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Provider perceptions of medication for opioid used disorder (MOUD): A qualitative study in communities with high opioid overdose death rates

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Abstract

Background: Medication for Opioid Use Disorder (MOUD) has been shown to be a safe, cost-effective intervention that successfully lowers risk of opioid overdose. However, access to and use of MOUD has been limited. Our objective was to explore attitudes, opinions, and beliefs regarding MOUD among healthcare and social service providers in a community highly impacted by the opioid overdose epidemic.

Methods: As part of a larger ethnographic study examining neighborhoods in Allegheny County, PA, with the highest opioid overdose death rates, semi-structured qualitative in-person and telephone interviews were conducted with forty-five providers treating persons with opioid use disorders in these communities. An open coding approach was used to code interview transcripts followed by thematic analysis.

Results: Three major themes were identified related to MOUD from the perspectives of our provider participants. Within a variety of health and substance use service roles and settings, provider reflections revealed: (1) different opinions about MOUD as a transition to abstinence

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or as a long-term treatment; (2) perceived lack of uniformity and dissemination of accurate information of MOUD care, permitting differences in care, and (3) observed barriers to entry and navigation of MOUD, including referrals as a "word-of-mouth insider system" and challenges of getting patients MOUD services when they need it.

Conclusions: Even in communities hard hit by the opioid overdose epidemic, healthcare providers' disagreement about the standard of care for MOUD can be a relevant obstacle. These insights can inform efforts to improve MOUD treatment and access for people with opioid use disorders.

Keywords

Opioid; buprenorphine; methadone; MOUD; providers; qualitative

Introduction

The United States is in the midst of a fatal opioid overdose epidemic; nearly 70% of the 67,367 drug overdose-related deaths in 2018 involved opioid use.[1] Medication for opioid use disorder (MOUD), specifically buprenorphine and methadone treatment, has been found to improve multiple outcome measures, including lower rates of other opioid use, better treatment retention rates, and reduced all-cause and opioid-related mortality.[2-4] Naltrexone has also demonstrated lower rates of opioid use as compared to placebo.[5,6]

Although methadone, buprenorphine, and injectable naltrexone were approved by the U.S. Food and Drug Administration for the treatment of opioid use disorder (OUD) in 1972, 2002, and 2010, respectively, wide-spread access has been challenging to implement. Of the greater than 2 million identified individuals with OUD in the U.S., it has been estimated that less than 7% initiate MOUD treatment. Moreover, of those started on MOUD, retention is only about 30–50%.[7,8] Distribution of MOUD providers, healthcare engagement of those identified with OUD, and insurance restrictions are some of the reasons thought to contribute to the under-utilization of MOUD treatment.[7-10]

Prior qualitative work has demonstrated a multitude of barriers to MOUD treatment including access, environment, knowledge, and stigma.[11-13] These studies have explored patient and provider opinions regarding MOUD in the context of specific healthcare settings, such as a hospital system (e.g., Veterans Affairs) or other healthcare organizations. Although other research has examined physician perceptions of MOUD, less is known about how community providers who provide services for persons with OUD – in professional roles ranging from healthcare to social services – perceive the benefits and drawbacks to patient treatment with MOUD.[14-16] We performed a sub-analysis of interviews collected from health and substance use service professionals as a part of the a larger ethnographic study examining neighborhoods with high opioid overdose rates in Allegheny County.[17,18] The objective of this analysis was to qualitatively explore attitudes, opinions, and beliefs of MOUD among healthcare and social service providers within these high risk communities of Allegheny County, Pennsylvania.

Methods

Study design

Parent ethnographic study—This study was conducted as part of a larger rapid-cycle assessment ethnographic study of communities with disproportionately high opioid overdose death rates.[17-21] For the larger study, we set out to examine the beliefs, concerns, needs, strategies, and experiences of various stakeholder groups in Allegheny County, Pennsylvania, neighborhoods with high opioid-related overdose death rates.[17-19] This study team consisted of a multi-disciplinary group with expertise in anthropology, public health, and medicine. A leadership team of key county and city stakeholders met regularly with the study team to provide input, insights, and assistance.[17,18,22,23]

Eight communities in Allegheny County were selected for participation in the study based on opioid-related overdose death rates, geographic variation, and demographic diversity. The parent study leadership team identified healthcare and social service providers as one of the key stakeholder groups targeted for interviews (including local MOUD providers, health providers, and substance use service providers). Data collection consisted of semi-structured interviews. Interested participants were contacted by study team members who reviewed study objectives and processes and scheduled an interview. Verbal consent was obtained from all participants to ensure complete anonymity (a waiver for written consent was obtained).

Interviews were conducted in person or by telephone. Most interviews lasted approximately one hour and were recorded using digital voice recorders. Participants were offered a $20 gift card as compensation. All interviews were transcribed verbatim and reviewed by interviewers for accuracy. We used Atlas.ti 8 for analysis management. The study was approved by the University of Pittsburgh IRB in June 2018 and a waiver for written consent was obtained.

Sample for this analysis—We contacted initial participants in each community using contacts provided by the parent study leadership team, and chain referral was used to expand the sample. Chain referral is a type of "snowball sampling" method that focuses on strategies to safely contact those working with sensitive, stigmatized, or illegal topics. This process asks participants to assist in passing along study information and contacts to others they perceive to be good candidates for study participation.[23,24] Interviews took place between March 7, 2018 and March 5, 2019. Participants self-identified in one or more of the following stakeholder categories: person who uses or used illicit opioids in the present or past, family member of a person who uses illicit opioids, government official, law enforcement official, school official, community member, or healthcare/social service provider. Among interview participants who identified as "healthcare/social service provider" were individuals who had medical, nursing, behavioral, social service, counseling, advocacy or other treatment/intervention expertise. These professionals worked in a variety of settings: hospital-based clinics and inpatient services, community addiction treatment centers, primary care practices, and public services embedded within the communities. Our analysis focused on interviews from this set of participants.

In interviews with those who self-identified as healthcare or social service providers, we included the question: "When you identify a patient with a substance use disorder, what are the next steps?" (See Supplementary Appendix 1 for full interview guide). In 45/62 (73%) of our completed healthcare/social service provider interviews, this question led to further discussion about MOUD. This manuscript focuses on analysis of these discussions regarding MOUD.

Most interviews were one-on-one with the interviewer and participant. There were three group interviews that included two to six participants, and these groups spontaneously formed due to the location and availability of participants (e.g., two healthcare providers from the same organization participated in the same interview). In sum, a total of 45 providers participated in 38 interviews used in this analysis.

Data analysis

For the parent ethnographic study, team members developed general preliminary codes from topic areas in the interview guide and applied these broad codes to all interview transcripts.[25] These codes were used to identify and categorize key topics/concepts addressed in the interviews. The team created a coding rulebook with definitions, rules, and examples for each code. Among these topical codes was "MOUD" which was applied to any mention of pharmacologic treatment of opioid use disorder broadly or naming of specific medications used to treat opioid use disorder such as methadone or buprenorphine. Transcripts from healthcare and service providers that contained discussions of MOUD were identified, and more detailed coding was performed using an open coding approach.[26,27] Two research team members independently coded the first 3 transcripts included in our analysis, compared codes, and then altered, merged, and added codes to create a preliminary coding rulebook. This process was repeated with a new set of 3 transcripts until thematic saturation – no new codes related to content topics or categories were created. This was noted after the 6th transcript coded. We planned for a third investigator to adjudicate when noting any interpretative discrepancies between the two coders. No discrepancies were noted that required adjudication. The final MOUD coding rulebook was reviewed with the larger study team and applied to all remaining provider participant interviews. We utilized Atlas.ti 8 as our data management and analysis software.

Once coding of all transcripts was completed, we performed thematic analysis to methodically explore and capture the meaning of the collected data.[28,29] The codes were reviewed by the same two research team members to uncover patterns and categories, and relationships and interactions between categories were subsequently identified by four research team members to generate themes. These themes were reviewed and refined by the study team. These themes were presented to the leadership teams in the context of the ethnographic data collected and members of the team noted that they were consistent with their own observations and perceptions. Findings were also presented at medical research meetings, scientific conferences, and meetings with community advocacy organizations with members at these meetings corroborating these themes.

Results

Demographic characteristics

A total of 45 healthcare and social service providers who provide services for persons with OUD participated in 38 interviews which specifically contained discussions of MOUD, and these 38 interviews were included in our analysis (Table 1). Twenty-one participants identified as serving the entire county. Eleven participants indicated additional stake-holder categories including: a member of the community they serve, person with former opioid use/currently in treatment, and parent/spouse/child/family member of a person with OUD. The average age of participants was 43 years old.

Qualitative themes

The following three themes were identified: (1) Disagreement in provider views regarding MOUD as a transition to abstinence or as long-term treatment; (2) Lack of uniformity and dissemination of accurate information of MOUD care; (3) Barriers to entry and navigation of MOUD care.

Disagreement in provider views of MOUD as a transition to abstinence or as long-term treatment.—Throughout discussions of MOUD in clinical practice, an overarching theme emerged around diverging views of the function and intent of MOUD. Providers often took a strong standpoint on two differing ideologies, and rarely did they discuss a more nuanced perspective on the central purpose and overall endpoint of MOUD. One perception of the role of MOUD was that it is a preliminary step to assist patients in reaching a primary objective – to achieve abstinence from all opioids.

> I think [MOUD is] a good way to help somebody get through a process until they realize "wait a minute, this isn't the right thing, it's more negative than positive for me." It's kind of a, keeps them in a neutral mode, so they're at least surviving, they're not OD-ing, and, that as long as they're using it properly, okay, then, then when they're ready, really ready for recovery, then they can move forward, and they have to do it cold turkey, they have to do it with meetings, peers that have been through it can help them through it, that's the way it seems to be, the most sustainable is really been.

In this perception, MOUD should be used for only a temporary and as short period of time as needed. Thus, continuation on MOUD is viewed as not ideal or even as a problem. This is illustrated in the following statement:

> Sometimes this medication becomes a curse … you have to take that Sub every morning … go to the doctors every month … you just want to live your life without these things every day … like [diabetics] have to take their insulin [every day].

The other perception of MOUD's role was that MOUD could be considered as a life-long treatment for a chronic condition. Providers discussed their perceived views of patients' opinions with respect to treatment goals and duration. Perceptions of patients' beliefs and experiences almost always paralleled participants' respective clinical practice ideologies.

> It's a very individualized treatment. I have one guy who has been on it for 8–9 years and is doing really well. He doesn't want to get off. He's successful, and has a great life, but is afraid. He says, "I'm not sure I quite trust myself. If I got a really bad urge, would I, or wouldn't I? Why risk it?" … There's a move to viewing addiction as any other chronic illness. You would never cut off treatment for another chronic illness.

With this perspective, providers worried that expecting MOUD to be temporary or only serving as a bridge to abstinence resulted in poor patient outcomes.

> They need to be on as long as they need to be on. If you push people off of methadone, or buprenorphine, they die. You do not push these patients off. You don't.

Lack of uniformity and dissemination of accurate information of MOUD care.
—Many participants perceived differences in MOUD treatment experiences within the community. The majority of participants attributed these observed discrepancies in care to lack of uniformity among MOUD facilities and specific providers. Participants also discussed differences in the pharmacological properties and regulations among methadone, buprenorphine, and naltrexone, and many believed that these differences influenced variations in MOUD delivery. When comparing treatment centers (whether generalizing or specifically naming facilities) participants often cited perceived differences in facility characteristics such as suspected physician profits and patient volume, insurance coverage, engagement in care, mental health treatment requirements, and licensure status of the facility. Overall, the perceived lack of standardization among MOUD treatment centers and providers was believed to foster differences in treatment experiences for patients.

> How many licensed facilities do [different areas] have? How many all-cash Subutex facilities do they have, and what are the overdoses in that ZIP code? If your treatment is different, in an area versus another treatment, then your outcomes are going to be different … But we tend to not talk about the treatment side, and it being related to the epidemic.

Additionally, participants frequently mentioned the lack of a centralized, trustworthy, and freely-accessible source to access information about MOUD providers and treatment programs. As a result, participants believed it was difficult for patients to assess the characteristics of services provided by different centers and providers, as well as discern which treatment option would be the best for their personal needs.

> So, trying to help get a clear direction on how to take care of addiction is often – there's a lot of static that comes from online groups. So, I think it's hard for a patient to understand: What [do] I have; Where do I go to get help?; What's the best help?; and Who's made it?–Who's a good example for me? I don't know how to clear that up, but that static makes it tough.

Information available on the internet was not only viewed as challenging to navigate; it was also perceived as unreliable.

So, um, you know, the internet's not updated … To prescribe Suboxone, you have to have the data waiver; and it's public record who has that data waiver on their medical license. So anybody on the internet can find that, and post it, and say "Here's the number on their license" that they're prescribing this medication, but that's not accurate.

Barriers to entry and navigation of MOUD.—Participants also described concern regarding numerous observed barriers to initiating MOUD care for patients. The most commonly perceived barriers to starting MOUD treatment were patients: (1) navigating the referral system and (2) getting MOUD when they need it. Participants discussed that MOUD centers/providers and patients were often connected with one another via informal recommendation networks. Although participants described various initiatives to develop a systematic referral process, they repeatedly returned to informal dissemination of information as the most effective means of patient outreach and initiation of care. As one participant noted, "We track things to determine where our marketing dollars should go and have found that word-of-mouth is the most common way that folks hear of us."

Some participants perceived the informal referral networks to be sufficient for community knowledge of MOUD treatment. However, others mentioned that while informal networks could be an effective means of patient recruitment, they also allowed for gaps in care because of its dependence on individual healthcare professionals who, in contrast to organizations, are more likely to have limited hours or change positions.

You need to have … really knowledgeable case managers that have worked in this area before. Because you may not get that person on the phone again. You may not get them in front of you again. So having really knowledgeable staff, really knowledgeable about what resources are out there for them, being able to do things rapidly, intervene rapidly, because their window of wanting [help] might close too. So, you kind of have to [pause] get them when they are ready too. Yeah, so I think that is, that takes a lot of work.

We found that participants did not necessarily have an explanation for why word-of-mouth referral networks, a system that participants also described as having their own challenges, might be more effective than the formal system. The provider in the following statement expresses uncertainty as to why MOUD treatment recruitment has not been as effective following changes in a staff member involved in the informal referral system.

I don't think we are doing a good job of getting people into treatment and I don't know where that comes, but somehow they are out there and they are not coming in and we don't have a centralized way of getting them to the appropriate place. I don't know if it is because the appropriate place doesn't exist or we don't do a good job of outreaching these people, but even now, with our Suboxone clinic, there was a change in the person who is the coordinator for the drug and alcohol program that we talk to, and they had a couple of therapists that changed, so I don't know if that is why it has been slow.

Participants also emphasized time-sensitive challenges of connecting patients to MOUD. Among obstacles discussed, participants mentioned the non-emergent nature of initiating

MOUD within the medical system, as well as a critical period for treatment initiation that was largely dependent on patient motivation and engagement. Due to the limitations of regular clinic hours, many participants believed that the available services within the community did not fully correlate to increased patient access, as illustrated by the following statements:

> So I can give a patient a list of twelve methadone clinics, Suboxone clinics to call, and they can call and make an appointment in any one of them, they're gonna get them in and they're eventually gonna get treatment, but when they show up to our door, in withdrawal, struggling, wanting something immediately, I can't always get them into detox, I can't always get them something that's gonna make them feel better and become invested in treatment.

Another participant described similar challenges providing services that accommodate to the needs of the clients:

> It is being able to have services available for them when they need the services. Again, if someone has a heart attack at 4:00 pm on Friday afternoon, we send them to the cath lab and everybody comes in and does a cardiac catherization. But if someone says at 4:00 pm on a Friday afternoon, I finally want to stop using, you know we are just like well, come back Monday. You know? We have the whole weekend we gotta get through now.

Discussion

In this qualitative study examining providers' perceptions of MOUD and challenges to implementing MOUD, we identified several important issues that may create obstacles for patients. First, providers had differing opinions about how to utilize MOUD: some felt it was a step on the road to abstinence and others felt it could be used as long-term treatment. In addition, there were a variety of concerns raised about differences in MOUD treatment facilities and the challenges inherent in entry into MOUD services.

Our findings highlight that providers' views on MOUD are similar to views on OUD services in general. Numerous studies have shown a long-standing cultural bias against treatment for OUD within the medical and non-medical system.[30-32] Negative perceptions of MOUD have also been shaped by a medical delivery system that fosters skepticism and mistrust of MOUD by the public, patients, and providers; this includes a lack of well-trained providers, regulatory barriers, and a societal preference for abstinence from all opioid containing medications.[33,34] Although efforts have been made to address barriers to MOUD, treatment gaps are still prevalent and MOUD remains underutilized.[8,35] Our study expands on this literature base by demonstrating similar findings regarding MOUD specifically.

Our participants' differing views regarding duration of MOUD reflect a shifting opinion within the medical community concerning best clinical practices for patients on MOUD, and more specifically, buprenorphine.[36-39] Our interviews began less than four months following the release of the Substance Abuse and Mental Health (SAMHSA) Treatment Improvement Protocol (TIP) 63, which advised against arbitrary time limits on MOUD treatment duration and reported that "patients who discontinue OUD medication generally

return to illicit opioid use."[39] While TIP 63 acknowledged that treatment length could vary, the report emphasized that optimal results occur with maintenance treatment – meaning as long as the medication "provides a benefit." This is in contrast to previous approaches that utilized MOUD (most commonly buprenorphine) as a shortterm treatment to be prescribed as tapered dosages.[36] In fact, only two years prior to the release of TIP 63, an opioid treatment review article stated: "universal agreement on how long a patient should continue to receive maintenance therapies is lacking" and that physicians tend to vary from goals of one year to lifelong treatment.[4]

In line with treatment review protocols during the time of our study, the majority of our participants did not readily identify a central source which dictates and regulates a "gold standard" of care. Instead, they frequently discussed differences in clinical practice. Prior studies have shown that provider education has influenced access to and use of MOUD.[40-42] This suggests that broader dissemination of updated MOUD recommendations among a variety of healthcare and social service providers may promote better understanding of current guidelines and development of more uniform treatment practices.

While translation of evidence-based practices is essential, the cultural components of using MOUD as a long-term treatment versus a tool for abstinence should not be neglected. The views of participants in our study may have been shaped by their environment and associated values, which may partially account for some providers in our study favoring MOUD as an indefinite treatment.[43,44]

Rather than focusing on the availability of MOUD services, participants in our study emphasized structural challenges for patients to enter and navigate MOUD care. Other studies have highlighted both limited MOUD services and infrastructure constraints as a significant challenge; however, our focused findings on perceptions of organizational barriers may reflect the abundant healthcare landscape of the community we studied.[8,13,45,46] Barriers discussed by our participants included the challenges of a "word-of-mouth" referral system; this "insider" system has been described elsewhere, as well.[13,47,48] Our findings regarding the reliance upon and yet limitations of informal referral systems raises new questions regarding why there is a perceived predominance of this type of referral and entry process into MOUD treatment and what is needed to develop more effective approaches to improve use of and access to MOUD among those with OUD who may benefit from it. Future studies are needed to explore this process and topic in more depth.

Additionally, participant views regarding the time-sensitive introduction of MOUD reflect a larger discussion about critical periods for MOUD intervention and the need to develop healthcare initiatives to address this problem.[49,50] Some state initiatives have worked to increase access to OUD treatments through expanded financing and reducing regulatory barriers.[51] Recently, SAMHSA commissioned and released an evidence-based guide entitled "Use of Medication-Assisted Treatment in Emergency Department" to expand expertise in and access to MOUD.[52] In response to the COVID-19 pandemic, federal regulations were changed to allow additional flexibility in the methods, modalities, sites, and providers for

MOUD services.[53-55] Ongoing studies are in process to explore the impact of both the pandemic and these changed regulations regarding MOUD.

Our study had limitations. As with many qualitative studies, the sample likely did not represent all viewpoints, and our recruitment methods may have left out providers who are not as active or well-known within the community. It is possible that healthcare and social service providers in other communities and regions would share different perspectives. Also, our healthcare and social service provider category was comprised of individuals with wide-ranging roles, and it is conceivable that specific subsets of this group (e.g., physicians compared to peer support specialists) may have different viewpoints that were not appreciated by analyzing their perspectives as a cohort. Even so, the points of view were consistent with other elements of our ethnographic observations and with other county initiatives describing barriers to accessing OUD treatment in the county.[56] Additionally, since the interview questions were broad and did not specifically focus on one type of MOUD, it was not possible to discern if the treatment modality (i.e., methadone, buprenorphine, and naltrexone) may have influenced participants' opinions, and it is likely the different treatment modalities contain nuances that are not fully generalizable to all types of MOUD.

Given the disagreement among study participants in the midst of evolving MOUD treatment recommendations, our findings provide a starting point for discussions among a variety of providers regarding differences in MOUD treatment in clinical practice, as well as highlight the need for broader dissemination of updated MOUD treatment protocols. Additionally, our work reveals limitations within some MOUD referral and delivery systems, which may be applicable to future clinical design and policy reform. Overall, our findings set the stage for larger studies within various geographic regions to better inform MOUD treatment protocols, policies, and clinical practice.

The study was approved on June 26, 2018 by the University of Pittsburgh IRB and a waiver for written consent was obtained (Protocol # MOD18030265-01/PRO18030265).

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention. Use of trade names and commercial sources is for identification only and does not imply endorsement by the Centers for Disease Control and Prevention, the Public Health Service, or the U.S. Department of Health and Human Services.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Funding

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Table 1.

Participant Demographics.

Characteristic	Sample, *N* (%)
N	45
Age, years (median)	43
Female	31
Provider groups	
Physician	9
Nurse	6
Administrator	10
Peer support specialist	3
Care manager/Social worker	6
Counselor	3
Other [*]	8

[*] This category includes housing supervisors and paramedics. It also includes office staff members who were included in a group interview with non-specified clinical roles.