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Knowledge and Attitudes Towards Use of Complementary and Integrative Health Therapies for Veterans with Opioid Use Disorder in the Veterans Health Administration

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Abstract

The Veterans Health Administration (VA) offers complementary and integrative health (CIH) therapies to Veterans with chronic pain and opioid use disorder (OUD). While CIH therapies have known benefits for chronic pain, less research exists on its use for patients with OUD. In this qualitative study, we aimed to assess provider and patient perceptions of CIH therapies for Veterans with OUD. We interviewed 45 providers involved in OUD care and 17 Veterans with OUD from five VA medical centers as part of a larger mixed-methods evaluation. Interviewees were identified through a snowball sampling strategy. The interview guide used the Practical Robust Implementation and Sustainability Model to explore contextual factors

influencing CIH therapy adoption (i.e., patient perspectives, provider perspectives, external environment). Most Veterans and providers were knowledgeable about CIH therapies and had positive experiences with them. Providers and Veterans said it was important to offer non-pharmacologic options for OUD. Some providers, however, felt that Veterans with OUD may be less likely than those with only chronic pain to consider CIH therapies due to more reported patient resistance and other barriers. Veterans with OUD and their providers were enthusiastic about integrating CIH therapies into treatment plans as a non-pharmacologic option for chronic pain and OUD. However, providers noted unique challenges impacting use of CIH therapies for Veterans with OUD. Providers may benefit from learning patient-centered approaches to offering CIH therapies to Veterans with OUD as part of a comprehensive pain treatment plan.

Keywords
Complementary and integrative health; opioid use disorder; whole health; multi-modal

1. Introduction

Opioid use disorder (OUD) is a chronic, neurobiological disease characterized by problematic patterns of opioid use that cause significant impairment and distress [1]. The OUD population is medically complex and suffers from high rates of chronic pain, mental health disorders, and social problems [1]. Within the Veterans Health Administration (VA), there has been a sharp increase in the number Veterans diagnosed with OUD (from 25,000 in 2003 to 66,000 in 2017) [2, 3]. Additionally, Veterans face increased risk of opioid-related adverse events, including overdose and death, relative to the general population [4, 5].

While medications for opioid use disorder (MOUD) can effectively reduce overdose and opioid-related morbidity [6], a multi-modal approach that incorporates non-pharmacological interventions (NPI) offers patients and providers additional options to help treat biopsychosocial problems that often underlie OUD and associated chronic pain [1, 6-9]. Some complementary and integrative health (CIH) therapies, which include therapies such as yoga, meditation, and acupuncture, are common types of NPIs used as an adjunctive treatment for chronic pain [6, 10-14]. CIH therapies can potentially reduce the use of opioids for patients with chronic pain [9, 15]. However, little is known about their use for patients with OUD specifically.

In recent years, the VA has made extensive efforts to improve and expand access to CIH therapies for Veterans with complex medical conditions. In 2018, the VA began a national deployment of the Whole Health System model of care, an initiative aimed in part at expanding availability and provision of CIH therapies to Veterans throughout the VA [16, 17] Around this time, VA medical centers in the Southwestern United States also initiated an implementation project to improve access to MOUD and CIH therapies for Veterans with OUD [14].

Using qualitative data collected from five VA medical centers participating in the above-referenced implementation project, we examined knowledge and attitudes of providers and Veterans with OUD towards using CIH therapies for OUD and chronic pain treatment. Although we were primarily interested in understanding knowledge and attitudes for OUD treatment, we

included knowledge and attitudes for chronic pain treatment to help contextualize and draw distinctions for the OUD population. Knowledge and attitudes were chosen as factors for study because they underlie the openness of both providers and patients to adopt novel and unconventional treatments such as CIH therapies [18]. Our focus on Veterans with OUD distinguishes it from other research studies [18, 19] focusing on the perceptions of CIH therapies for patients with only chronic pain. Results may inform the VA and other health systems about designing NPI strategies that consider the unique needs of patients with OUD.

2. Materials and Methods

2.1 Design and Participants

Qualitative data were collected through interviews with 17 Veterans and 45 health care providers from five VA Medical centers in the Southwestern United States participating in an implementation initiative to increase use of MOUD and CIH therapies among Veterans with OUD [15]. The project study team identified key clinical leaders involved in the project implementation at each facility to participate in the initial interviews. A snowball sampling strategy was then used to identify additional providers who were involved in care for Veterans with OUD, which included primary care physicians, psychiatrists, pain specialists, nurses, and pharmacists. Pain and addiction providers identified Veterans diagnosed with OUD who they believed might be good candidates to participate in the study and were currently being treated with MOUD. Identified veterans were then invited to participate in a brief (<30 minutes) interview about use of MOUD and CIH therapies. Interviews were conducted in 2018 and 2019.

The implementation project study team developed the provider and patient interview guides (Table 1). The provider interview guide included questions about: (a) perceived availability of CIH therapies at each VA medical center; (b) ease of CIH therapy referrals, either within VA or the community; (c) provider and perceptions of the strength of the evidence base for CIH therapies; (d) perceived benefits of different CIH therapies for Veterans with chronic pain and OUD; and (e) other facilitators and barriers to CIH therapy use. The Veteran interview guide included questions about: (a) prior experience with CIH therapies; and (b) factors influencing their use of CIH therapies through the VA. All interviews in which participants agreed to be recorded were transcribed through a professional transcription company and imported into the qualitative software Atlas.ti for analysis.

Table 1 Coding Manual Provider (P) and Veteran (V) interviews.

Code	P	V	Definition/Desired Content (incl. when to use and not to use)
A. Knowledge, attitudes, and beliefs about CIH			
A1. Evidence about CIH effectiveness	X		Knowledge of scientific evidence supporting use of CIH for chronic pain (does not include personal experience)
A2. Prior experience with CIH	X	X	Knowledge about CIH based on prior use (for providers, this pertains to their patients using CIH)
A3. Openness to CIH	X	X	Mention of providers and Veterans being open to using CIH therapies (in the case of providers, this means having their patients use)
A4. Have attitudes towards CIH shifted over time?	X	X	Mention of an attitude shift towards CIH over time (does not include attitude shifts as a result of this intervention)
A5. CIH as a non-medication option/shift from opioids	X	X	Mention of CIH as a non-medication treatment option for pain/OUD
B. Types of CIH			
B1. Acupuncture, chiropractic, massage	X	X	Mention of acupuncture or chiropractic care or massage therapies
B2. Other CIH therapies	X	X	Mention of CIH therapies not in B1
C. System/organizational context			
C1. VA	X	X	Mention of system/organizational factors related to using CIH within the VA (e.g. referring within the VA, access/availability within the VA, leadership/organizational support for CIH use, etc.)
C2. Community Care	X	X	Mention of system/organizational factors related to using CIH within the community (e.g. referring to the community, care coordination, prior authorizations, etc.)
D. Barriers			
E. Facilitators			
F. Interesting Quotes			
G. Flag for discussion			

2.2 Analysis

We used a template analysis, in which an initial codebook is refined to incorporate emergent themes within the data for this study [20]. Initial codes were applied to a subset of five transcripts and then compared for consistency by a second person. The codebook was revised to clarify construct definitions or better highlight critical themes, including collapsing and removing codes. Using this finalized codebook, two reviewers coded the transcripts. Reviewer one coded 100% of the transcripts and reviewer two coded 20% of the transcripts (every fifth interview as ordered in the Atlas.ti). Discrepancies in coding were discussed until consensus was reached. Analyses focused on identifying broad themes within the data as well as similarities and differences by respondent role (Veteran, provider) or VA medical center, and discussion of CIH therapy use for chronic pain or for OUD. Subthemes were also identified to highlight relevant distinctions within a theme.

Research for this study adhered to the Research and Publication Ethics Guidelines. It was deemed non-exempt by the West Los Angeles VA IRB because the data used are secondary.

3. Results

Table 2 provides a summary of the study participants. All but two of the Veterans interviewed were male. Among providers interviewed, the majority were female and about half were physicians (primary care, ED, psychiatrist, pain specialist, hospitalist). The non-physician providers interviewed includes several nurses as well as pharmacists and other clinical staff. Some of the providers interviewed also held clinical and administrative leadership positions within the VA.

Table 2 List of Providers and Patients Interviewed by Gender and Type of Provider.

Gender	Provider/Patient	Professional Type
M	Patient	n/a
M	Patient	n/a
M	Patient	n/a
M	Patient	n/a
M	Patient	n/a
M	Patient	n/a
M	Patient	n/a
M	Patient	n/a
F	Patient	n/a
M	Patient	n/a
M	Patient	n/a
M	Patient	n/a
M	Patient	n/a
F	Patient	n/a
M	Patient	n/a
M	Patient	n/a
M	Patient	n/a
F	Provider	Primary Care Provider, Whole Health program lead
F	Provider	Primary Care Provider

F	Provider	Nurse Manager
F	Provider	Primary Care Provider
F	Provider	Primary Care Provider
F	Provider	Primary Care Provider
M	Provider	Addiction Psychiatrist, Head of addiction clinic
F	Provider	Pharmacist, pain
F	Provider	Pharmacist, pain
F	Provider	Psychologist
F	Provider	Pharmacist, academic detailing
F	Provider	Psychiatric Nurse Practitioner in Primary Care
F	Provider	Nurse Practitioner, HUD-VASH
M	Provider	Physician, Emergency Department
F	Provider	Psychiatrist
F	Provider	Addiction internist
F	Provider	Pharmacist, Mental Health
F	Provider	Nurse, Substance use clinic
M	Provider	LVN, Substance use clinic
F	Provider	Social work Supervisor
M	Provider	Primary Care Provider
F	Provider	Physician, Pain medicine
M	Provider	Pharmacist
M	Provider	Physician, PM&R
M	Provider	Pharmacist, Pain
M	Provider	Emergency Department chief
F	Provider	Nurse manager, primary care
F	Provider	Addiction psychiatrist
F	Provider	Primary Care Provider
F	Provider	Emergency Department director
M	Provider	Physician, internal medicine, inpatient
M	Provider	Clinical supervisor, alcohol treatment program
F	Provider	CFO, co-chair of Whole Health program
M	Provider	Primary Care Provider, primary care section chief
F	Provider	Primary Care Provider, Whole Health medical advisor
M	Provider	Addiction psychiatrist
F	Provider	Nurse, section chief in addiction
F	Provider	Pharmacist
F	Provider	Nurse, co-chair of Whole Health program
F	Provider	Pharmacist, inpatient mental health
F	Provider	Nurse, primary care
F	Provider	Pharmacist
F	Provider	Nurse, pain clinic
F	Provider	Nurse manager, primary care
F	Provider	Primary Care Provider, Pain

4. Knowledge of CIH Therapies for OUD

Most Veterans indicated they had experience using CIH therapies, and most providers said they had experience referring Veterans to CIH therapies. The most commonly mentioned therapies by providers and Veterans were chiropractic care, acupuncture, mindfulness/meditation, and yoga.

The majority of providers were aware that use of CIH therapies for chronic pain is well-supported by the scientific literature-and some in fact expressed a sophisticated view of the scientific evidence for chronic pain, noting how effectiveness varies depending on the pain condition and type of CIH therapy ("*The evidence is really robust for some therapies in the treatment of chronic pain.*"). Providers also had good knowledge of the effectiveness of CIH therapies based on prior experience of recommending them as treatment options for Veterans, particularly those with chronic pain (*"One of my favorite stories is when [redacted name] was here and she was so cynical about CIH therapies and then she came back to me and said after her patient used a CIH therapy, it really changed how they viewed these therapies. That's the most convincing thing to providers.").* However, virtually no providers knew if CIH therapies are effective at reducing opioid use or helping treat patients with OUD. ("*Well, most CIH therapies, at least for my practice, I use them for pain. I must admit I don't know data for how well CIH therapies achieves good outcomes for patients with OUD.").*

Patient knowledge of the effectiveness of CIH therapies was derived from personal experience rather than the scientific evidence, and most thought they worked for chronic pain. A couple of Veterans noted they thought CIH therapies were effective for OUD specifically, noting the importance of a holistic approach to their OUD care (*"I saw the benefits with a holistic approach that included meditation and mindfulness, chiropractic care, acupuncture. All of that combined with medication assistance is where I've seen the most benefit for me as well. You know, just taking methadone, which, there are periods in the last ten, twelve years that I just took methadone, I didn't go to groups, I didn't speak to my doctor, I didn't really have any other assistance; it was just the methadone. That was the least helpful."*).

5. Attitudes Toward CIH Therapies as Treatment for OUD

The majority of VA providers interviewed for this study had positive attitudes towards incorporating CIH therapies into treatment plans, particularly for chronic pain ("*Yeah. I think positive, really. And even if, you know, Veterans try and it doesn't help with their pain, they never regret trying.*"). Several providers also indicated that attitudes among other providers and Veterans towards CIH therapies in general have become more positive in recent years (*"I feel like even starting in my position, which I started like seven or eight years ago. I feel like, you know, people are much more open to these treatments. And I think even in the popular media, the word has been getting better about these treatments.").*

Several providers, however, had mixed attitudes towards incorporating CIH therapies into treatment plans for Veterans with OUD specifically. In general, providers liked having NPI's available for treating OUD, with several noting the difficulties of treating substance abuse with just medication ("*Oftentimes there's another reason, you know, obviously a reason for them that results in using substances or result in relapse. We want to make sure we address not just with medication but making sure they learn other coping mechanisms that are healthier.").* However, several providers expressed reservations about getting Veterans with OUD to use CIH therapies. In particular, multiple providers indicated that Veterans with OUD were more likely to resist using CIH

therapies than Veterans with just chronic pain. ("*So the chronic pain patients are probably more likely to want CIH therapies. They would be more likely to use them than the OUD patients.").* Some providers felt that Veterans with OUD may have fears about having opioids or MOUD taken away and not understanding how CIH therapies help treat their addiction ("*And then the OUD patients aren't really going to be interested in that because their narrative is: I have this addiction and I want to kind of kick this habit. And so I think they'd be less likely to be like, yeah, how's yoga and how's massage and how's chiropractor going to help me?*"). Multiple providers also said Veterans with OUD are more unstable mentally and socially than those with just chronic pain, which they perceived as barriers to adoption CIH therapies. ("*I guess one thing I might say, it's just like severity of their symptoms. Patients with OUD have more severe mental health symptoms and have a harder time following through.*").

Veterans interviewed for this study had generally positive attitudes towards incorporating CIH therapies into their treatment plans for chronic pain or OUD in some capacity. ("*That's where I believe that the actual answer lies. It's not just one thing, it's a combination of multiple things that are going to address what's wrong with you.").* A couple Veterans did not think CIH therapies were particularly efficacious for their condition, but none of the Veterans expressed fears about medication potentially being taken away or instability as factors that would prevent them from using CIH therapies.

6. Discussion

This qualitative study examined knowledge and attitudes of VA providers and Veteran patients about the use of CIH therapies for Veterans with OUD and chronic pain, a topic for which little research exists. We found that Veterans and providers had solid knowledge of CIH therapies as effective and important treatment options based on personal experience and their recognition of the need for multi-modal treatments that include NPIs, particularly for Veterans with chronic pain. As a result, they were generally enthusiastic about integrating CIH therapies into treatment plans as an NPI option for chronic pain. However, providers largely lacked of knowledge and had less positive attitudes towards incorporating CIH therapies into OUD treatment plans due to perceived patient resistance and other barriers.

The main takeaway from this study is that the OUD population may present unique challenges with regards to uptake of CIH and other NPI therapies. Despite their positive attitudes towards CIH therapies, a large number of providers perceived patient resistance towards using CIH therapies due to concerns about opioids being taken away for chronic pain, patient disbelief in the effectiveness of CIH therapies for their condition, and high rates of mental and social instability. These provider perceptions might impact their attitudes toward offering CIH therapies to patients with OUD. Stigma towards patients with OUD may also contribute to the perception among providers that this population is more resistant to using CIH therapies [21-23]. Patient-centered treatment approaches for this population, which could include tailoring communication and treatment approaches to OUD patients and providing training to providers to overcome stigma, may be warranted within the VA and other health systems. More research into CIH treatment for OUD patients is needed to help inform specific patient-centered approaches that could be most effective.

Another key point we learned is providers and veterans had good knowledge and attitudes overall towards using CIH therapies, with multiple providers noting an improvement in colleagues'

and patients' attitudes in the past 5 years. This shift in attitudes could be due to not only secular trends but also recent VA organizational reforms aimed at incorporating CIH therapies into standard medical treatment for Veterans and have become relatively widely available.

While published research on the topic is limited, the strong consensus among providers and Veterans participating in this study was that OUD patients benefit from a multimodal approach to treatment that includes CIH therapies. This population is highly complex, with most having chronic pain [1] and mental health disorders [1], which CIH therapies have been proven to help effectively treat [20, 24-27]. In addition, some CIH therapies offer patients tools that they can learn to manage their health in a way medication cannot. For example, mediation and yoga require patients to learn techniques to control their breathing and improve their focus. These therapies also necessitate patient engagement, which is shown to be related to improved health outcomes [28-31]. While pharmaceuticals are an indispensable part of treatment for OUD, CIH therapies and other NPIs may play an important adjunctive role in supporting recovery and good health in this population. For healthcare organizations and systems, increased use of these therapies for OUD patients could offer additional benefits around cost of care and improved quality metrics for a vulnerable population. Increased availability and accessibility of these therapies also provides providers with more tools for treating a complex patient population. CIH therapies could also be used more frequently in substance use settings, such as residential treatment programs and outpatient substance use clinics [32].

A strength of this study is the large diverse sample of providers (the Veteran sample was smaller and less representative). As with all qualitative studies, the limitations relate to the representativeness of the sample. Both Veterans and providers in the study were more likely to have had experience with CIH therapies than the average provider or Veteran. The Veterans included in this study were limited to those who were receiving treatment for OUD. Also, the sample only included only Veterans and providers from one region of the nation, so these findings are not representative of the VA as a whole. Additionally, Veterans chosen to participate in this study were chosen by their own providers who had been interviewed for this study, further limiting the representativeness of the Veteran sample. Last, the sample was limited to the VA, so it is not representative of perspectives outside the VA.

7. Conclusions

Veterans with OUD and their providers were enthusiastic about integrating CIH therapies into treatment plans as an NPI option, particularly for chronic pain. However, providers noted unique challenges impacting the use of CIH therapies for Veterans with OUD, which included perceived mental and social instability of the population and concerns among Veterans with OUD that CIH therapies would not help their condition and might be used to supplant pain medication. Providers may benefit from learning patient-centered approaches to offering CIH therapies to Veterans with OUD as part of a comprehensive pain treatment plan. Future research should investigate the impact of the use of CIH therapies on opioid use and the effectiveness of CIH therapies for OUD patients specifically.

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Author Contributions

Adam Resnick Conceptualization (lead), methodology (lead), formal analysis (lead), software (lead), writing original draft (lead). Adam Resnick Conceptualization (supporting), methodology (supporting), data collection (lead). Adam Resnick Writing - review and editing (supporting), Validation (supporting). Stephanie L. Taylor Writing - review and editing (supporting), Validation (supporting). Emmeline Chuang Writing - review and editing (supporting), Validation (supporting**).** Conceptualization (supporting), methodology (supporting), formal analysis (supporting), Kelsey Cummings formal analysis (supporting), Evelyn T. Chang Writing - review and editing (supporting), Validation (supporting), conceptualization (supporting), supervision oversight (lead), resources (lead).

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Competing Interests

Evelyn Chang receives consulting services for Behavioral Health Services, Inc.

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