

## Review

# A scoping review of barriers and facilitators to the integration of substance use treatment services into US mainstream health care



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## ABSTRACT

**Background:** Following the national implementation of the Affordable Care Act (ACA) in 2014, barriers still exist that limit the adoption of substance use treatment (SUT) services in mainstream health care (MHC) settings in the United States. This study provides an overview of current evidence on barriers and facilitators to integrating various SUT services into MHC.

**Methods:** A systematic search was conducted with the following databases: “PubMed including MEDLINE”, “CINAHL”, “Web of Science”, “ABI/Inform”, and “PsycINFO.” We identified barriers and/or facilitators affecting patients, providers, and programs/systems.

**Results:** Of the 540 identified citations, 36 were included. Main barriers were identified for patients (socio-demographics, finances, confidentiality, legal impact, and disinterest), providers (limited training, lack of time, patient satisfaction concerns, legal implications, lack of access to resources or evidence-based information, and lack of legal/regulatory clarity), and programs/systems (lack of leadership support, lack of staff, limited financial resources, lack of referral networks, lack of space, and lack of state-level support). Also, we recognized key facilitators pertaining to patients (trust for providers, education, and shared decision making), providers (expert supervision, use of support team, training with programs like Extension for Community Health Outcomes (ECHO), and receptivity), and programs/systems (leadership support, collaboration with external agencies, and policies e.g., those expanding the addiction workforce, improving insurance access and treatment access).

**Conclusions:** This study identified several factors influencing the integration of SUT services in MHC. Strategies for improving SUT integration in MHC should address barriers and leverage facilitators related to patients, providers, and programs/systems.

## 1. Introduction

Substance Use Disorder (SUD) is a global health problem that impacts individuals of all ages (Connery et al., 2020; Lipari et al., 2016). In the United States (US), about 8% of the population meets diagnostic criteria for SUD (Center for Behavioral Health Statistics and Quality et al., 2019). Diagnostic criteria include “hazardous use, social/interpersonal problems related to use, neglected major roles to use, withdrawal, tolerance, used larger amounts/longer, much time spent using, physical/psychological problems related to use, activities given up to use, and repeated attempts to quit/control use” (Hasin et al., 2013). Individ-

uals with SUD usually receive substance use treatment (SUT) from specialty facilities, including drug/alcohol rehabilitation or mental health centers (Center for Behavioral Health Statistics and Quality et al., 2019; SAMHSA and Office of the Surgeon General, 2016). A 2019 national survey reported that only 2.6 million individuals  $\geq 12$  years were treated at specialty facilities out of 21.6 million recognized as needing treatment in the past year, with similar estimates for 2015–2018 (Center for Behavioral Health Statistics and Quality et al., 2019). In 2019, persons  $\geq 12$  years old were enrolled in self-help groups (2.1 million), inpatient/outpatient rehabilitation (1.0 and 1.7 million), outpatient mental health centers (1.3 million), inpatient hospitalization (642,000), private

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doctor's offices (948,000), and emergency rooms (514,000) (Center for Behavioral Health Statistics and Quality et al., 2019).

The Substance Abuse and Mental Health Services Administration (SAMHSA) defines integration as “the systematic coordination of general and behavioral health care (BHC)” (SAMHSA and Office of the Surgeon General, 2016). SAMHSA demonstrates that integrating SUD treatment services across general or mainstream health care (MHC) systems can help address the misuse of substances and related consequences, reducing health disparities, saving costs, and meeting the needs of people with SUDs (SAMHSA and Office of the Surgeon General, 2016). In the current study, MHC settings are defined as settings or facilities that prioritize the provision of health care services over SUT services or do not specialize in providing SUT services. MHC settings may include primary care, obstetrics/gynecology, emergency departments, and hospitals (McLellan and Woodworth, 2014; SAMHSA and Office of the Surgeon General, 2016). Integration could expand access as individuals with SUD utilize health care systems for acute and chronic medical conditions. Concerns about not integrating SUT into MHC include missed prevention/early intervention opportunities, inefficient referrals, unfinished treatment, increased readmission rates, and avoidable tragedies like overdose (SAMHSA and Office of the Surgeon General, 2016).

Evidence of the integration of SUT into MHC is found in individual studies (McNeely et al., 2018; Sokol et al., 2021; Storholm et al., 2017; Williams et al., 2018), which identified some of the following: (1) patient-barriers, including demographics (e.g., homelessness), confidentiality, and hesitancy to admit a substance use problem; (2) provider-barriers, including lack of clinical knowledge/training/experience, and limited beliefs and attitudes (medications not replacing specialty treatment, and substance-use stigma); and (3) program/system-barriers, including limited resources (cost of service and lack of space/staff), organizational culture, and clinic/state/county policies (McNeely et al., 2018; Sokol et al., 2021; Storholm et al., 2017; Williams et al., 2018). Facilitators identified include provider training, additional staff to assist with follow-up or medication prescription, and quality improvement teams to employ practice change e.g., coordinating and evaluating the implementation of SUT services in settings (Rahm et al., 2015; Williams et al., 2018). We are not aware of any study that has provided an overview of current evidence on barriers and facilitators to integrating various SUT services in MHC.

Several events have laid the foundation for integrated care, including reports from renowned organizations, research, and legislation (Gerstein and Lawrence, 1990; Institute of Medicine (US) Committee on Quality of Health Care in America, 2001; Institute of Medicine Committee on Treatment of Alcohol Problems, 1990; SAMHSA and Office of the Surgeon General, 2016). One that stands out is the Affordable Care Act (ACA) which was nationally implemented in 2014 and has helped improve access to BHC through insurance coverage expansion (Beronio et al., 2014; Congressional Budget Office, n.d.; Creedon and Cook, 2016). Remarkably, the ACA requires that health care plans provide coverage for ten categories of essential health benefits; and mental health and SUD services are included (SAMHSA and Office of the Surgeon General, 2016). Over 20 million formerly uninsured persons, including children on their parent's insurance plan, had additional benefits as a result of the ACA as of 2016 (Uberoi et al., 2016). Still, research indicates a pressing need for behavioral health treatment among people (approximately 25 million) who may or have gained insurance following the implementation of the ACA (Mark et al., 2015). Therefore, the current scoping review focused on synthesizing literature published from 2014 to 2021.

The primary aim of this scoping review was to synthesize evidence of barriers and facilitators to the integration of substance use services into the US MHC. Consistent with the literature (Arksey and O'Malley, 2007; Tricco et al., 2018), a scoping review was chosen to provide an overview of factors influencing the integration of SUT services in various MHC settings irrespective of study design. The present scoping review was guided by the question: “What barriers and facilitators are impacting

the integration of SUT services in US MHC?” Our findings will inform practice- and policy-based efforts targeted at expanding SUT services in MHC, which could subsequently improve SUT access, health outcomes, and save costs.

## 2. Methods

The initial protocol for this review was registered with the Open Science Framework (OSF) Registries on August 24th, 2021, under the Registration DOI: 10.17605/OSF.IO/6FJPY and was subsequently revised and published on the OSF Registries website in January 2022. The SURE (Supporting the Use of Research Evidence) framework guided the extraction and organization of evidence (i.e., barriers and facilitators) from the final included studies. The SURE framework was created to execute health system changes within Africa, and it has been utilized in a health service implementation study similar to ours (The SURE Collaboration, 2011; Wakida et al., 2018). The SURE framework comprises of five levels in which potential barriers and facilitators can be categorized, including: (1) recipients of care, (2) providers of care, (3) other stakeholders, (4) health system constraints, and (5) social and political constraints. In the current study, we classified barriers and facilitators under three levels: patients (or recipients of care), providers (or providers of care), and programs/systems (other stakeholders, health system constraints, and social and political constraints) as informed by the SURE framework. Under patients, we were interested in factors that impact their ability to receive or access SUT services within MHC. Regarding providers, we were interested in factors influencing their ability to deliver SUT services within MHC. Finally, we were interested in the following programs/systems, including the SUT program, MHC settings, and the society. This scoping review was informed by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) (Tricco et al., 2018).

### 2.1. Eligibility criteria

To identify evidence on the barriers and/or facilitators to integrating SUT or related services in MHC, the following inclusion criteria were used: (1) actual integration of substance use services, and not study protocols giving a theoretical account of how the integration of the services might be implemented, (2) studies that examined patient, provider, program, and system barriers and/or facilitators affecting integration, (3) services that range from simple diagnostic or screening procedures to therapeutic interventions or medication use, (4) US-based health care organizations or studies, (5) substances used (alcohol and/or drugs), (6) articles published from 2014 to 2021, (7) written in English language, (8) full-length papers, and (9) peer-reviewed.

Articles were excluded based on these criteria: (1) those not specifically about MHC settings, (2) studies done in specialized SUT facilities or centers, (3) mental health services, as there is a systematic review on this (Wakida et al., 2018), (4) reviews were excluded due to the aggregation of information, which may conceal or exclude relevant information, (5) studies specific to veterans and incarcerated individuals, and (6) studies not meeting our inclusion criteria.

### 2.2. Information sources and search strategy

A systematic search of the literature was performed in November 2021, by two experienced librarians, while working with the first author to peer-review. The following databases were used to search for articles: “PubMed including MEDLINE”, “CINAHL”, “Web of Science”, “ABI/Inform”, and “PsycINFO.” A preliminary search using PubMed including MEDLINE was employed to identify relevant search terms and applied to other databases. In January 2021, we updated the date restrictions of articles from 2014 upward (i.e., 2014 to 2021) to reflect when the ACA was nationally implemented. The search terms used in

each database are provided in Supplemental Table 1.1. The PRISMA checklist is provided in Supplemental Table 1.2 (Tricco et al., 2018).

### 2.3. Data abstraction

After concluding the literature search, all references were exported into Mendeley Desktop (version 1.19.8), and duplicates removed. Then citations were imported into a systematic review software (Rayyan version 1.19.1). Two reviewers reviewed title/abstracts and full-text stage using the eligibility criteria. Then the full text of all eligible and selected articles was retrieved and read thoroughly before final decisions were made. In the case of disagreements concerning studies to be included, this was resolved by consensus between both reviewers. Also, the reference lists of included articles were screened to identify other eligible articles.

### 2.4. Data synthesis

Based on existing literature (Grella et al., 2020; Wakida et al., 2018), the following key variables were extracted from the articles: (1) lead author, (2) year of publication, (3) study aim, (4) study design, (5) type of facility (6) participants/sample size, (7) data collection method, (8) SUT services received, and (9) barriers and/or facilitators.

## 3. Results

### 3.1. Study selection

Electronic search resulted in a total of 540 articles from PubMed including MEDLINE (432), CINAHL (2), Web of Science (59), ABI/Inform (47), and PsycINFO (0). After removing duplicates (9), we reviewed titles and abstracts of 531 articles, and 67 articles went under full-text review. Full-text screening resulted in the further exclusion of 32 articles not meeting our eligibility criteria or related to the study aim. After screening the reference lists of included articles, we identified an additional article to include (Andraka-Christou and Capone, 2018). Fig. 1 shows the flowchart of the search results.

### 3.2. Study characteristics

Supplemental Table 1.3 describes the final 36 studies included in this synthesis. Of these, 8 used quantitative methods or secondary survey data analysis, 19 used qualitative methods, and 9 used mixed-method approach. All studies were conducted in MHC settings. The SUT services identified were mostly regarding medications for opioid-use disorder (MOUD), while others were about Screening Brief Intervention and Referral to Treatment (SBIRT) including those that are computer-facilitated, Neonatal Abstinence Syndrome (NAS), SUD, Prescription Drug Monitoring Programs (PDMP), injection drug use, utilizing professionals (peer-recovery specialists and patient navigators), overdose/post-overdose, alcohol, and addiction. Overall, 32 articles described both barriers and facilitators to integrating SUT into MHC, 3 described barriers, and 1 described facilitators. The barriers and facilitators identified among patients, providers, and programs/systems are summarized in Table 1.

### 3.3. Barriers and facilitators to the integration of SUT into MHC

Below we summarize barriers and facilitators based on the following categories: (1) patients, (2) providers, and (3) programs/systems:

#### 3.3.1. Patients

Patient related barriers to the integration of SUT into MHC included: (i) poverty, low income, and unemployment (Collins et al., 2021; Shuman et al., 2020); (ii) low educational level (Shuman et al., 2020); (iii) limited family/social support (Powell et al., 2019; Shuman et al.,

2020); (iv) caring for other children at home (Shuman et al., 2020); (v) unreliable transportation (Blair et al., 2021; Powell et al., 2019; Shuman et al., 2020); (vi) being self-critical (Shuman et al., 2020); (vii) negative societal interactions (Shuman et al., 2020); (viii) fear of real/anticipated bias by care team (Shuman et al., 2020); (ix) confidentiality concerns (mostly about having substance use information in the Electronic Health Record (EHR)) (Hodgson et al., 2016; McNeely et al., 2018; Singh et al., 2017; Wagner et al., 2020); (x) fear of law enforcement/criminal justice sanctions (Blair et al., 2021; Wagner et al., 2020); (xi) limited finances including insurance coverage, medication cost, and fears of grant funding and service discontinuation (Collins et al., 2021; Hodgson et al., 2016; Oros et al., 2021; Powell et al., 2019; Rutkow et al., 2015; Wagner et al., 2020); (xii) homelessness (Blair et al., 2021; Powell et al., 2019); (xiii) poorly informed or misinformed about care, hospital policies, or cost (Blair et al., 2021; Wagner et al., 2020); (xiv) food security (Blair et al., 2021); (xv) lack of honesty and non-disclosure of substance use (Blair et al., 2021; Hodgson et al., 2016); (xvi) disinterest, lack of readiness to change, and unwillingness to return for follow-up or agree to counseling or referral (Andraka-Christou and Capone, 2018; Blair et al., 2021; Collins et al., 2021; Eaton et al., 2020; Hodgson et al., 2016; Lin et al., 2017; Oros et al., 2021; Wessell et al., 2014); (xvii) stigma (Hodgson et al., 2016; McNeely et al., 2018); (xviii) language barrier (Hodgson et al., 2016); (xix) age (younger or older) (Hodgson et al., 2016; Robbins et al., 2021); (xx) religious beliefs (Hodgson et al., 2016); (xxi) being male (Hodgson et al., 2016; Robbins et al., 2021); (xxii) substance use (Hodgson et al., 2016); (xxiii) race/ethnicity (Blacks and Hispanics) (Hodgson et al., 2016); (xiv) skeptical about providers ability to effectively address substance use (McNeely et al., 2018); (xxv) viewing that SUT occurs outside of MHC (McNeely et al., 2018); (xxvi) lack of access to legally obtained buprenorphine (Robbins et al., 2021); (xxvii) low number of patients for whom PDMP information is needed and having multiple IDs in the regional information system (Lin et al., 2017; Rutkow et al., 2015); (xxviii) misuse of medication (Oros et al., 2021); (xxix) presence of other medical conditions (physical limitation and co-occurring mental health disorders) (Powell et al., 2019); and (xxx) having no means of contact (IDs and cell phones) (Powell et al., 2019).

On the other hand, patient-based facilitators to the integration of SUT into MHC included: (i) education or awareness (e.g., prenatal NAS education for mothers) (Blair et al., 2021; Shuman et al., 2020); (ii) being aware of confidentiality limitations, clarity about voluntary participation, and the extent their participation can expose them to criminal justice sanctions (Wagner et al., 2020); (iii) shared decision making in which patients can take the lead (Wagner et al., 2020); (iv) trust and quality relationship with providers (Hodgson et al., 2016; McNeely et al., 2018; Oros et al., 2021); (v) gender (women) (Robbins et al., 2021); (vi) identifying as White (Robbins et al., 2021); (vii) receptivity (Wessell et al., 2014); (viii) showing successful outcomes (Wessell et al., 2014); and (ix) age (<40 years) (Robbins et al., 2021).

#### 3.3.2. Providers

Provider related barriers to the integration of SUT into MHC included: (i) work burden/competing priorities (Agle et al., 2014; Coughlin et al., 2019; Hawk et al., 2020; Kilaru et al., 2021; Klusaritz et al., 2020; McNeely et al., 2018; Salvador et al., 2019; Shea et al., 2021; Shuman et al., 2020; Wagner et al., 2020); (ii) lack of or few trained/experienced providers, lack of drug enforcement administration (DEA) waiver and obtaining waivers involves demanding training requirements (Agle et al., 2014; Andraka-Christou and Capone, 2018; Binswanger et al., 2015; Cole et al., 2021; Collins et al., 2021; Foti et al., 2021; Hawk et al., 2020; Hodgson et al., 2016; Klusaritz et al., 2020; Lin et al., 2017; McNeely et al., 2018; Oros et al., 2021; Shea et al., 2021; Urada et al., 2014; Wessell et al., 2014; Zuckerman et al., 2021); (iii) time con-

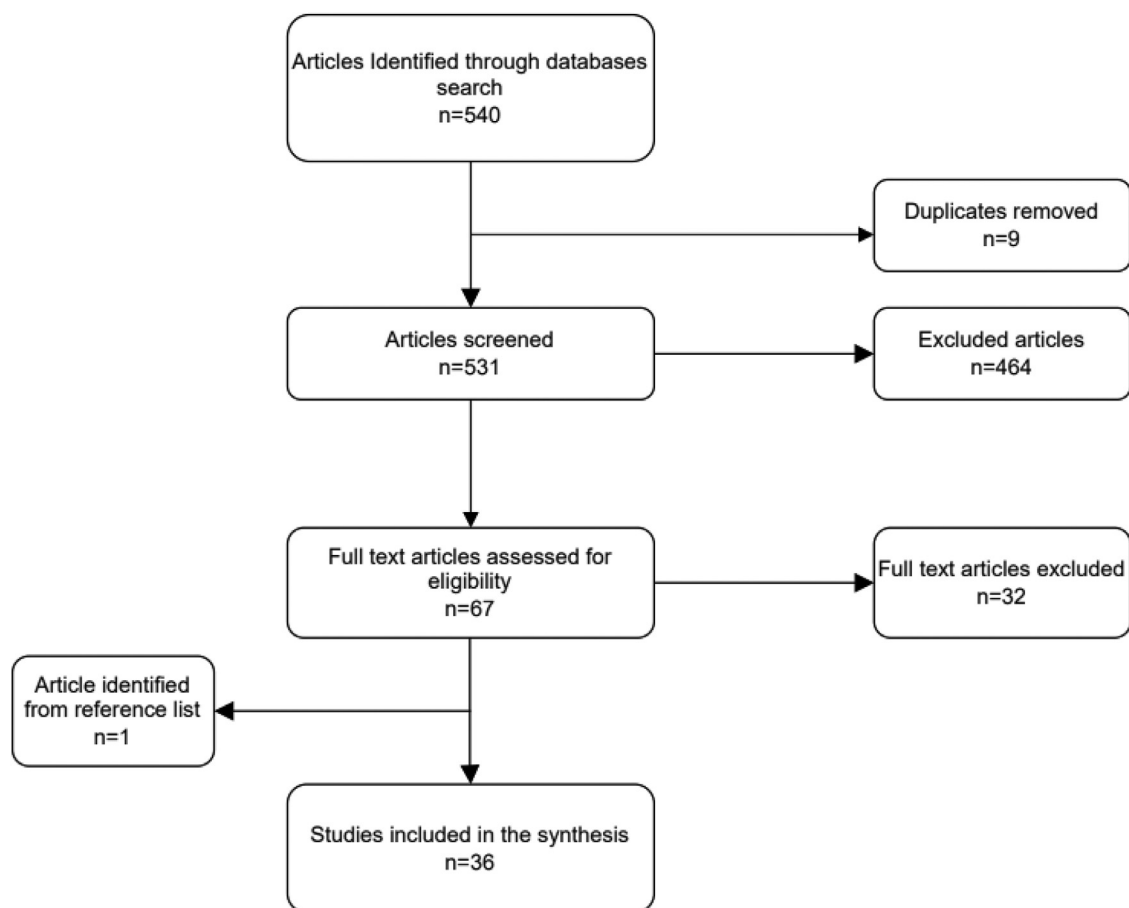


Fig. 1. Flow Chart of Identified Studies or Search Results.

straints (Agle et al., 2014; Binswanger et al., 2015; Blair et al., 2021; Cole et al., 2021; Coughlin et al., 2019; Eaton et al., 2020; Englander et al., 2021; Gibson et al., 2021; Hawk et al., 2020; Hodgson et al., 2016; Hutchinson et al., 2014; Klusaritz et al., 2020; Lin et al., 2017; McNeely et al., 2018; Oros et al., 2021; Rutkow et al., 2015; Salvador et al., 2019; Wagner et al., 2020; Zuckerman et al., 2021); (iv) negative attitude towards patients (stigma/bias/judgment) (Andraka-Christou and Capone, 2018; Blair et al., 2021; Cole et al., 2021; Englander et al., 2021; Hodgson et al., 2016; Kilaru et al., 2021; Klusaritz et al., 2020; Oros et al., 2021; Shuman et al., 2020; Stone et al., 2021); (v) lack of confidence in managing affected patients and prescribing medications (Binswanger et al., 2015; Collins et al., 2021; Englander et al., 2021; Hodgson et al., 2016; Hutchinson et al., 2014; Shea et al., 2021); (vi) unfamiliarity with technology and lack of access to integrated data systems (EHR) (Agle et al., 2014; Gibson et al., 2021); (vii) lack of understanding of regulations and laws guiding OUD medication prescription and hospital policies (Englander et al., 2021; Hawk et al., 2020); (viii) vaguely understanding evidence-based information needed to implement SUT services in MHC and unfamiliarity with treatment resources/programs, especially referral sources and PDMP (Coughlin et al., 2019; Hawk et al., 2020; Lin et al., 2017; McNeely et al., 2018; Rutkow et al., 2015; Zuckerman et al., 2021); (ix) perception that SUT is outside the scope of MHC and a complex intervention (Cole et al., 2021; Hawk et al., 2020; Kilaru et al., 2021; McNeely et al., 2018; Shea et al., 2021); (x) improper and complicated documentation (Eaton et al., 2020); (xi) facing pressure to promptly discharge patients (Eaton et al., 2020); (xii) concerned that patients will misuse medication (Binswanger et al., 2015; Hodgson et al., 2016); (xiii) liability fears or concerns about legal impact (Andraka-Christou and Capone, 2018; Binswanger et al., 2015;

Coughlin et al., 2019; Hodgson et al., 2016; McNeely et al., 2018; Shea et al., 2021); (xiv) concerns about the impact of intervention on patient satisfaction (Binswanger et al., 2015; Coughlin et al., 2019; Oros et al., 2021); (xv) perception that buprenorphine may be riskier (Oros et al., 2021); (xvi) lack of readiness for change (Agle et al., 2014; Cole et al., 2021; Foti et al., 2021; Kilaru et al., 2021; Shea et al., 2021; Urada et al., 2014); (xvii) seeing patients as difficult (Andraka-Christou and Capone, 2018); and (xviii) needing expert supervision (Andraka-Christou and Capone, 2018).

Provider related facilitators to the integration of SUT into MHC included: (i) receiving financial incentives or reimbursement (Agle et al., 2014; Klusaritz et al., 2020); (ii) education/training, obtaining waivers, and taking follow-up courses (Cole et al., 2021; Collins et al., 2021; Englander et al., 2021; Foti et al., 2021; Hawk et al., 2020; Hutchinson et al., 2014; Kilaru et al., 2021; Lin et al., 2017; McNeely et al., 2018; Oros et al., 2021; Powell et al., 2019; Rutkow et al., 2015; Shuman et al., 2020; Urada et al., 2014; Wagner et al., 2020; Wessell et al., 2014; Zuckerman et al., 2021); (iii) access to a support team and the use of professionals including peer-recovery specialists, resident physicians, pharmacists, and behavioral health specialists (Agle et al., 2014; Collins et al., 2021; Coughlin et al., 2019; Powell et al., 2019; Singh et al., 2017; Urada et al., 2014; Wagner et al., 2020); (iv) positive behavior that provides non-judgmental support, hope, encouragement, and builds trust and connection with patients more personally (Binswanger et al., 2015; Blair et al., 2021; Englander et al., 2021; Hodgson et al., 2016; McNeely et al., 2018; Oros et al., 2021; Wagner et al., 2020); (v) clear communication with patients (McNeely et al., 2018); (vi) staff receptivity, and willingness to participate and collaborate (Agle et al., 2014; Andraka-Christou and Capone, 2018; Cole et al., 2021; Oros et al., 2021; Powell et al., 2019;



**Table 1**  
Summary of Barriers and Facilitators.

	Barriers	Facilitators
<b>Patients</b>	(i) poverty, low income, and unemployment; (ii) low educational level; (iii) limited family/social support; (iv) caring for other children at home; (v) unreliable transportation; (vi) being self-critical; (vii) negative societal interactions; (viii) fear of real/anticipated bias by care team; (ix) confidentiality concerns; (x) fear of law enforcement/criminal justice sanctions; (xi) limited finances; (xii) homelessness; (xiii) poorly informed or misinformed about care, hospital policies, or cost; (xiv) food security; (xv) lack of honesty and non-disclosure of substance use; (xvi) disinterest, lack of readiness to change, and unwillingness to return for follow-up or agree to counseling or referral; (xvii) stigma; (xviii) language barrier; (xix) age; (xx) religious beliefs; (xxi) being male; (xxii) substance use; (xxiii) race/ethnicity (Blacks and Hispanics); (xxiv) skeptical about providers ability to effectively address substance use; (xxv) viewing that SUT occurs outside of MHC; (xxvi) lack of access to legally obtained buprenorphine; (xxvii) low number of patients for whom PDMP information is needed and having multiple IDs in the regional system; (xxviii) misuse of medication; (xxix) presence of other medical condition; and (xxx) having no means of contact.	(i) education or awareness; (ii) being aware of confidentiality limitations, clarity about voluntary participation, and the extent their participation can expose them to criminal justice sanctions; (iii) shared decision making in which patients can take the lead; (iv) trust and quality relationship with providers; (v) gender (women); (vi) identifying as White; (vii) receptivity; (viii) showing successful outcomes; and (ix) age (<40 years).
<b>Providers</b>	(i) work burden/competing priorities; (ii) lack of or few trained/experienced providers, lack of DEA waiver and obtaining waivers involves demanding training requirements; (iii) time constraints; (iv) negative attitude towards patients; (v) lack of confidence in managing affected patients and prescribing medications; (vi) unfamiliarity with technology and lack of access to integrated data systems (EHR); (vii) lack of understanding of regulations and laws guiding OUD medication prescription and hospital policies; (viii) vaguely understanding evidence-based information needed to implement SUT services in MHC and unfamiliarity with treatment resources/programs, especially referral sources and PDMP; (ix) perception that SUT is outside the scope of MHC and a complex intervention; (x) improper and complicated documentation (xi) facing pressure to promptly discharge patients; (xii) concerned that patients will misuse medication; (xiii) liability fears or concerns about legal impact; (xiv) concerns about the impact of intervention on patient satisfaction; (xv) perception that buprenorphine may be riskier; (xvi) lack of readiness for change; (xvii) seeing patients as difficult; and (xviii) needing expert supervision.	(i) receiving financial incentives or reimbursement; (ii) education/training, obtaining waivers, and taking follow-up courses; (iii) access to a support team and the use of professionals including peer-recovery specialists, resident physicians, pharmacists, and behavioral health specialists; (iv) positive behavior that provides non-judgmental support, hope, encouragement, builds trust and connection with patients more personally; (v) clear communication with patients; (vi) staff receptivity and willingness to participate and collaborate; (vii) monitoring adherence to prescription guidelines, provide prescribing data feedback for physicians and undergoing disciplinary correction; (viii) use of EHR; (ix) using recent evidence and standardized guidelines for prescribing or attending to patients; and (x) believe that SUT is effective.
<b>Programs/Systems</b>	(i) lack of leadership support; (ii) limited reimbursement for services or insurance authorizations; (iii) SUT curriculum limitations (e.g., limited training in cultural competence, inappropriate timing of sessions, and issues with formatting educational materials); (iv) training/program limitations (e.g., clinics having different priorities or showing a lack of interest and difficulty with advertisement); (v) federal or state policy based limitations on education requirements and buprenorphine-naloxone prescriptions; (vi) limited financial resources and discontinuation of program funding; (vii) lack of clear hospital guidelines/policies/program requirements, and not monitoring performance; (viii) technological issues (ix) demanding support activities; (x) limited referral networks, community resources, and inter-agency partnership; (xi) lack of experts, staff, and champions; (xii) pressure on the health system to promptly discharge patients or decrease hospital length of stay; (xiii) lack of space/privacy; (xiv) communication gap between clinical departments; (xv) lack of community buy-in to using MOUD; (xvi) referral issues (limited beds and long waiting lists); (xvii) lack of or delay in buprenorphine/naloxone distribution; (xviii) lack of state-level support; and (xix) unsuitable staffing arrangement.	(i) collaborating with external organizations and community partners; (ii) education (e.g., the use of ECHO and training with features like interactive modules, online/print access, podcasts/recordings, role play, addressing stigma, information on MOUD and PDMP, and opportunities to shadow experts; (iii) receptive and supportive leadership including program champions; (iv) providing administrative and technical support; (v) standardized and clear clinic procedure and protocols for patients and providers; (vi) identifying/assigning funds and having financial incentive policies; (vii) incorporating EHR to manage patients, and for advertising services; (viii) clinics with integrated behavioral health workers; (ix) telemedicine access and support; (x) consider as separate from criminal justice agencies; (xi) providing a sense of community/support within MHC setting; (xii) programs with pre-visit screening, individualized talking points on substance use risk/counseling and integrated with the EHR; (xiii) patient-centeredness and implementing practice change; (xiv) clarifying current regulations of obtaining a federal waiver to prescribe MOUD; (xv) attend to patients in private rooms; (xvi) state-level support (e.g., legal mandates by states); (xvii) improved communication within referral sources; (xviii) continuously measure progress towards integration and having a system that re-routes patients back to treatment; (xix) workflow changes that encourage frequent follow-up times and visits; and (xx) policies that expand the SUD workforce by increasing access to addiction medicine education for medical/nursing students and other care providers, policies to improve access to MOUD, and those centered on insurance reforms.

*Note.* SUT: Substance Use Treatment; MHC: Mainstream Health Care; PDMP: Prescription Drug Monitoring Programs; DEA: Drug Enforcement Administration; EHR: Electronic Health Records; OUD: Opioid Use Disorder; ECHO: Extension for Community Healthcare Outcomes; MOUD: Medications for Opioid Use Disorder; SUD: Substance Use Disorder.

Salvador et al., 2019; Urada et al., 2014); (vii) monitoring adherence to prescription guidelines, provide prescribing data feedback for physicians, and undergoing disciplinary correction (Agle et al., 2014; Coughlin et al., 2019); (viii) use of EHR (Coughlin et al., 2019); (ix) using recent evidence and standardized guidelines for prescribing or attending to patients (Binswanger et al., 2015; Coughlin et al., 2019); and (x) believe that SUT is effective (Oros et al., 2021).

### 3.3.3. Programs/systems

Programs/Systems barriers to the integration of SUT into MHC included: (i) lack of leadership support (Cole et al., 2021; Englander et al.,

2021; Klusaritz et al., 2020; Salvador et al., 2019); (ii) limited reimbursement for services or insurance authorizations (e.g., Medicare/Medicaid) (Andraka-Christou and Capone, 2018; Binswanger et al., 2015; Foti et al., 2021; Hutchinson et al., 2014; Klusaritz et al., 2020; McNeely et al., 2018; Oros et al., 2021; Urada et al., 2014; Zuckerman et al., 2021); (iii) SUT curriculum limitations including limited training in cultural competence, inappropriate timing of sessions, and issues with formatting educational materials (Coughlin et al., 2019; Klusaritz et al., 2020; Shea et al., 2021); (iv) training/program limitations e.g., clinics having different priorities or showing a lack of interest and difficulty with advertisement (Collins et al., 2021;

Klusaritz et al., 2020; Parchman et al., 2017); (v) federal or state policy based limitations on education requirements and buprenorphine-naloxone prescriptions (Andraka-Christou and Capone, 2018; Foti et al., 2021; Klusaritz et al., 2020); (vi) limited financial resources and discontinuation of program funding (Hodgson et al., 2016; Singh et al., 2017; Wagner et al., 2020); (vii) lack of clear hospital guidelines/policies/program requirements, and not monitoring performance (Blair et al., 2021; Cole et al., 2021; Kilaru et al., 2021; Parchman et al., 2017; Wagner et al., 2020); (viii) technological issues including difficulty opening tablet computer, non-user friendly interface, system slowness, no integrated data system (EHR), and EHR not being congruent with guidelines (Agle et al., 2014; Gibson et al., 2021; Kilaru et al., 2021; Lin et al., 2017; Rutkow et al., 2015; Smalley et al., 2020); (ix) demanding support activities (Barbosa et al., 2016; Cowell et al., 2017); (x) limited referral networks, community resources, and inter-agency partnerships (Cole et al., 2021; Collins et al., 2021; Englander et al., 2021; Foti et al., 2021; Hawk et al., 2020; Hodgson et al., 2016; McNeely et al., 2018; Oros et al., 2021; Parchman et al., 2017; Shea et al., 2021; Singh et al., 2017; Urada et al., 2014; Wessell et al., 2014; Zuckerman et al., 2021); (xi) lack of experts, staff, and champions (Cole et al., 2021; Collins et al., 2021; Coughlin et al., 2019; Eaton et al., 2020; Englander et al., 2021; Singh et al., 2017; Zuckerman et al., 2021); (xii) pressure on the health system to promptly discharge patients or decrease hospital length of stay (Eaton et al., 2020); (xiii) lack of space/privacy (Binswanger et al., 2015; McNeely et al., 2018); (xiv) communication gap between clinical departments (Binswanger et al., 2015); (xv) lack of community buy-in to using MOUD (Cole et al., 2021); (xvi) referral issues (limited beds and long-waiting lists) (Collins et al., 2021; Powell et al., 2019); (xvii) lack of or delay in buprenorphine-naloxone distribution (Zuckerman et al., 2021); (xviii) lack of state-level support (Singh et al., 2017); and (xix) unsuitable staffing arrangement (Collins et al., 2021).

Regarding programs/systems, the following facilitators to the integration of SUT into MHC were identified: (i) collaborating with external organizations and community partners (Kilaru et al., 2021; Klusaritz et al., 2020; Oros et al., 2021; Singh et al., 2017; Tofighi et al., 2019); (ii) education (e.g., the use of Extension for Community Health Outcomes (ECHO)) and training with features like interactive modules, online/print access, podcasts/recordings, role play, addressing stigma, information on MOUD and PDMP, and opportunities to shadow experts (Cole et al., 2021; Coughlin et al., 2019; Eaton et al., 2020; Englander et al., 2021; Klusaritz et al., 2020; Lin et al., 2017; Salvador et al., 2019; Shea et al., 2021; Tofighi et al., 2019); (iii) receptive and supportive leadership including program champions (Englander et al., 2021; Hawk et al., 2020; Kilaru et al., 2021; Klusaritz et al., 2020; Parchman et al., 2017; Singh et al., 2017; Wessell et al., 2014); (iv) providing administrative and technical support (Cole et al., 2021; Klusaritz et al., 2020; Tofighi et al., 2019); (v) standardized and clear clinic procedure and protocols for patients and providers (Blair et al., 2021; Coughlin et al., 2019; Eaton et al., 2020; Hawk et al., 2020; Klusaritz et al., 2020; McNeely et al., 2018; Oros et al., 2021; Parchman et al., 2017); (vi) identifying/assigning funds and having financial incentive policies (Kilaru et al., 2021; Klusaritz et al., 2020; Singh et al., 2017; Wagner et al., 2020); (vii) incorporating EHR to manage patients, and for advertising services (Agle et al., 2014; Hodgson et al., 2016; Klusaritz et al., 2020; Parchman et al., 2017; Rutkow et al., 2015; Smalley et al., 2020); (viii) clinics with integrated behavioral health workers e.g., peer recovery specialists and staffing resources (Cole et al., 2021; Collins et al., 2021; Eaton et al., 2020; Foti et al., 2021; Hawk et al., 2020; Hodgson et al., 2016; Klusaritz et al., 2020; Oros et al., 2021); (ix) telemedicine access and support (Cole et al., 2021; Wagner et al., 2020); (x) consider as separate from criminal justice agencies (Wagner et al., 2020); (xi) providing a sense of community/support within MHC setting (Blair et al., 2021); (xii) programs with pre-visit screening, individualized talking points on substance use risk/counseling and integrated with the EHR

(Gibson et al., 2021); (xiii) patient-centeredness (monitoring patient feedback on the quality of care) and implementing practice change (Hawk et al., 2020); (xiv) clarifying current regulations of obtaining a federal waiver to prescribe MOUD (Englander et al., 2021); (xv) attend to patients in private rooms (Collins et al., 2021; McNeely et al., 2018); (xvi) state-level support e.g., legal mandates by states (Lin et al., 2017; Oros et al., 2021; Rutkow et al., 2015); (xvii) improved communication within referral sources (Binswanger et al., 2015); (xviii) continuously measure progress towards integration and having a system that re-routes patients back to treatment (Agle et al., 2014; Parchman et al., 2017); (xix) workflow changes that encourage frequent follow-up times and visits (Oros et al., 2021); (xx) policies that expand the SUD workforce by increasing access to addiction medicine education for medical/nursing students and other care providers, policies to improve access to MOUD, and those centered on insurance reforms including (1) mandating coverage for medications and detoxification, (2) increased reimbursement for BHC, (3) prohibits excessive authorizations, and (4) enables same-day billing of two services (Andraka-Christou and Capone, 2018; Urada et al., 2014).

#### 4. Discussion

To our knowledge, this is the first scoping review identifying the barriers and facilitators to integrating diverse SUT services in various US MHC settings since the national implementation of the ACA in 2014. Further, our study is significant in that we captured this as it relates to patients, providers, and programs/systems. Our study reveals that even after the national implementation of the ACA, many barriers still exist that continue to compromise the adoption of SUT services in US MHC facilities. Therefore, the facilitators identified in this study are needed to inform interventions to help advance SUT integration in MHC.

This study found that patient-related barriers were mostly due to socio-demographic factors, including race/ethnicity (Blacks and Hispanics), poverty, low educational level, limited social support, unreliable transportation, homelessness, and food security. This result is similar to studies that showed that social and socio-demographic factors impact SUD treatment (Andersson et al., 2021; Saloner and Karthikeyan, 2015) and integrating SUT into MHC could reduce health disparities (SAMHSA and Office of the Surgeon General, 2016). Our findings regarding age were mixed and require further investigation as we are uncertain if being younger/older could serve as a barrier or not (Blair et al., 2021; Robbins et al., 2021). Consistent with existing studies (Manuel et al., 2013; Rahm et al., 2015), we found that confidentiality concerns were primarily related to having substance use information reported in the EHR system. More so, patients were scared of law enforcement sanctions. Identifying a patient's substance use history can help to avoid overprescribing when working with high-risk individuals and underprescribing when accurate prescribing could have helped to improve the patient's condition (Longo et al., 2000). Other factors limiting patients were choice-related (lack of honesty, unwillingness to partake in treatment, and lack of trust for providers) and experience-related (stigma and not being well informed about care/hospital policies). Some of these have been identified in previous literature (Hewell et al., 2017), thus educational interventions should focus on improving patients' attitudes and reducing negative experiences. Another important facilitator to help address patient concerns is to build trust in providers. Thus, echoing the literature, having non-judgmental and caring staff is key to enhancing patient trust and participation (Velez et al., 2016). In agreement with past literature (Velez et al., 2016), this review highlights the need for patient education focused on substance use, clearly explaining confidentiality limitations, and providing clarity or addressing questions regarding criminal justice sanctions. Additionally, this study recognizes that patients' receptivity is an essential facilitator to treatment engagement. Our results are consistent with a systematic review showing that it is essential to encourage shared decision-making, allowing patients to contribute to treatment decisions (Friedrichs et al., 2016). We rec-

omment that future interventions prioritize addressing these patient-centered issues.

It was frequently reported that providers had competing priorities and limited time. Also, most lacked addiction training/experience and a DEA waiver. Our study recognized that the training requirements for obtaining a waiver were demanding. Likewise, the lack of confidence in attending to patients and prescribing medication impacted providers. These barriers have been identified in prior studies (Babor et al., 2004; Modesto-Lowe and Boornazian, 2012). Notably, this study found that a frequently cited facilitator was providing education and training, with an emphasis on follow-up courses and obtaining DEA waivers. Particularly, training can help build providers' confidence (Babor et al., 2004). For instance, ECHO was often recognized as a valuable tool for educating providers (Cole et al., 2021; Englander et al., 2021; Salvador et al., 2019; Shea et al., 2021; Tofighi et al., 2019). We found limitations in the SUT training curriculum, including a lack of information on cultural competency, the format of educational materials, difficulties in advertising, non-user-friendly interface, and the time sessions were offered. Facilitators included interactive modules, role play, online and print access, and expert shadowing experiences.

This review reflects that providers need access to supervisory experts and a support team. To support this finding, there is literature indicating that ongoing supervision and support from specialists are needed to incorporate screening and brief interventions (SBI) in medical settings (Groves et al., 2010). Our study reveals that individuals who can serve as facilitators include peer-recovery specialists, behavioral health specialists, pharmacists, and resident physicians. Parallel to prior research (Modesto-Lowe and Boornazian, 2012), we found that providers were concerned about their negative attitudes toward patients, including stigma, bias, and judgment. Therefore, based on several identified facilitators, we recommend that provider training emphasize improving attitudes (providing non-judgmental support, hope, trust, and building quality connections with patients), making them aware of SUT effectiveness, and ways to clearly communicate with patients about care. Providers perceived that SUT is complex and not within the scope of MHC, which was highlighted in an existing study (Modesto-Lowe and Boornazian, 2012). Hence, training could enhance providers' receptivity, an additional facilitator recognized. This study showed that providers were also concerned about patient satisfaction ratings. However, a study found that patients receiving buprenorphine-naloxone-treatment in a primary care setting reported high levels of treatment satisfaction and suggested this may have been influenced by the number of appointments with providers (Barry et al., 2007).

Our study reflects that providers were concerned about the legal impact on their reputations. Research indicates continuing tension between providers and the legal system, which could be because both have opposing aims (Klag et al., 2009). Typically, legal systems are concerned with social control and public safety, whereas providers are concerned with rehabilitation/treatment; thus, providers may perceive that legal systems are interfering with treatment (Klag et al., 2009). Providers and programs/systems reported the need to understand current regulations/laws for opioid prescription. While the Centers for Disease Control and Prevention guidelines for prescribing opioids may be used (CDC, 2021), providers in MHC settings must receive training about regulations/laws, and training must keep pace with change. There was an inadequate understanding of evidence to aid integration, and the present study could serve as solid evidence to aid the adoption of various SUT services in MHC. Another provider-barrier was not having sufficient information or access to treatment resources, particularly referral sources and PDMP (Martin et al., 2021; Neushotz and Fitzpatrick, 2008; Wu et al., 2016). To address this, we suggest using an EHR system (a facilitator) as informed by a systematic review (Martin et al., 2021). Another facilitator was measuring provider performance including monitoring, feedback, and disciplinary correction; this can be incorporated in the EHR (Tai et al., 2012). Also, MHC settings should have per-

formance measures to ensure accountability and quality improvement (NIAAA, 2005; SAMHSA and Office of the Surgeon General, 2016).

MHC settings can act as a conduit to facilitate patient engagement, sustain recovery, and refer individuals to specialized SUT facilities (SAMHSA and Office of the Surgeon General, 2016). Barriers mostly specific to programs/systems were lack of experts/staff/champions, lack of leadership support, lack of space/privacy, lack of state-level support, absence of community buy-in about MOUD, and the lack of access to MOUD. A report has identified several of these factors (SAMHSA and Office of the Surgeon General, 2016). We recognized the following program/system facilitators, including external organization collaboration, having supportive leadership, administrative and technical support, attending to patients in private rooms, treating clinics as separate from legal agencies, having a system that re-routes patients to treatment, telemedicine access and support, and policies that expand the SUD workforce, and improve access to MOUD. These factors are needed to drive integration efforts.

Both providers and programs/systems were affected by the lack of standardized hospital guidelines for attending to patients and prescribing medications. Guidelines are clinical decision support tools and can be used to support improved care (SAMHSA and Office of the Surgeon General, 2016). Another barrier affecting both was the lack of an integrated data system (EHR). Technology integration for SUT via EHR systems is valuable in avoiding redundancy in treatment and prescription, monitoring treatment long-term, developing performance indicators, and facilitating preventive services and coordinated care (Blevins et al., 2018; Tai et al., 2012). Also, there was a need for referral sources/resources and inter-agency partnership, as present within extant literature (Blevins et al., 2018; Vendetti et al., 2017). Gaps in the referral process may lead to delays in care, while partnerships can facilitate integration and functioning (Blevins et al., 2018; Vendetti et al., 2017). We recognized that an important facilitator is improved communication with referral sources. Like providers, clinics reported disinterest or different priorities and faced pressure to discharge patients promptly. When addressing barriers, both providers and program/system administrators should be included in the process (Blevins et al., 2018).

The ACA expands SUT access through (1) modifying regulatory insurance (e.g., coverage for SBI for every insurance plan), (2) extending insurance coverage to the uninsured through Medicaid expansion and state health insurance exchanges, (3) extending the 2008 Mental Health Parity and Addiction Equity Act by requiring insurance companies to cover SUT as done for general medicine, and (4) providing innovative ways to integrate SUT in MHC (e.g., allowing reimbursement for a wide range of services within a single budget) (Abraham et al., 2017). However, we found that financial limitations remain a challenge, including limited insurance coverage for patients, issues with reimbursement or incentives for providers, and the lack of program funding. Our finding agrees with past literature (Hewell et al., 2017; SAMHSA and Office of the Surgeon General, 2016; Settiani et al., 2018) and may be explained by a literature indicating that the ACA reforms are optional and primarily left to states to decide (Abraham et al., 2017). We found that MHC settings should have financial incentive policies and identify additional funds to support SUT sustainability. We determined that policy changes focusing on insurance reforms should emphasize mandating coverage for medications and detoxification, increasing reimbursement for BHC, prohibiting excessive authorizations, and enabling same-day billing of two services. Our study showed that being a patient with SUD and other medical conditions e.g., physical disability and co-occurring mental health disorders was a barrier to integration, which has been implied in the literature (SAMHSA and Office of the Surgeon General, 2016). Individuals with chronic medical illnesses incur 2–3 times higher health care costs with comorbid SUD than without this condition (National Council for Behavioral Health, 2014). Integration has the potential of decreasing health care costs, improving health outcomes, and lessening the cost of SUT delivery (SAMHSA and Office of the Surgeon General, 2016). To encourage integration, a system that



reroutes patients back to treatment especially when SUT is interrupted is essential (Aglely et al., 2014; Parchman et al., 2017).

The coronavirus disease 2019 (COVID-19) pandemic posed numerous challenges to providers and their patients, especially in the management of SUDs, highlighting the importance of addressing federal and state policy-based limitations on education requirements and buprenorphine-naloxone prescriptions (an identified barrier). In response to the COVID-19 pandemic challenges, the DEA temporarily relaxed restrictions on buprenorphine prescribing through telemedicine (DEA, 2020). Buprenorphine is used to manage opioid addiction and has the potential for abuse, misuse, and diversion (Chilcoat et al., 2019). To qualify to prescribe buprenorphine, providers are required to have a special license (X waiver), which is typically obtained through an eight-hour in-person training course approved by SAMHSA (Lanham et al., 2022). However, our study revealed that the training requirements for obtaining a waiver were demanding for providers, as they may face obstacles such as being unable to travel or take time away from their practices to attend training. The temporary policy change on buprenorphine prescribing during the pandemic has helped reduce some of the barriers to care faced by patients and providers. Patients can receive treatment remotely, allowing for greater access to treatment, and a reduced risk of exposure to COVID-19 (American Psychiatric Association, 2023; DEA, 2020; Weintraub et al., 2021). Also, providers can obtain an X waiver without in-person training and expand their reach to more patients, especially those in rural or underserved areas (DEA, 2020; Wang et al., 2021). Important facilitators of SUT integration in MHC highlighted in our study include having telemedicine access/support and policies to improve access to MOUD. Although the temporary policy change implemented during the COVID-19 pandemic allowed for greater access to buprenorphine via telemedicine, it does not eliminate the need for an X waiver or the required training. Providers and policymakers must collaborate to ensure that telemedicine buprenorphine prescribing remains an option for patients beyond the pandemic.

Furthermore, policies that expand the SUD workforce by increasing access to addiction medicine education for providers (an identified facilitator) should be implemented. The Opioid Workforce Act of 2021, a bill introduced in the US Congress that builds on previous efforts (the Opioid Workforce Act of 2019 was not passed into law) aims to expand the number of health care professionals trained in addiction medicine and SUD treatment (H.R. 2439, 2021). This bill would increase the number of residency positions available in addiction medicine, addiction psychiatry, and pain management by 1000 over the next five years. The bill also aims to increase funding for institutions of higher education (e.g., medical schools and nursing programs) to establish or expand training programs in addiction medicine and related fields. Further, the bill includes provisions to support existing health care professionals who want to pursue training in addiction medicine, including loan repayment programs for those who agree to work in underserved areas or with underserved populations, and funding for continuing education and professional development programs. Although the bill has received bipartisan support, it has not yet been passed into law as of March 2023. Notably, the Comprehensive Addiction and Recovery Act is an example of legislation that recognized the importance of the SUD workforce by providing grants to increase the number of addiction specialists and expand training opportunities (S. 524, 2016). However, there is still a need for more providers trained in addiction medicine. Policymakers must continue to evaluate and amend policies to ensure that they effectively meet the needs of patients and providers.

Some limitations have been identified in this study. The studies included in this review were published from 2014 to 2021, and additional studies may have been published since this review was conducted. We excluded articles that were not written in English and those that are non-US-based. No studies on smoking interventions were included. Previous literature identifies that half of published scoping reviews do not include gray literature (Tricco et al., 2016). Thus, we excluded gray literature and focused on peer-reviewed research publications to provide

a review of evidence-based research. Other databases may exist that we did not obtain relevant information from; however, the chances of missing relevant information are limited because we used five databases.

## 5. Conclusions

In this paper, we identified the barriers and facilitators to integrating SUT services into MHC after the national implementation of the ACA. Patients were mostly limited by socio-demographic factors, finances, confidentiality, fears of legal sanctions, disinterest, and negative experiences; while their facilitators were trusting providers, education, and shared decision making. Providers frequently reported having limited training, time constraints, patient satisfaction concerns, legal consequences, inadequate access to treatment resources or evidence-based information, and a lack of clarity for laws/regulations. Provider facilitators included expert supervision, support team, receptivity, and training using programs like ECHO. Some program/system barriers/facilitators included leadership support, staff, financial resources, referral networks, space, and state-level support. A holistic approach is needed to enhance SUT adoption in MHC.

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## Declaration of Competing Interest

None.

## CRediT authorship contribution statement

**Esther Adeniran:** Conceptualization, Visualization, Formal analysis, Methodology, Data curation, Investigation, Software, Validation, Writing – original draft, Writing – review & editing. **Megan Quinn:** Supervision, Writing – review & editing. **Richard Wallace:** Data curation, Methodology, Writing – review & editing. **Rachel R. Walden:** Data curation, Methodology, Writing – review & editing. **Titilola Labisi:** Methodology, Writing – review & editing. **Afolakemi Olaniyan:** Methodology, Formal analysis, Writing – review & editing. **Billy Brooks:** Supervision, Writing – review & editing. **Robert Pack:** Supervision, Writing – review & editing.

## Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.dadr.2023.100152.

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