


# Untangling the Complexities of Substance Use Initiation and Recovery: Client Reflections on Opioid Use Prevention and Recovery From a Social-Ecological Perspective

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## ABSTRACT

**BACKGROUND:** In Canada, the rate of opioid use, opioid use disorder (OUD), and associated mortality and morbidity are higher among Indigenous Peoples than the general population. Indigenous Peoples on medications for opioid use disorders (MOUD) often face distinct barriers that hinder their clinical progress, leading to treatment attrition.

**METHODS:** We used a social-ecological model to inquire into clients' experiences with a history of treatment failure for OUD. We used exploratory qualitative research to engage 22 clients with a history of OUD treatment dropouts and who are currently on MOUD. In-depth, semi-structured interviews lasting an average of 30 minutes were conducted on-site.

**RESULTS:** We identified 4 themes from the study: (a) risk for substance use; (b) factors sustaining substance use; (c) factors leading to treatment, and (d) treatment failure and re-enrollment.

**CONCLUSION:** Using a socio-ecological model helps to understand factors that influence an individual's risk for OUD, decision to pursue treatment, and treatment outcomes. Furthermore, social ecological model also creates possibilities to develop supportive, multilevel interventions to prevent OUD risks and support for clients on MOUD. Such interventions include mitigating adverse childhood experiences, supporting families, and creating safe community environments.

**KEYWORDS:** Opioid use disorder, Indigenous, Canada, methadone, treatment outcome, social ecological model

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## Introduction

American Society of Addiction Medicine<sup>1</sup> defines opioid use disorder (OUD) as a “chronic, relapsing disease which has significant economic, personal, and public health consequences” (p. 14). Opioid use does not guarantee disorder as there are many complex contextual factors that contribute to becoming dependent on opioids. The physiological dependence for opioids can happen quickly, and severe opioid withdrawal symptoms can contribute to the continued use of opioids despite known risks.<sup>2–4</sup> Diverse factors associated with developing OUD include mental health challenges, familial and environmental factors, adverse childhood experiences, past drug misuse, younger age, and chronic pain.<sup>5–7</sup> Use of opioids can cause or worsen mental health problems, such as depression, anxiety, mood swings, and psychological impairments.<sup>8,9</sup> Also, opioid use predisposes individuals to physical comorbidities such as blood-borne diseases (HIV/AIDS and Hepatitis C), heart disease, and chronic pain.<sup>10–13</sup>

Opioid agonists such as methadone and buprenorphine/naloxone are common medications for opioid use disorders (MOUD) used to treat clients with OUD by reducing the cravings and withdrawal symptoms caused by substance

use.<sup>14,15</sup> Suboxone has a lower risk for overdose compared with methadone; hence it is now the recommended first line of treatment in Canada for OUD.<sup>16,17</sup> However, in our experience, methadone remains the most common treatment regimen, arguably due to its cost and effectiveness.<sup>18</sup>

In Canada, the rate of opioid use, OUD, and associated mortality and morbidity are higher among Indigenous Peoples than the general population—especially among youth and young adults.<sup>19–22</sup> For instance, in British Columbia, the mortality rate of Indigenous Peoples from opioids is 5 times more than non-Indigenous users.<sup>22</sup> Historical trauma has broad effects on Indigenous Peoples' health and well-being.<sup>23</sup> The legacy of colonization—the loss of culture, identity, and language and the culminating intergenerational trauma—is associated with increased vulnerability to opioid use and subsequent disorder.<sup>24,25</sup>

Indigenous clients seeking treatment for OUD often face distinct barriers that hinder their clinical progress. These barriers include lack of transport, lack of culturally appropriate interventions and support, and racism and stigma in health care settings.<sup>26–29</sup> Limited access to mental health and other addiction services for concurrent conditions is associated with



adverse treatment outcomes.<sup>30</sup> Moreover, social determinants of health, such as income, employment, childhood experiences, social support, and physical environments, significantly affect the risk of developing OUD in Indigenous clients and their ability to access care.<sup>31</sup>

To improve Indigenous clients' treatment outcomes on MOUD, incorporating cultural interventions into the biomedical approach is recommended.<sup>32,33</sup> Additionally, trauma-informed psychosocial services such as family planning therapies and counseling may increase engagement and retention to care, considering that many Indigenous clients have a history of traumatic experiences.<sup>24,34,35</sup>

This paper builds on a study of characteristics and predictors of clinical outcomes for clients on MOUD in a western Canadian city. In the chosen clinic, 95% of the overall clients enrolled in treatment self-identified as Indigenous.<sup>36</sup> This percentage was also indicated by the population of participants recruited. In this study, we found that clients on MOUD at this clinic did not significantly progress on treatment after stalling at the stabilization phase, and compared to the median dropout rate of 57%, 70% of clients in this clinic dropped out within the first year.<sup>36,37</sup> The positive clinical outcomes were hindered by diverse personal factors, such as complex physical and mental health issues arising from chronic polysubstance use, and systemic factors, such as inadequate resources for these clients' comprehensive care. Moreover, as a specialized clinic, the OUD treatment program does not have adjunct supportive services to assist clients on treatment and few links to services outside the OUD treatment clinic.<sup>36</sup>

The aim of this study was to understand the experiences of clients enrolled in the OUD treatment clinic in a Western Canadian clinic. We used the social-ecological model to inquire into clients' experiences with a history of OUD treatment dropout. The social-ecological model makes explicit the individual, family, and community behaviors and how they all interconnect to shape an individual's health behaviors.<sup>38,39</sup> In this study, focusing on clients' experiences from the socio-ecological lens allowed for an examination of how diverse factors—at the individual, family, and community levels—impact the risk for OUD, the proclivity to seek treatment for it, and the treatment outcome.<sup>40,41</sup> The social-ecological model has been previously used to understand factors related to substance use treatment's success and termination.<sup>41-43</sup>

## Methods and Procedure

This study employed an exploratory qualitative design to examine the experiences of clients on methadone treatment. We used convenience sampling to recruit participants who came to the pharmacy for medication pickup or to community clinic for other services. Participants were included in this study if they had at least 1 treatment dropout, were on current treatment for at least 6 months, were 18 years of age or older and provided consent. Recruitment posters were placed in the

community pharmacies where clients received their methadone dosage and, in the community, where most participants lived. The researchers and the participants were previously unknown to each other. The researchers were drawn to conducting this research with people that have lived experience of substance use and treatment after completing a similar study with health care providers. The primary researcher (GM) met the participants face to face to explain the purpose of the study and to recruit them once they consented to the study. Before the study started, we obtained participants' verbal and written consent. Ethics approval was obtained from the University of Saskatchewan Ethics Review Board. In-depth, semi-structured interviews lasting an average of 30 minutes were conducted in the pharmacies and in the community where the participants live. Although the interviews were intended to be in-depth in nature, majority of the participants did not provide in-depth answers to the question posed and probing questions did not always yield additional information. The interview questions were informed by a literature review and the study's findings on the characteristics and predictors of clinical outcomes for clients on MOUD in a western Canadian city.<sup>27,36</sup> These audio interviews were recorded electronically and conducted by GM, a PhD prepared researcher, and faculty with more than 10 years conducting qualitative research. GM has extensive experience conducting addiction related research which include using electronic medical records of clients on MOUD, interviewing health care providers caring for clients on OUD and engaging families affected by addiction in community-based research. Every effort was made to ensure gender representation in the data collection and the interviews were stopped when data saturation was achieved for each set of interviews.

In this paper, 2 broad questions—informed by the social-ecological model—guided the identification of nodes that then formed themes on factors influencing opioid use and treatment initiation, attrition, and re-enrollment. The questions were: (a) what individual, family, and community risk factors contributed to opioid use initiation and led to the development of OUD?; and (b) what individual, family, and community factors influenced the initiation of opioid agonist treatment, attrition, and re-enrollment in the OUD treatment clinic?

Interviews were transcribed verbatim before analysis began. Thematic analysis was used to analyze the data and began with the development of the analytical framework, which included 2 phases.<sup>44</sup> In the first phase, GM and 2 research assistants inductively coded 2 transcripts with rich data to identify emerging concepts. The 3 code sets were compared, negotiated, and harmonized to develop 1 unified codebook. Definition of the meaning of the codes was developed to enhance clarity of their meaning and essence. This analytical framework was used to analyze the remainder of the interviews for example, the interviews were coded based on the nodes developed in the framework. As needed, new nodes which were not captured by the framework were created throughout the analysis phase.

During the second phase, the interviews were independently coded by 2 research assistants using the codebook created. GM who oversaw the analysis compared the coding output of the 2 research assistants to ensure that the codebook was consistently and accurately applied. Following, the team grouped the codes into designated thematic categories and subthemes.<sup>44,45</sup> NVIVO-12 software was used to manage the data.

## Results

Twenty-two clients participated in individual interviews to share their experiences with opioid use and treatment for OUD. Participant ages ranged from 28 to 49 years (average of 43.5 years), and most participants were female (n = 13: 59.1%). Incidentally, most of the participants self-identified as First Nation (95.5%). Nineteen (86.4%) participants were not engaged in any gainful employment. Four themes emerged from this study: (a) risk for substance use; (b) factors sustaining substance use; (c) factors that drove clients to seek treatment; and (d) treatment termination and re-enrollment. Table 1 shows the participant's sociodemographic characteristics.

### *Theme 1: Risk of substance use*

Participants reported that they were exposed to opioids and non-opioids as early as 9 years old with an average exposure of 15.9 years. Non-opioids, such as alcohol and marijuana, were the earliest substances that participants used. Participants discussed diverse reasons for early use of these substances, including experimentation (36.4%); peer pressure (36.4%); family factors, such as a family member using that substance (18.2%); and the need to numb the pain arising from unresolved issues such as grief and trauma (9.1%). On average, participants started using marijuana earliest: the average age of exposure to marijuana was 14 years, followed by alcohol (14.5 years), cocaine (14.5 years), and morphine (20.5 years).

Participants' home environments significantly affected the initiation and continuation of substances. Most participants in this study indicated that they grew up in an environment where drugs were accessible and regularly used. Challenging family dynamics often accompanied substance use and significantly impacted the social and mental health of the participants, who, as children, struggled to cope with the trauma and chaos their home environments produced. In homes where parents used substances, children risked neglect and abandonment, and, with little parental oversight, they were tempted to try substances at an early age.

My parents, my mom, and my dad were big alcoholics. It [alcohol] was around the house a lot. . . They were drinking a lot then we got apprehended because of the drinking and the violence that was going on in the house (Male participant, 38 years old).

As most of the participants were introduced to substances by a family member (40.1%) or a friend (36.4%) at an early age,

**Table 1.** Sociodemographic characteristics of the participants.

CHARACTERISTIC	FREQUENCY	PERCENTAGE (%)
Age		
Under 30	2	9.1
30-39	11	50
40-49	9	40.9
Gender		
Female	9	40.9
Male		
Marital status		
Partner	14	63.6
No partner	2	9.1
Not mentioned	6	27.3
Level of education		
Less than grade 10	2	9.1
Grade 10	10	45.4
Grade 11-12	6	27.3
Post secondary	4	18.2
Ethnicity		
First nation	21	95.5
Other	1	4.5
Employment		
Employed	1	4.5
Unemployed	19	86.4
Not mentioned	2	9.1

they normalized substance use as a part of the family and community experience. Therefore, most participants were not aware of the addictive nature of the substances at the time of first use and only realized the substance's effect on their bodies when they began to experience withdrawal symptoms.

A friend introduced me to drugs. He was already addicted to it; I didn't know, and then he wasn't there one day, and I wasn't feeling good at all. I thought, "What the heck's wrong with me?" I didn't know what was wrong with me. I later realized that I had gotten addicted to drugs (Female participant, 43 years old).

Early exposure to opioids also meant an early development of drug dependency and dependent behaviors. This dependency's visible impact was participants' inability to continue schooling, as many (54.5%) dropped out of school in grade 10. Their inability to complete education made finding employment difficult.

I couldn't use and go to school at the same time because I was always sick. Photography was what I was going to take. And that didn't work out because of the drugs. I'm still working on it (Female participant, 49 years old).

Once addicted to substances, participants began to engage in high-risk behaviors to sustain their substance use. These included stealing (31.9%), exchanging sex for drugs or money (9.1%), and selling drugs (9.1%). Subsequently, more than 50% of the participants contracted a blood-borne infection (HIV or Hepatitis C), and 27.3% were incarcerated for engaging in illegal activities.

Like the home environment, the community also played an essential role in influencing participants to use substances. Many participants reported that their friends also used substances and that, everywhere they went, they had easy access to drugs. Growing up in such a community environment helped normalize substance use. A community where substance use is prevalent may create communal substance use opportunities, particularly with relatives and friends. This further amplified the participants' risks of exposure to substances.

One of my relatives used and sold drugs. He said, "You ever try morphine?" I said, "No." And he goes, "Go try it." And at the time I busted my hand here, and I said, "Will it work for my hand?" And he goes, "Oh yeah, for sure." So, I got the morphine, and I did it; it took everything away; it took everything away from me. Memories gone, sleeping no problem, I could work, do all these things because of it (Female participant, 41 years old).

In the community, availability, accessibility, and friends and peers' use of substances normalized these activities. One participant reported that the fact that her friends used drugs and appeared to be "doing well" made her desire to use them too to be like him:

I just saw these old friends and started hanging out with them and doing the same thing, they're still doing it after all that time, and they look normal like it hasn't even affected them (Female participant, 49 years old).

Individual, family, and community factors played significant roles, either simultaneously or concurrently, in exposing, introducing, and normalizing substance use to participants at a young age. When dependency occurred, participants did not have a way to deal with it. Therefore, the continuation of substance use was commonly the only way to deal with cravings and withdrawal symptoms temporarily.

### *Theme 2: Factors sustaining substance use*

Alongside substance use (opioids, and non-opioids) participants experienced concurrent and diverse physical, social, and mental health challenges. Half of the participants experienced mental health illnesses (anxiety, depression, and PTSD), 36.4% had reported problems in their relationships, and 27.3% were

incarcerated at some point for engaging in illegal activities. As many participants did not have formal education (having dropped out of high school due to substance use), they struggled to secure employment and therefore endured severe socio-economic challenges.

Participants introduced to drugs by family members found it difficult to stop using even when they realized the harm it caused. Participants also expressed difficulties because of the environment they lived in. One participant reported that the presence of substances in the house intensified his substance use, so he went from being an occasional user to dependent on them:

I would only do it occasionally, more when everyone was around. But then I started hanging out with my auntie, and my auntie was like, "You should try and get some for yourself; I can't always get you high all the time." So, I started finding ways to get myself high, and that's where it led from, how I got addicted to the opioids (Male participant, 30 years old).

The factors that led participants to initiate substance use also caused pain and a deep craving that only the substance could temporarily address. Some participants explained that the outcomes of using substances contributed to further substance use, creating a cycle that sustained using substances. For instance, if someone that was using substances became pregnant or recently had a child, apprehension of the child or the threat of apprehension created further trauma where substances were then used to cope:

After I had my baby, they took her from me, from the hospital. It [the opioid] took all my pain away, and it took me from not thinking about my baby. And so, I thought, you feel good, I'm not thinking about my baby. I love my baby, but it's just making life a little easier on me. Because, when you do that, you're emotionless; you have no emotions. I just kept doing it and kept doing it, and I got addicted very fast (Female participant, 42 years old).

For some, initiation of substance use was preceded by child apprehension. Once using, if parents did not seek recovery services or abide by the restrictive terms set out by the Department of Social Services, parents were deemed as incompetent or unsafe to parent. Participants expressed that the Department of Social Services lacked an empathic understanding and did not regard the mother's mental and emotional welfare. The participant below explains how she began to use opioids as a result of child apprehension:

And after I had my baby, they took her from me, from the hospital. So, after that, I told my mom, "You know what, how do you do that? I wanna try it." She said, "You're not going to like it, sweetheart. You're going to get addicted." I said, "Just never mind, I'm old enough." So, she made me one [prepared a drug to inject], and I did it. (Female participant, 42 years old).

Family influence on substance use was so strong for some participants that they could not seek treatment when they

wanted and used substances for longer than desired. For others, seeking treatment was not a consideration as it was not feasible with families and friends' lifestyles, or they would not have the support to be successful in treatment. The family acted as a factor that contributed to sustaining substance for participants. Additionally, for some, substance use created a vicious cycle where the only way to cope with their substance use outcomes was to continue to use substances.

### *Theme 3: Factors leading to treatment*

Participants sought treatment for OUD after an average of 4 years of opioid use. The primary treatment duration ranged from 5 days to 5 years, with an average of 31 months. Most participants (40.1%) reported that they sought treatment because they were tired of feeling dope sick and needing the drug all the time, which became unbearable:

It started getting so tiring and challenging that some days I was suffering because I wouldn't have any (Male participant, 38 years old).

Furthermore, participants were spending an average of \$157.14 a day to sustain their substance use, mostly earned through illegal activities. Given that most participants were not employed, most could not sustain their substance use. At the time they signed up for methadone, most participants were desperate for help to deal with their opioid use:

I think I did it for about a year at that time, and it got too expensive for me, I couldn't. I thought I'd be able to stop doing it like that, like cold turkey, but I went on the methadone (Female participant, 49 years old).

Family and health-related issues such as pregnancy, hospitalization from conditions arising from chronic substance use, enrolling in detoxification services, suffering health issues, and a desire to change their lives were other personal reasons that participants identified for seeking MOUD.

Family considerations significantly impacted a participant's determination to enter treatment for OUD. Pregnant clients were often referred to addiction treatment by a physician to mitigate the effects of substance use on the unborn child. Besides, the hope for starting a family created a desire for many to stop using substances so that their children would grow up in an environment devoid of substances. Others, moved by the knowledge that their substance caused their families to worry about their safety—especially due to the prevalence of missing and murdered Indigenous women—were determined to enter treatment for their sake:

I realize that my family worries about me when I go into town every day. They don't want to see me. There have been Indigenous women going missing, so they're scared that I might go missing. That's why I must keep going [with treatment] (Female participant, 40 years old).

Wanting to improve relationships with loved ones was another major reason (63.6%) participants signed up for treatment. Although there were instances of co-dependence with partners, many participants described the importance of a good relationship with their partners as an incentive to seek recovery:

I am on treatment because of my girlfriend. In the past, when we are together, she wants to get high all the time. So, we decided to join the program together. It kind of does help [me] stay on (Male participant, 30 years old).

The community, where participants spend most of their time, played an important role in spreading information about the OUD treatment program. Most participants first heard about medications for opioid use disorder on the streets or from friends. Others were drawn to the program when they witnessed positive results in the people on MOUD:

When the methadone program came out, it wasn't like I was told; it was already all out there on the streets. People like, "Why don't you quit already?" Friends, you know. "Go on methadone" (Female participant, 48 years old).

Diverse personal family and community factors informed the participants' desire to seek treatment for opioid use disorder. Sickness from opioid use and diverse family considerations were perhaps the most significant factors that drew participants to the path of recovery.

### *Theme 4: Treatment termination and reenrollment*

At some point in their lives, all participants dropped out of treatment for diverse reasons: missing appointments (31.8%); unresolved grief (13.6%); lack of support (13.6%); continuous substance use (9.1%); treatment fatigue (9.1%); and lack of money to maintain the treatment commitment (4.5%). After dropping out of the first treatment program, most participants relapsed, eroding the gains that treatment had afforded them. For others, personal tragedies such as the loss of a family member were the reason that led to relapse.

I didn't care about anything. Why should I go to drink my methadone? When she [my mother] died, I was angry, I went to her house, and I just freaked out and threw everything on the floor. I lost my mind for two months. So, I quit doing methadone. I just thought, "Why should I live my life good? There's nothing" (Female participant, 48 years old).

Considering that many participants grew up in environments where substance use was prevalent, being close to family was a risk factor for those in recovery. Participants reported that, as much as they tried to stay on treatment, their home environments were not conducive to supporting recovery. Moreover, participants did not have the family support that they needed to remain on treatment. Therefore, they could not

abstain from using substances with family members because of the many opportunities present at home to use substances. Families stigmatized others for being on methadone treatment and felt the pressure to quit. Methadone stigma was based on misinformation, for example there is confusion between crystal meth and methadone because the names sound similar.

I told my mom about it [methadone treatment], and she's like, "Oh no, you shouldn't be on methadone, son. It can kill you; it destroys your organs inside if you abuse it, it rots your teeth." I'm like, "Oh man, my teeth are kinda rotten and stuff like that from using it for however long" (Male participant, 30 years old).

Living in communities where substance use was common caused many participants to give up treatment simply because their peers and extended family members were inundated with substance use, which led to the normalization of substance use. Communities not only influenced when participants started using substances but also contributed to relapsing. Returning to substance use became easy because of peer influence, so some traded the methadone treatment and its restrictive policies to return to communal substance use. Living in this environment increased the risk of participants returning to addiction and giving up treatment:

I ended up relapsing because I didn't have any supports out there. Everywhere I went, people were still doing it and this and that. Everywhere I went, people were still doing it, my old friends, everybody was doing it, so I ended up falling off (Male participant, 38 years old).

At some point, participants re-enrolled in the methadone treatment for different reasons. Feeling dope sick (50%) was the main reason, followed by family/partner influence (27.3%), a desire for life stability (18.2%), and remembering the benefit of the first treatment (4.5%).

This time I was getting sick again, I got dope sick, and I needed some down and whatever. I started getting sick of it because that time of the year, it was -33, -44 in the middle of the night, and I needed somewhere where I could get help get myself off the drugs. So, I told my partner, I told her, and she's like, "Well, what do you wanna do?" And I said, "Well, I wanna get back on the methadone. . ." (Male participant, 38 years old).

Starting a new family also motivated participants to seek treatment. The idea that the stability caused by enrolling in a MOUD program would help them to lead a normal life and to start and raise a family appealed to many. Moreover, considering the experiences participants had regarding substance use and its effects, they wished to have their children grow up without such influences in their lives. To do that, participants believed that seeking treatment for OUD would, in the long run, help:

I started a family, and I don't want them to go down the road I went down. My road was hasty; I try to keep them away from that stuff (Male participant, 35 years old).

The presence of support from family members, who provided emotional and social stability, allowed participants to overcome many barriers they faced and reengage with treatment. One participant shared that family support made a significant difference when she was dealing with the loss of her mother:

My family, yeah. For sure. My mom passed away just in March, but she was in huge support of us. I have older kids; they're my support. We worked to help each other out a lot (Female participant, 43 years old).

Family support was also essential for the recovery from concurrent mental health issues that participants presented, including depression (27.3%), hallucinations (9.1%), post-traumatic stress disorder (4.5%), unresolved grief (4.5%), and suicidal thoughts (4.5%). The absence of an OUD treatment program in the community meant that clients living more than 70 km from the OUD treatment clinic were provided daily transportation to the pharmacy or the clinic for medication pickup or appointments. The medical van's provision to transport participants mitigated significant socioeconomic barriers that would otherwise have deterred them from seeking treatment. However, using this service attracted stigma from some community members who regard methadone as another addictive substance. Such individuals deemed methadone as a substitution of 1 addictive substance for another.

Participants experienced multiple reasons for treatment termination and re-enrolling. Community and family had a positive and negative influence on clients' engagement with care. Stigma from family and community members was a strong deterrent to treatment, while family support and communal acceptance were sources of encouragement to remain on treatment.

## Discussion

In this study, we focus on the clients' understanding of the individual, family, and community perspectives in perpetuating risks for opioid use and seeking treatment for OUD. It was evident that most participants started using substances at a young age, unaware of their chemical properties and effects. Moreover, they did not possess the skills to resist drug offers from relatives, friends, and peers. The understanding of how youth are predisposed to substance use can inform substance use prevention intervention. In communities with increased substance use, focusing on equipping youth with skills to resist and refuse substance use offers is essential. Previous studies have shown the efficacy of teaching refusal and resistance skills to children and youth.<sup>46,47</sup> These skills increase children's knowledge of the adverse effects of drugs and help them resist substance offers from family and friends.<sup>48,49</sup> Emphasis should therefore be placed at delaying the age of substance use debut, which is associated with positive outcomes.<sup>50,51</sup> Specific to Indigenous youth, spiritual engagement, community support without substance use, and positive social support can protect against substance use.<sup>52</sup>

Families are settings where socialization occurs. Children tend to take on behaviors and practices of the adults living in the same household. Therefore, if parents are using substances, the risks of children using substances increases.<sup>53</sup> Substance use by parents or guardians may impact the ability to provide nurturance to the children and increases the risk of involvement with the Child Protection Services which, when parents are separated from their children, results in trauma to both.<sup>53,54</sup> Given the negative impact of separating children from their parents, efforts should therefore be made to build capacity for parents using substances to manage their parenting responsibilities safely or concurrently receive treatment and parenting services.<sup>55</sup>

The lack of community structures and programs that would mitigate early risks for substance use, such as providing safe homes for at-risk children, means that breaking the intergenerational cycle of drug use is difficult to attain.<sup>56,57</sup> Some youth in isolated communities discussed that substance use was an everyday activity as there were no other youth activities to partake in Jenkins et al.<sup>49</sup> There is also a dire need for family-focused interventions promoting delayed substance use initiation.<sup>58</sup> Such interventions should also focus on addressing childhood trauma, which significantly drove substance use initiation.<sup>59</sup> Trauma-informed care needs to be integrated into health and social programs for children, such as regular screening for adverse childhood experiences at schools and in communities and clinics to identify those at risk of substance use.<sup>60</sup>

Understanding factors that drive participants to seek treatment is key to supporting their recovery and integration into the community. Most of the participants were tired of feeling dope sick—an experience of craving and withdrawal that occurs with opioid use. An option for integrating services in one's home community could involve the community clinic assisting in monitoring the treatment and symptom reduction for those who may feel that their methadone dosages are inadequate to address cravings and withdrawal symptoms make individuals more vulnerable to relapsing. Exploring low-cost interventions such as peer-based recovery supports can also foster relationships for those on MOUD and create an extended network of professionals to aid in accessibility and integration.<sup>61</sup>

Given the community related risks for substance use for these participants, treatment interventions for clients on MOUD should focus on the individual and their family and community. Living in families that used substances were at significant risk of relapsing. In order to mitigate these risks, investing in safe houses for clients whose adherence to the OUD treatment program is otherwise threatened is needed.<sup>62</sup> Involving the family in clients' treatment can improve OUD treatment outcomes.<sup>63</sup> Such programs can also reduce the family's stigma by educating them about the disorder and its importance in the patient's recovery.<sup>53,64</sup> Using peer-based recovery services in community can be an effective way to challenge stigma and develop resources from those with lived experiences.<sup>61</sup> Peer-based services can provide outreach to educate

those interested treatment options, and act as liaisons between treatment providers and those seeking treatment.<sup>61</sup> As stigma and discrimination are significant barriers to treatment, addressing stigma through community education is an essential step in decreasing attrition rates and increasing treatment engagement and retention.<sup>31,65-67</sup>

Both the family and the community need to be mindful of factors that cause treatment termination such as socioeconomic factors, treatment factors, program factors, and health factors. HCPs may be inadvertently treating the substance use without understanding the greater context of historical trauma or may lack understanding of the effects that trauma can have.<sup>68</sup> The community can play a supportive role by providing social support programs that can increase patient retention to the treatment and early engagement.<sup>69</sup> Also, since positive treatment outcomes often depend on the quality of the individual's relationships with family and friends,<sup>64,70</sup> the community can invest in programs that involve the family in treating the patient and motivating them to seek treatment.<sup>55</sup>

## Conclusion

Using a socio-ecological model to understand the risk for opioid use, what sustains its use, what drives individuals to seek treatment, and what causes treatment termination and reengagement brings out the complexities surrounding substance use and recovery. Such an approach can help health care providers, policymakers, and community partners better plan for and anticipate the treatment trajectory for clients with OUD, who often present with complex needs. Moreover, since the treatment model that guides the operation of the OUD treatment clinic is biomedical in orientation, understanding both the internal and external factors that influence treatment outcomes for clients on MOUD can help reduce client blaming or penalizing clients who seem to struggle in treatment. Risk reduction and recovery from OUD needs to be reoriented to include individual, family, and community interventions. Otherwise, the hope of comprehensively addressing OUD is diminished.

## Author Contributions

GM originally conceptualized the paper and completed data analysis. KM assisted in interpretation, writing, and reviewing. JS was involved in reviewing and revision of the manuscript.

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## Access to Materials

Data is available upon request.

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## Appendix: Interview Guide for Clients on Methadone Treatment

### Inclusion criteria

- Be more than 18 years old
- On methadone for at least 6 months
- Mentally stable to provide consent
- Have been unsuccessful on methadone treatment before

#### 1. Demographics

- a. Age
- b. Sex
- c. Level of education
- d. Where do you live
  - i. Living arrangements
  - ii. Off reserve or on reserve

- e. Employment status/source of income
  - f. Ethnicity
- #### 2. Addiction history
- a. Which substances do you struggle with? (Opiates, Stimulants, Alcohol, Marijuana)
  - b. How did you start using drugs
  - c. Have you sought treatment for them? (detox, etc.)
- #### 3. Experiences with methadone treatment
- a. How and why did you get enrolled in the methadone treatment?
  - b. How long have you been on methadone treatment?
  - c. How has it been for you to be on methadone?
- #### 4. Access to treatment
- a. Are you able to access health and social services you need to live well?
  - b. How do you navigate transportation?
- #### 5. Adherence to methadone treatment
- a. What level of recovery are you?
  - b. How many carries do you have?
  - c. What personally motivates you to remain in the methadone program?
  - d. Have you considered dropping out of treatment? If so, why?
  - e. How would you like to be supported to remain in treatment?
- #### 6. Support
- a. Where do you get your social support? Who are they? And where are they located?
  - b. Do you face stigma for being on methadone treatment?
  - c. Do you have a permanent address?
- #### 7. Mental health
- a. Do you have unresolved mental health issues? (trauma, grief)
  - b. Are you on treatment for mental health (depression, anxiety, paranoia)
- #### 8. What challenges do you face in methadone treatment?
- a. Physical health
  - b. Mental health
  - c. Access to care
  - d. Stigma
  - e. System factors