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Understanding opioid use within a Southwestern American Indian Reservation Community: A qualitative study

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Abstract

Purpose: Morbidity and mortality due to nonprescription use of opioids has been well documented following the significant increase in the availability of prescription opioids in the early 2000s. The aim of this paper is to explore community beliefs about correlates of opioid risk, protective factors, and behavioral functions of opioid misuse among American Indian youth and young adults living on or near a reservation.

Methods: Qualitative in-depth interviews were conducted with N = 18 youth and young adults who were enrolled in a parent research trial focused on American Indian youth suicide prevention. Participants were eligible if they endorsed the use of opioids themselves or by close friends or family members at any point during their trial participation.

Findings: Major themes discussed include: (1) description of opioid use and those who use opioids; (2) acquisition; (3) initiation; (4) motivation to continue using; (5) consequences; and (6) possibilities for intervention. Family played an important role in the initiation of use, but was also highlighted as an important factor in treatment and recovery. A need for upstream prevention methods, including increased employment and after-school activities, was described.

Conclusions: The insights gained through this work could help to inform treatment and prevention programs in the community. This work is timely due to the pressing urgency of the opioid epidemic nationally, and community capacity to address opioid use locally.

KEYWORDS
American Indian, opioids, qualitative

INTRODUCTION

Morbidity and mortality due to nonprescription use of opioids has been well documented following the significant increase in the availability of prescription opioids in the early 2000s.[1] Alcohol and drug use disparities among American Indian/Alaska Native (AI/AN) communities, "are inextricably linked to the ills of European colonialism, such as epidemic disease, geographic dislocation, systematic attempts of cultural genocide, and ongoing oppression, violence, and discrimination."[2] While there is a larger knowledge base about alcohol and other drug

use among AI/ANs, less is known about opioid use among AI/AN populations. In less than 20 years, AI/AN communities have seen a 5-fold increase in deaths by opioid and nonopioid drug overdose with AI/AN youth being estimated to use nonprescription opioids at a rate twice as high as their white peers.[1,3] Addressing these disparities and preventing prescription drug and opioid misuse among AI/AN communities was named as a priority area in the National Tribal Behavioral Health Agenda.[4]

Although many studies draw conclusions that generalize about AI/AN peoples and opioid use, these conclusions inherently neglect important historical, social, political, and cultural differences between the nearly 600 federally recognized tribes and several other hundred state recognized and nonrecognized tribes in the United States. Studies that examine differences in opioid and other substance use among AI/AN populations have found significant heterogeneity by regions and tribe. One such study, utilizing national opioid overdose and death data from the Centers for Disease Control and Prevention, found regional differences in opioid-related mortality rates among AI/ANs; Arizona and New Mexico had lower opioid-related mortality rates compared with higher rates in Nevada, Utah, and the Great Lakes region.[5] Another study comparing differences in drug use and drug use disorder between a Northern Plains and a Southwest reservation community found significant differences between tribes, between age groups within tribes, and between genders. For instance, lifetime drug use among the sample of Northern Plains women was significantly higher than that of Southwest women. Drug use in the past year was also higher among the Northern Plains sample than the Southwest sample; both of which were higher than comparisons to a national sample.[6] These studies demonstrate the need for region-, state-, and tribe-specific data. Such data would inform prevention efforts that are uniquely tailored to individual tribes and urban AI/AN communities.

There are numerous innovative examples from Indian Country to reduce morbidity and mortality due to opioid misuse. In January 2015, the Indian Health Service (IHS) was the first federal agency to mandate pain management training for all its prescribing physicians.[7] IHS has also invested heavily in disseminating best practices in opioid overdose prevention through its Substance Abuse and Suicide Prevention initiative (SASP; formerly MSPI), including programs that incorporate ceremony and cultural practices. There are also many individual tribe and community-driven interventions that incorporate best practice recommendations and locally relevant knowledge and solutions.[7] For example, Lummi Nation's Healing Spirit Clinic Model incorporates medically assisted treatment, including the first to use suboxone in Indian Country, while also offering cultural therapists to teach about tribal traditional and spiritual practices to aid in the healing process.[8]

To inform local opioid prevention and treatment needs, qualitative methodology can be particularly useful for looking at the drivers of issues in a local context, as well as for providing contextual background to epidemiological studies. Qualitative data can help shape how to ask questions on quantitative surveys, as well as, provide further explanation of quantitative findings. By taking a qualitative approach, researchers show their respect for the values and beliefs of the community with which they are working.[9,10] This approach can also yield particularly informative findings around the context of a problem beyond, or in absence of, rigorous epidemiologic data, which is sparse for small, individual communities. Qualitative methods have been used previously to understand prescription drug use in AI/AN communities. One study conducted with a rural Midwestern reservation community utilized the Indigenous practice of talking circles (a tradition that in practice is similar to a focus group) with youth, adults, and elders and found that exposure to drug use was initiated by family members or friends and boredom was cited as a motivator for prescription drug use.[11] A similar study, focusing specifically on OxyContin, found that increases in misuse were leading to growing problems for individuals, families, and the tribe, located on a rural Midwestern reservation.[12] This research gives context to epidemiologic studies showing the rapid rise in opioid misuse. It elevates the voices of community members and elaborates on the reasons for use, in addition to beginning to illustrate what interventions are needed.

The Southwestern reservation community where this study was conducted has a history of innovative studies to examine, prevent, and treat substance use generally, and had a current and specific interest in understanding opioid use and misuse. Further opioid use has the highest mortality risk compared to other commonly used substances; opioid use disorder increases the likelihood of suicide by 13.5 times, much higher than that of alcohol use.[13] The current study builds on past qualitative research by examining the context of opioid misuse among American Indian youth and young adults from a Southwestern Tribe. This study was embedded in an ongoing research study to understand the effectiveness of 2 brief interventions for suicide prevention among youth. Details of parent study have been described elsewhere (see Ref. 15). The aim of this paper is to explore community beliefs about correlates of opioid risk, protective factors, and behavioral functions of opioid misuse among American Indian youth and young adults living on or near a Southwestern reservation through in-depth interviews. The insights gained through this work could help to inform treatment and prevention programs in the community.

METHODS

Community-based participatory research approach

This project builds on a long-standing 40+ year partnership between the tribe and the university focused on public health research and programming. In addition to this long-standing partnership, community-based participatory research principles of focusing on community-driven inquiry, colearning among all research partners, and balancing the needs of research and action to mutually benefit science and community are central to this study and all research conducted jointly by these partners.[14] This project was born out of a desire by tribal partners to better understand opioid use and misuse locally. The project was directed and overseen by the community research director, an enrolled tribal member of the tribe, where this study took place; all interviews were conducted by a tribal member. As part of this project, training and capacity-building opportunities were provided to the local

research team. Tribal research team members and partners provided input in all aspects of the research process, including—identifying the research question, design of interview guide, reviewing analysis results, and providing input on this manuscript. Local Tribal Council and Health Advisory Board approved this study and this manuscript. This study was also approved by the University Institutional Review Board.

Sample

This research was undertaken as part of the Southwest Hub for American Indian Youth Suicide Prevention (SW Hub), 1 of 3 National Institutes of Mental Health U19 Hub grants to address youth suicide across American Indian/Alaska Native communities (3U19MH113136-02S2). One component of the SW Hub aims to test, through a sequential, multirandomized trial, 2 brief culturally adapted interventions for youth who have experienced recent suicide ideation, binge substance use with suicide ideation, or a suicide attempt.[15] Study participants were recruited from the ongoing SW Hub study. Eligibility criteria for the parent trial include: identify as American Indian, reside on or near the reservation, between 10 and 24 years old, report suicide ideation, and attempt or binge substance use (with ideation) within the 30 days prior to enrollment. Participants were eligible in this qualitative substudy if at any point during their 6-month enrollment in the SW Hub, they endorsed opioid use. Given the lack of understanding of the prevalence of opioid use among this population, eligibility criteria were also opened to individuals who indicated they had close friends or family members as used opioids, who could also provide insight on the issue.

Data collection

Between August 2019 and March 2020, N = 18 in-depth interviews were conducted with 18 individuals. Participants who endorsed personal use or use by close friends or family were contacted in-person for recruitment. Consent to participate in the individual interviews was obtained during the consent process for the parent study, which involved signed parental consent, youth assent, or adult consent as appropriate. Individuals were provided with a $25 gift card as an incentive to participate in the interviews. The local interviewer was trained in qualitative research methodology and ethical conduct of research as required by university review boards; they also received additional training by the community research director for cultural sensitivity and ethics. All interviews occurred in locations that were deemed comfortable by participants and safe by community staff. Interviews lasted between 30 and 60 minutes. The interviewer audio-recorded and took field notes during all interviews. Using a semistructured in-depth interview guide, interviews covered various topics around opioids and their community. The guide contained 4 general questions with 1-6 probes per question about specific influences on opioids across different socioecological levels.[16] We asked about: (1) personal experiences with opioids (ie, first use, where they obtained opioids, how they were exposed, types of opioids found in the community, and relational aspects of using opioids); (2) opioid use in the community (ie, which group of people used opioids the most, why certain groups used opioids, and consequences of opioid use in the community); (3) prevention and treatment of opioids in the community; and (4) topics perceived to be important but had not yet been mentioned during the interview. The interview guide has been added as a Supplementary File.

Data management and quality assurance

Audio recordings were uploaded to a protected server and labeled with unique participant IDs after each interview. Once confirmation was received that interviews were securely uploaded, original audio recordings were deleted from the recording device. A secure transcription service (rev.com) was used to create verbatim transcripts of all recordings, which were uploaded to the same server. After approximately every 5 interviews, the supporting faculty would meet with the interviewer to discuss the interviews, the interview guide, review notes of past interviews, and iteratively adjust the interview guide as needed.

Data analysis

Data analysis was conducted in multiple phases using ATLAS.Ti for a thorough and dynamic examination of the data. Broad topics from the interview guide were first identified as deductive codes. This draft framework was used as a guide by the first and second authors to review a selected transcript. The purpose of this review was to understand the utility of the deductive codes and to understand in more depth the types and range of topics addressed by participants and to identify any needed inductive codes. This process was repeated with an additional 3 transcripts to further refine the codebook and ensure consistency of the coders. This process allowed for iterative adjustments to the codebook; the majority of codes in the final codebook were deductive in nature. After a codebook was established, all interviews were coded by the same 2 authors. Data were queried and analyzed separately by those who used opioids themselves (personal use group) and those who know others who used (use by others group).

RESULTS

Characteristics of the study sample are presented in Table 1. Half the participants were under 15, two-thirds were females, and just over half reported recent opioid use. Major themes discussed include: (1) description of opioid use and those who use opioids; (2) acquisition; (3) initiation; (4) motivation to continue using; (5) consequences; and (6) possibilities for intervention.

TABLE 1 Characteristics of study sample (N = 18)

Characteristics	Number	%
Age (years)		
10-12	1	6
13-15	8	44
16-18	3	17
19-21	3	17
22-24	3	17
Gender		
Male	6	33
Female	12	64
Status		
Personal use	10	55
Use by others	8	44

Description of opioid use and those who use

No divergent themes between the personal use and use by other groups were noted in descriptions of opioid use and those who use. In both groups, teens and young adults were often mentioned as those most likely to misuse, although 3 participants named adults as those most likely to misuse.

Participants in both groups expressed no preference for when or where they (or those they know) might use opioids. Rather, use was dictated by opportunity and desire,

> "Whenever people would give it [opioid pills] to me, or wherever I would get it, they would say it's Oxy or whatever, I'd be like, "Oh, okay," then I would just take it. (22 yr old female)"

Among the personal use group, most participants did not express a preferred type of opioid; "oxys," "methadone," "hydro," and "morphine" were the only specific preferred opioids mentioned. Notably, there was no description of opioid overdoses by participants in either the personal use or use by other groups. Some participants described overdosing, but all were specified as related to a nonopioid substance, primarily over-the-counter drugs, including unisoms, Mucinex, and benadryl. However, overdose was a common and most serious consequence pertaining to opioid use that was discussed.

Acquisition

In the use by others group, participants had little knowledge of how their friends or family members acquired opioids. In the personal use group, the most mentioned method of acquiring opioids was from family members, including siblings, parents, grandparents, and extended relatives with a prescription. Acquisition included both knowing distribution of opioids to family members—"*My mom gives it to me when I'm extremely weak or when I'm extremely in pain." (15yr old male)*—and unknowing, sometimes referred to as "stealing" or "taking"—"*So they would prescribe him [my brother] different types of painkillers throughout the years and everything. So I would steal those from him and just play with them." (23 yr old female)*

All participants were also asked directly about what they know about selling opioids. One older participant in the personal use group brought up the ability to make a profit from selling them, but few other participants knew much about selling (or buying) opioids.

Initiation

In the personal use group, participants age at initiation ranged from 11 to 18 years. In the use by others group, participants thought people started using from middle school aged to early 20s. Three participants from the personal use group had initially been prescribed opioids for a medical purpose. Two of these participants said it led to misuse and were among the very few to describe selling opioids. In the personal use group, several participants described first learning about opioids from family members and/or introducing other family members to opioids. Family members were influenced by this negative behavior that relatives were modeling,

> "Probably just having the children having to see their parents actually take a medicine, they're going to see them pills. They're going to see them actually put them in their mouth and everything and… because they're too young to be knowing about those things, to be doing those things too." (17 yr old female)

Consequences

Consequences of opioid use were asked about generally, to avoid stigmatizing those who use or make participants uncomfortable discussing sensitive topics. Data were queried separately by the personal use and use by others group; there were no discernable differences between these groups. Consequences of opioid use that were identified fall into 3 categories—physical, school, and family; although legal consequences were specifically asked about, only 1 participant identified any during the interviews. Death, overdose, and more general "health problems" were commonly mentioned physical consequences. Participants were split regarding how opioid use would affect their schooling; some felt that use did not affect their school performance, whereas others felt that opioid use kept them (or their friends) from concentrating or doing schoolwork at all.

> "I think it would affect school because you never know, they might be good at basketball or sports or something, and if they get introduced to this drug and they

> get addicted to it, it can make them lose interest in what they're doing. And it can make them lose interest in school (13 year old female)"

Another consequence of opioid use was "*families breaking apart" (15 year old male)*. Participants described opioid use leading to family problems because when using, they were not around to care for children or were not there to offer support for siblings, cousins, or other relatives.

Motivation

Among the personal use group, the most commonly mentioned reason for using opioids was to "get high." For example, 1 participant stated:

> "Just anytime of the day, like I would just do it [take opioids] when I want to get high. It wasn't really because I was depressed. It was just because I wanted to get high. (22 yr old female)"

Other motivations included: depression, anxiety, stress, and because one can pass an employer's drug test while using opioids.

Possibilities for intervention

All participants were asked what needs to be done to address opioid use locally, including what role various entities—family, school, and tribe—should play. Broad statements about more treatment options at the hospital, behavioral health department, and local behavioral health treatment center were common. However, responses to these questions focused primarily on upstream prevention efforts, many of which were mentioned and described in great detail. These upstream prevention activities included after-school activities and sports for youth, cited as a way to decrease boredom and opportunity to use opioids or other substances. The need for more jobs was mentioned as well.

> "Honestly, I would say this community really, really needs someplace for us kids to do something. You could just be home bored and you're like, "What can I do?"…I used to live in [city] I always had something to do. I walked down and be like, "Let's go to the mall," or "Let's go eat here and let's just go for a walk down [neighborhood]." And for here, you can't really do anything because … I mean you can go visit the lake, you can go visit anywhere, but people use that for drinking and all that" (21 yr old female)

Participants stated that there was a lack of understanding in the community of the negative consequences of drugs/opioids; they identified this as a needed point of intervention. Interventions to change doctors' prescribing practices were mentioned, but less frequently and in less detail than other points of interventions. Lastly, participants had divergent views about the role of one's family in helping an individual struggling with substance abuse. Some participants identified a passive role for families—sending them to in-person treatment—as the primary family role. Others saw family support as a critical, active part of a person's recovery. Participants described family members' need to "*be there for them (17 yr old female)"* talk to them, and let them know they care,

> "…how would I say, [how] behavioral health does it, a group session. And just talk about their ways they're feeling in life and them getting over it addiction and if they tell somebody, it will probably bring a whole light of hope…(16 yr old male)"

Confusion of opioids

Among all participants, there was significant confusion around what is classified as an opioid. Prior to the start of each interview, the interviewer framed their discussion by introducing what was meant by "opioid" as this was the main topic of the interview. However, despite these efforts, participants discussed the use of substances beyond opioids, including—Mucinex, sleeping pills, Benadryl, and Unisom. Many participants responded "I don't know" when asked specifically about types of opioids.

DISCUSSION

This study is one of only a few to use qualitative methods to better understand opioid use in Indian Country and is unique in that it focuses on the perspectives of AI young people from 1 Southwest reservation community. Our participants knew little about opioids generally; almost no participants knew where to sell or buy opioids, and no one described experiencing or witnessing an opioid overdose themselves. However, participants did describe misuse of over the counter (OTC) medications, which may be a function of OTC versus prescription medications being easier to acquire at younger ages. Previous research in this community has highlighted the negative impact of other substances, including binge drinking and methamphetamine use.[17–19] It is unclear if these findings signal relatively lower severity of the opioid epidemic in the community in comparison to other types of substances given that the current study only included 18 individuals out of a total population of approximately 17,500 tribal members. Additional work is underway to provide insight into this area. Questions related to opioid misuse have recently been added to a local, community-wide surveillance system for individuals who have suicide ideation, suicide attempts, nonsuicidal self-injury, or binge drinking. Therefore, future research can examine opioid prevalence in this larger sample.[20]

Within this study, our most robust and important results surrounded the role of family. A small, but meaningful number of par-

ticipants shared that they often learned about or received opioids from relatives who had a prescription, which is consistent with other research with some AI/AN communities.[21] This finding may indicate that additional patient and family education about why opioids are prescribed, preventing misuse by not sharing prescriptions, safe storage within the home, and safe disposal when prescriptions are no longer required may be crucial.[22] Other qualitative research with AI/AN communities has revealed concerns about community misunderstandings about safety with prescription medications.[21] For those who do use opioids, family support was also identified as a critical piece of treatment and recovery for some participants. The local substance use treatment center includes family-based education and programming.[23] Thus, it may be beneficial to better understand local perspectives about services available, to provide community education about these services, and further identify any needs for novel prevention and treatment approaches. The importance of family involvement in treatment and recovery aligns with other research with AI/AN communities showing that family support, belonging, and care are crucial for recovery from opioid and other substance misuse.[24] Further, family and culturally based approaches to substance misuse with AI/AN youth are showing promising results that may be beneficial to implement within this community.[25] While community and cultural connectedness were not expressed as important protective factors in the current study, other research has pointed to the importance of culturally congruent treatment and integrating Western treatment with tribal practices and ceremonies.[21,24,26] Finally, many upstream prevention efforts, including after-school programming for youth and increasing employment opportunities, were identified by participants, and are potentially the most warranted based on our current data, which appear to indicate low knowledge and use of opioids among youth in this community. Future research and programming with the community and tribal leadership may continue to explore and implement these community-driven recommendations. One example implemented in this community teaches entrepreneurship skills to youth during after-school groups and summer camps. A randomized controlled trial evaluating this program found that participation increased connectedness with parents and school and taught youth valuable entrepreneurial skills that were sustained for 24 months after program participation.[27] Additional research would be needed to understand if this or similar program could have meaningful impacts on opioid and/or substance misuse among youth.

Our study had several limitations, including the small sample size, and that close to half of our participants were reflecting on second-hand experiences and exposures versus their personal experiences with opioids. Additionally, given the sensitivity of the subject, it is possible that a social desirability bias affected our participants' responses. While our participants ranged in age from 10 to 24 years, we were not able to disentangle how age may have affected our results. Given our limited sample, dividing participants into 4 groups to understand how both age and personal use/use by others impacted results was challenging, limiting our ability to understand distinctions between these groups. Data collection was stopped sooner than anticipated due to the COVID-19 pandemic; we were not able to purposively sample within these groups to better understand any differences that may exist. It is possible that we did not reach full saturation among all of our themes, although we began to see redundancy in responses indicating that we were at least approaching saturation. However, there are several notable strengths, including obtaining the perspectives of youth on opioids and utilizing rigorous qualitative methodology to understand the unique context of 1 Southwest reservation-based tribal community, an approach that could be replicated by other tribal nations and urban AI/AN communities interested in understanding how opioids are impacting their youth.

CONCLUSIONS

The insights gained through this work could help to inform treatment and prevention programs in this community. This study contributes context-specific, local qualitative information, as well as future research directions and an approach that could be used for other Indigenous communities. American Indians/Alaska Natives are not often well represented in larger studies of opioid use, and even when they are, these studies do not capture the heterogeneity of different tribal groups and geographic regions. One way to capture this heterogeneity is to conduct in-depth qualitative work in different AI/AI communities, as such was done here in 1 tribal community. This study contributes context-specific, local qualitative information, as well as future research directions and an approach that can inform work in this and other Indigenous communities.

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CONFLICT OF INTEREST

The authors report no conflict of interest.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

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