana community pharmacist preceptors' knowledge and perceptions of medication-assisted treatment	Pharmacy preceptors	<ul style="list-style-type: none"> A full third of pharmacy preceptors, but at most two-thirds of preceptors, were unaware of important clinical, programmatic, and policy issues related to methadone 61.7% knew that methadone can only be dispensed for OUD through certified OTPs 67% of preceptors associated methadone with respiratory depression. Although this item represented the greatest degree of knowledge, it is surprising that a potential side effect that is universal among opioid-based medications was unknown to a notable minority of preceptors. 32.6% knew that methadone is FDA-approved for the management of OUD

- 13 articles in this scoping review, including 12 on HCWs and 2 on pharmacists specifically, identified attitudes around the provision of methadone^{21,22,23-34}
- Most of the articles (12 studies, 92.3%) involved what were essentially cross-sectional study designs (7 qualitative; 3 quantitative; 2 review articles; and 1 mixed-methods)
- Themes related to methadone attitudes included:
 1. Healthcare Workers' Attitude Toward Provision of Methadone
 2. How Different OUD Treatment Models Influence Attitudes
 3. Attitudes about COVID Changes to Methadone Treatment
 4. Pharmacist Attitudes

Attitudes Sub-Sections	Key Findings
Healthcare Workers' Attitude Toward Provision of Methadone (5/13 articles)	<ol style="list-style-type: none">1. Perceive methadone as effective at reducing opioid cravings, the risk of fatal opioid overdose, and return to opioid misuse2. HCW attitudes were influenced by individual and organizational experiences and treatment philosophies3. Methadone prescribing is positively correlated with a belief in harm reduction
How Different OUD Treatment Models Influence Attitudes (3/13 articles)	<ol style="list-style-type: none">1. Offering patients greater autonomy in deciding their own care plans led to a perceived improvement in counselor-patient relationships2. Providing methadone for stable users in physicians' offices revealed high satisfaction and demonstrated significant improvement in attitudes toward addiction treatment3. Policies and regulations have isolated MMT from mainstream medicine and limited expansion

Attitudes Sub-Sections	Key Findings
Attitudes about COVID Changes to Methadone Treatment (3/13 articles)	<ol style="list-style-type: none">1. HCW expressed concern about legal liability, their ability to identify drug use, and decreased engagement with the relaxed methadone regulations during COVID2. Alternatively, increased take home doses were seen as a benefit to patients that could help overcome the perceived punitive nature of the current structure of care3. Daily dosing and restricted access are considered mechanisms to prevent diversion
Pharmacist Attitudes (2/13 articles)	<ol style="list-style-type: none">1. Of the MAT products, pharmacists were most concerned about methadone substituting one addiction for another2. Some felt that dispensing methadone was no different than dispensing any other medication3. Methadone dispensing could work with the prescription-based system already in place

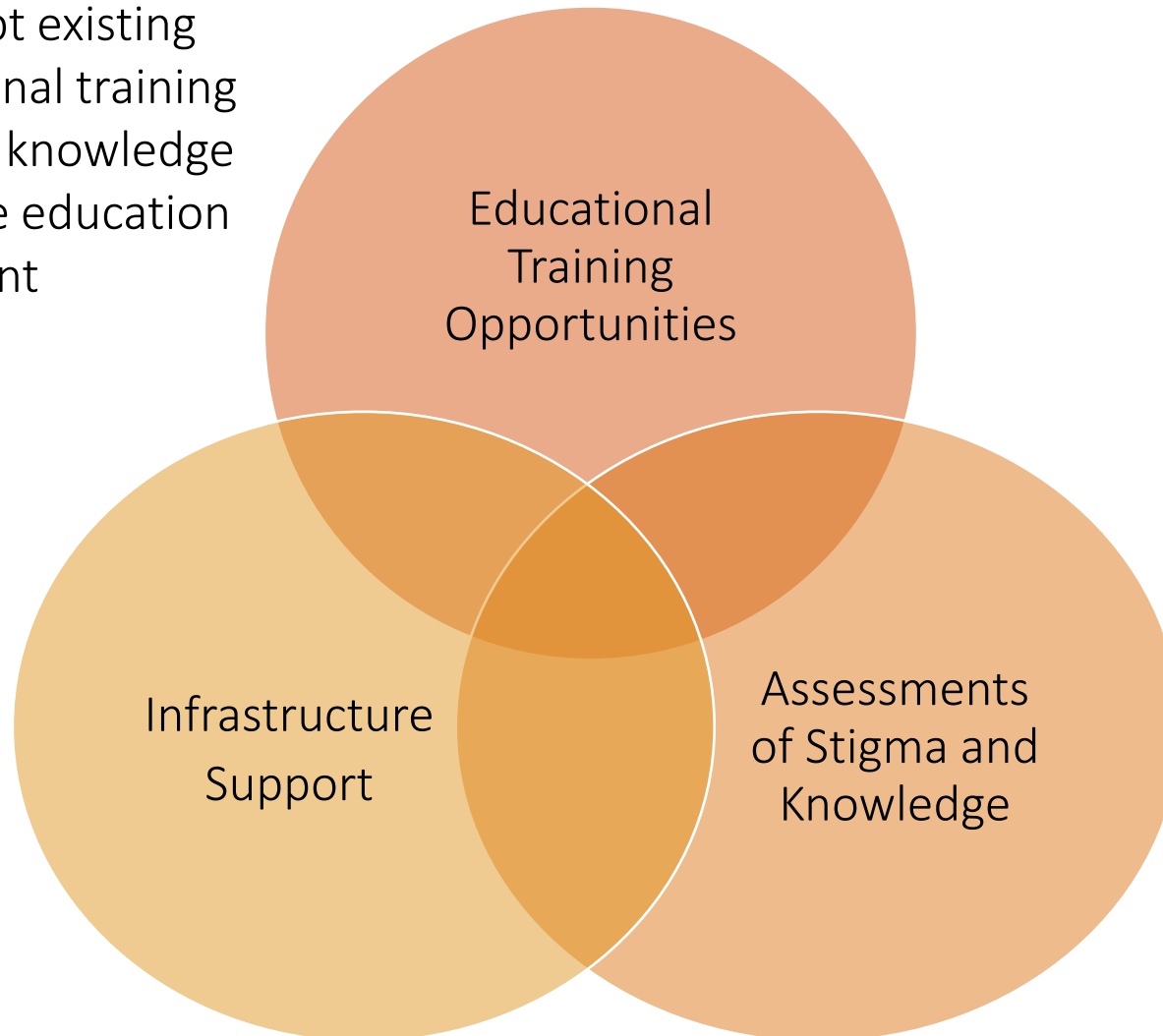
- 11 articles identified some degree of stigma related to methadone provision, two of which focused on pharmacists^{22,23,25-25,30,33}
- There were 7 qualitative studies, 3 quantitative, and 1 mixed-methods
- Themes related to methadone stigma included:
 1. Concern for misuse and diversion,
 2. Skepticism of methadone as a treatment for OUD, and
 3. Prejudice against people with OUD

Stigma Sub-Sections	Key Findings
Misuse & Diversion (5/11 articles)	<ol style="list-style-type: none">1. Treatment centers might become “drug mills”2. Concerns about diversion and misuse of MAT products3. Increase in take-home doses led to concerns about patient risk and program liability
Skepticism & Doubt (7/11 articles)	<ol style="list-style-type: none">1. Believing methadone is less effective than other MOUD2. Viewing methadone as a means to gain profit or control, especially in communities of color3. Providing medication could undermine the effectiveness of behavioral therapy for OUD
Prejudice Against People with OUD (5/11 articles)	<ol style="list-style-type: none">1. Not wanting to attract “unwanted clientele”2. Some were concerned about break-ins, theft, and safety3. Possibility of negative community reactions or stigma against offering methadone

Discussion - Summary

- Develop new or adapt existing methadone educational training targeting stigma and knowledge
- Integrate methadone education into pharmacy student curriculum

- Funding & resources
- Provider-patient relationships
- Allocation of local resources
- Integration into existing workflows



- Utilize tools such as the Methadone Knowledge Scale or the Methadone Maintenance Treatment Stigma Mechanism Scale
- Integrate questions about methadone regulations.
- Administer to HCWs, including pharmacists

Discussion - Pharmacy Results

- Higher extent of negative attitudes and stigmatization were prevalent within the pharmacists regarding the benefits of methadone (individually and societal) compared to other MAT (e.g., buprenorphine, naloxone)
- Exhibit limited confidence in dispensing/administration of methadone
- Lack of awareness of federal regulations related to methadone dispensing
- Perceived lack of professional support, including staffing, documentation work, as well as inadequate facilities for inventory
- Support interventions (e.g., education, training) to increase knowledge and attitudes towards methadone

- While we used the PRISMA-ScR checklist to guide this scoping review, our review protocol is not registered, and this review did not involve a quality assessment.
- The scoping review focused on knowledge, stigma, and attitudes towards methadone and the results may differ for other medications for OUD.
- Articles that did not define the MOUD focus may have provided insights to HCW or pharmacists knowledge, attitudes, or stigma related to methadone.

- Healthcare workers including pharmacists' knowledge and attitudes towards methadone is a barrier to acceptance and medication use.
- The lack of knowledge about methadone may influence attitudes and stigma perceptions.
- Pharmacist current knowledge about methadone is unknown and more research is needed.
- Assessments of knowledge, stigma, and attitudes are primarily qualitative and more quantitative studies are needed.
- Additional quantitative studies should assess the concepts (knowledge, attitude, and stigma) in general and measure changes over time after exposure to interventions.



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