

Concerns about Medications for Opioid Use Disorder Among American Indian Community Members: A Qualitative Secondary Analysis

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Abstract

Opioid use disorder (OUD) and mortality due to opioid overdose pose significant public health problems in the United States, particularly among American Indian/Alaska Native (AI/AN) communities that experience disproportionately high rates of opioid overdose deaths. Such health inequities are related to centuries of ongoing colonization and oppression that inform social determinants of health today. Using medications to treat opioid use disorder (MOUD) has broad support among health professionals due to substantial evidence of its effectiveness and benefits to patients. However, most AI/ANs who need MOUD never receive it. This analysis sought to identify concerns related to the use of MOUD and how they inform barriers to implementing MOUD in a rural AI reservation community. Secondary analysis of qualitative data was conducted using reflexive thematic analysis. Findings reveal key themes related to conditions for when to use MOUD, recovery, distrust of Western medicine, and individual viewpoints on MOUD. Implications of these findings for reducing barriers to MOUD in AI/AN communities are discussed.

Introduction

Deaths due to opioid use disorder (OUD) have been rising in the United States (US) for several years, with recent increases in opioid-related mortality exacerbated by the COVID-19 pandemic (Alexander et al. 2020; Khatri and Perrone 2020). Many opioid overdose deaths are attributed to synthetic opioids such as fentanyl (US Department of Justice 2015). From 2013 to 2019, overdose deaths from synthetic opioids increased by over 1000% (Mattson et al. 2021). Overdose deaths associated with fentanyl and fentanyl analogs further increased by more than 22% between 2020 and 2021 (Centers for Disease Control and Prevention [CDC] 2023), reflecting the severity of the opioid crisis in the US. While the opioid crisis has wide-reaching effects across the nation, it has disproportionately affected American Indian and Alaska Native (AI/AN) communities (Joshi et al. 2018; Whelshula et al. 2021). Of all racial/ethnic groups in the US, AI/ANs experience the second highest rate of opioid overdose deaths (Scholl et al. 2018), and this rate has been increasing steadily for more than a decade (Tipps et al. 2018). Additionally, rates of drug overdose mortality are likely underestimated among AI/ANs, with research suggesting current rates could be underreported by as much as 35% (Mack et al. 2017; Joshi et al. 2018).

There is evidence of inadequate access to substance use disorder (SUD) treatment in general among AI/ANs (Duran et al. 2005; Rieckmann et al. 2017), contributing to increased overdose rates. Rates of SUD among AI/ANs are driven by historical trauma, racism, and inequities in the social determinants of health resulting from historical and ongoing colonization and oppression (Yellow Horse Brave Heart 2003; Whitesell et al. 2012; Warne and Lajimodiere 2015; Skewes and Blume 2019; Gameon and Skewes 2021). Importantly, AI/AN communities benefit from inherent cultural strengths and knowledge related to health and well-being that

67 provide a strong foundation on which to integrate new treatments, including medications for
68 OUD (Hirschak et al. 2023).

69 The US Food and Drug Administration (FDA) has approved medications for opioid use
70 disorder (MOUD), including opioid agonist medications (i.e., buprenorphine and methadone)
71 and naltrexone, an opioid antagonist (Blanco and Volkow 2019). Using MOUD has been shown
72 to reduce cravings, relieve withdrawal symptoms, prevent relapse, and prevent overdoses
73 (Manchester and Leshner 2019). The use of MOUD is also associated with other benefits, including
74 reduced risk of viral infections such as HIV and hepatitis C, reduced criminal behavior, reduced
75 opioid use, increased treatment retention, improved psychosocial functioning, and reduced
76 opioid-related and all-cause mortality (Manchester and Leshner 2019). Due to the strong evidence
77 of its efficacy, MOUD treatment is supported by the FDA, American Medical Association
78 (AMA), National Institutes of Health, Substance Abuse and Mental Health Services
79 Administration (SAMHSA), Centers for Disease Control and Prevention (CDC), and American
80 Society of Addiction Medicine (ASAM 2019; Carroll et al. 2022; SAMHSA 2023; AMA n.d.).
81 The evidence for MOUD is so strong that it is considered the gold standard of care for treating
82 OUD (Adams and Volkow 2020; Crotty et al. 2020; Krawczyk et al. 2021), and some view
83 withholding MOUD treatment as unethical (e.g., Brezel et al. 2020). Despite this, MOUD is
84 underutilized (Sordo et al. 2017; Krawczyk et al. 2021), particularly among AI/ANs (Rieckmann
85 et al. 2017); most AI/ANs with OUD do not receive MOUD (Krawczyk et al. 2021). Expanding
86 access to and use of MOUD is an essential strategy for addressing the opioid crisis and saving
87 lives (Krawczyk et al. 2021).

88 Given the overwhelming evidence that MOUD treatment improves health outcomes and
89 reduces mortality, it is important to understand the reasons that MOUD often is not prescribed to

or used by patients who could benefit from it. For AI/AN communities, there are logistical, systemic, social, and cultural barriers to MOUD uptake (Venner et al. 2018; Zeledon et al. 2019). For example, a logistical barrier is that until June 2023, clinicians needed to apply for a waiver to prescribe buprenorphine and were limited in the number of patients they were permitted to treat (SAMHSA n.d.). These restrictions impeded the use of this MOUD across the nation, especially in rural areas where there are fewer providers to meet patient needs (Green et al. 2021). As many AI/AN reservations and villages are located in rural areas, buprenorphine waiver and patient cap requirements served as a notable barrier to MOUD implementation. Systemic barriers include scarcity of SUD treatment services in general and MOUD services in particular, a lack of qualified prescribers, transportation barriers, inadequate insurance coverage, housing instability, and long wait times for treatment (Rosenblatt et al. 2015; Rieckmann et al. 2017; Krawczyk et al. 2021).

There also is evidence of social barriers to MOUD implementation, including inadequate knowledge about MOUD, misconceptions about how MOUD works, confusion about how long it should be used, fears of diversion, and beliefs that agonist medications are misused and perpetuate addiction (Venner et al. 2018; Richard et al. 2020). Fear of diversion of medications is a notable barrier to MOUD implementation (Richard et al. 2020); however, most diverted medications are used by people with OUD to control craving and withdrawal symptoms (Krawczyk et al. 2021), and increased access to MOUD in a community has been shown to decrease diversion rates (Sofuoglu et al. 2018; Cooper et al. 2020; Del Pozo & Rich 2020). Although fear of diversion may be reasonable in some contexts, the consequences associated with diversion have not been shown to outweigh the benefits of MOUD treatment.

Inadequate understanding about how MOUD works contributes to widespread misconceptions that agonist medications are simply trading one addiction for another (Venner et al. 2018; Richard et al. 2020). Addiction treatment services relying on 12-step models of recovery are commonly opposed to agonist medications, as MOUD patients are not considered to be truly abstinent (Richard et al. 2020). Stigma surrounding drug use and people who use drugs contributes to resistance to MOUD treatment, as does the belief that addiction is a moral rather than medical problem (Tipps et al. 2018; Venner et al. 2018; Richard et al. 2020; Krawczyk et al. 2021). Some treatment providers may be willing to prescribe MOUD on a short-term basis or for detoxification purposes but are reluctant to provide ongoing treatment to patients (Richard et al. 2020). However, ongoing maintenance treatment is associated with improved outcomes among people with OUD (Blanco and Volkow 2019). In AI/AN communities, skepticism about MOUD is compounded by distrust of Western medicine, preferences for traditional approaches to treatment, and preferences for treatments that advocate complete abstinence from drugs (Venner et al. 2018; Zeledon et al. 2019; Krawczyk et al. 2021).

Given the opioid crisis's disproportionate impact on AI/AN communities and evidence of diverse barriers to MOUD implementation in these communities, it is important to understand these barriers to inform efforts to overcome them. To better understand concerns about MOUD among AI Tribal members from a rural reservation community, we conducted secondary analyses of qualitative data from a larger Community Based Participatory Research (CBPR)¹ project focused on understanding substance use and recovery within the reservation context. The

¹ CBPR is a collaborative research approach that equitably involves all partners, including the community, in the research process (Laveaux and Christopher 2009). In the primary study, CBPR guided the design and implementation of interviews, ensuring the research questions and methods aligned with the community's needs, priorities, and culture. For the secondary data analysis, CBPR principles ensured that the interpretation of findings remained rooted in the community's context and values, fostering actionable and culturally relevant insights.

goal of this analysis was to answer the research questions: what are AI community members' concerns, attitudes, and perceptions related to MOUD, and how do these expand our understanding of barriers to MOUD implementation in a Tribal community? The long-term implication of this research is to develop community-wide campaigns to address these concerns, thereby increasing support for uptake of MOUD programs and for AI patients who use MOUD.

Qualitative Secondary Analysis Approach

Study Design

We conducted qualitative secondary analysis to learn about perspectives on MOUD and how they inform barriers to implementing MOUD in a Tribal community. Qualitative secondary analysis uses existing data to answer research questions that are distinct from those of the original study (Tate and Happ 2018). This approach also allows researchers to engage in a comparison with other data/analyses, or to combine similar data to examine a given research question (Heaton 2004). Secondary analysis of qualitative data saves time on data collection and processing, provides access to data from participants who might otherwise be difficult to reach, reduces the burden of time for participants, and makes the most of data that participants and researchers took the time to produce (Chatfield 2020).

Data in the present analysis were collected as part of a larger project conducted in partnership with an AI community to understand risk and resilience associated with substance use, SUD, and SUD recovery (i.e., the primary study). The overarching goal of the primary study was to identify factors that may inform targeted interventions to facilitate recovery on the reservation and improve public health. Key informant interviews were conducted using a purposive sample of diverse AI community members and covered topics related to health, well-being, and substance use, including targeted questions about using medications to help people

change their substance use (see Supplementary Material). In discussing medications to help people change their substance use, participants raised concerns about the use of MOUD for people with OUD. During initial analysis of transcripts, researchers noticed common themes in participant responses reflecting concerns about MOUD, prompting further investigation to understand barriers to implementing MOUD in this community. At this time the opioid crisis was increasingly impacting the community, and the local SUD treatment facility was considering starting a MOUD program. These events inspired our team to conduct secondary analysis of qualitative data collected in the primary study to explore perspectives on MOUD treatment and barriers to its implementation. We aimed to explore these themes in depth in hopes of offering a timely contribution to the community's efforts to address increasing opioid overdose deaths, which constituted a significant concern for the reservation. We used data in the primary study to investigate new research questions in a supplemental analysis (Heaton 2008) focusing specifically on MOUD, a topic relevant to the primary study and of interest to the community due to a spike in opioid overdose deaths plaguing the reservation and the state. Below we describe the primary study setting and methods.

Primary Study Design

Location

This research took place between 2015-2016 in a geographically isolated, rural AI reservation community that is home to two Tribal Nations. The community partnered with academic researchers to engage in research on substance use and addiction, which was the community's research priority. The reservation experiences high rates of poverty and significant health disparities leading to high rates of premature mortality for its residents. Alcohol sales are permitted on the reservation, and alcohol and other drug use was stated as a priority health

concern by community partners. At the time of data collection, there were no MOUD services available in the community, although some community members traveled to off-reservation clinics to receive MOUD treatment. The reservation has its own Institutional Review Board (IRB) that reviews research taking place in the community and approves all study dissemination activities, including these secondary analyses and this manuscript. A community advisory board (CAB) of Tribal members helped guide the primary study, including study design, interview questions, procedures, and interpretation and dissemination of findings. The CAB also reviewed and approved the findings produced by the present secondary qualitative analysis.

Participants

Participants were 25 Tribal members from a rural AI reservation community. Recruitment took place through nomination by the local project manager and CAB, who recommended interviewing key informants with diverse perspectives, including women and men, members of each of the two tribes that share the reservation, people from different age groups, people who follow different spiritual traditions, and people with varied experiences with substance use. In nominating participants, the CAB drew on their knowledge of community members to select participants who had experiences with their own or others' substance use and were knowledgeable about SUD treatment resources in the community. We did not use a screening process in recruitment but instead relied on the CAB's list of potential key informants. We did not ask participants to report their personal history and experiences with SUD or OUD, but during interviews, all participants reported knowing someone who had recovered from SUD, and all participants reported having lost relatives to SUD. Community partners recommended this approach to purposive sampling to gather perspectives from diverse constituencies represented on the reservation.

Due to practical and budgetary constraints, we aimed to collect data from 25 key informants. Twenty-seven Tribal members were invited to participate in the study, and 25 agreed. Two prospective participants declined due to time constraints surrounding work and family obligations. The final study sample included 13 women and 12 men ranging in age from 29 to 79 years ($M = 51.68$). All participants identified as American Indian. The majority of the sample (79.2%) had completed high school; 37.5% had completed an associate degree or higher. Household sizes ranged from one to 15 people ($M = 5.24$). Median household income was \$27,910 per year.

Interview Protocol

The study team and CAB collaboratively developed interview questions (see Supplementary Material for the complete interview guide; additional details about the study team and primary study are described in depth in Skewes and Blume's 2019 manuscript). The goal of the interviews was to understand experiences with substance use and SUD recovery within the reservation context. We sought to identify risk and protective factors associated with substance use among Tribal members, pathways into and out of addiction, and needs and priorities of community members regarding SUD treatment. A semi-structured interview protocol was finalized and approved by the CAB and Tribal IRB. The protocol included questions about the use of medications to treat addiction, and responses centered around the use of MOUDs. Answers to these questions serve as the primary focus of this manuscript. In some cases, participants were unaware of medications that could be used to treat SUD; in these cases, the interviewer provided a description of medications that can be used to treat SUDs, including MOUD.

Four study team members served as interviewers, including two AI women, one non-Native woman, and one non-Native man. The two Native interviewers, women with master's degrees and decades of experience conducting qualitative interviews in Native communities, trained the two non-Native researchers to prepare for these interviews. The Native interviewers guided the non-Native interviewers and provided feedback throughout the process. In each data collection session, two interviewers were present (one non-Native and one Native), and both interviewers played active roles, with the non-Native interviewer asking questions to guide the conversation and the Native interviewer providing support as needed. The Native interviewers helped guide the conversations, established familial connections between themselves and participants, made participants feel more comfortable, vouched for the respectful intentions of the research team, and helped the participants and the non-Native interviewers understand each other.

Procedure

After providing informed consent, participants completed two interview sessions spaced a few weeks apart. Interviews were held across two sessions to reduce participant fatigue, with the second session covering questions that were not addressed in the first session. Interviews were audio recorded with permission from the participant. Each interview session lasted one to two hours, for a total of two to four hours of audio recording per participant. Two interviewers were present for each session, and our team ensured that one member of each team of interviewers was Native, per the CAB's recommendation. The discussions were led by the non-Native interviewers, with the Native interviewers providing guidance and facilitation support. Interviews took place in a private study room at the Tribal college library, and refreshments were

served, as is the custom in this community. Participants received a \$25 gift card for completing the first interview session and a \$50 gift card for completing the second session.

Secondary Analysis

Audio recordings from the primary study were transcribed verbatim and de-identified (i.e., identifying information such as names were redacted) prior to analysis. The sections of the transcripts related to MOUD were extracted for the present analysis (other findings have been disseminated previously; see Skewes and Blume 2019; Skewes et al. 2019). The extracted portions of transcripts were primarily taken from questions and probes related to using medications to help people change their substance use (see Supplementary Material for the full interview guide), but also were extracted from other sections of the interviews if the participant discussed MOUD in any way. In the current analysis, we only examined instances where it was clear that participants were explicitly discussing MOUD, as opposed to other medications or SUD treatments. We did this by establishing an operational definition of MOUD (i.e., listing all medications that constitute MOUD) during extraction to ensure that only sections in which participants were clearly discussing a MOUD or responding to a question about a MOUD were extracted. Any instance of participants solely mentioning other forms of MAT (e.g., Antabuse) were not extracted for this analysis. Similarly, instances where it was unclear whether participants were discussing MOUD or another form of medication assisted treatment (MAT; a broader term which refers to the variety of medications used to treat SUDs) were not extracted for analysis.

Study team members for this secondary analysis include the PI of the primary study and their student mentees. The first author engaged in an iterative, qualitative analysis of the extracted portions of the transcripts following guiding principles of thematic analysis (Nowell et

al. 2017). Specifically, the analysis represents reflexive thematic analysis, fundamentally grounded in the constructivist understanding that the researcher/analyst plays an active role in generating knowledge and meaning within the data (Byrne 2022). The analyst approached the data from an experiential orientation with the goal of understanding the meaning and experience shared by participants (Braun and Clarke 2014), since the research question sought to learn about their perspectives, experiences, and attitudes related to MOUD. Given this epistemological foundation, it is important to understand the analyst's positionality; the analyst is a White, cisgender, queer woman with four years of experience engaging in qualitative research and CBPR with AI/AN communities. The analyst and PI of the primary study have been collaborators for nearly a decade and share a commitment to equitable community-based research that honors and benefits the community. Though the analyst was not part of the study team when the primary study collected these data, given the analyst's experience leading diverse qualitative data analysis as part of other CBPR projects with Indigenous communities, the PI invited the analyst to help investigate the emergent research question to understand MOUD and barriers to its implementation.

First, the analyst read through the transcripts to become familiar with the data and drafted memos to outline emergent codes, ideas, and themes (Birks et al. 2008). Code generation and coding were largely inductive, with no *a priori* codes employed, as the goal was to best analyze the meaning that participants communicated (Braun and Clarke 2013). Next, the data were reviewed again, and excerpts from the transcripts were organized in Microsoft Excel to link segments of text with inductive codes, both those identified initially and new inductive codes that arose during the second review. Both semantic (i.e., descriptive/surface level meaning) and latent (i.e., connoting deeper or underlying meaning) codes were developed and applied to the

data (Byrne 2022), and many segments of text were double coded to reflect diverse meanings and interpretations of the participants and analyst (Patton 1990). Then, the analyst reviewed the coding and combined codes that had significant overlap. The text was recoded using the refined codes, and the analyst memoed throughout this process, which was iterative and reflective of the non-linear nature of reflexive thematic analysis (Braun and Clarke 2014).

Next, the analyst compiled a list of final codes and worked to generate themes. Codes were grouped to produce meaning and identify themes germane to the research question. A coding report detailed the findings from this analysis and included all quotations with codes applied during analysis (i.e., any quotation that could be useful to address the research question; Byrne 2022). Results in this coding report were compared to results from a qualitative analysis previously conducted in 2022 on the same data by four student research assistants who employed a similarly iterative approach as a team. The current secondary analysis, taking place in 2023, was used to triangulate the findings and showed significant overlap in the codes, themes, and results generated through both endeavors, thus offering some confirmation of the findings (Carter et al. 2014). The PI reviewed the report and contributed to the analytic discussion, connecting the findings to their knowledge and experience of the primary study and community context, noting that the findings and interpretation tracked well with their understanding based on their experience working with the community. Throughout this process, we took care to focus on and report findings specific to MOUD, rather than other forms of medication assisted treatment, or SUD treatment generally. Though we did not conduct member checking (Lincoln and Guba 1985) with interview participants, the project's CAB and Tribal IRB reviewed and approved this manuscript, increasing the trustworthiness of the findings (Ahmed 2024).

Secondary Analysis Results

The results reported here pertain to the present secondary analysis. Direct quotations presented in this section are identified using participant numbers to protect the privacy and identities of participants while conveying the spread of quotations across the sample. We did not find any major differences across participant perspectives based on age or gender. Analysis elicited four main themes: 1) Conditions; 2) Recovery; 3) Distrust of Western medicine; and 4) MOUD viewpoints. The results are organized and discussed below by theme.

Theme: Conditions

Many participants acknowledged that MOUD can be a useful tool for people with OUD, saying things like, “I believe in it. It should be used right” (P16), “It's good that you can use medicine to help you” (P24), and “I think they [MOUD] would help. ... I hear those withdrawals are terrible. I can just imagine” (P12). However, when discussing the utility of MOUD, participants often said it was useful and acceptable, but only under certain conditions. One of these conditions was that MOUD be used only temporarily when beginning recovery: “I’m pro temporary use until they can get sober, kinda get on track” (P3). Another participant added that MOUD was useful, but not in the long term: “I think it's good to an extent and wean themselves off of that when they don't feel they need it anymore but I don't think it should be a lifetime thing” (P23). One participant specified that using MOUD was appropriate only “if someone was in really deep trouble because of their behavior, I think if it was really extreme” (P4).

Another condition of using MOUD was that it must be stringently monitored and regulated. Participant 9 shared, “Of course [Suboxone] has to be highly monitored, highly regulated, but I think that's possible as something that could be used as a tool. We just need some strict policy, procedures and highly monitored.” Some participants linked the need to supervise

336 use of MOUD to their skepticism of its efficacy: "I think if it works, it has to be monitored.
337 Yeah, I think medications are OK, you know, to that extent if they work" (P12).

338 Participants also connected the need to monitor and regulate MOUD with the risk of
339 misusing these medications, describing the condition that MOUD use is appropriate as long as
340 the medication is used as intended and not abused: "Don't use [MOUD] as an escape to get high"
341 (P18). Participant 7 shared, "If you need that help and you request it, then use it. If it really helps
342 you. As long as you don't abuse that either." Another participant added, "I'm glad that [MOUD
343 are] all locked up and that the pharmacy only has control over them. Otherwise, I think they
344 might be misused or overused" (P12).

345 Diversion of MOUD was cited as an important concern, specifically that people are
346 selling and repurposing these medications to obtain and use other substances: "They want that
347 Suboxone and sometimes they get so much of it, they sell it, too, to support themselves" (P16).
348 Participant 13 added, "The profits from [Suboxone] are used to invest in amphetamines. So it's
349 abuse and I think ... right now it's not helping our people. It's just enabling more
350 methamphetamine use." Another concern of using MOUD was side effects of the medication: "I
351 worry about side effects from the modern medicine. Then you gotta take more medicine for the
352 side effects" (P1).

353 Finally, some participants described how they thought MOUD could be useful, but only
354 for certain people and not for others: "They can work, but I think for most people, it's not going
355 to work" (P3). Specifically, MOUD was touted as something that could be helpful only for
356 people who were highly motivated to pursue recovery and make changes beyond just using
357 medication:

It depends upon the person. If that person really wants to quit, and he needs the aids. ... But what happens if he doesn't change his lifestyle? ... Sometimes they also have to remember that they need to change their personality, their way of acting, their way of wanting to do things (P6).

Overall, participants described strict rules and conditions under which MOUD use is acceptable and useful: when used temporarily, only for extreme cases of SUD, and strictly monitored. There were concerns that deviation from these conditions of when to use MOUD would lead to MOUD being misused or diverted, and worries about the side effects of MOUD. Some also noted that the efficacy of MOUD greatly depends on the user's attitude and engagement in creating larger lifestyle changes.

Theme: Recovery

Many participants discussed their perspective in the context of what SUD recovery means to them. For some people, using medications to treat addiction was incompatible with recovery, as they viewed recovery as involving broader, more holistic changes than simply abstaining from substance use. In this view, MOUD felt like a shortcut or a reason for someone to avoid making deeper changes: "[MOUD will] just extend their behavior, their negativity. It gives them an excuse for not getting healthy, I think" (P4). Other participants described how recovery must also include facing difficult emotions and experiences: "They're not better till they're weaned off. Until they can deal with themselves and their own mind. ... That's what getting better means. Being able to deal again. Deal with yourself again." (P10).

For many, the concept of recovery is predicated on abstinence from all substances. Participants shared that, "Abstinence is the thing we need to be keying in on" (P19), "Number one is to be abstinent ... alcohol and drug free. Number one as a goal" (P18), and "It has to be

abstinence. Just because you can't go part way" (P3). Building on this idea, participant 6 noted that using substances again after abstaining meant that a person had "probably never really recovered." For some, this baseline requirement of abstinence meant that using MOUD in recovery is contraindicated: "If you can do it just naturally with your own will power that would be the way to go. As far as taking drugs to quit drugs, that don't make sense to me" (P20).

Overall, recovery from SUD was described as a process that involves deep personal changes across all aspects of life, and one which must include abstinence from all substances. Through this lens, using MOUD was viewed as incompatible with recovery.

Theme: Distrust of Western Medicine

Another important theme that emerged is distrust and avoidance of Western medicine, especially pills:

It's a medication ... if you can do it without it that's the way I'd go. ... What are the side effects of those? All the complications that might arise from that because we've been labeled as the medicated generation. ... It's like no matter what you have, oh we've got a pill for that (P20).

Some participants also connected their distrust of Western medicine to their preference for herbal or alternative medicines. Participant 8 shared: "I'm against all Western medication, but I'm for all herbal remedies. We have a medicine cabinet out in our fields." For this participant, their distrust and hesitancy to engage with Western medicine was related to how taking medication leads to changes in a person such that they are not themselves or are not fully present: "I don't like pills because working in the school too, I seen what Ritalin did to the kids ... happy, just energetic. They take the pills, and they're zombies. They're not there in the mind because of that pill" (P8).

Other participants connected their well-warranted distrust of Western medicine today to past abuses that have occurred to Indigenous peoples in the Western medical system:

It's good that you can use medicine to help you. It's bad that you don't use the wrong medicine, because a lot of times a lot of those doctors and nurses are using medicine to experiment on Native people and you've got to be very careful of that (P24).

For some participants, distrust of Western medicine extended beyond concerns about MOUD into concerns about other medications for SUDs, such as Antabuse (disulfiram) for alcohol use disorder. These concerns mirrored and contributed to negative perceptions of MOUDs. Participant 18 described broad concerns related to medications for SUDs (including MOUD):

Antabuse can help, but if you use, you got severe side effects. You could die. It depends on where the person is at with their usage. Suboxone is just another way to get high. I hate to say that, but that's what it is. I know people on the reservation that get those. They sell it as soon as they get it, people are all going to them and buying that Suboxone. Maybe they're trying to use it to help them with their drug use, but no. The nicotine patches are good for a person that really wants to stop smoking, but there are also side effects to that too.

Overall, we found evidence of distrust and avoidance of Western medicine, including medications beyond MOUD. Hesitancy to use Western medicine is related to the history of abuses that Indigenous people have endured by Western medical and research systems and a preference for traditional medicines.

Theme: MOUD Viewpoints

Participants' responses to interview questions revealed insights into their perspectives and understandings related to MOUD. When MOUD arose during discussions, participants often responded by sharing examples of personal experience, whether their own or someone else's. Participant 3 said: "I have a lot of relatives on meth and alcohol and [opioid] pills. It's a small percentage that gets better." One participant described how they felt their lack of personal experience with this topic limited their perspective: "I don't like [MOUD], but on the other hand, I've never been an addict like that ... so I don't know if that provides ... how much relief that would provide" (P4). One participant talked about having no relevant personal experience related to MOUD: "I don't know how that stuff works or not. I don't think I've ever met anyone going through that, to use that" (P1).

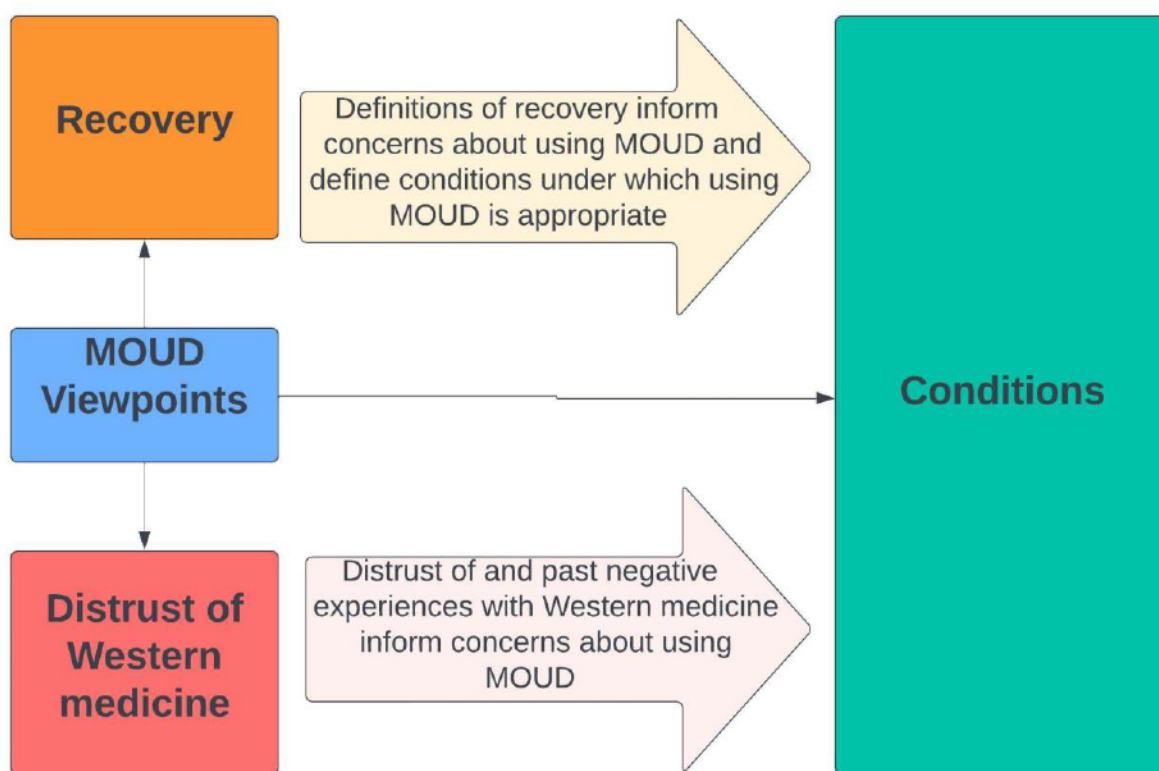
Finally, some participants responded to questions about MOUD with contradictory statements, suggesting conflicting perspectives. When asked about what they thought of using MOUD, participant 19 stated: "Don't. There's individuals right now [who] use Suboxone to get high. ... I say don't do it. If you've got to wean them off [illicit opioids], fine, but ultimately I don't think you ought to." Other participants made similar statements that expressed concern surrounding MOUD use, but also that it could be effective. Participant 2 talked about how they did see some utility for MOUD, but that they also do not believe in the efficacy of MOUD: "These legal drugs may actually give them that little bit of help that they need. ... My own personal bias is that I don't believe those drugs are helping."

Overall, viewpoints related to MOUD tended to be grounded in personal experience and were sometimes contradictory. The ways participants described their perspectives related to MOUD varied, with people expressing different viewpoints and levels of understanding MOUD, suggesting there are diverse community perspectives on this topic.

Results Summary

Results highlight the important theme of conditions of MOUD, including specific circumstances under which it should be used. The theme of recovery was connected to these conditions, as many concerns surrounding MOUD use are related to how it aligns (or does not align) with these conditions and conceptualizations of addiction and recovery. Concerns about MOUD also appear to stem from a general distrust of Western medicine due to historical abuses of Indigenous peoples by this system. Perspectives on Western medicine in general influenced perspectives on the utility and appropriate conditions for using MOUD. Viewpoints related to MOUD were often grounded in personal experience. Figure 1 illustrates how these four major themes are connected with and influence each other.

[Insert Figure 1 about here]



Discussion

These results highlight important attitudes about MOUD among participants in this community, illuminating potential barriers to implementation. Key barriers identified include perceptions that its use must be temporary, that MOUD is incompatible with true recovery, distrust of Western medicine, concerns about side effects of MOUD and other medications generally, and the misuse of MOUD.

As a group, AI/ANs experience some of the highest rates of OUD and deaths from opioid overdose (Scholl et al. 2018), and there is overwhelming evidence for the effectiveness of MOUD in treating OUD, as well as broad support from clinicians and national health organizations (Adams and Volkow 2020; Crotty et al. 2020; Krawczyk et al. 2021). Given the urgent need to address inequities related to OUD in AI/AN communities, as well as evidence that MOUD can significantly reduce mortality and improve treatment outcomes, it is important to understand barriers to expanding its use in Tribal communities.

The results reported here are largely corroborated by existing research. Findings from a national gathering of stakeholders exploring the feasibility of MOUD among AI/ANs highlight distrust of Western medicine and its incongruence with AI/AN cultural values and worldviews related to health (Venner et al. 2018), themes that were echoed by participants in this analysis. Participants described fears about side effects of Western medication and a preference for traditional medicines. They also connected this distrust to medical and research abuses committed against AI/ANs by Western institutions. These concerns are well warranted as they are grounded in numerous examples of such abuses, for instance, the forced sterilization of thousands of AI/AN women without their consent/knowledge by Indian Health Service facilities as recently as the 1970s (Lawrence 2000). Research has also linked distrust of Western medicine

among AI/ANs to historical trauma and racial discrimination and points to the importance of considering this context when trying to increase utilization of health care services for AI/ANs (Stewart and Gonzalez 2023).

In addition, participants described concerns related to the misuse of MOUD, specifically that persons with a prescription for MOUD were selling medication to support themselves or to purchase other substances. Fears of diversion have been reported in other populations (Finlay et al. 2020; Scorsone et al. 2020; Rubel et al. 2023) and in other research with AI/AN participants (Venner et al. 2018). However, these findings highlight a distinct concern about diversion of MOUD— that profits from selling prescribed medication appear to be fueling the local methamphetamine trade. Among participants in this analysis, concerns about all forms of MAT seemed to inform and be linked to concerns about MOUD specifically. While concerns about MOUD are not limited to AI/AN communities, other forms of MAT (e.g., Antabuse for alcohol use disorder) are more widely accepted across the general population (Rieckmann et al. 2010).

Venner and colleagues (2018) also discuss the view of abstinence from all substances as a requirement for recovery as a barrier to MOUD, including concerns that using MOUD for longer periods of time could have side effects and would preclude abstinence (and therefore more comprehensive healing). Participants in this analysis similarly shared that their conceptualizations of recovery from OUD must involve abstinence from any substances or medications, as well as more holistic lifestyle changes, illustrating how using MOUD would be incompatible with what recovery should look like. In addition, many participants who described the potential usefulness of MOUD did so with the caveat that it should only be used temporarily but not prescribed long-term. Participants also repeated the commonly reported idea that MOUD is just “trading one drug for another.” The idea that MOUD is swapping one addiction for an

equally harmful addiction has been reported in other AI/AN samples (Venner et al. 2018) and in studies with the general population (Dickson-Gomez et al. 2022), despite the dramatic lifestyle and health improvements that accompany using MOUD instead of illicit substances (Reed et al. 2023).

The view that using MOUD means a person is not abstinent or not in recovery means that AI/AN people taking MOUD may be barred from participating in traditional healing activities or ceremonies requiring abstinence, underscoring the consequences AI/AN people who use MOUD may face. Such consequences could represent a significant barrier to promoting MOUD use (Venner et al. 2018). Many studies document the importance of grounding SUD interventions for AI/ANs in cultural values and practices, and there are calls for future research to continue in this vein (Richer and Roddy 2023). For some people, using MOUD might be an essential part of being functional enough to participate in such cultural healing practices (and interventions that incorporate them). Therefore, research should explore how best to overcome cultural barriers to MOUD so that more people might benefit from culturally adapted/grounded treatment. One approach to expanding access to/use of MOUD (and simultaneous participation in cultural activities) is Indigenous harm reduction, a process of tying cultural knowledge together with harm reduction services and strategies (First Nations Health Authority n.d.). Indigenous harm reduction is grounded in compassion and advocates acknowledging and reversing the harmful impacts of colonialism, including debunking the idea that abstinence from all substances is the only acceptable pathway for people with SUD (First Nations Health Authority 2023).

Finally, these results illuminate viewpoints of how people in this community think about MOUD. Many participants in this analysis expressed their perspectives by grounding them in personal experience, whether their own or someone else's, suggesting that peer and social

influence on this topic is important. Studies exploring barriers to MOUD implementation cite stigma as a common challenge (Finlay et al. 2020; Scorsone et al. 2020), including studies with AI/ANs (Venner et al. 2018; Mpofu et al. 2021), and some of the findings reported in this paper (e.g., the idea that using MOUD is trading one drug for another) could contribute to stigma around MOUD use in AI/AN communities. There also may be concerns that increasing MOUD use in AI/AN communities could be seen as evidence that AI/AN people have greater problems with addiction than other racial groups, adding stigma to an already stigmatized population. Research shows that AI/AN people experience increased stigma in terms of SUD (Winters and Harris 2019), and it is important to offer equal treatment and care without increasing the negative effects of stigma. Public/community perceptions of MOUD may be affected by sharing stories and examples of positive experiences using MOUD and may be one way to reduce stigma and improve access to and use of this medication. Noting that the high rates of overdose deaths among AI/ANs also contribute to stigma and highlighting the efficacy of MOUD for preventing overdose deaths may also be a helpful way of framing MOUD use in AI/AN communities.

Strengths and Limitations

These findings add to knowledge surrounding concerns about MOUD in AI/AN communities and help identify potential barriers to MOUD implementation. This understanding may inform future interventions to support greater acceptability and uptake of MOUD in these communities. The primary study and secondary analysis both used a CBPR approach to ensure the research was acceptable, of interest to the community, and carried out in a manner that is culturally appropriate and respectful of Tribal sovereignty (LaVeaux and Christopher 2009). Strengths and limitations of the primary study are described in Skewes & Blume (2019). Limitations include the fact that a qualitative approach cannot be used to test hypotheses, that the

sample is not generalizable nor representative, and that by focusing on key informants, it is possible that other perspectives in this community were not captured in these data. However, these were balanced by strengths of the primary study, including careful, collaborative development of a robust interview guide, taking time to build community relationships as a fundamental piece of CBPR, and generating important insights that add to the literature related to SUD and racial trauma. Efforts were made to include a diverse range of participants in the primary study, but it is possible that participant referrals from the CAB and project manager did not include important perspectives from community members with diverging views on MOUD use. The interviews in the primary study also did not ask specifically about barriers to wider MOUD use because at the time of data collection MOUD was not available in this community, therefore it would not have made sense to ask participants about barriers to a service that did not exist locally. Instead, questions broadly asked what people thought about using medication to treat substance use problems. When asked about using medication to treat SUDs, it was apparent in many responses that MOUD came to mind, and numerous participants discussed MOUD specifically. Moreover, we did not ask participants to report their substance use history or experiences with OUD or MOUD, so were unable to compare findings from people who had experienced OUD/used MOUD with those who had not. A more focused inquiry may have produced different results.

This qualitative secondary analysis is limited to a specific Tribal community, and while the interview participants were not randomly selected, and these findings cannot be generalized to a larger population, these results are nevertheless consistent with existing research and may be transferable to other AI/AN communities. Many studies with other Tribal communities and participants have reported similar findings (e.g., Venner et al. 2018), which suggests these

concerns may be widespread for AI/ANs. This secondary analysis was undertaken by a team of researchers with distinct identities, backgrounds, and histories that influence their analytic lenses. Specifically, we are trained in the disciplines of psychology and public health, and engaged in this analysis in light of the growing opioid epidemic with knowledge of how it was directly impacting the community since the primary study collected these data. Reflexive thematic analysis conceptualizes positionality of researchers as something that should be embraced and discussed transparently. Through reflexive thematic analytic and constructivist epistemological lenses, analysis is inherently shaped by the researcher as they interact with the data to produce knowledge (i.e., results and interpretations; Braun et al. 2022). The analyst who coded the data for the present analysis has lenses shaped by experience working on SUD-related research in partnership with diverse Tribal Nations, and her work is shaped by this experience and context. These ideas were noted in reflexive memos written throughout analysis. We view this as a strength because while the analyst is less familiar with this specific Tribal Nation, she has more than four years of experience working in Indigenous health research, which confers a basic understanding and knowledge of the larger context of SUDs in Native communities and how to engage in this research in a respectful manner. Because we used a sole coder approach in this analysis, it is possible that results would look different had another coder with their own unique lenses also shaped this analysis. The results may also have been shaped differently if the analyst and sole coder was part of the primary study team when data were collected. The PI, CAB, and Tribal IRB found that the findings aligned with their understandings, and results were also triangulated with a previous analysis of the same data, all of which increase our confidence in the validity of these results. However, we did not conduct member checking (Lincoln and Guba 1985), meaning that nobody outside of the research team corroborated these findings.

Implications & Future Directions

Despite these limitations, the present analysis highlights important opportunities for intervention to support greater use of MOUD in AI/AN communities. Many AI/AN communities have strong family and community systems and share collective identities and value connectedness as an important contributor to individual, family, and community well-being (Mohatt et al. 2011; Ullrich et al. 2019). In this context, general perceptions around MOUD use become even more important as they are likely to influence a treatment's uptake and usefulness. Therefore, it is important for future research to explore opportunities for intervention on multiple fronts.

Research demonstrates the effectiveness of and preference for culturally tailored (i.e., adapted or grounded) interventions to support AI/AN mental health (Gone and Trimble 2012) and suggests finding ways to embed MOUD programs within AI/AN cultures and communities as a promising strategy to reduce implementation barriers (Venner et al. 2018; Mpofu et al. 2021). For example, the idea that using any medication or substances, including MOUD, is not compatible with visions of ideal recovery could prevent access to and use of MOUD among AI/AN people. Providing education to the community about how MOUD works, increasing public perception that MOUD is a safe and strongly scientifically recommended treatment, and finding ways to highlight and expand positive perceptions and personal experiences with MOUD may help reduce this barrier. If community and cultural leaders or traditional healers feel comfortable showing their support for the use of MOUDs, this may go a long way toward decreasing stigma and barriers to MOUD in Indigenous communities. Future work must also consider and address distrust of Western medicine. Health care providers should acknowledge and understand the history of research/medical abuses committed against AI/ANs. Multi-faceted

622 interventions are needed to help overcome barriers to using MOUD in AI/AN communities and
623 promote access to this life-saving treatment.

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Appendix A: AAPOR-Required Disclosure Elements

1. **Data Collection Strategy:** Purposive sampling for key informant qualitative interviews.
2. **Who Sponsored the Research and Who Conducted It:** This research was supported by the National Institute of General Medical Sciences of the National Institutes of Health under Award Number 5P20GM104417–02. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. This research was conducted by the team of authors above, as well as the CAB and local project manager described in the methods section.
3. **Measurement Tools/Instruments:** Semi-structured interview guide is included as Supplementary Material.
4. **Population Under Study:** American Indian community members who have experience related to substance use disorders.
5. **Method Used to Generate and Recruit the Sample:** Purposive sampling.
6. **Method(s) and Mode(s) of Data Collection:** Semi-structured, in-depth interviews conducted in-person.
7. **Dates of Data Collection:** 2015-2016
8. **Sample Sizes (by sampling frame if more than one frame was used) and (if applicable) Discussion of the Precision of the Results:** N = 25
9. **How the Data Were Weighted:** N/A
10. **How the Data Were Processed and Procedures to Ensure Data Quality:** Interviews were audio-recorded and transcribed for analysis. Transcription also included de-identifying the data to remove any details that might allow someone to identify a

participant from the transcript. Transcripts were crosschecked with the audio-recording for accuracy.

11. A General Statement Acknowledging Limitations of the Design and Data Collection:

As a qualitative secondary analysis, these findings may not be widely generalizable across other settings. These data were not collected as a representative sample, but rather, a purposive one, therefore important community perspectives could be missing from this data. However, these findings were triangulated across multiple members of the study team, including community members, and provide important insight into barriers and facilitators for implementing MOUD in this community.

References

- Adams, Jerome M., and Nora D. Volkow. 2020. "Ethical Imperatives to Overcome Stigma Against People with Substance Use Disorders." *AMA Journal of Ethics* 22 (8): E702-E708. <https://doi.org/10.1001/amajethics.2020.702>.
- Ahmed, Sirwan K. 2024. "The Pillars of Trustworthiness in Qualitative Research." *Journal of Medicine, Surgery, and Public Health* 2 (100051). <https://doi.org/10.1016/j.glmedi.2024.100051>.
- Alexander, Caleb G., Kenneth B. Stoller, Rebecca L. Haffajee, and Benjamin Saloner. 2020. "An Epidemic in the Midst of a Pandemic: Opioid Use Disorder and COVID-19." *Annals of Internal Medicine* 173 (1): 57–58. <https://doi.org/10.7326/m20-1141>.
- American Medical Association (AMA). n.d. "Substance Use Disorder Treatment Guide." Accessed November 20, 2023. <https://www.ama-assn.org/delivering-care/overdose-epidemic/substance-use-disorder-treatment-guide>.
- American Society of Addiction Medicine (ASAM). 2019. "The ASAM National Practice Guideline for the Treatment of Opioid Use Disorder: 2020 Focused Update." Accessed November 20, 2023. https://sitefinitystorage.blob.core.windows.net/sitefinity-production-blobs/docs/default-source/guidelines/npg-jam-supplement.pdf?sfvrsn=a00a52c2_2.
- Birks, Melanie, Ysanne Chapman, and Karen Francis. 2008. "Memoing in Qualitative Research: Probing Data and Processes." *Journal of Research in Nursing* 13 (1): 68–75. <https://doi.org/10.1177/1744987107081254>.
- Blanco, Carlos, and Nora D. Volkow. 2019. "Management of Opioid Use Disorder in the USA: Present Status and Future Directions." *Lancet* 393 (10182): 1760–1772. [https://doi.org/10.1016/S0140-6736\(18\)33078-2](https://doi.org/10.1016/S0140-6736(18)33078-2).

- 713 Braun, Virginia, and Victoria Clarke. 2013. *Successful Qualitative Research: A Practical Guide*
714 *for Beginners*. Sage Publications. [https://uk.sagepub.com/en-gb/eur/successful-](https://uk.sagepub.com/en-gb/eur/successful-qualitative-research/book233059#contents)
715 [qualitative-research/book233059#contents](https://uk.sagepub.com/en-gb/eur/successful-qualitative-research/book233059#contents).
- 716 Braun, Virginia, and Victoria Clarke. 2014. "Thematic Analysis." In *Encyclopedia of Critical*
717 *Psychology*, edited by Thomas Teo. Springer.
- 718 Braun, Virginia, Victoria Clarke, Nikki Hayfield, Louise Davey, and Elizabeth Jenkinson. 2022.
719 "Doing Reflexive Thematic Analysis." In *Supporting Research in Counselling and*
720 *Psychotherapy: Qualitative, Quantitative, and Mixed Methods Research*, edited by S.
721 Bager-Charleson and Alistair McBeath. Springer International Publishing.
722 https://doi.org/10.1007/978-3-031-13942-0_2.
- 723 Brezel, Emma R., Tia Powell, and Aaron D. Fox. 2020. "Article Commentary: An Ethical
724 Analysis of Medication Treatment for Opioid Use Disorder (MOUD) for Persons Who
725 Are Incarcerated." *Substance Abuse* 41 (2): 150–154.
726 <https://doi.org/10.1080/08897077.2019.1695706>.
- 727 Byrne, David. 2022. "A Worked Example of Braun and Clarke's Approach to Reflexive
728 Thematic Analysis." *Quality & Quantity* 56: 1391–1412. [https://doi.org/10.1007/s11135-](https://doi.org/10.1007/s11135-021-01182-y)
729 [021-01182-y](https://doi.org/10.1007/s11135-021-01182-y).
- 730 Carroll, Jennifer J., Alice Asher, Vikram Krishnasamy, and Deborah Dowell. 2022. "Linking
731 People with Opioid Use Disorder to Medication Treatment: A Resource for Action of
732 Policy, Programs, and Practices." *Centers for Disease Control and Prevention*. Accessed
733 November 20, 2023. [https://www.cdc.gov/overdose-prevention/hcp/clinical-](https://www.cdc.gov/overdose-prevention/hcp/clinical-guidance/linkage-to-care.html)
734 [guidance/linkage-to-care.html](https://www.cdc.gov/overdose-prevention/hcp/clinical-guidance/linkage-to-care.html).

- Carter, Nancy, Denise Bryant-Lukosius, Alba DiCenso, Jennifer Blythe, and Alan J. Neville. 2014. "The Use of Triangulation in Qualitative Research." *Oncology Nursing Forum* 41 (5): 545–547. <https://doi.org/10.1188/14.ONF.545-547>.
- Centers for Disease Control and Prevention (CDC). 2023. "Fentanyl." Accessed November 20, 2023. <https://www.cdc.gov/overdose-prevention/about/fentanyl.html>.
- Chatfield, Sheryl L. 2020. "Recommendations for Secondary Analysis of Qualitative Data." *The Qualitative Report* 25 (3): 833–842. <https://nsuworks.nova.edu/tqr/vol25/iss3/17>.
- Cooper, R. L., Armandla Ramesh, Paul D. Juarez, et al. 2020. "Systematic Review of Opioid Use Disorder Treatment Training for Medical Students and Residents." *Journal of Health Care for the Poor and Underserved* 31 (5): 26–42. <https://doi.org/10.1353/hpu.2020.0136>.
- Crotty, Karen, Kenneth I. Freedman, and Kyle M. Kampman. 2020. "Executive Summary of the Focused Update of the ASAM National Practice Guideline for the Treatment of Opioid Use Disorder." *Journal of Addiction Medicine* 14 (2): 99–112. <https://doi.org/10.1097/ADM.0000000000000635>.
- Del Pozo, Brandon, and Josiah D. Rich. 2020. "Revising Our Attitudes Towards Agonist Medications and Their Diversion in a Time of Pandemic." *Journal of Substance Abuse Treatment* 119. <https://doi.org/10.1016/j.jsat.2020.108139>.
- Dickson-Gomez, Julia, Antoinette Spector, Margaret Weeks, Carol Galletly, Madelyn McDonald, and Helena D. Green Montaque. 2022. "'You're Not Supposed to Be on It Forever': Medications to Treat Opioid Use Disorder (MOUD) Related Stigma Among Drug Treatment Providers and People Who Use Opioids." *Substance Abuse: Research and Treatment* 16. <https://doi.org/10.1177/11782218221103859>.

- 758 Duran, Bonnie, John Oetzel, Julie Lucero, et al. 2005. "Obstacles for Rural American Indians
759 Seeking Alcohol, Drug, or Mental Health Treatment." *Journal of Consulting and Clinical*
760 *Psychology* 73 (5): 819–829. <https://doi.org/10.1037/0022-006X.73.5.819>.
- 761 Finlay, Andrea K., Erica Morse, Matthew Stimmel, et al. 2020. "Barriers to Medications for
762 Opioid Use Disorder Among Veterans Involved in the Legal System: A Qualitative
763 Study." *Journal of General Internal Medicine* 35 (9): 2529–2536.
764 <https://doi.org/10.1007/s11606-020-05944-6>.
- 765 First Nations Health Authority. n.d. "Indigenous Harm Reduction Principles and Practices."
766 Accessed November 20, 2023.
767 [https://www.fnha.ca/WellnessSite/WellnessDocuments/FNHA-Indigenous-Harm-](https://www.fnha.ca/WellnessSite/WellnessDocuments/FNHA-Indigenous-Harm-Reduction-Principles-and-Practices-Fact-Sheet.pdf)
768 [Reduction-Principles-and-Practices-Fact-Sheet.pdf](https://www.fnha.ca/WellnessSite/WellnessDocuments/FNHA-Indigenous-Harm-Reduction-Principles-and-Practices-Fact-Sheet.pdf).
- 769 First Nations Health Authority. 2023. "Indigenous Harm Reduction." Accessed November 20,
770 2023. [https://www.fnha.ca/what-we-do/mental-wellness-and-substance-use/harm-](https://www.fnha.ca/what-we-do/mental-wellness-and-substance-use/harm-reduction-and-the-toxic-drug-crisis/indigenous-harm-reduction)
771 [reduction-and-the-toxic-drug-crisis/indigenous-harm-reduction](https://www.fnha.ca/what-we-do/mental-wellness-and-substance-use/harm-reduction-and-the-toxic-drug-crisis/indigenous-harm-reduction).
- 772 Gameon, Julie A., and Monica C. Skewes. 2021. "Historical Trauma and Substance Use Among
773 American Indian People with Current Substance Use Problems." *Psychology of Addictive*
774 *Behaviors* 35 (3): 295–309. <https://doi.org/10.1037/adb0000729>.
- 775 Gone, Joseph P., and Joseph E. Trimble. 2012. "American Indian and Alaska Native Mental
776 Health: Diverse Perspectives on Enduring Disparities." *Annual Review of Clinical*
777 *Psychology* 8: 131–160. <https://doi.org/10.1146/annurev-clinpsy-032511-143127>.
- 778 Green, Brandn., Danielle C. Rhubart, and Matthew R. Filteau. 2021. "Barriers for Implementing
779 the Hub and Spoke Model to Expand Medication for Opioid Use Disorder: A Case Study

of Montana." *Substance Abuse: Research and Treatment* 15: 1–8.

<https://doi.org/10.1177/11782218211039781>.

Heaton, Janet. 2004. *Reworking Qualitative Data*. Sage.

Heaton, Janet. 2008. "Secondary Analysis of Qualitative Data: An Overview." *Historical Social Research / Historische Sozialforschung* 33 (3): 33–45.

<http://www.jstor.org/stable/20762299>.

Hirschak, Kathryn A., Melanie Nadeau, Angel Vasquez, et al. 2023. "Centering Culture in the Treatment of Opioid Use Disorder with American Indian and Alaska Native Communities: Contributions from a National Collaborative Board." *American Journal of Community Psychology* 71 (1-2): 174–183. <https://doi.org/10.1002/ajcp.12620>.

Joshi, Sujata, Thomas Weiser, and Victoria Warren-Mears. 2018. "Drug, Opioid-Involved, and Heroin-Involved Overdose Deaths Among American Indians and Alaska Natives—Washington, 1999–2015." *Morbidity and Mortality Weekly Report* 67 (50): 1384–1387. <https://doi.org/10.15585/mmwr.mm6750a2>.

Khatrri, Utsha G., and Jeanmarie Perrone. 2020. "Opioid Use Disorder and COVID-19: Crashing of the Crises." *Journal of Addiction Medicine* 14 (4): e6–e7. <https://doi.org/10.1097/adm.0000000000000684>.

Krawczyk, Noa, Brady Garrett, N. J. Ahmad, et al. 2021. "Medications for Opioid Use Disorder Among American Indians and Alaska Natives: Availability and Use Across a National Sample." *Drug and Alcohol Dependence* 220: 108512. <https://doi.org/10.1016/j.drugalcdep.2021.108512>.

LaVeaux, Deborah, and Suzanne Christopher. 2009. "Contextualizing CBPR: Key Principles of CBPR Meet the Indigenous Research Context." *Pimatisiwin* 7 (1): 1.

- 803 Lawrence, Jane. 2000. "The Indian Health Service and the Sterilization of Native American
804 Women." *American Indian Quarterly* 24 (3): 400–419.
805 <http://www.jstor.org/stable/1185911>.
- 806 Lincoln, Yvonna S., and Egon G. Guba. 1985. *Naturalistic Inquiry*. SAGE Publications.
- 807 Mack, Karin A., Christopher M. Jones, and Michael F. Ballesteros. 2017. "Illicit Drug Use, Illicit
808 Drug Use Disorders, and Drug Overdose Deaths in Metropolitan and Nonmetropolitan
809 Areas—United States." *American Journal of Transplantation* 17 (12): 3241–3252.
810 <https://doi.org/10.1111/ajt.14555>.
- 811 Mancher, Michelle, and Alan I. Leshner. 2019. *Medications for Opioid Use Disorder Save Lives*.
812 National Academies Press. [https://nap.nationalacademies.org/catalog/25310/medications-](https://nap.nationalacademies.org/catalog/25310/medications-for-opioid-use-disorder-save-lives)
813 [for-opioid-use-disorder-save-lives](https://nap.nationalacademies.org/catalog/25310/medications-for-opioid-use-disorder-save-lives).
- 814 Mattson, Christine L., Lauren J. Tanz, Kelly Quinn, Mbabazi Kariisa, Priyam Patel, and Nicole
815 L. Davis. 2021. "Trends and Geographic Patterns in Drug and Synthetic Opioid Overdose
816 Deaths—United States, 2013–2019." *Morbidity and Mortality Weekly Report* 70 (6):
817 202–207. <https://doi.org/10.15585/mmwr.mm7006a4>.
- 818 Mohatt, Nathaniel V., Carlotta Ching Ting Fok, Rebekah Burket, David Henry, and James Allen.
819 2011. "Assessment of Awareness of Connectedness as a Culturally-Based Protective
820 Factor for Alaska Native Youth." *Cultural Diversity & Ethnic Minority Psychology* 17
821 (4): 444–455. <https://doi.org/10.1037/a0025456>.
- 822 Mpofu, Elias, Stanley Ingman, Patricia Matthews-Juarez, Solymar Rivera-Torres, and Paul D.
823 Juarez. 2021. "Trending the Evidence on Opioid Use Disorder (OUD) Continuum of Care
824 Among Rural American Indian/Alaska Native (AI/AN) Tribes: A Systematic Scoping

- 825 Review." *Addictive Behaviors* 114: 106743.
- 826 <https://doi.org/10.1016/j.addbeh.2020.106743>.
- 827 Nowell, Lorelli S., Jill M. Norris, Deborah E. White, and Nancy J. Moules. 2017. "Thematic
- 828 Analysis: Striving to Meet the Trustworthiness Criteria." *International Journal of*
- 829 *Qualitative Methods* 16 (1). <https://doi.org/10.1177/1609406917733847>.
- 830 Patton, Michael Quinn. 1990. *Qualitative Evaluation and Research Methods*. 2nd ed. Sage
- 831 Publications.
- 832 Reed, Megan K., Kelsey R. Smith, Francesca Ciocco, et al. 2023. "Sorting Through Life:
- 833 Evaluating Patient-Important Measures of Success in a Medication for Opioid Use
- 834 Disorder (MOUD) Treatment Program." *Substance Abuse Treatment, Prevention, and*
- 835 *Policy* 18 (4). <https://doi.org/10.1186/s13011-022-00510-1>.
- 836 Richard, Emma L., Chrstine A. Schalkoff, Hannah M. Piscalko, et al. 2020. "'You Are Not
- 837 Clean Until You're Not on Anything": Perceptions of Medication-Assisted Treatment in
- 838 Rural Appalachia." *International Journal of Drug Policy* 85.
- 839 <https://doi.org/10.1016/j.drugpo.2020.102704>
- 840 Richer, Ariel M. S., and Ariel L. Roddy. 2023. "Culturally Tailored Substance Use Interventions
- 841 for Indigenous People of North America: A Systematic Review." *The Journal of Mental*
- 842 *Health Training, Education, and Practice* 18 (1): 60–77. [https://doi.org/10.1108/jmhtep-](https://doi.org/10.1108/jmhtep-07-2021-0088)
- 843 07-2021-0088.
- 844 Rieckmann, Traci, Anne E. Kavas, and Beth A. Rutkowski. 2010. "Adoption of Medications in
- 845 Substance Abuse Treatment: Priorities and Strategies of Single State Authorities."
- 846 *Journal of Psychoactive Drugs* 42 (sup6): 227–238.
- 847 <https://doi.org/10.1080/02791072.2010.10400546>.

- 848 Rieckmann, Traci, Laurie Moore, Calvin Croy, Gregory A. Aarons, and Douglas K. Novins.
849 2017. "National Overview of Medication-Assisted Treatment for American Indians and
850 Alaska Natives with Substance Use Disorders." *Psychiatric Services* 68 (11): 1136–1143.
851 <https://doi.org/10.1176/appi.ps.201600397>.
- 852 Rosenblatt, Roger A., C. Holly A. Andrilla, Mary Catlin, and Eric H. Larson. 2015. "Geographic
853 and Specialty Distribution of US Physicians Trained to Treat Opioid Use Disorder."
854 *Annals of Family Medicine* 13 (1): 23–26. <https://doi.org/10.1370/afm.1735>.
- 855 Rubel, Stephanie K., Matthew Eisenstat, Jessica Wolff, Michael Calevski, and Sasha Mital.
856 2023. "Scope of, Motivations for, and Outcomes Associated with Buprenorphine
857 Diversion in the United States: A Scoping Review." *Substance Use & Misuse* 58 (5):
858 685–697. <https://doi.org/10.1080/10826084.2023.2177972>.
- 859 Scholl, Lawrence, Puja Seth, Mbabazi Kariisa, Nana Wilson, and Grant Baldwin. 2018. "Drug
860 and Opioid-Involved Overdose Deaths—United States, 2013–2017." *MMWR. Morbidity
861 and Mortality Weekly Report* 67 (51-52): 1419–1427.
862 <https://doi.org/10.15585/mmwr.mm675152e1>.
- 863 Scorsone, Krista L., Emily A. Haozous, Leslie Hayes, and Kim J. Cox. 2020. "Overcoming
864 Barriers: Individual Experiences Obtaining Medication-Assisted Treatment for Opioid
865 Use Disorder." *Qualitative Health Research* 30 (13): 2103–2117.
866 <https://doi.org/10.1177/1049732320938689>.
- 867 Skewes, Monica C., and Arthur W. Blume. 2019. "Understanding the Link Between Racial
868 Trauma and Substance Use Among American Indians." *American Psychologist* 74 (1):
869 88–100. <https://doi.org/10.1037/amp0000331>.

- 870 Skewes, Monica C., Rachel Hallum-Montes, Scott A. Gardner, Arthur W. Blume, Adirann
871 Ricker, and Paula FireMoon. 2019. "Partnering with Native Communities to Develop a
872 Culturally Grounded Intervention for Substance Use Disorder." *American Journal of*
873 *Community Psychology* 64 (1-2): 72–82. <https://doi.org/10.1002/ajcp.12354>.
- 874 Sofuoglu, Mehmet S., Elise E. DeVito, and Kathleen M. Carroll. 2018. "Pharmacological and
875 Behavioral Treatment of Opioid Use Disorder." *Psychiatric Research and Clinical*
876 *Practice* 1 (1): 4–15. <https://doi.org/10.1176/appi.prcp.20180006>.
- 877 Sordo, Luis, Gregorio Barrio, María J. Bravo, et al. 2017. "Mortality Risk During and After
878 Opioid Substitution Treatment: Systematic Review and Meta-Analysis of Cohort
879 Studies." *BMJ* 357: j1550. <https://doi.org/10.1136/bmj.j1550>.
- 880 Stewart, Tracy J., and Vivian M. Gonzalez. 2023. "Associations of Historical Trauma and
881 Racism with Health Care System Distrust and Mental Health Help-Seeking Propensity
882 Among American Indian and Alaska Native College Students." *Cultural Diversity and*
883 *Ethnic Minority Psychology* 29 (3): 348–357. <https://doi.org/10.1037/cdp0000587>.
- 884 Substance Abuse and Mental Health Services Administration (SAMHSA). 2023. "Medications,
885 Counseling, and Related Conditions." Accessed November 20, 2023.
886 <https://www.samhsa.gov/substance-use/treatment/options/medications>.
- 887 SAMHSA. n.d. "Waiver Elimination (MAT Act)." Accessed November 20, 2023.
888 [https://www.samhsa.gov/medications-substance-use-disorders/waiver-elimination-mat-](https://www.samhsa.gov/medications-substance-use-disorders/waiver-elimination-mat-act)
889 [act](https://www.samhsa.gov/medications-substance-use-disorders/waiver-elimination-mat-act).
- 890 Tate, Judith A., and Mary B. Happ. 2018. "Qualitative Secondary Analysis: A Case Exemplar."
891 *Journal of Pediatric Health Care: Official Publication of the National Association of*

- 892 *Pediatric Nurse Associates & Practitioners* 32 (3): 308–312.
- 893 <https://doi.org/10.1016/j.pedhc.2017.09.007>.
- 894 Tipps, Robin T., Gregory T. Buzzard, and John A. McDougall. 2018. "The Opioid Epidemic in
- 895 Indian Country." *Journal of Law, Medicine, and Ethics* 46 (2): 422–436.
- 896 <https://doi.org/10.1177/1073110518782950>.
- 897 Ullrich, Jessica S. 2019. "For the Love of Our Children: An Indigenous Connectedness
- 898 Framework." *AlterNative: An International Journal of Indigenous Peoples* 15 (2): 121–
- 899 130. <https://doi.org/10.1177/1177180119828114>.
- 900 United States Department of Justice (USDOJ). 2015. "2015 National Drug Threat Assessment
- 901 Summary." Drug Enforcement Administration. Accessed November 20, 2023.
- 902 <https://www.dea.gov/sites/default/files/2018-07/2015%20NDTA%20Report.pdf>.
- 903 Venner, Kamilla L., Dennis M. Donovan, Aimee N. C. Campbell, et al. 2018. "Future Directions
- 904 for Medication-Assisted Treatment for Opioid Use Disorder with American
- 905 Indian/Alaska Natives." *Addictive Behaviors* 86: 111–117.
- 906 <https://doi.org/10.1016/j.addbeh.2018.05.017>.
- 907 Warne, Donald, and Denise Lajimodiere. 2015. "American Indian Health Disparities:
- 908 Psychosocial Influences." *Social and Personality Psychology Compass* 9 (10): 567–579.
- 909 <https://doi.org/10.1111/spc3.12198>.
- 910 Whelshula, Martina, Margo Hill, S. E. Galaitsi, et al. 2021. "Native Populations and the Opioid
- 911 Crisis: Forging a Path to Recovery." *Environmental Systems & Decisions* 41 (3): 334–
- 912 340. <https://doi.org/10.1007/s10669-021-09813-3>.
- 913 Whitesell, Nancy R., Janette Beals, Cecelia Big Crow, Christina M. Mitchell, and Douglas K.
- 914 Novins. 2012. "Epidemiology and Etiology of Substance Use Among American Indians

and Alaska Natives: Risk, Protection, and Implications for Prevention." *The American Journal of Drug and Alcohol Abuse* 38 (5): 376–382.

<https://doi.org/10.3109/00952990.2012.694527>.

Winters, Emily, and Nick Harris. 2020. "The Impact of Indigenous Identity and Treatment Seeking Intention on the Stigmatization of Substance Use." *International Journal of Mental Health and Addiction* 18 (5): 1403–1415. <https://doi.org/10.1007/s11469-019-00162-6>.

Yellow Horse Brave Heart, M. 2003. "The historical trauma response among natives and its relationship with substance abuse: A Lakota Illustration." *Journal of Psychoactive Drugs*, 35 (1): 7–13. <https://doi.org/10.1080/02791072.2003.10399988>

Zeledon, Ingrid, Amy West, Valentine Antony, et al. (2019). Statewide collaborative partnerships among American Indian and Alaska Native (AI/AN) communities in California to target the opioid epidemic: Preliminary results of the Tribal Medication Assisted Treatment (MAT) key informant needs assessment. *Journal of Substance Abuse Treatment*, 108, 9–19. <https://doi.org/10.1016/j.jsat.2019.04.003>

938 **Numbered list of figure captions**

- 939 1. Figure 1: Interaction of Qualitative Themes