An Evaluation of the First Safer Supply Program in New Brunswick: The River Stone Recovery Centre

by

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ABSTRACT

In response to the opioid poisoning crisis, safer supply programs (SSPs) have been implemented across Canada, and provide individuals access to prescription medications as an alternative to the illicit drug supply. River Stone Recovery Centre's injectable opioid agonist treatment program is the only SSP currently operating in New Brunswick. Semi-structured interviews were completed with participants (*N* = 22), and follow-up interviews (*N* = 18) were conducted six months later, to assess participant's experiences and outcomes related to their program involvement. Participants reported positive program experiences and impacts, such as improvements in quality of life, that were attributed to the non-stigmatizing care they were receiving, and to the low-threshold, harm reduction approach of the program. The results from this study demonstrate the positive impact of SSPs in reducing the harms associated with the opioid toxicity crisis, but also highlight areas of unmet needs that can inform harm reduction strategies.

Keywords: Opioid Use Disorder, safer supply programs, people who use drugs, opioid poisoning crisis

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Table of Contents

List of Tables

List of Abbreviations

APA – American Psychological Association

CDC – Center for Disease Control

HCV – Hepatitis C virus

HIV – Human immunodeficiency virus

iOAT – Injectable opioid agonist therapy

NEPs – Needle exchange programs

OAT – Opioid agonist therapy

OUD – Opioid use disorder

PWUD – People who use drugs

SRT – Stimulant replacement therapy

SSP – Safer supply program

SSPs – Safer supply programs

SUAP – Substance Use and Addiction Program

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Overview of the Study

The current thesis relates to the global opioid epidemic, which has been declared a public health emergency in Canada (Public Health Agency of Canada, 2024). Responses to address the opioid poisoning crisis in Canada have occurred at different levels (e.g., policy, prevention, harm reduction, etc.) and have included the development of emergency safer supply programs (SSPs; Tyndall, 2020a). SSPs provide individuals with moderate/severe opioid use disorder access to a regulated supply of prescription medications that are free from unknown contaminants, which are common in the illicit drug market (Ivsins et al., 2020).

Health Canada’s Substance Use and Addiction Program (SUAP) has provided funding for a number of SSPs to operate across Canada. The River Stone Recovery Centre’s injectable opioid agonist therapy (iOAT) program, located in Fredericton, New Brunswick, is one program initially funded by Health Canada. The Canadian Institutes of Health Research (CIHR) provided funding for a national evaluation of SUAP funded SSPs, to examine their effectiveness as a response to the opioid poisoning crisis. Embedded within the broader national evaluation, the current study is a qualitative evaluation of River Stone Recovery Centre’s iOAT program, the only SSP currently operating in New Brunswick. The purpose of this study is to evaluate River Stone Recovery Centre’s SSP from the perspective of program users to understand program experiences, barriers and facilitators to success in the program, and to examine the longer-term impacts of receiving safer supply. The University of New Brunswick’s Research and Ethics Board approved the current study (#2022-064).

Opioids

Opioids are substances that have analgesic properties that are often prescribed to treat severe chronic or terminal pain (Government of Canada, 2024a). There are two forms of opioids; naturally derived opiates (e.g., codeine, morphine), which are extracted from the opium poppy (*Papaver somniferum)*, and semi-synthetic (e.g., heroin) and synthetic opioids (e.g., fentanyl), which are produced in a laboratory (Shafi et al., 2022). The opium poppy was first discovered in Mesopotamia in 3400 BC by the ancient Sumerians, where it was used mostly medically for pain relief (Shafi et al., 2022). When semi-synthetic and synthetic opioid manufacturing began in the 19th century, it resulted in an increase in the non-medical use of opioids (Shafi et al., 2022). Within the endogenous opioid system, opioids function by attaching to mu-opioid receptors in the brain, thereby blocking pain sensations (Kosten & George, 2002). Opioids also attach to kappa and delta opioid receptors in the brain, which promote analgesia and relaxation (Volkow & Blanco, 2021). In addition, opioids activate the mesolimbic reward system, in the midbrain, promoting the secondary release of dopamine, a neurotransmitter that is associated with feelings of pleasure and positive reinforcement (Kosten & George, 2002).

Regular opioid use, however, is associated with a rapid increase in tolerance (i.e., an individual will have to use more opioids to experience the same effects as they previously did, or the previous dosage will no longer result in the same effects), and withdrawal, which can develop within 2–3 weeks of using opioids (American Psychological Association [APA], 2013; Centre for Addiction and Mental Health, 2021). According to the APA (2013), and as per the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*, opioid withdrawal occurs after an attempt at reducing/stopping opioid use, or the use of an opioid antagonist, resulting in three or more of the following symptoms: 1) dysphoric mood, 2) nausea or vomiting, 3) muscle aches, 4) runny nose or runny eyes, 5) pupillary dilation, shivering, or sweating, 6) diarrhea, 7) yawning, 8) fever, or 9) difficulty sleeping. An opioid withdrawal diagnosis also specifies that the above symptoms cause distress and impairment to an individual's activities of daily living, and that such symptoms are not being caused by a different medical issue, or withdrawal from another substance (e.g., alcohol; APA, 2013).

Opioid Use Disorder

Opioid use can quickly lead to increased tolerance as well as physiological and psychological dependence (Pergolizzi et al., 2020) which may contribute to the development of opioid use disorder (OUD). The criteria for an OUD diagnosis is met when an individual demonstrates a sustained pattern of opioid use, and two or more of the following criteria in the past year: 1) Use of opioids, in amounts that are larger or for a longer period of time than intended by the individual, 2) Inability to decrease opioid use despite wanting to, 3) An increased amount of time spent finding, using, or recovering from opioid use, 4) Intense cravings for opioids, 5) Opioid use impacting activities of daily living (e.g., negatively impacting work, home, or school obligations), 6) Opioid use impacting personal relationships, 7) Reducing activities of daily living (e.g., social, work, etc.) due to opioid use, 8) Opioid use in dangerous situations (while driving, etc.), 9) Using opioids despite the negative physical (e.g., skin infections, human immunodeficiency virus [HIV]) and psychological (e.g., depression, anxiety) outcomes, 10) Increased tolerance for opioids, and 11) Experiencing withdrawal symptoms, or using opioids to counter withdrawal symptoms (APA, 2013). The severity of OUD can be classified by the number of symptoms an individual is experiencing, with the presence of 2–3 symptoms being classified as mild OUD, the presence of 4–5 symptoms being classified as moderate OUD, and the presence of 6 or more symptoms being classified as severe OUD (APA, 2013). Although opioids can be used to treat medical conditions that are marked by severe and chronic pain, OUD is present when opioids are being used for non-medical reasons, or when they are being used at increased frequencies or quantities than what has been prescribed, by a practicing physician, to treat a medical condition (APA, 2013).

Prevalence of OUD

Globally, approximately 27 million people met the criteria for OUD in 2016 (Vos et al., 2017). In the United States, approximately 6–7 million individuals meet the criteria for OUD (Keyes et al., 2022). In 2018, approximately 3.7 million Canadians (12.7%) reported having used opioids in the past year, and approximately 351,000 Canadians reported problematic opioid use, consistent with OUD (Statistics Canada, 2019). However, this prevalence is likely an underestimation of OUD in Canada, as individuals may be less likely to report using illegal substances on self-report measures, and individuals using pharmacological prescription opioids may also be underreported (Government of New Brunswick, 2016). In New Brunswick, it is estimated that 6.8% of the population uses illicit substances, including opioids, similar to the national prevalence which was estimated to be 6.4% in 2016 (Government of New Brunswick, 2016). Suspected opioid-related deaths in 2023 were highest in British Columbia, Alberta, and Ontario. However, New Brunswick also had a high rate of opioid-related deaths with population size being considered (Government of Canada, 2024a). In 2023, there were 110 recorded overdose deaths in New Brunswick, with over half (72) of the deaths being attributable to opioids (Public Health New Brunswick, 2024), demonstrating the high rates of opioid overdoses in New Brunswick.

Although it is evident that opioid use is a necessary condition to develop OUD, it is also important to consider how much of a risk factor it is for OUD. Marel and colleagues (2019) found that 46.6% of individuals develop OUD within 12 years after initiating opioid use, highlighting the high rates of transition from first use to problematic use. Additionally, the emergence of OUD was most commonly observed around the age of 20, demonstrating the rapid onset of this disorder. Stimulant use is also commonly associated with the onset of stimulant use disorder with 50.4% of participants using stimulant drugs developing stimulant use disorder. Other substances, such as sedatives and alcohol have lower rates of transition to disordered use. In another study, 32.2% of a sample of opioid users reported that there was less than a year gap between their first use of opioids and the onset of opioid dependence (Sartor et al., 2014). The rapid progression from first using opioids to developing OUD demonstrates the importance of examining risk factors for both opioid use and OUD.

Risk Factors Associated with OUD

There are many factors that can increase an individual’s risk of developing OUD, including genetic, biological, environmental, and social factors. Genetic factors have been found to contribute to approximately 50% of a person’s risk of developing OUD (Berrettini, 2017). Genes can influence neurotransmitter systems, such as the endogenous opioid system and the dopaminergic system, which subsequently impact the psychotropic effects of the drug, but also influence other factors such as personality traits (e.g., impulsivity; APA, 2013), as well as the intensity of withdrawal symptoms, and the likelihood of relapse (Volkow & Blanco, 2021).

Outside of genetic influence, further biological factors can influence OUD risk levels. Early experimentation with using drugs in adolescence can modify brain structures during development, leading to increased risk of developing OUD in later life, along with other mental health disorders (Santo et al., 2022; Volkow & Blanco, 2021). As such, an earlier age of onset (i.e., in adolescence) of opioid use is associated with an increased risk of continued opioid use in adulthood (Groenewald et al., 2019). Genetics and biological factors can also interact with an individual's social environment. For example, adverse environmental and social factors in childhood (e.g., poverty, social isolation, abuse) can lead to increased experimentation with drug use in adolescence, which can subsequently negatively impact brain development, leading to a decrease in an individual's ability to control urges to use drugs (Volkow & Blanco, 2021). Instances such as childhood maltreatment, which is high among people who use drugs (PWUD), increase the risk of developing OUD (APA, 2013; Darke & Torok, 2013; Volkow & Blanco, 2021). For example, Darke and Torok (2013) found that 74.3% of injection drug users had experienced parental physical abuse as a child.

Additionally, comorbidity with other medical and psychological conditions are commonly reported among those with OUD. In a study by Bakos-Block et al. (2020), approximately 60% of opioid-using individuals surveyed in an emergency-response substance use setting reported having been diagnosed with a mental health disorder, including anxiety disorders, major depressive disorder, bipolar disorder, attention deficit hyperactivity disorder, and schizophrenia. Individuals with OUD are also at increased risk of having some form of post-traumatic stress disorder, antisocial personality disorder, or childhood conduct disorder (Darke & Torok, 2013; Kendler et al., 1997; Santo et al., 2022). The prevalence of mental health disorders among those with OUD was assessed in a recent review (Santo et al., 2022). Among those with OUD, the estimated prevalence of also having a comorbid mental health disorder was as follows: 36% for depression, 29% for anxiety, 34% for antisocial personality disorder, 20% for attention deficit hyperactivity disorder, 18% for both post-traumatic stress disorder and borderline personality disorder, 8.7% for bipolar disorder, and 1.9% for schizophrenia.

Polysubstance use (i.e., using more than one group of substances) is also common among those with OUD (APA, 2013). In a systematic review by Karamouzian and colleagues (2022), polysubstance use patterns were examined in people who use opioids. Out of 30 studies analyzed, high levels of polysubstance use were identified in 20.3% of participants, ranging from 1.5%–53% for the studies included in the analysis. These findings are concerning as polysubstance use is associated with increased negative physical, social, and mental health outcomes (e.g., increased overdose risk, mental health comorbidities, increased risk for infectious diseases, homelessness, high-risk injection drug use) as well as poorer treatment outcomes (Karamouzian et al., 2022; Steinhoff et al., 2022).

Harms Associated with OUD

In addition to the risk factors associated with OUD, harms associated with OUD are important to consider. OUD is correlated with significant morbidity and mortality risk. Among these, suicidal ideation is commonly reported among those with OUD. Bakos-Block and colleagues (2020) found that 41% of individuals with OUD in their study reported having suicidal thoughts. Suicidal ideation is overall common among PWUD, linked to intentional overdoses (Darke & Torok, 2013). The prevalence of suicide attempts among PWUD was evaluated in a meta-review by Colledge et al. (2020), with estimates for lifetime suicide attempts among PWUD ranging from 20.0–

25.7%. Unintentional overdoses are also common among individuals with OUD and are generally attributed to the illicit drug market containing unknown contaminants, thereby increasing opioid poisoning risk (Kolla et al., 2022). In Canada, in 2023, there were an estimated 7,889 accidental opioid-related deaths, equalling to a rate of 20.4 per 100,000 individuals (Public Health Agency of Canada, 2024).

In addition, individuals with OUD are at increased risk of contracting HIV/AIDS, the hepatitis C virus (HCV), and general skin infections associated with injection drug use, typically caused by sharing equipment (Bonn et al., 2020; Shayan et al., 2021). In a recent study, HIV prevalence was assessed in individuals receiving safer supply in Ontario, with a reported prevalence of HIV at 13.9% (Young et al., 2022). The results from another study in the United States showed that in a population of people who inject drugs, the prevalence of HIV was 6.2%, and the prevalence of HCV was 52.7%, both demonstrating increased prevalence when compared to the general population (Anderson et al., 2020). The risk of contracting HIV/AIDS, HCV, infective endocarditis (i.e., a vascular condition caused by unsanitary injection practices) and general skin infections increase with the criminalization of substances, as PWUD may have to engage in illegal activities in order to access drugs and use them in unsafe conditions (Bonn et al., 2020).

In addition, individuals with OUD are more likely to experience social challenges such as unstable housing, unmet healthcare needs, poverty, unemployment, limited access to food, stigma, and social isolation (Cheetham et al., 2022; Milaney et al., 2021). Opioid use increases the likelihood of experiencing these social challenges, and social harms increase the likelihood of an individual continuing to use opioids, which demonstrates the complexity of the association between opioid use and social harms (Doran et al., 2018; Milaney et al., 2021; Yamamoto et al., 2019). Milaney et al. (2021) found that 55.6% of PWUD in Alberta reported unstable housing conditions. Furthermore, researchers found that unstable housing was associated with increased hospital utilization in this sample of PWUD, highlighting probable unmet healthcare needs, which were reported by 56.9% of the sample.

In addition, poverty, including limited access to food, and unemployment, have been linked to increased opioid-related harms (Cairncross et al., 2018; Dasgupta et al., 2018; Gomes et al., 2011). Cairncross et al. (2018) evaluated opioid poisonings in Ontario and found that individuals in the lowest income quantile had the highest number of emergency department visits, hospital admissions, and deaths related to opioid use as compared to individuals in higher income quantiles.

Further harms associated with OUD include increased stigmatization towards PWUD, which can also lead to social isolation among individuals (Cheetham et al., 2022; Paquette et al., 2018). Cheetham and colleagues (2022) separated stigma associated with OUD into macro, meso, and micro levels, where macro levels include the services available, policies, and funding, meso levels include service providers, peer, and public stigma, and micro levels include self-stigmatization. All levels of stigma had negative impacts on individuals with OUD, including limited access to services at the macro level, poor relationships with service providers at the meso level, and individuals avoiding seeking help at the micro level. In a qualitative study, Paquette and colleagues (2018) conducted interviews with people who inject drugs and found that most individuals who reported stigma did so at the meso and micro levels, indicating that PWUD feel the most stigmatized by healthcare providers as well as by themselves. Given the psychological and physical harms associated with OUD, it is not surprising that OUD was estimated to amount to 78.5 billion dollars in costs in 2013 (Florence et al., 2016). Approximately one third of the costs were associated with healthcare and substance use interventions, which are of critical importance given the current opioid overdose crisis.

Overdose Crisis

There is a global opioid overdose crisis, which Canada has declared as a public health emergency (Public Health Agency of Canada, 2024). Opioid overdoses have occurred in waves in Canada. The first recorded opioid overdose wave was in the 1990s, when opioid analgesic drugs were heavily prescribed by physicians to treat pain, leading to increased risk of developing opioid tolerance and withdrawal, ultimately increasing one's risk for OUD and overdose (Center for Disease Control [CDC], 2022; Volkow & Blanco, 2021). In 2010, there was a recorded rise in overdose deaths related to the illegal opioid, heroin (CDC, 2022). Heroin is a highly addictive opioid that increases overdose risk, especially when it is used concurrently with other substances (e.g., other opioids, benzodiazepines, alcohol; Al-Tayyib et al., 2017). Following the rise in heroin overdoses, 2013 marked the further rise in opioid overdoses related to highly potent, synthetic opioids, such as fentanyl (CDC, 2022). Although fentanyl can be used on its own, it is often cut into other drugs and used unknowingly by people purchasing drugs from the illicit market, thereby increasing their risk for opioid poisoning (Han et al., 2019; Kolla et al., 2022; McDonald et al., 2020; Tyndall, 2020b). Both heroin and fentanyl have a quick uptake at the mu-opioid receptor, making the drugs more rewarding; increased use of such substances is associated with overdose risk (Volkow & Blanco, 2021). Carfentanil, a fentanyl analogue typically used in veterinary medicine, has also contributed to the overdose crisis, as it is often cut into other illicit substances, such as heroin, and unknowingly used, increasing one's tolerance to opioids (Suzuki & El-Haddad, 2017). Regarding the fentanyl wave of overdoses, there have been an estimated 44,592 opioid-related deaths in Canada between January 2016 and December 2023 (Public Health Agency of Canada, 2024). Fentanyl was linked to 82% of deaths during the year of 2023 (Public Health Agency of Canada, 2024), highlighting the potency of the drug. Its potency and quick uptake also contribute to an increased difficulty in reversing fentanyl overdoses, which may also explain the high fentanyl overdose rates (Suzuki & El-Haddad, 2017). Naloxone is a mu-opioid antagonist that is used to reverse opioid overdoses. However, with fentanyl overdoses, higher doses of naloxone are generally needed.

Canada is currently in the fourth wave of overdoses, which started during the COVID-19 pandemic, and is associated with high rates of opioid overdoses due to the increased barriers to receiving services (e.g., sheltering in place caused harm reduction clinics to close) and riskier use (e.g., injecting alone, reusing injection equipment, etc.; Suvar et al., 2023) during the pandemic. In Canada, there were an average of 10 opioid-related deaths a day in 2019, an average of 22 opioid-related deaths a day in 2021, and an average of 20 opioid-related deaths a day in 2022, highlighting the impacts of COVID-19 on the opioid overdose crisis (Public Health Agency of Canada, 2024). In addition to the COVID-19 pandemic, an increase in the number of individuals using both psychostimulant drugs (e.g. methamphetamines, cocaine) and opioids together has contributed to the fourth wave of the overdose crisis (Volkow & Blanco, 2021). Psychostimulant drug use combined with opioid use increases the rate of overdoses and overdose risk (Ciccarone, 2021) due to increased risk-taking behaviour of PWUD when injecting opioids with stimulants (Meacham et al., 2016). The overdose crisis and the harms associated with OUD highlight the evident need for treatment programs.

Abstinence-Based Models

Traditionally, abstinence-based models, which include detoxification commonly combined with 28-day residential treatments, were the main intervention for OUD, where the treatment goal is complete abstinence from the drugs being used (Lee & O'Malley, 2018). Abstinence-based models are generally high-threshold, which means that barriers to access are common (Mofizul Islam et al., 2013). Such barriers to access can include requiring a physician's referral, waitlists, the requirement for personal identification documentation, income, and transportation requirements (Mofizul Islam et al., 2013). Furthermore, such interventions often operate as low-tolerance, meaning that rules surrounding appointment attendance, commitments to abstinence, and urine testing can lead to early treatment dropouts and dismissals (Lee & O'Malley, 2018).

Brorson et al. (2013) analyzed dropout rates in traditional abstinence-based treatments and found that dropout rates ranged from 22–43% for detoxification programs, 23–50% for outpatient programs, and 17–57% for inpatient programs. In abstinence-based programs, dropouts from the programs are seen as 'failure'. However, there are a multitude of reasons for client dropouts. In a qualitative study by Lee and O'Malley (2018), researchers interviewed 32 individuals who were engaged in low-threshold substance use disorder treatment programs, in order to better understand previous experiences, and reasons for dropouts from high-threshold, low-tolerance programs. Researchers found that clients' main reasons for dropout were related to the feeling of having to behave in a certain way (i.e., use specific language in discussions, match personal goals to those of the group/organization), engaging in the program as expected, and abstaining from using substances, in order for program services to not be impacted or ceased. Such expectations led clients to disengage from the programs, leading to higher dropout rates, and negative program experiences. This research highlights that not all individuals benefit from or are interested in abstinence-based programs, further demonstrating the need for alternative intervention programs and supports, that are not based on traditional models of care. Furthermore, the evolution of opioid use and overdoses in Canada has necessitated the development of alternatives to sole abstinence-based programs, which are no longer the first recommended line of treatment for OUD, in favour of harm reduction approaches (Centre for Addiction and Mental Health, 2021).

Harm Reduction Programs

During the first wave of opioid overdoses in the 1990s, the main contributor to the crisis was the overprescribing of opioids as a pain medication (CDC, 2022). Because of this, deprescribing of opioid analgesics was considered the strategy to address OUD and opioid-related harms. However, with the more recent waves of overdoses, deprescribing is no longer sufficient to address the opioid crisis, highlighting the need for alternative strategies, including harm reduction services (Tyndall, 2020a).

Harm reduction services aim to reduce the negative outcomes associated with drug use, such as infectious diseases, overdose risk, and unsafe drug practices (Tzemis et al., 2013). These services emphasize a non-judgemental view towards PWUD and are not based on traditional abstinence-based models of care, such as rehabilitation, detoxification, or live-in addiction treatment programs (Tyndall, 2020b). Harm reduction services provide support to PWUD, through increasing the safety of their drug use, but not requiring individuals to abstain from using drugs in order to receive services. Harm reduction programs are beneficial to those who have not benefited from, or are not interested in, abstinence-based programs (Brar et al., 2019). In addition, harm reduction programs are generally low-threshold/low-barrier, meaning that typical treatment barriers are reduced to make the services more accessible, and are high-tolerance, indicating that individuals are not required to meet specific requirements to receive services, such as abstaining from drugs (Mofizul Islam et al., 2013). Although this is the case, the level of commitment required by the participant varies depending on the type of harm reduction services that are accessed. For example, accessing clean needles from a vending machine in one's neighborhood would be considered less time-consuming than participating in opioid agonist therapy (OAT), which requires individuals to show up daily for dosing. Such commitments, or increased treatment thresholds, can lead to less program retention and higher dropout rates (Frank et al., 2021; Gomes et al., 2022a). As such, even across harm reduction initiatives, the threshold (i.e., barriers to attending the program) and tolerance (i.e., regulations to attend the program) levels vary.

Types of Harm Reduction Programs

Harm reduction services include needle exchange programs (NEPs), OAT, drug testing, naloxone overdose distribution kits, supervised injection/inhalation sites, and safer supply programs (SSPs; Glegg et al., 2022; Mrazovac et al., 2020).

NEPs were generally the first harm reduction service to be implemented in North America by providing PWUD access to sterile equipment (e.g., needles, tourniquets, pipes) with the purpose of reducing the risk of transmissible diseases (e.g., HIV, HCV) that can be passed on through using contaminated equipment, or through needle sharing (Bonn et al., 2020). NEPs have been shown to be effective in reducing risky drug use and the harms associated with drug use, along with participants in the programs identifying NEPs as being important to their own safety (MacNeil & Pauly, 2011; Strathdee & Vlahov, 2001).

OAT is one of the most commonly implemented harm reduction service, and is now recommended in the treatment of OUD, as a first-line treatment option (Centre for Addiction and Mental Health, 2021). OAT provides participants with prescription long-acting opioid medications, such as methadone, buprenorphine/naloxone, or slow-release oral morphine, that are taken daily under the supervision of a healthcare provider (Government of Canada, 2024a). These medications prevent the symptoms of opioid withdrawal, reduce opioid cravings, and counter the psychoactive effects of opioids taken outside of the program (Centre for Addiction and Mental Health, 2021). Both methadone and buprenorphine/naloxone (Suboxone®) have been shown to be effective treatments for OUD, reducing illicit opioid use and overdose rates, however, buprenorphine/naloxone is considered ‘safer’ in terms of further reductions to overdose risk (Bell et al., 2009; Bruneau et al., 2018).

An additional and important consideration of OAT is retention in the programs. As mentioned, OAT programs require a significant commitment from participants, as individuals must usually attend a clinic/pharmacy daily to receive their medications, which can be a challenging barrier to treatment (Frank et al., 2021). In a review by Brorson et al. (2013), OAT programs had dropout rates that ranged from 32–68%, highlighting challenges with retention. Because OAT programs enforce different rules within their programs, there is a large variance in dropout rates, with low-threshold, high-tolerance programs having lower dropout rates, likely attributable to the application of less rigid rules (Christie et al., 2013). Christie and colleagues (2013) evaluated the retention rates of a low-threshold, high-tolerance OAT program in Saint John, New Brunswick, and found the 12-month retention rates to be 95%, highlighting the decreased dropout rates with more relaxed rules. Gomes et al. (2022a) evaluated the impact of increasing the frequency of OAT take-home doses (as opposed to daily witnessed dose ingestion) during the COVID-19 pandemic in Ontario and found that allowing clients in OAT to take home doses was associated with better retention in the program, and that there were no significant increases in overdose rates in the sample resulting from this policy. Allowing take-home doses in OAT programs could limit the barriers to treatment that are present with commitment to a program that requires daily supervised dosing (Frank et al., 2021; Gomes et al., 2022a). However, take-home doses are generally only approved in cases where individuals meet the strict eligibility criteria (e.g., good program attendance, negative urine toxicology tests, etc.) due to OAT medication diversion concerns (Gomes et al., 2022a).

Another form of harm reduction service is drug checking. Although there are many forms of drug checking available, the most common include drug test strips (e.g., fentanyl test strips), where individuals can check their own drugs for content, or mass spectrometry, where testing is completed by a technician (Borden et al., 2022; Karamouzian et al., 2018). Drug checking is often available at harm reduction clinics (e.g., safer consumption sites) or through harm reduction dispensing machines, where PWUD can test their drugs for contaminants, in order for them to make informed decisions on their usage and dose (Arendt, 2023; Karamouzian et al., 2018; Olding et al., 2020). Karamouzian and colleagues (2018) found that 79.8% of drug samples tested by participants at a supervised injection site in Vancouver, BC, were positive for fentanyl and that 36.3% of those individuals reported that they would lower their dosage based on this information, demonstrating the importance of the availability of this harm reduction service. In the same study, there were lower odds of experiencing an overdose among those who lowered their dosage based on being informed of the content of their drug sample.

In addition, naloxone overdose kits are commonly distributed at harm reduction sites, along with training on how to identify an opioid overdose, and how to administer naloxone to an individual in need (Arendt, 2023; Young et al., 2019). Naloxone kits in Canada are available in two forms, both a nasal spray and an injectable form, and can be accessed either at pharmacies, or at certain harm reduction sites (Government of Canada, 2024a; Young et al., 2019) at a rapidly increasing rate. An example of such a service is facilitated by the BC Centre for Disease Control, which has 496 naloxone distribution sites in British Columbia, where individuals are provided with free naloxone overdose kits, and appropriate training on how to identify an overdose and administer naloxone (Young et al., 2019). In New Brunswick, the New Brunswick Take-Home Naloxone Program began in 2017, providing naloxone kits to individuals who were either at high risk of opioid poisoning, or who were in close contact with an individual who is at high risk of overdose, with kits being available at some harm reduction programs (Government of New Brunswick, 2017). Such programs provide the kits with the necessary equipment to administer naloxone, along with instructions on how to administer it. For individuals who are at less of a risk of experiencing an overdose (i.e., the general public), naloxone kits can generally be purchased at local pharmacies, although they are not free of charge as they are in other provinces (e.g., Nova Scotia, British Columbia; Government of Canada, 2024a). In a study evaluating naloxone distribution services in British Columbia, overdose deaths in previous weeks were positively associated with increased take-home naloxone distribution in the weeks following, demonstrating both the need for and importance of these services in the prevention of future opioid-related overdoses (Young et al., 2019).

Another form of harm reduction service is supervised consumption sites, which provide individuals with a safer space to consume their own supply of drugs, where consumption is supervised by individuals trained in overdose response (Kerr et al., 2017). In addition to drug use being supervised, individuals are generally offered further resources such as access to other forms of treatment, and additional social supports (Kerr et al., 2017; Olding et al., 2020). Supervised consumption sites can include the option for injection, nasal, or oral drug consumption, along with supervised inhalation sites, where individuals can smoke substances under the supervision of staff trained in overdose response (Ivsins et al., 2023). In Canada, there are currently 38 supervised consumption sites operating, with the majority of sites offering individuals the option for injection, oral, or nasal drug use, and also offering drug testing (Government of Canada, 2024b). Regarding supervised injection sites, a review by Levengood and colleagues (2021) demonstrated supervised injection sites to be effective in reducing overdose deaths related to opioid use, reducing infections related to injection drug use, providing increased access to treatment for PWUD, and decreasing crime rates in the geographical areas where the supervised injection sites were located. In addition to the harm reduction benefits that these sites provide, there is also a reduction in costs to the healthcare system associated with supervised consumption sites, as fewer individuals are using emergency services, including hospital emergency department visits, when overdoses can be managed within the safer consumption site (Khair et al., 2022). Despite these positive outcomes, supervised consumption sites are still associated with opioid overdoses, although they are less likely to be fatal (Olding et al., 2020). For example, at a supervised consumption site in Vancouver, there were 770 overdoses between September 2017–August 2019, with all overdoses being reversed (i.e., none of the overdoses were fatal; Olding et al., 2020). Given that clients in supervised consumption sites are still consuming unregulated drugs that increase the risk of opioid poisoning, safer supply programs have recently been implemented.

Safer Supply Programs. Safer supply programs (SSPs) are a newer form of harm reduction that have emerged, specifically to address the unregulated, illegal drug supply containing unknown contaminants, such as fentanyl and benzodiazepines (Tyndall, 2020a). SSPs provide PWUD access to regulated, prescribed drugs (e.g., diacetylmorphine, hydromorphone, dextroamphetamine) that are free from unknown contaminants that are common in the unregulated, illegal drug market (Government of Canada, 2024a; Ivsins et al., 2020). The current wave of the opioid overdose crisis is directly linked to the illicit drug supply, which includes highly potent opioids, often combined with stimulants, which have increased opioid tolerance and overdose risk (Ciccarone, 2021; Volkow & Blanco, 2021). Because of this, traditional OAT is no longer sufficient to meet the needs of many individuals with OUD who are likely to supplement OAT with opioids from the illicit market (Karamouzian et al., 2023) to avoid withdrawal symptoms that are reported as highly aversive by opioid users (Monroe & Radke, 2023).

SSPs as a harm reduction service not only provide an alternative to the illicit drug supply but are useful in reaching individuals who are at high risk of overdose but are not interested or do not respond to other forms of harm reduction, such as OAT, while keeping barriers to access low (Karamouzian et al., 2023). Programs vary with regard to the medications being prescribed, the types of services offered, including whether consumption of medications is supervised or not, and the types of consumption that are allowed on-site (i.e., injection, smoking, intranasal use). In order to improve access 24/7, SSPs are now also available in certain communities (e.g., Vancouver) in the form of a biometric automated-dispensing machine, where individuals pick up their prescription opioids (i.e., tablet hydromorphone), and use without supervision (Bardwell et al., 2023). Also included within the realm of safer supply are programs such as injectable opioid agonist therapy (iOAT), which offer regulated opioids, in an already prepared liquid form (e.g., hydromorphone) that are generally injected under the supervision of trained staff, and tablet injectable opioid agonist therapy (TiOAT), where individuals are given regulated tablet opioids, which can be used either orally or through injection prepared by the individual in a supervised setting (Glegg et al., 2022). In addition to the medications being prescribed, SSPs often provide individuals with access to alternative treatment information, clean supplies, and access to social support and resources (Klaire et al., 2022; Pauly et al., 2020).

There are currently 29 SSPs operating within Canada that are funded by Health Canada's Substance Use and Addiction Program (SUAP), although other SSPs are operating outside of those funded by SUAP (Government of Canada, 2024b). Glegg and colleagues (2022), in an environmental scan of SSPs within Canada, identified 103 SSP programs in 2020. Out of these 103 sites, 79% of programs were unfunded, also highlighting the number of programs operating outside of SUAP funding (Glegg et al., 2022).

Effectiveness of SSPs. SSPs have been shown to improve the mental and physical health of those in the program (Brar et al., 2019; Haines & O'Byrne, 2023;

Ivsins et al., 2021) at the same time as being cost-effective (Gomes et al., 2022b; Ivsins et al., 2021). Gomes et al. (2022b) demonstrated the cost-effectiveness and additional benefits of a SSP in London, Ontario, where participants had decreased emergency department visits, hospital admissions, and other healthcare costs as compared to a control group not involved in a SSP. Haines and O'Byrne (2023) completed qualitative interviews with participants at SSPs in Ottawa, Ontario. Results from the study showed that participants were, overall, content with the SSP, and that their only concerns were around the medications being prescribed in the program (i.e., the medications are not always sufficient to counter withdrawal symptoms), the strict policies (e.g., daily attendance being required to receive safer supply) within some programs acting as barriers to access, and diversion, although it was noted that participants were not extremely concerned with the impacts of diversion. The positive impacts of the SSPs were noted by participants as helping with consistency in their lives, increasing their feelings of safety, and allowing them to feel supported. A sense of community within the program, along with the benefits for participants' mental and physical health, decreasing substance use outside of the program, and decreasing overdoses were also noted. Reductions in overdoses and overdose mortalities by individuals participating in SSPs have been demonstrated in other studies as well (Ivsins et al., 2021; Klaire et al., 2022).

Furthermore, improvements in financial stability are seen among participants in SSPs, as individuals are spending less money in the illegal drug market, as they have access to a regulated supply of opioids (Bardwell et al., 2023). Oviedo-Joekes and colleagues (2009), as part of the North American Opiate Medication Initiative, evaluated the use of diacetylmorphine (i.e., pharmaceutical grade heroin) as a treatment for OUD, and found that individuals spent less money on drugs from the illicit market (mean of

$320 USD) when receiving diacetylmorphine, as compared to before the trial began (mean of $1,200 USD). Financial stability is important as it can assist individuals in achieving housing stability and food security, which can be challenging for individuals with OUD (Cairncross et al., 2018; Milaney et al., 2021). In addition, reductions in injection drug use, along with reductions in fentanyl use in SSP users were demonstrated in a qualitative study by Gagnon et al. (2023), identifying the further benefits of SSPs as a harm reduction service, including decreasing risk for infectious diseases such as HIV and HCV.

Also demonstrating the effectiveness of SSPs is the decreased crime rates in areas where SSPs are located (Levengood et al., 2021), as PWUD do not have to participate in illegal activities to access and use drugs to avoid harmful withdrawal symptoms (Bonn et al., 2020). Participants involved in SSPs have reported that they engage less in criminal activities or cease all crime engagement following enrollment in a SSP, as medications from the program prevent withdrawal that previously resulted in the engagement in illegal activities to purchase or obtain drugs (Giang et al., 2023; Haines & O'Byrne, 2023). Overall, the research to date has demonstrated SSPs to be effective in helping to address the overdose crisis, and useful as a harm reduction service, demonstrating their importance as one form of intervention for OUD. Governmental funding for SSPs is contingent on evidence-based research demonstrating the effectiveness of these programs, which will aid in the implementation of further programs within Canada.

River Stone Recovery Centre

There is currently only one SSP in New Brunswick, the River Stone Recovery Centre, which opened in 2020 (Government of Canada, 2024b). Located in Fredericton, New Brunswick, the site offers services that are based on harm reduction, emphasizing the client's individual experience, and working to meet the physical, social, and psychological needs of individuals with substance use disorders (River Stone Recovery Centre, 2021). In addition to River Stone Recovery being a harm reduction service, and focusing on an individual-centered approach, the clinic emphasizes trauma-informed care, and uses interventions supported by research for those experiencing a substance use disorder, while also prioritizing contributing to the body of research surrounding the treatment of substance use disorders (River Stone Recovery Centre, 2021).

River Stone offers a variety of services including stimulant replacement therapy (SRT), which currently has 80 individuals in the program, OAT, and iOAT. The oral OAT program offers patients a daily dose of either methadone, buprenorphine/naloxone (Suboxone®), or Kadian®, and the consumption is supervised by a healthcare worker; there are currently 183 individuals in this program. An alternative OAT option available at River Stone Recovery is Sublocade®, which is an injectable form of Suboxone® that can be administered every 28 days. River Stone Recovery currently has 16 individuals in this program. Funded through Health Canada's SUAP, River Stone Recovery's iOAT program offers individualized doses of liquid hydromorphone, which is self-administered through injection three times daily, under the supervision of on-site doctors, nurses, or staff trained in overdose response. As of August 2023, there were 70 individuals participating in the iOAT program at River Stone Recovery. In addition to the three daily doses, individuals in the iOAT program are prescribed a long-acting dose of oral OAT, in order to prevent overnight withdrawal symptoms, as the clinic's operating hours are from 8:00 AM–6:00 PM, seven days a week. River Stone Recovery also has partnered with the Centre for Research, Education, and Clinical Care of At-Risk Populations (RECAP) in Saint John, NB, which offers River Stone Recovery's iOAT program in the area, in addition to offering PWUD in Saint John access to RECAP's services. The location in Saint John opened in July 2022, and currently has approximately 35 individuals receiving iOAT services. RECAP provides HCV care, primary care, oral OAT, and social support to individuals in the program.

Furthermore, River Stone Recovery offers 'wraparound' support, including providing resources and aid in accessing housing and food, psychological and social support such as counselling services, access to social workers, peer support workers, group activities, and life skills support, such as assisting in developing the skills necessary for employment (River Stone Recovery Centre, 2021).

Health Canada's SUAP provides funding for programs related to substance use prevention, harm reduction services, and treatment for substance use disorders within Canada, including River Stone Recovery's iOAT program, with a focus on the evaluation of such programs through research (Government of Canada, 2024a). The Canadian Institutes of Health Research received applications to evaluate the first 10 SUAP-funded SSPs in Canada, including the River Stone Recovery iOAT program. The current study was included as one of the sites comprising the national evaluation of SSPs in Canada. Although the evaluation allows for regional variations in methodological design, a qualitative evaluation of each program with both service users and services providers, along with measurement of several outcomes (health, quality of life, overdose rates, etc.) overall (across sites) are being conducted. The current thesis focused on the qualitative component of the evaluation, with an interest in the participants' experience in the River Stone Recovery Centre's program.

Gaps in the Literature

SSPs are a newer form of harm reduction, and therefore there is currently limited research on the effectiveness and possible areas of needs/improvement for these harm reduction initiatives. Furthermore, due to the rapidly evolving overdose crisis (Glegg et al., 2022), updated evaluations of these services from the perspectives of program users are necessary, in order to ensure that the programs are meeting participants' needs in the most effective manner. Longer-term impacts of SSPs are also critical to examine, which is a gap in the literature due to their recent implementation. New Brunswick has only one SSP currently operating, although there are two active locations for participants to receive services. Although River Stone Recovery is mandated by SUAP to collect data on outcomes of the program, an independent (i.e., external) evaluation is also a requirement for SUAP funding. In addition, it is necessary to evaluate the current program to ensure that it meets the needs of New Brunswick clients before further implementation of programs within the province. Indeed, because of several regional differences (nature of the drug supply, political and economic factors, etc.), it is problematic to apply the findings of outcome studies conducted in other provinces (Ontario, British Columbia) to the Maritimes context (Morrison et al., 2017). Program availability and operating practices are often dependent on the political contexts of the regions where they located, due to a variety of factors (e.g., public opinion, funding availability), highlighting the need to evaluate programs regionally (Morris et al., 2023). Additionally, there are regional variations in the nature of the drug supply. An examination of the illicit drug supply showed an increased presence of fentanyl in Western Canada, whereas stimulants were more common in Eastern Canada (Payer et al., 2020). These variations can influence the clients' needs (e.g., the types of safer supply required), further demonstrating the need for regional program evaluations.

Although a few recent mixed methods (Glegg et al., 2022; Ivsins et al., 2020; Karamouzian et al., 2023), qualitative (Bardwell et al., 2023; Haines & O'Byrne, 2023; Mansoor et al., 2023), and quantitative (Gomes et al., 2022b; Kamal et al., 2023; Oviedo-Joekes et al., 2017) studies have evaluated SSPs, few of the studies have completed follow-ups or used a longitudinal design to evaluate the programs, specifically from the perspectives of participants. The impacts of COVID-19 on safer supply prescribing were evaluated by Glegg and colleagues (2022), at two time points (March and May 2020), from the perspectives of healthcare providers, though long-term impacts are difficult to conclude from only a three-month period. Mansoor and colleagues (2023) completed qualitative interviews with professional community members involved with SSPs, at one time point, and over a period of four months. Another evaluation of SSPs was completed by Karamouzian et al. (2023), using progress reports provided by the programs over a period of two years (2020–2022). Although these evaluations add to the literature, ongoing examination of programs, especially from the perspective of program users, is critical.

Regarding evaluations completed from the perspective of program participants, the majority of previous studies included interviews conducted at only one time (Bardwell et al., 2023; Haines & O'Byrne, 2023). This is with the exception of a study by Ivsins and colleagues (2020), which completed baseline interviews with participants after 2–4 weeks of enrollment in a SSP, and interviews at both 3–5 months and after a year of being enrolled in the program. Outside of this, a study by Bardwell et al. (2023) required that participants had been enrolled in the program for a minimum of one month, whereas participants in the study completed by Haines & O'Byrne (2023) had been enrolled in the program for an average of approximately 20 months. Having both short-term and long-term effects of a program included within a single study would add to the literature, as it could explain any changes in participants' experiences after being in the program for a period of time.

An additional study (Kamal et al., 2023) completed interviews at one time point to determine preferred mode of administration for safer supply, although any individual using illicit drugs (i.e., not necessarily receiving safer supply) was eligible to participate, and therefore time enrolled in a program was not relevant. Lastly, a study by Gomes et al. (2022b) used client outcomes before and during enrollment in an SSP in order to evaluate effectiveness, although this was quantitative in nature. Although examining outcomes through quantitative analyses is useful, qualitative studies within addiction research provide further context to the information that can be provided by quantitative research (Ivsins et al., 2023), allowing PWUD to explain responses, reasoning for their decisions, and provide explanations surrounding their met and unmet needs within programs. Within the context of SSPs, it is useful to evaluate the long-term impacts of being in the program, and to gain an understanding of how clients' needs change over time in a program. Therefore, including follow-up interviews is beneficial, as it allows researchers to understand any changes to a participant's situation, along with clarifying any misunderstandings in the initial interview (Staveteig et al., 2017).

Purpose of the Current Study

The purpose of the current study was to assess the impact of New Brunswick's first SSP, using a qualitative design, in order to better understand the barriers and facilitators of success in the program, through the lens of program users. The impact of the program on participants was examined by assessing its impact on housing, employment, substance use, and substance use practices, as well as transmissible diseases. Furthermore, participants reported on their experience within the program, including any changes to their physical and mental health, relationships with staff at the clinic, and their needs/unmet needs in the program. Participants were interviewed twice, six months apart, to assess the longer-term impacts of being on the program. The current study provided a depiction of the impact of the first SSP within New Brunswick on participants, along with highlighting any possible areas of unmet needs to formulate recommendations for improvement and implementation of additional SSPs in New Brunswick.

Due to the study being qualitative in nature, formal hypotheses were not formulated, as is customary in qualitative research (Sullivan & Forrester, 2019). Rather, the research questions for the current study were 1) What is the experience of participants entering the River Stone program?, 2) How does the iOAT program compare to previous programs used?, 3) What are the impacts of interruptions to participant's safer supply (e.g., from being hospitalized, arrested, or moving)?, and 4) What are the impacts of being in the program on participants' lives (e.g., overall well-being, safety, overdose frequency, etc.)? For the long-term (i.e., six months) assessment of program participation, the research questions were 1) How do participant experiences change after being in the iOAT program for six months (i.e., program alterations, retention in the program, etc.), and 2) What are the new impacts and challenges of being in the program for participants after six months (i.e., overall well-being, safety, overdose frequency, etc.)? This research was conducted with the purpose of aiding River Stone Recovery Centre in addressing the needs of their clients from the data provided from this study, in order to enhance their iOAT program, and to make changes where needed. Furthermore, this research contributed to the growing literature surrounding SSPs, and the impact of SSPs for PWUD, specifically through addressing limitations from previous research evaluations.

Method

Participants

Participants with OUD and receiving iOAT from the River Stone Recovery Centre were recruited to complete semi-structured interviews, as part of a national evaluation of SUAP funded SSPs. Due to evaluations occurring simultaneously across SUAP funded sites, the timeline for data collection at the New Brunswick site was set. Interviews were completed with participants ($N = 22$) enrolled in the iOAT program, at the Fredericton, New Brunswick location. Participants were eligible to complete the interviews if they had been enrolled in the iOAT program for approximately six months ($M = 5.8$ months, $SD = 3.02$) at the time of the first interview. There were 24 individuals who were eligible to participate, however, thematic saturation was met at 22 participants. Although the exclusion criterion was in place prior to the interviews, one participant’s data were excluded due to them having been in the program for much longer than six months (i.e., two years). Initial interviews were completed in November 2022. Follow-up interviews with participants ($N = 18$) were completed approximately six months later, during a period stemming from May to July 2023. Follow-up interviews were not completed with all participants due to some ($n = 4$) participants not being available due to incarceration, being banned from the site, or not being available for other reasons. Purposeful recruitment was based off a list of eligible individuals provided by River Stone Recovery Centre. In addition, convenience sampling was used during site visits for data collection (if inclusion criteria were met by interested participants).

Materials

Client Questionnaire

The client questionnaire was completed for both initial (see Appendix A) and follow-up interviews (see Appendix B) and consisted of a series of demographic questions that were asked. Responses were audio recorded and handwritten by the researcher, on the printed interview guide, for each participant. The questions included asking participants their age, gender affiliation, ethnicity, current housing situation, employment information, jail/prison history, past addiction treatments, HIV/HCV diagnosis and treatment, and their history of substance use. The questions about the participants' substance use were split into categories of substances including a) alcohol (beer, wine, liquor, etc.), b) cannabis (marijuana, pot, grass, hash, weed, THC, etc.), c) crack, d) crystal methamphetamine (ice, jib, glass, tina), e) any other stimulants or uppers (e.g., cocaine, speed, Ritalin®, Dexedrine®, Adderall®, amphetamines, methamphetamines), f) any OAT drugs (non-prescribed; e.g., methadone, Suboxone®/buprenorphine, Kadian®), g) any opioids (non-prescribed; e.g., heroin, morphine, Dilaudid®, fentanyl, codeine, Percocet®, Percodan®, OxyContin®, oxycodone, Vicodin®, etc.), h) sedatives, hypnotics, anxiolytics, barbiturates or downers (e.g., Valium®, Xanax®, Ativan®, Klonopin®, Ambien®, Sonata®, phenobarbital, etc.), i) hallucinogens (e.g., LSD, acid, peyote, mescaline, psilocybin, ecstasy, bath salts, DMT, etc.), j) dissociatives or phencyclidine and related substances (e.g., PCP, ketamine, GHB, etc.), and k) any other drugs (e.g., new psychoactive substances, anabolic steroids/

hormones, nitrous oxide, nitrites, diet pills, over-the-counter medicine for allergies, colds, cough, or sleep, etc.). For each group of substances, participants were asked if they had ever used them, if they had used them in the past 30 days, approximately how many days in the past 30 days, and what their main route of administration was (i.e., oral, intravenous, intranasal, inhalation). Participants were advised to report their use of substances outside of the program, or for prescription medications that were not taken as prescribed. In addition, participants were asked if they had injected drugs for non-medical reasons.

At the follow-up interview, the client questionnaire also included a question asking participants about their relationship status, along with a question asking participants if their relationship status had changed since the time of the first interview. Furthermore, the follow-up client questionnaire included a question about the participant's history with overdoses. Participants were asked if they had ever overdosed, if they had overdosed in the past six months (i.e., in the time since the initial interview), and if they answered affirmatively to the latter question, they were asked to explain what had caused the overdose (e.g., using a higher dose than usual, unknowingly using a contaminated supply, etc.).

Semi-Structured Initial Interview Guide

The semi-structured initial interview guide (see Appendix C) was developed in consultation with the lead researchers spearheading the national evaluation of SSPs, including Dr. Daniel Werb of the Centre on Drug Policy Evaluation at St. Michael's Hospital in Toronto, Ontario. Interview guides were also developed in consultation with individuals with living/lived experiences, which is critical to ensure that the questions being asked are relevant and important to the population (i.e., PWUD; Jones & Pietilä, 2020). A generic interview guide was provided to researchers at each of the sites, and then was adapted to ensure relevance to the specific programs being evaluated. For example, the current interview guide was altered to remove the question “What was it like for you the first time you went to pick up your dose at the pharmacy”, as this is not how River Stone Recovery operates their SSP. At River Stone Recovery, medications are dispensed at the clinic, where dosing is then supervised by clinic staff.

The interview guide was divided into sections. First, participants were queried about their experiences accessing the SSP, including when they first accessed the program, the waiting period from first inquiring to beginning the program, and their overall satisfaction with this process. Following this, participants were asked about their history of receiving OAT prior to their initiation into the SSP program, the circumstances that led to this prescribing, and a comparison of the OAT and iOAT experience. Participants were then asked to discuss their experience with their dose of medications prescribed within the program. Questions were included to assess if participants had any interruptions to their safer supply, and to understand the circumstances that led to this interruption, along with the impact that it had on participants.

The next section of the interview guide included asking participants questions about their experiences with their service providers at the SSP. Participants were asked about their appointments in the program, their relationships with the staff at the SSP, and how their relationships with the SSP staff (i.e., doctors, nurses, social workers, etc.) compare to their relationships with healthcare providers outside of the program. In addition, questions were included to better understand participants’ relationships with other individuals in the program.

Following this, participants were asked about the impacts of the SSP on their lives, including their overall stability, any diversion of safer supply prescriptions, their physical and mental health, drug use and overdoses, personal safety, HIV/HCV testing and treatment, housing, food security, financial stability, and their family and personal relationships. Next, participants were asked about met and unmet needs, and if they have had any negative experiences as a direct result of being in the program. Finally, individuals were asked whether they had suggestions to improve the program.

Semi-Structured Follow-Up Interview Guide

The semi-structured follow-up interview guide (see Appendix D) followed the same structure as the initial interview guide, however, questions were added, excluded, or changed to account for it being a follow-up interview. Participants were asked if they were still a client of the SSP, and, if relevant, asked why they were no longer in the program. Participants were then asked if there have been any significant changes to the program (e.g., medications, policies, etc.), and asked to explain any impacts that those changes have had. Following this, participants were asked about their experiences since the first interview, with respect to the service providers at the SSP, their experiences with other healthcare settings, and the impact that the program has had on their lives. Participants were asked about their short and long-term goals, and the role of the program in helping them to achieve these goals. Participants were also asked to explain how their experiences at the time of the follow-up interview compared to their experiences at the time of the initial interview and were asked if they had any new suggestions to improve the program.

Procedure

The current study received ethical approval from the University of New Brunswick's Research and Ethics Board (see Appendix E). As River Stone Recovery Centre's iOAT program is funded by Health Canada's SUAP program, the site was identified to receive an external evaluation of the program, as part of the funding requirements. River Stone Recovery Centre agreed to the evaluation study (see Appendix F) after receiving the study protocol and was consulted throughout the study's implementation and data collection process.

Correspondence with River Stone Recovery Centre's project and research coordinator occurred, both in the form of email correspondence and meetings, to establish a timeline for data collection that was feasible for the clinic. Posters (see Appendix G) advertising the study and eligibility criteria were circulated at the clinic and individuals who were eligible for the interviews were also informed by word of mouth via the River Stone Recovery staff and the principal investigator.

Once specific days were scheduled with the clinic, the author set up for the interviews in a private room (the room alternated depending on what was available with the clinic's schedule), to complete the interviews with participants confidentially. If they were eligible to complete interviews, participants were reminded by the staff that they could meet with the author to ask questions about the study. Interviews were completed on a first-come, first-serve basis, with select interviews being scheduled at other times as requested by participants. Interested participants were given an explanation of the study and an opportunity to ask questions. They were presented with an informed consent form (see Appendix H) that was either read out to them or reviewed quietly. Individuals were informed that their participation in the study was voluntary, that they could stop the interview at any point, and that they did not have to answer certain questions if they did not want to. In addition, it was explained to individuals that their participation in the study, or any information gathered, would not impact the services that they were receiving at the clinic, and that although the clinic would be given a summary of the results, information derived from any specific individual would not be provided. Furthermore, it was explained to participants that although the interviews would be audio recorded and transcribed, anonymization would occur (i.e., removing names or other identifying information), and that following transcription, the audio recordings would be destroyed. Participants were asked if they had any questions prior to obtaining consent, and once consent was given, in the form of a written signature, the recording was started, and the interview began.

Interviews were recorded using a ZOOM H4n Handy Recorder (ZOOM North America, 2016). Initial interviews lasted approximately 40 minutes (*M* = 39.2 minutes, Median = 36.0, *SD* = 12.28), and follow-up interviews lasted approximately 30 minutes (*M* = 30.3 minutes, Median = 28.5, *SD* = 12.04). Following the interview, participants were given the contact information for the researchers in case of any questions or concerns, were thanked for their time, and then selected their compensation in the form of a $30 gift card. Each participant received a gift card, and could select one of their choosing (Sobeys, Irving, St. Mary's Supermarket, or Victory Meat Market).

Results

Data Analytical Plan

Descriptive Analyses

IBM's Statistical Package for the Social Sciences (SPSS, www.ibm.com) software version 29 was used to complete the descriptive analyses of the current study. Descriptive statistics (e.g., frequencies, means, standard deviations) were calculated for all the demographic variables. Furthermore, the group distributions and frequencies on outcome variables (e.g., current drug use, overdose history, housing situation, etc.) were calculated for both time points (i.e., initial interviews and follow-up interviews). The purpose of the current study was to examine how River Stone Recovery Centre's iOAT program was impacting clients, from their perspective via a qualitative design. As such, the sample size was not determined with the intention of conducting inferential statistics. A power analysis conducted with the software G*Power (Faul et al., 2007) indicated that a sample of $N = 28$ participants would be needed to conduct paired *t*-tests to compare outcomes from the initial to the follow-up interviews with a power set at .80 and alpha set at .05. Therefore, no inferential statistics are reported.

Qualitative Analyses

Data saturation is met in qualitative research when no new information is gathered from completing further interviews with participants, demonstrating thematic saturation (i.e., a consistency in themes; Grady, 1998). In most studies using a qualitative design, thematic saturation is reached after 9–17 interviews (Hennink & Kaiser, 2022). In the current study, data saturation was met both in initial interviews and follow-up interviews, and the current sample was deemed to accurately reflect the broader population of individuals with OUD receiving iOAT at River Stone Recovery Centre.

Interviews from both time points were transcribed by the author and a research assistant. Transcription included listening to the recordings of interviews and recording what had been said by both the interviewer and the interviewee, typing the full conversation word-for-word. Any identifying information that was mentioned in the recording was removed during this process. An Interpretative Phenomenological Analysis (IPA) was used to analyze the data, which is an approach to qualitative analysis that allows for the understanding of individual experiences (Flahault et al., 2022; Murray & Chamberlain, 1999). IPA uses a dynamic process, emphasizing the importance of a primary researcher conducting interviews and analyzing the data to ensure consistency and accuracy within analyses. Although IPA was the broader framework used to address the research objectives, thematic analysis was used to achieve the goals of IPA, specifically to ensure that both the groups' experiences and individual experiences were accounted for. Thematic analysis was used to identify themes, which are recurring ideas or features within data, through arranging and organizing this data (Sullivan & Forrester, 2019). Both semantic and latent themes were identified within the data. Semantic themes are those that are explicit from the data, whereas latent themes are interpreted from the data, by engaging with the data in order to identify the underlying meaning in what has been stated (Sullivan & Forrester, 2019).

Specifically, following the transcription of each interview recording, coding of themes occurred in Microsoft Word. Transcripts were placed in tables, and initial annotations were made. Initial notes were then transformed into sub-themes, or Personal Experiential Statements (PESs), and then again refined and grouped into themes, or

Personal Experiential Themes (PETs) based on commonalities among PESs. This process was repeated for each transcript. Once themes and sub-themes were identified, the repeated process of identifying, explaining, and adding quotes to provide context for the themes that have been systematically interpreted from the data occurred, for each case, until themes accounted for the entire sample's perspectives (Sullivan & Forrester, 2019). Therefore, following completion of PETs and PESs for each transcript (participant), Group Experiential Themes (GETs) were developed to reflect commonalities across the interviews.

Two independent coders (the author and another member of the laboratory) reviewed the transcribed interviews, identifying themes by assigning codes to responses. Inter-rater reliability was evaluated by calculating the percentage of agreement (i.e., the percent that both raters assigned the same code to the same text exert) for a randomly selected subset (n = 3) of the transcribed interviews. Percentage of agreement is calculated by dividing the number of rater agreements by the number of rater agreements and disagreements, and then by multiplying this value by 100. The percentage of agreement is considered acceptable if the value is above 75% (Roberts et al., 2019). Adequate levels of agreement were demonstrated in the current study, with an average percentage of agreement of 85.5% (range = 80.6–89.4%) for the subset of transcripts that were used to evaluate inter-rater reliability.

Descriptive Statistics and Frequencies

Descriptive statistics were calculated for all demographic variables for initial and follow-up interviews and are presented in Table 1. At the initial interview stage, the average age of the sample was 34 years (M_{age} = 34.10, SD = 6.34). Approximately half of the participants identified as women (n = 11, 52.4%), and the other half identified as men (*n* =10, 47.6%). The majority of the sample reported being of European origin (*n* = 17, 81.0%), and the remainder of the sample were Black, Indigenous, and people of colour (BIPOC; *n* = 4, 19.0%).

Over half of the participants reported being housed at the time of the initial interview (*n* = 12, 57.1%) and nine participants (42.9%) reported being unhoused. All participants were receiving social assistance as an income source, along with some participants receiving additional income either from paid jobs (*n* = 3, 14.3%), other government programs (*n* = 2, 9.5%), and/or illegal activities (*n* = 2, 9.5%). No participants reported having received an HIV positive diagnosis. Although the majority of participants had received an HCV positive diagnosis (*n* = 17, 81.0%), most had completed, or were currently completing, medication treatment (*n* = 11, 64.7%; see Table 2).

At the time of the initial interview, when asked about their past 30-day substance use (non-prescribed substances; see Table 3), participants reported having used alcohol (*n* = 4, 19.0%), cannabis (*n* = 20, 95.2%), crack (*n* = 3, 14.3%), crystal methamphetamines (*n* = 21, 100%), other stimulants (*n* = 7, 33.3%), OAT medications (e.g., methadone, buprenorphine, etc.; *n* = 1, 4.8%), other opioids (*n* = 16, 76.2%), sedatives (*n* = 9, 42.9%), hallucinogens (*n* = 1, 4.8%), and other drugs (e.g., diet pills, cold/flu medications, etc.; *n* = 2, 9.5%). Across all substances used (i.e., all categories except alcohol), participants reported their main administration routes as smoking (*n* = 41, 31.8%), intravenous (*n* = 29, 22.5%), smoking and intravenous (*n* = 7, 5.4%), and other (e.g., orally; *n* = 52, 40.3%).

Descriptive statistics for demographics and outcome variables were calculated for the follow-up interviews (*N* = 18). With regard to participant demographics at the follow-up interview (see Table 1), the average age of the sample was 34 years (M_{age} = 34.28, *SD* = 6.16), remaining consistent from initial interviews. Just over half of the participants identified as women (*n* = 10, 55.6%), and the remainder of participants identified as men (*n* = 8, 44.4%). Most of the sample reported being of European origin (*n* = 15, 83.3%). The remainder of the sample were BIPOC (*n* = 3, 16.7%). The sample's demographic characteristics remained relatively the same from initial interviews to follow-up interviews.

At the time of the follow-up interviews, approximately half of the participants reported being housed (*n* = 10, 55.6%) and the remainder of participants reported being unhoused (*n* = 8, 44.4%). Relative to initial interviews, the number of participants (*n* = 17, 94.4%) reporting that they were receiving social assistance as an income source was similar. More participants reported receiving income from a paid job (*n* = 5, 27.8%). The percentage receiving financial support from other government programs (*n* = 1, 5.6%), and/or from illegal activities (*n* = 1, 5.6%) was similar to initial interviews. No participants reported having received an HIV positive diagnosis, which was unchanged from initial interviews. A total of 72.2 % of participants reported having ever received an HCV positive diagnosis (*n* = 13) but most participants had completed, or were currently completing, medication treatment (*n* = 11, 84.6%; see Table 2). Participants also reported their lifetime and past six-month overdose instances during the follow-up interviews. Participants were asked if they had ever overdosed, and the majority of individuals reported that they had (*n* = 13, 72.2%), with the remainder of participants (*n* = 5, 27.8%) reporting that they had not. When asked about overdoses within the past six months, five participants (27.8%) reported that they had overdosed one or more times, and the remainder of participants (*n* = 13, 72.2%) reported that they had not overdosed.

Participants reported a mean of approximately one overdose within the past six months (M = 1.06, SD = 3.52), and reported that their overdoses were due to using potent opioids from the illicit drug market (e.g., fentanyl), or because of other contextual factors (e.g., illness, fatigue, etc.) related to an individual's patterns of substance use and tolerance levels.

During the follow-up interviews, participants again reported on their past 30-day substance use (non-prescribed; see Table 3). No participants reported having used alcohol within this time frame, demonstrating a decrease in alcohol use reported at the follow-up interviews compared to the initial interviews. Participants reported use of cannabis (n = 11, 61.1%), crystal methamphetamines (n = 17, 94.4%), other stimulants (n = 1, 5.6%), illicit opioids (n = 11, 61.1%), sedatives (n = 1, 5.6%), and other drugs (e.g., diet pills, cold/flu medications, etc.; n = 1, 5.6%) all decreased. Past 30-day use of crack (n = 8, 44.4%) increased but use of OAT medications (e.g., methadone, buprenorphine, etc.; n = 1, 5.6%) and hallucinogens (n = 1, 5.6%) remained stable.

Additionally, participants reported on the number of days in the past 30 days that they had used each category of substances, at both initial and follow-up interviews. At the follow-up interviews, the number of days participants had used substances decreased for alcohol (M = 0.33, SD = 0.80 for initial and M = 0, SD = 0 for follow-up), cannabis (M = 11.14, SD = 13.85 for initial and M = 4.06, SD = 8.29 for follow-up), crystal methamphetamines (M = 22.24, SD = 10.05 for initial and M = 18.17, SD = 10.04 for follow-up), stimulants (M = 1.23, SD = 2.26 for initial and M = 0.06, SD = 0.24 for follow-up), and sedatives (M = 2.29, SD = 4.19 for initial and M = 0.28, SD = 1.18 for follow-up). Increases in the number of days substances were used was noted for crack (M = 0.33, SD = 0.91 for initial and M = 2.39, SD = 6.96 for follow-up), other opioids

(*M* = 7.48, *SD* = 9.09 for initial and *M* = 9.33, *SD* = 12.86 for follow-up), and hallucinogens (*M* = 0.19, *SD* = 0.87 for initial and *M* = 1.11, *SD* = 4.71 for follow-up). The number of days participants had used OAT drugs (*M* = 0.10, *SD* = 0.44 for initial and *M* = 0.17, *SD* = 0.71 for follow-up) and other drugs (*M* = 0.57, *SD* = 2.20 for initial and *M* = 0, *SD* = 0 for follow-up) remained similar.

IPA: Initial Interviews

Program Initiation

Participants were asked about their experiences accessing River Stone Recovery Centre's iOAT program, and their experiences with the program intake and initiation. The following themes emerged (see Table 4).

Low-Threshold/Low-Barrier. All participants (*n* = 21, 100%) mentioned the low-threshold/low-barrier nature of the program initiation and overall program experience. Low-threshold/low-barrier refers to the characteristics of a program that reduce the barriers associated with accessing a program and receiving treatment. Low-threshold/low-barrier aspects were related to the ease of program referral, initiation, the clinic environment, and group doctor's appointments. Participants were often referred to the program by friends or by others already engaged with the program, rather than requiring referral from medical professionals, contributing to the ease of program initiation. One participant explained this by saying "I was actually told by like a friend of mine about the program…they had told me about it, like at another friend's house or whatever…like while we were using" (Participant 5).

Prior engagement with the clinic also contributed to low-barrier initiation experiences. Many participants had either prior contact with the clinic (e.g., receiving other services), or had a family or friend receiving services at the clinic, with knowledge of the program. This knowledge of the clinic and the specific iOAT program often contributed to an individual's program initiation; for example, one participant explained "I just came in, like I had come to River Stone before the program had started…so they knew me here from that, so I felt comfortable coming in" (Participant 1).

Participants reported that the program initiation experience was straightforward, that they were able to walk-in to the clinic, and that there were short wait times for program initiation, ranging from one day to one week. The intake process for participants in the program consisted of an interview, blood sample, and urine tests. When asked about their program initiation experience, one participant explained that their program initiation was "actually really easy", "really relaxed", and that it was "the opposite of what [they were] expecting it to be, but in a good way" (Participant 11).

Program initiation was also often reported as a decision made as a harm reduction strategy, with participants choosing to begin the program as an alternative to using substances from the illicit drug market. One participant expressed that they "basically just got sick with dealing with so many overdoses" (Participant 17). The program's low-threshold/low-barrier approach contributed to individuals selecting this program over engaging in the illicit market, illegal activities, and 'chasing' substances (i.e., attempting to access substances). For example, one individual explained their program initiation experience:

> I mean it's taken me off a lot of…dying off fentanyl every day…and I don't touch it no more, like this program pretty much saved my life…that I'm not out on the street doing it…I'm in a safe place you know, it's monitored. (Participant 4)

The low-threshold/low-barrier approach of the program was also identified as being important to the group doctor's appointments that are available at the clinic for program participants. The group doctor's appointments are bi-weekly sessions offered at the clinic, where iOAT participants can attend and ask questions or discuss any concerns with the doctor and nursing staff. Group doctor's appointments are conducted with participants in an open setting, where each participant has an opportunity to discuss their needs with the doctor. Participants can discuss any topic; however, appointments tend to focus on dosage, unmet needs (in general and specific to the program), and suggestions for change. Participants mentioned that the group doctor's appointments were low-threshold/low-barrier (i.e., accessible) and high-tolerance (i.e., participants are not penalized for missing group appointments), contributing to positive experiences accessing care. When discussing the group doctor's appointments, one individual explained that "It's pretty comfortable here [at the clinic]. Everything's a pretty laid-back environment so there's no…judgement of any kind…you're not looked down upon for…or scolded for being on drugs and being addicted" (Participant 18). Similarly, participants discussed their first-impression of the clinic's comfortable and non-stigmatizing environment and program initiation process.

Characteristics and Philosophy of the Program

Participants were asked about their experiences in the program, and the philosophy and characteristics of the program (i.e., the program's mission and operations). The harm reduction approach of the program, previous negative hospital experiences, iOAT vs. OAT, program operations, clinic staff, and group doctor's appointments were themes that were brought up during the interviews.

Harm Reduction Philosophy. Harm reduction was discussed in relation to the iOAT program and the clinic as a whole. The majority (*n* = 16, 76.2%) of participants explained that the program operates as a harm reduction service, providing individuals with a safer regulated supply of drugs, access to clean equipment, and testing and treatment options for HIV and HCV. One participant explained that "they [the program] just try and help, it's all about harm reduction I guess" (Participant 18). Another participant explained the impact of the clinic's harm reduction approach on their health:

> Yeah, I found out that I had hep [HCV]…before I got on the program and…I wasn't really like into much of the treatment and then they…told me about it, and then they said that they would help me which, which really made a big impact…and uhm now I'm hep free. (Participant 10)

Another individual who discussed the impact of the program's harm reduction approach said:

> I don't have to worry about what I'm getting, I know I'm getting a Dilaudid® [hydromorphone]…and I know that if I, if I overdose, they're great here, whereas before, I didn't, if you're getting beads, like hydromorphs…they could put anything in that, they could open the capsule and put anything, anything, and, you know they could put drift [deflazacort] in, and that's not safe to inject. (Participant 1)

The harm reduction approach of the program was also reflected in participants' reasoning for program initiation, which were often informed by overdose experiences. Another individual explained that "rather than turning and going out to the street, and using out there, [they] came to the iOAT program" (Participant 3). Participants expressed that their overdose experiences contributed to program initiation, with the goal of accessing a safer supply of regulated drugs, that would prevent them from experiencing overdoses. One individual explained:

> My life was spiraling out of control…I overdosed really bad on what I thought was fentanyl but was isotonitazene like pure pure isotonitazene…so that was actually, that was probably like the main, main reason why I went and got on the program, because it was a safer place to get my fix and I didn't have to worry about dying like imminently. (Participant 21)

Negative Hospital Experiences. Some participants (*n* = 10, 47.6%) discussed past hospital experiences, which were described as negative and stigmatizing. Stigmatizing experiences were generally attributed to a participant's iOAT program involvement and their substance use. One participant explained their hospital experiences, saying:

> Uh the hospital, they are so judgemental. I don't like going to the hospital for anything, especially if you have the flag on you that you're in a program like this then they, uh, I find that they're just super judgemental right…this place is so much better. Like just in general, generally speaking, it's better. (Participant 21)

Similarly, another individual expressed that their experiences at the hospital were "bad, horrible, not pleasant at all, very uncomfortable" and that they are "100% different from the experience that [they've] had here [at River Stone]" (Participant 3). Another participant explained that they had issues in accessing their dose at the hospital, saying:

> They really patronized me and like, they had a lot of opinions there. They said the whole time they're administering it they were saying, 'is this place even

> working for you? How do they help people?' My experience at the hospital was shocking, to say the least. (Participant 9)

Negative hospital experiences resulting in experienced stigma led to unmet healthcare needs in participants, where healthcare needs were either not addressed at the time of hospital visits or led the clients to not seeking out medical care when experiencing medical needs, due to a fear of experiencing further stigma in this setting. Demonstrating this, one participant reported a specific negative hospital experience, resulting in unmet mental health needs:

> One time I was suicidal and they called the ambulance and I was taken up there by police and the psychiatrist on call after listening to me cry to [them] and telling [them] that I didn't…see a reason to live anymore, [they] told me to go to the homeless shelter and get a bed and go get a hot meal at the soup kitchen and then quit my programs at [River Stone]…so if the first two things didn't make you want to kill yourself…the withdrawals from the last thing [quitting programs], sure as hell will. (Participant 21)

iOAT vs. OAT. The majority of participants (n = 15, 71.4%) had previous experience in an OAT program, which was discussed in comparison to the iOAT program. Although individual experiences differed in OAT, many individuals began iOAT following the termination of OAT. In these cases, OAT was terminated for a variety of reasons (e.g., being banned from program, the program did not meet the client's needs, missed doses/attendance challenges, etc.). One participant explained their experience switching from OAT to iOAT:

> Then I got on to the Suboxone®, but I just, I couldn't do it, it wasn't enough, and then…so then I went right to the iOAT…I believe I actually used umm, outside, like that night, and then that next morning I was on the iOAT program. (Participant 3)

Other participants explained that they were using opioids while on OAT, contributing to their transition to iOAT. One individual said, "the methadone and Suboxone® didn't help cause I'm here obviously, I still was doing pills on them, so there was no sense of taking the medication if it's not helping right?" (Participant 15). Another individual explained that the iOAT program "is a lot of maintenance", but said "it's good, it helps, a lot" and explained that they were "still using on the side with the Suboxone®", but that they do not use outside of the iOAT program (Participant 7).

iOAT was described as being more high-tolerance than OAT programs, contributing to iOAT adherence, where rules for program attendance are less strict as compared to OAT. In line with this, participants described negative experiences in OAT, that were related both to the lower-tolerance levels of the program (i.e., strict attendance requirements, etc.) and the program not meeting their needs. OAT was discussed as being ineffective for some individuals, attributed to either the medication not sufficiently addressing withdrawal symptoms, negative medication side effects, or other reasons. This ineffectiveness highlights the importance of having a variety of options for individuals seeking treatment or harm reduction services for their substance use. Some participants reported having chosen the iOAT program over OAT to control the administration method, as they reported injection as a method that allowed them to experience feelings of euphoria, which they were accustomed to when injecting drugs from the illicit market. One participant said “well, they offered it [OAT] when I came in and I’m like…no I want the iOAT…because I’m using pills, and I want to keep using pills, and I don’t want methadone because it will block my pills” (Participant 2).

Program Operations. Participants were asked about the iOAT program’s operations, and the majority of participants discussed topics pertaining to these (n = 18, 85.7%). During the intake process, participants mentioned that they were given information about OAT, as an alternative to iOAT.

There was a significant focus placed on dosing practices and the dose change process (e.g., to address withdrawal symptoms, mitigate medications side effects, etc.). Participants described the process of modifying their doses as easy and straightforward, with one participant explaining that “you’ve just got to fill the paperwork and wait until the morning…pretty straightforward” (Participant 6). Participants discussed that dose changes (i.e., increases or decreases) could be requested in intervals of two, four, or six millilitres, and that these requests could be made for either nighttime medications (i.e., slow-release opioids) or daytime medications (i.e., hydromorphone), but that changes would not be approved for both at the same time. It was also noted that although the doctor makes the final decision for approving or denying dose change requests, the nurses and other staff have input on decisions, as they are in daily contact with participants. To meet with the doctor, program participants can either attend bi-weekly group appointments or request an individual appointment. When discussing the dose change practices, a participant explained:

> Oh it’s I mean it’s very easy…we have the request sheets, and…we’re able to go up by two four or six and down by two four or six…turn it into one of the nurses and you know it’s up to the doctor from then if you know…not only the doctor I

> guess, the nurses and stuff have input as well, I mean they're the ones that see us every day…I've never had an issue or problem with needing to go up or down, I've done both… I've had to turn around and go down a little bit too. (Participant 3)

Additionally, participants explained that self-administration of doses is a program requirement, and that although the clinic staff can assist with certain aspects of this process (e.g., finding veins), they are not permitted to administer the medications. It was explained that doses are lower at the beginning of treatment and gradually increase, and that this process is tailored to an individual's needs (i.e., tolerance levels, etc.) and program goals (e.g., abstinence, harm reduction, etc.). A participant who explained this process said, "I've been trying to decrease…one of the nurses came up and was like 'okay I think you're going down too fast, so we're just going to like level it out for a minute…then we can start taking you down some more'" (Participant 10). Lastly, participants noted that doses for nighttime and daytime medications are adjusted following a period of non-attendance as tolerance levels become unpredictable, and overdose risk can increase.

Also related to program operations, participants discussed the responsiveness of the program managers to suggestions for change and reported that the program is adapted quickly based on feedback. It was also noted that participants can be directed to appropriate resources (e.g., housing, food, employment resources, etc.) by the clinic or clinic staff, and that the staff provide assistance (e.g., helping to fill out social assistance applications, providing apartment listings, etc.) to participants, when applicable. One participant said, "if you have, if you have uh things in your life that…you need help with, whatever it might be, there's people for that around here" (Participant 9).

Carry doses, which are available at River Stone by request and on holidays when the clinic is closed, allow clients to self-administer their medications and avoid visiting the clinic for up to three days. Participants explained that although carry doses are available, they can be difficult to access, and need to be requested approximately one week in advance (between 6–10 days). Due to safety regulations and concerns surrounding diversion, carry doses can be difficult to access, where prescribers may be hesitant to approve carry dose requests due to these reasons. At River Stone, a limited number of carry doses are allowed each year, and requests can be approved or denied depending on the reason that carry doses are being requested. Most participants had experiences receiving carry doses, given either on holidays or requested for a variety of reasons (e.g., work, travel, moving, etc.).

Negative and positive carry dose experiences were discussed, along with diversion of carry doses, by the majority of participants (*n* = 20, 95.2%). Negative carry dose experiences were generally attributed to the form of the carry doses (8 mg pills) not meeting the client's needs, as the strength of the pills were reported to differ from the strength of the liquid medication (i.e., the liquid medication appeared more potent to participants). One participant explained this, saying "they [clinic] give it to us in real eights…I'd rather them give it to us in a different form, like maybe give us in like beads or something, because trying to do it all in eighths is kind of difficult" (Participant 10). Participants also explained that they had experienced withdrawal symptoms due to the carry dose form not meeting their needs.

Positive carry dose experiences were attributed to carry doses contributing to an individual's ability to travel and decreased clinic attendance, which some participants described as their reason for preferring carry doses. Decreased clinic attendance is beneficial for participants who are seeking employment, as daily dosing requirements can influence participants' ability to maintain their employment. Decreased clinic attendance was also explained to help with the repetitive nature of the program, which some participants reported as hindering their experience. One participant explained that they often felt like "a robot" because of this (Participant 4).

Diversion of carry doses was relatively rare, with the majority of participants reporting that they had not diverted any carry doses (n = 16, 76.2%). In the cases of diversion (n = 3, 14.3%), participants explained that they had diverted their doses to access money to purchase food, or other substances, such as to purchase an alternative to the carry doses provided (e.g., fentanyl) because the carry dose was not meeting their tolerance levels. When asked about their carry dose experience, one participant reported:

> It was alright, it just doesn't cut it I don't think…like the pills, they can't give you enough pills to add up to your dose…it's not as strong at all…it kind of sucks, that's probably why everybody sells them…for the extra money of course…or for other drugs. (Participant 2)

A different perspective was provided by another participant, who felt that diversion occurs because "people need money and they're hurting for food or stuff" and that "if they do so [divert their carry doses], it's for a reason, it's not for drugs, because you already got it, right". The same participant reported having diverted carry doses, saying "I sold some…to get food…I did what I had to do to get by, right" (Participant 8).

Clinic Staff. Participants were asked about their relationships with clinic staff, and the majority (n = 20, 95.2%) addressed their interactions with staff in their responses. Most participants reported maintaining positive relationships with the clinic staff. Participants explained that in order to develop positive relationships with clinic staff, an emphasis was placed on building trust. Trust was reported to be built over time, and non-stigmatizing, attentive, and straightforward care contributed to positive trust building experiences. When asked about their relationships with clinic staff, one individual explained that:

> They [clinic staff] are like very welcoming people…they really do look at you as a person, and you can tell when they're talking to you that you're talking to someone who actually cares…and especially with this type of treatment, like they're not judgemental…they're are very like transparent with everything…to make sure you feel safe and knowledgeable about what you're doing…they just really make you feel like a human being. They're very attentive, like if something's wrong they'll really catch on to it, like they're really there for like the mental health aspect of it as well. (Participant 5)

The clinic staff were described as trusting, non-stigmatizing, non-judgemental, attentive, supportive, and caring. They were also reported to provide informed, straightforward, and honest healthcare, going out of their way to meet the needs of individuals in the program. One individual reported that at River Stone, the staff "know [understand] and they care" (Participant 11). Another participant explained that the clinic staff "just have a way of making you feel comfortable…and they just talk to you like you're an actual human not just another junky" (Participant 10).

Participants reported that discussing their own drug use with staff is easy, but that it can be a process to become comfortable sharing this information with staff, and that this process takes time, as they learn to trust the staff.

A few participants described negative relationships with clinic staff, although these negative relationships were specific to select staff, and to specific situations. Participants who discussed negative interactions with clinic staff explained that there are specific individuals with whom they do not get along with, or that they have had prior disagreements with. One individual said, “I don’t get along with some of them [nurses] here, and like wouldn’t put it past them to be…not so nice I guess” (Participant 2). Another participant explained that they have “had [their] disagreements with some of the staff”, but that “even in the disagreements it’s still, it’s still like a positive thing” (Participant 11).

Group Doctor’s Appointments. Further related to the characteristics of the program, participants were asked about their experiences in accessing and participating in doctor’s appointments. Participants (*n* = 19, 90.5%) discussed both positive and negative aspects of group doctor’s appointments. For the positive aspects, group doctor’s appointments were described as being beneficial check-ins, where opportunities to ask questions or raise concerns related to the program were available. It was also noted that group doctor’s appointments contribute to the openness and transparency between the staff and clients, where topics are discussed openly in this setting with all clients present. When asked about the group doctor’s appointments, one participant said:

> It's basically you go, and…the doctor is giving you [their] time, so…you could talk about anything. You could talk about nonsense if you wanted to right, and I like how that’s done, I used to not like the group setting, I used to like being able to see the doctor one-on-one, but then it’s so formal and so institutional that it’s, I find it takes away everything that they’re trying to do here to have openness and transparency. (Participant 21)

The negative aspects of group doctor's appointments were discussed in relation to the lack of privacy in these settings, contributing to decreased comfort in discussing certain topics (i.e., other clients/staff listening to personal concerns). For example, an individual reported "it kind of sucks, because you can't really ask anything in private, it's all out there for everyone to hear and stuff, but umm, it is a pretty welcoming and open community, so it's not that big of a deal" (Participant 5).

Participants' Outcomes in iOAT

Participants were asked about the impacts that the iOAT program has had on their lives. Specifically, participants were asked about any interruptions to their safer supply and the resulting impacts, their peer relationships, the overall outcomes of the program (e.g., on their mental health, physical health, financial stability, engagement in criminal activities, personal relationships, safety, substance use, and quality of life), any barriers to accessing safer supply, and if they had any suggestions for improving the iOAT program or the clinic's approach to operating the program.

Interruptions to Safer Supply. Approximately half of the participants (n = 9, 42.9%) reported interruptions to their safer supply, either from being arrested or hospitalized. Participants described interruptions as having negative impacts, causing frustration with the inconsistent administration/allowance of doses in these settings (i.e., jails, hospitals), resulting in the experience of harmful and distressing withdrawal symptoms. Interruptions to safer supply are of specific concern as they may increase the risk of subsequent overdoses, due to decreased tolerance after a period of abstinence from the interruption. Related to these settings, participants also explained that the refusal to offer safer supply was often perceived as being attributed to stigma. Participants described both hospital and jail/prison experiences as highly stigmatizing and aversive. When discussing an interruption to their safer supply from being arrested, one participant said:

> In jail, that was, uhm a nightmare, really. They said that you can't, obviously you can't, shoot up in jail. That makes sense, but they got to at least give you an equivalent oral dose or something. But no, they uh, I think they enjoyed the fact that I was in complete agony, miserable, almost unraveling basically they, they seemed to enjoy it…I was very, very sick. (Participant 9)

Another individual reported a similar experience of an interruption to their safer supply from being arrested:

> I went four to five days without anything…that was brutal, brutal…it was inhumane…I was puking, had the poops, and I was pill sick…they didn't know what I was talking about, the program, they didn't even know about the program. (Participant 8)

An additional participant explained their experience of an interruption to their safer supply from being hospitalized and the impact of inconsistent dose administration:

> It was frustrating because I was going through withdrawals and stuff…there were nurses who didn't agree with the program, so they would refuse to give me my dose, so it depended on the nurse who was on staff if I would get my dose or not, because if they didn't approve of the program then they wouldn't give it to me, they wouldn't administer it. (Participant 5)

Peer Relationships. Participants' relationships with others in the program were discussed (*n* = 20, 95.2%). Peer relationships were reported to be generally positive, although there was a noted variability in the depth of peer relationships, ranging from individuals being ‘friends’ to ‘acquaintances’ or to having no interactions. One participant explained their peer relationships, saying:

> Honestly, I’ve made like friends here…I pretty much interact with everybody here, because I mean, it’s almost like one big family here honestly. There are some people that you don’t get along with, and I mean it’s bound to happen with a big group of people…but I mean for the most part I mean we all just do our thing, get along, and we know the rules of the place, like we don’t bring violence or anything here. (Participant 10)

Demonstrating the variability in the depth of peer relationships, another participant explained their approach to peer relationships, saying “I don’t interact with many people…I’ll joke around and stuff like that…just acquaintances” (Participant 4).

Participants also described the importance of maintaining boundaries in their peer relationships, and explained that they often keep to themselves, ensuring that their peer interactions stay within the clinic setting (i.e., not interacting with peers outside of the clinic). Specifically, participants explained that interacting with peers outside of the clinic can increase their chances of using other substances (when others are using in a social setting). They also explained that maintaining boundaries are important to reduce the chances of developing negative relationships, characterized by behaviours such as lying and stealing, subsequently impacting their experience in the clinic setting. A participant reported on this, saying:

> It’s hard because people who are using you know, a lot of people like lie and cheat and steal and it gets pretty messy…I don’t mean that in a stereotypical way. I just mean that in the fact that drugs cost money…you’re spending the money on drugs and you therefore have less money to spend on other things and

sometimes you need to find other means to get, and with addiction you are…it's a very very rocky road, where you need to get that next dose, and people will therefore do certain things that are out of the norm to get that…that's the sad reality and stuff, so it is hard to develop those relationships and stuff when you know there is so much of that going on…it can become like very…dangerous, even. (Participant 5)

Overall Satisfaction with the Program. All participants (*n* = 21, 100%) discussed their experiences in the iOAT program, identifying both positive and negative outcomes. Participants discussed their positive program experiences, and the positive impacts of being in the program. One individual said, "in my opinion, anybody who looks at this program and doesn't see the positive side from it doesn't fully understand…they just, they don't" (Participant 3). Participants explained that their expectations of the program are being met, allowing them to shift their focus from drugs to other areas of their lives. Demonstrating this, one participant reported that they are "able to focus more on…getting other parts of [their] life in order" (Participant 3). Another individual discussed the positive program impacts, saying "it's comfortable here…if I was at the hospital or my family doctor, I'd probably lie a little bit, but here I've got no reason to…don't feel ashamed" (Participant 7).

When asked if they were getting what they hoped for out of the program, one individual said, "where I am now, in my addiction, yeah, I'm getting what I, what I need and what I want out of it" (Participant 17). Another participant expressed a similar program experience, saying "it's actually doing a lot for me, a lot more than I thought it would. I thought I was just going to come in here getting high three times a day but…it's more…emotional and like uh mental" (Participant 11). One participant explained the overall outcome of the program on their life, saying:

> Well…I don't have to go sick, if I couldn't find anything right, or I don't have to go rob or steal something…it keeps me out of jail, or I could be dead, I don't know…it saved my life, because I was in a dark, dark place. (Participant 8)

Negative aspects of the program were discussed in relation to participants not being content with their doses (n = 2, 9.5%), describing that when using highly potent opioids, such as fentanyl, the doses of liquid hydromorphone are not always high/strong enough to counter withdrawal symptoms. For example, one participant explained their view, saying "I just think it's not enough. Well, I do fentanyl on the street right? So uhm Dilaudid® [hydromorphone] isn't really going to cut it, fentanyl is a lot stronger" (Participant 18).

Physical Health. Many participants (n = 14, 66.7%) reported changes to their physical health from being in the program. Participants' improvements to their physical health included decreased experiences of withdrawal symptoms, decreased skin infections, sleep quality improvements, and healthier eating habits. Specifically, one participant reported that they "haven't had an abscess since [they've] been on the program" (Participant 17). Another participant who also reported improvements in their physical health said, "I'm more consistent, so I'm eating better…so I feel a lot better anyways" (Participant 7).

Negative changes to physical health attributed to the program were related to participant's increased tiredness, which was due to some participants reporting decreased stimulant use since entering the iOAT program.

Mental Health. The majority of participants (*n* = 20, 95.2%) also discussed the program's impacts on their mental health. Positive improvements in mental health were reported by most individuals (*n* = 17, 81.0%). Improvements in mental health were attributed to a decrease in participants' stress and anxiety, both in general, and directly related to attempting to access substances from the illicit drug market. One participant who reported improvements in their mental health said, "my mental health is a lot better, because I'm not always stressed and worried about where I'm going to find something [substances]…or worried about the cops showing…life's a lot less stressful" (Participant 7). It was also noted that increased interactions with others contributed to improvements in mental health, with one participant stating, "it gets me interacting with people…and honestly, it gets me out of my dark black cave that I have at home" (Participant 10).

Participants also noted that the non-stigmatizing care and the mental health support at the clinic contributed to improvements in mental health, resulting in increased drive and ambition. One individual described their increased drive and ambition, saying "I was really depressed when I was on methadone…and I had no mojo, no drive or anything, and I got it all back now…it's a lot better than methadone…so yeah everything's going good now" (Participant 8).

Negative changes to participants' (*n* = 3, 14.3%) mental health were attributed to unmet mental health needs that the program was not equipped to address, and to the time constraints associated with the program negatively impacting mental health. Participants explained that because they shifted their focus from obtaining drugs from the illicit market, they were able to begin identifying their mental health needs. They noted however, that the program is not equipped (i.e., they do not have adequate resources) to address complex mental health needs. A participant explained this, saying “they [program] want to help, but I think also I need to see a psychiatrist” (Participant 21).

Financial Stability. Approximately half of the participants (*n* = 10, 47.6%) discussed improvements in their financial stability, attributed to their ability to allocate their income to other needs (e.g., food, housing, etc.) and to spending less of their income on purchasing substances from the illicit drug market. One participant who reported improvements in their financial stability explained that they “have a lot more time and…a lot more money…and [are] starting to have a little bit more normal of a life” (Participant 7).

Engagement in Criminal Activities. Participants (*n* = 9, 42.9%) also discussed outcomes related to their engagement in criminal activities, with all individuals who discussed this reporting decreased criminal activity. Participants explained that prior to program initiation, engagement in criminal activities was related to accessing substances from the illicit market, and their engagement in these behaviours decreased with access to a regulated supply of opioids. One participant explained that being in the program has decreased their engagement in criminal activities, saying “it’s kept me from doing a lot of dumb shit…when you get sick [withdrawal] there’s nothing you won’t do to feel better, right” (Participant 20). Another participant who reported this outcome said:

> I’m not getting in trouble for shoplifting or anything like that anymore, like I just come down here and get my meds instead of freaking breaking the law, so that’s good, that’s a big bonus, cause if I wasn’t here, I’d be out shoplifting or I’d be out stealing something to get what I need to get. (Participant 18)

Personal Relationships. Participants (*n* = 15, 71.4%) reported both negative and positive outcomes related to their personal relationships. Negative aspects of participants personal relationships were related to non-supportive family and friends regarding their involvement in iOAT, and family and friends' lack of knowledge of the participants' program involvement, which was reported by some individuals (*n* = 8, 38.1%). For example, one individual explained that they "haven't told [their] parents that [they are] on this program yet cause uh…[they] feel like it's going to rip them apart" (Participant 11).

Participants explained that although their friends and family may have been aware that they are on a treatment program, they did not know what type of program they were attending, or the nature of the program. Some participants' family and friends believed that they were receiving OAT, while others believed that they were not receiving any treatment for their substance use. Participants often felt that if they shared the specific nature of the program (i.e., that they were injecting substances), their family and friends would not be supportive, due to their continued use of substances, regardless of them receiving treatment or not. This lack of support was reported to have negative consequences on participants' well-being. Some individuals thought that if their non-supportive friends or family knew more about the program, they may adopt a more positive view, whereas others believed that their opinions would not change, and they would only be supportive of an abstinence-based program. When asked about any changes to their personal relationships, one participant said:

> Yeah they've definitely changed…I've had some family not support it and some family support it, umm a lot of people don't see eye to eye with this stuff…it's hard…I've had a lot of change in my life with that, and friends too…some people I don't really like to tell…some people I do…I keep it up to my discretion really…I've lost family over it so definitely a change. (Participant 5)

Positive aspects of participants' personal relationships were related to having family and friends that were supportive of their program involvement, and improvements in their personal relationships were attributed to having increased contact with family and friends. One participant who reported improvements in their personal relationships explained that these improvements occurred "because [they're] not either sick or out chasing for dope all day" and that they "actually have time to spend with them [friends]" (Participant 16).

Safety. A large proportion of participants (*n* = 14, 66.7%) also reported improvements in their personal safety. This was attributed to the increased safety of the clinic environment (e.g., monitored dosing, sanitary environment), having access to a regulated supply of opioids, which decreases frequency of overdose (*n* = 2, 9.5%), and decreased interactions with the illicit drug market (*n* = 14 , 66.7%). One of the participants who reported a decrease in their overdose frequency explained:

> Before I was on the program, I overdosed quite a few times and uh since on the program I don't think, maybe two or three times…I overdosed, but that was like not here it was outside the program obviously using fentanyl, the rate has declined seriously. (Participant 18)

Another participant who reported improvements in their personal safety explained that the clinic setting is a "good, safe environment" and that they "don't have to go find a place to hide…and inject" (Participant 2). Regarding the regulated supply of opioids that the program provides, a participant described the impact on their safety, saying "when you're getting them [opioids] off the street, you don't know what's in them, so yeah, it's a big difference" (Participant 16).

Substance Use. Of the participants who discussed outcomes related to their substance use (*n* = 11, 52.4%), all individuals reported decreases in their use of substances outside of the program. Participants explained that due to having access to a regulated supply of opioid medications, their substance use outside of the program decreased, as they no longer had to use drugs from the illicit market to counter their withdrawal symptoms. For example, one participant said "other than smoking a little bit of meth, I don't do anything outside the program. So, that changed quite a bit…and I was doing a lot of drugs outside the program right" (Participant 16).

Quality of Life. Many participants (*n* = 14, 66.7%) discussed program outcomes related to their quality of life. Participants reported having increased life stability (related to decreased engagement with the illicit drug market and criminal activities, having a regulated supply of medications, and access to treatment and resources; *n* = 7, 33.3%), increased consistency (i.e., having a routine; *n* = 5, 23.8%), and increased time (due to not accessing substances from the illicit drug market; *n* = 7, 33.3%). Participants explained that having a routine and more time allowed for them to focus on other aspects of their health (e.g., physical and mental health), and life (e.g., personal relationships, employment, etc.). One participant who reported improvements in their quality of life stated "I feel a lot more stable now you know what I mean? Cause I'm not worried about, worried about how I'm going to get my next fix" (Participant 14).

Barriers to Accessing Safer Supply. Participants (*n* = 18, 85.7%) discussed outcomes related to challenges in accessing safer supply. Specifically, participants discussed difficulties with transportation (i.e., getting to the clinic three times a day) and challenges with daily attendance. For example, the requirement to attend the clinic several times daily impacts participants ability to find employment and also prevents them from leaving the city and travelling. When asked about any barriers to accessing safer supply, one participant said, “coming in three times a day…that’s another reason why I like the carries, because then I wouldn’t have to come in so many times a day right, I could have more time to do, maybe get a job you know” (Participant 20).

Furthermore, the waiting period (approximately one week, ranging from one to ten days) between the program intake appointment and program initiation acted as a barrier. This delay is generally due to waiting to access social assistance which includes the New Brunswick Prescription Drug Program (to refund the cost of the safer supply drugs). This transitional period resulted in some participants experiencing withdrawal symptoms and accessing substances from the illicit drug market to counter these symptoms. One participant explained their experience with the wait times , saying “it took…about 5 days…it was a long five days…I was sick the whole time” (Participant 1).

Similarly, participants reported challenges with the starting dose in the program, as the initial dose starts lower and gradually increases. For example, one individual said, “it’s a little frustrating because you’re used to doing so much and then…you’ve got this small amount that you’re doing, and you have to work up towards it…so it’s kind of frustrating in the way that you’re going through withdrawals” (Participant 5).

Additionally, some participants found that negative peer interactions acted as a barrier to accessing the iOAT program. Specifically, participants explained that because of their negative peer interactions, they were hesitant to continue in the program, stating that their peer relationships were negatively impacting their mental well-being.

Suggestions for Improvement

Participants were asked to provide any feedback or suggestions for improvement related to the clinic as a whole, or to the specific iOAT program. Participants' (*n* = 13, 61.9%) suggestions applied to the clinic rules, need for additional services, and the accessibility of the program.

Clinic Rules. Suggestions related to the clinic's rules included increasing the accessibility of carry doses (having more carry doses available per year and not having to request carry doses as far in advance), providing carry doses in different forms (e.g., beads, liquid), providing carry doses (i.e., hydromorphone) as an alternative to nighttime medications (i.e., extended-release morphine, methadone, etc.), having immediate dose changes (i.e., not having to wait until the next day), only having to attend the clinic once daily and receiving carry doses for the other doses, and receiving more than three doses a day. Participants explained that these changes would improve their program experience by decreasing the amount of time that they spend at the clinic daily. One participant described this in their suggestion, saying "I don't know…give out more carries…so that maybe I could go see my kids, like for a day, like if I wanted to and not have to have…a really good explanation and have it put in like a week before" (Participant 10). They also explained that the changes to the medication form for carry doses, and dosing practices (i.e., number of doses a day) would improve their experience as well, related to the doses better meeting their needs.

Additional Services. Participants' suggestions surrounding additional services included having more appointments with the doctor (i.e., one-on-one meetings), having more accessible harm reduction supplies, having more programming available (e.g., classes for academic upgrading), and having more snacks and a larger water station.

Participants explained that although the group doctor's appointments are beneficial, having access to one-on-one meetings with the doctor would contribute to their openness in their discussions, and would allow them to discuss more specific topics related to their health, that they may not be comfortable discussing in a group setting.

Harm reduction supplies, although available at the clinic, must be requested to access them. To increase the accessibility of harm reduction supplies (e.g., needles, syringes, pipes, etc.), it was suggested that supplies be freely available (i.e., without having to request them), and also in larger quantity, as they tend to run out quickly. Increased programming was suggested, specifically, having classes that are educational, not necessarily related to substance use or the iOAT program, but life skills in general (e.g., finance courses, resume building courses, etc.). Due to the large portion of the day that participants tend to spend at or around the clinic, participants suggested that having these types of courses accessible could be beneficial to fill the time between their doses. Lastly, suggestions to increase the accessibility of snacks and water were made. Snacks are occasionally available at the clinic, usually during certain group sessions, and there is a water station, but the cups are small. Participants explained that they like having snacks available to them (which is especially relevant to a lot of participants who have limited access to food), and that they would like to have larger cups available near the water station.

Access. Suggestions related to the accessibility of the clinic included providing further transportation assistance to and from the clinic, increasing the clinic's operating hours, making the program more known, having additional program locations (e.g., on both sides of the river in Fredericton, and throughout the province in other municipalities), and having a larger dosing area and waiting room. The clinic recently implemented a transportation program, where a shuttle bus transports clients to and from the clinic. However, the shuttle bus only makes certain stops, and makes a limited number of runs a day, and so expanding this program would aid in decreasing the transportation barrier associated with program involvement. Additionally, there are city bus tickets that are available at the clinic, but they tend to run out quickly. Having increased access to both services (i.e., the shuttle bus and city bus tickets) would decrease the transportation barrier and improve program experiences.

Participants also commented on the program's operating hours and suggested that the program increase their operating hours to be open later into the evening (e.g., 8:00 AM–10:00 PM), to allow for more doses administered throughout the day. Lastly, the suggestion to have a larger dosing and waiting room was made. This was suggested to allow for more clients to receive their dose at the same time (to decrease wait times for dosing), and not feeling crowded while in the waiting room.

IPA: Follow-Up Interviews

During the follow-up interviews, participants were asked about their experiences in the program during the last six months (i.e., the time since the initial interview), about any changes to the program, and any new impacts or challenges related to being in the program. Participants discussed topics related to the program operations and perceptions, the medications prescribed in the iOAT program, carry doses, alternative programs, new outcomes of the program, and suggestions for improvement (see Table 5).

Program

Wait Times for Doctor's Appointments. Some participants (n = 3, 16.7%) discussed challenges related to increased wait times for individual doctor's appointments. Participants explained that an increased number of individuals enrolled in the iOAT program has resulted in longer wait times to access services. For example, one individual explained that "sometimes they are too busy, and you don't get an appointment for like days ahead" (Participant 2).

Community Stigma. Some participants (*n* = 4, 22.2%) also discussed stigma from the community related to the iOAT program and the program's location. When discussing stigma within the community, one participant said, "I don't even know if the program will be here that long…I don't know if [location] can put up with us for that long" (Participant 9). Another participant explained the impacts of the program's location and subsequent stigma, saying "I want to go back to work, but when you have employers seeing you down in front of this place it puts out a bad name for employers…when they see you hanging out, because most people don't look at this place the way we look at it right, they look at it as a stain" (Participant 21).

Although community stigma is present, there are efforts by the clinic to decrease this stigma. One participant explained the steps that River Stone has taken to change the attitudes towards the clinic:

> Somebody [community group] is coming in talk to us. So, then we're there as the professionals trying to show to whoever's come in who and what we are. That we are just regular people, you know, in hopes to change the view that people have. (Participant 1)

In this case, various community groups were invited to River Stone to learn about the work that is being done, from the perspective of the program participants, in an attempt to reduce stigma towards the program and its clients.

iOAT Medications

Participants were asked in the follow-up interviews about the medications that are being prescribed to them in the iOAT program, and if they had changed since the time of the initial interview.

Medication Type. For some participants (*n* = 4, 22.2%), the medication dispensed (i.e., hydromorphone) was no longer meeting their needs. Participants explained that hydromorphone has little impact on preventing withdrawal symptoms when using highly potent substances, such as fentanyl. One individual explained this by saying "I do a lot of fentanyl, and it doesn't even come close to being able to make me not sick…it almost…it puts me into withdrawal before it takes it away" (Participant 13). Another participant explained a similar experience, saying:

> It doesn't do anything, like I'm not getting what I need out of it…heroin would be great, that would meet my needs…sometimes I come in here and I do my dose and it puts me in worse withdrawal because I'm doing so much street fentanyl. (Participant 18)

Medication Composition. A few participants (*n* = 4, 22.2%) also had concerns related to the medication composition, explaining that they were under the impression that the medication they were receiving in the iOAT program contained Narcan® (commonly known as naloxone, an opioid antagonist that can reverse an overdose), and that it was causing them to experience withdrawal symptoms. One participant stated, "I feel like the meds have changed…I just feel like there's Narcan® in them" (Participant 2). Another participant explained their experience:

> I almost want to come in and like like squirt my shot in my pant leg sometimes, like I always wanted to just because I was so like, I was terrified to take it, but I had to, just cause it made me sicker right, and then like the only thing to make me, bring me out of that, would be to go and get more fentanyl, which I didn't want to do. (Participant 17)

Participants noted that concerns surrounding the medication composition had been present for only a period of time (i.e., a few months), with some participants suggesting that these experiences may have been from the clinic using a different brand of drugs or from the potency of substances used outside of the program. Of the participants who discussed medication composition concerns, two individuals reported that the problem with the medications had been resolved and two individuals reported that the issue was currently affecting them.

Carry Doses

When asked about their experience with carry doses since the time of the initial interview, participants discussed the clinic's implementation of a new carry dose system and diversion of carry doses, related to the medications not meeting participants' needs.

Clinic's Carry Dose System. Participants (*n* = 6, 33.3%) mentioned that the clinic has implemented a new carry dose system since the time of the initial interview. Participants explained that they are now allowed up to 15 carry dose days a year, and that carry doses are allotted based on daily attendance. For example, if an individual was only coming in for two doses a day, participants explained that they would also only receive two doses per day for their carry doses, in an attempt to reduce diversion. Although most participants did not have concerns with the new carry dose system, one participant suggested that a different approach would be more appropriate:

> I think that the 15, the 15 days throughout the year for carries, I think that is low, on the low end, and I don't think that they should particularly even have a number to it. I think it should be at the discretion of the health care providers…that's my recommendation. I don't think the 15 a year, I don't think that number should even be there. I think there's people who are in different circumstances that could use more than 15 days, like if their reasons are good enough and suitable to whatever, but I think it should be at the discretion of the health care team. (Participant 21)

In sum, some participants believe that for some, carry doses should be allotted more readily (e.g., individuals who are using their carry doses to visit their children), and that rather than having one rule for all, decisions should ultimately be left up to the discretion of clinic staff.

Diversion. During the follow-up interviews, participants were again asked about any diversion of their carry doses from the iOAT program. Although diversion remained relatively rare, participants who did divert their carry doses (*n* = 3, 16.7%) mentioned again that they did so because the medication type was not meeting their needs. Similar to initial interviews, participants explained that they were diverting their carry doses to purchase substances from the illicit market that would better meet their needs (e.g., fentanyl). One participant also explained that they would not divert their carry doses if the medication was better suited to their needs, saying "if they were what I wanted or what I needed then yeah, I wouldn't sell them at all" (Participant 18).

Alternative Programs

Some participants discussed their plans to switch (*n* = 7, 38.9%), or had already switched (*n* = 1, 5.6%) to a different program (e.g., OAT) at the follow-up interviews.

Many of these participants (*n* = 4, 22.2%) specified their interest in switching to Suboxone®, with plans to then switch to Sublocade® (a monthly OAT injection). Participants explained that they were considering switching programs as the next step in their recovery plan (if their goal was abstinence). Additional reasons for considering another program were because of the intensive nature of the program and its impacts on being able to find and maintain employment, or because the medications were not meeting their needs. One individual who had already switched from the iOAT program to a different program explained their decision, saying “I was very tired of it, like I really didn’t want to be taking drugs…I really didn’t like the control it had over me, I didn’t like coming to clinic multiple times a day” (Participant 5). Another participant explained their reasoning for wanting to switch programs:

> I just want a change, so much has changed over this last year…I just want, want better for myself I guess now. Now that I’ve gotten a good taste of you know, actually living a good life, I want more of it so, so it’s just, I can start saving money, I’m not investing all my money into fuel to come into town three times a day. (Participant 20)

Similarly, another participant explained:

> I really want to go back to work full time, I want to go back full time and I just really can't see me doing that and being on the program. It just it would be too hard…so that's one of my goals, and in order to get to that you know it's coming down off the program, which is what I'm trying to do…it's coming together but takes time. (Participant 3)

New Outcomes of iOAT

Although many of the outcomes of iOAT for participants at the time of the follow-up interviews remained consistent with those at the time of the initial interviews, some participants mentioned new outcomes within the past six months. Specifically, some participants explained that additional positive impacts of the program occurred in the time since the initial interview. One individual said, “I was sleeping on someone’s couch six months ago…I’m in my own space now, so it’s changed a lot” (Participant 20). Another participant explained their experience, saying “six months ago I was just, just entering [the program]…so now everything is kind of stabilizing, and I know what I'm doing, what’s available and what’s not” (Participant 1).

Decreased Attendance. When discussing their clinic attendance, some participants (n = 7, 38.9%) reported that they were attending the clinic twice daily for dosing, as opposed to three times daily. One participant explained that “it's just too much to be down here all day long” (Participant 9). Decreased attendance was reported to be due to either participants’ employment, to reduce the time spent at the clinic and/or travelling to and from the clinic, or due to transportation barriers impacting participant’s ability to attend the clinic three times daily. Another participant explained the reductions in their clinic attendance, saying “I can come and hang around, wait for two shots, then I usually go home tired of waiting” (Participant 1). An additional participant reported on their reduced clinic attendance, saying “mentally, [I] could not do that…physically it was taking a toll on me too” (Participant 5).

New Suggestions for Improvement

As with the initial interviews, during the follow-up interviews, participants were asked if they had any suggestions for improvement. Participants suggested that there should be more supports available to help participants achieve their program-related goals, that services should be expanded to include a safe injection site, and that the type of medications that are available at the clinic should be broadened.

Support with Program Goals. One participant suggested that there should be more supports available to participants to help them achieve their goals, specifically for individuals who would like to taper their medications with a goal of abstinence. The participant who suggested this said, “I wish there was like a program that would help you…get off, cause like you kind of control your own dose right now and control like when you want to come off” (Participant 10).

Expanding Services. Another suggestion was made to expand the services that are available at the clinic to also include a safe injection site where other individuals (not in the iOAT program) could inject their own substances under the supervision of staff, who are trained to reverse overdoses. The individual who suggested this said “I would like to have a safe injection spot. A lot of people come here looking for supplies, and then they have nowhere to do their dope” (Participant 19).

Expanding Medications Available. A few participants (n = 5, 27.8%) suggested that additional medications (e.g., heroin, fentanyl, methamphetamine) should be available at the clinic, to better meet participant needs, and to reduce the harms associated with accessing substances from the illicit drug market. One individual suggested that “any of the street drugs people are doing” should be provided as safer supply (Participant 9). According to the participants, increasing the types of medications that are available as safer supply would have important impacts, such as addressing the withdrawal symptoms of individuals, reducing engagement in criminal activities, reducing overdoses linked to the illicit drug market, and other positive outcomes related to individuals' well-being and quality of life.

Discussion

The purpose of the current study was to evaluate New Brunswick's first SSP, River Stone Recovery Centre's iOAT program, from the perspective of individuals in the program. Using a qualitative approach, the barriers and facilitators to program accessibility and success were examined at two time-points (i.e., initial and follow-up interviews), approximately six months apart. In addition to evaluating the impacts of the program on participants' lives, suggestions for program improvement were provided, which bears specific implications for River Stone Recovery Centre's iOAT program. As SSPs continue to emerge across Canada, research examining their impact has also become more available (Ledlie et al., 2024), however, gaps in the literature are still prominent, especially regarding the longer-term impact of SSPs, emphasizing the importance of the results from the current study. These results are discussed below and contrasted with novel literature examining SSPs.

Characteristics of iOAT River Stone Program Users

Participants in the current study, individuals accessing the River Stone Recovery Centre's iOAT program, have specific characteristics that may also be similar to those of individuals in other iOAT programs, or more broadly, SSPs. iOAT is offered to individuals with moderate to severe OUD (Friedmann et al., 2024), and as such, participants in the current study were experiencing severe consequences from their opioid use, including blood borne illnesses such as HCV and overdoses. Many participants reported having been previously engaged in a variety of substance use treatments including residential facilities (n = 8, 38.1%), outpatient facilities (n = 19, 90.5%), detoxification programs (*n* = 11, 52.4%), methadone maintenance therapy programs (*n* = 10, 47.6%), and/or buprenorphine programs (*n* = 8, 38.1%) over their lifetimes. Participation in a variety of substance use treatments over the course of their lifetimes suggests that such interventions were insufficient to address their needs and/or goals and the chronic nature of substance use disorders. Young et al. (2022) examined the characteristics of individuals receiving opioid safer supply in Ontario. They found that of individuals receiving safer supply, 69.1% had been prescribed OAT and 13.9% had experienced an overdose in the year prior to SSP initiation. In line with the results from the current study, Young and colleagues (2022) suggest that individuals receiving safer supply are at a high risk of experiencing opioid-related harms, and that previous treatments (i.e., OAT) had not sufficiently addressed their OUD needs.

Attesting to the complexity of individuals accessing SSPs, participants in the current study also reported high concurrent use of substances (e.g., opioids, stimulants, etc.), and unmet needs (e.g., unstable housing, food insecurity, etc.). For example, all participants reported using crystal methamphetamines in the past 30 days at the time of initial interviews, for an average of 22 days in a month, and 42.9% reported unstable housing. Both polysubstance use (Karamouzian et al., 2022; Konefal et al., 2022) and social determinants of health such as lack of stable housing (Dasgupta et al., 2018), are associated with poorer substance use outcomes for individuals with OUD, suggesting that these individuals may not have sufficient stability in their lives to benefit from traditional approaches to substance use interventions.

Initial Interviews

With regard to the initial interviews, the current research aimed to answer four research questions, namely, 1) What is the experience of participants entering River

Stone Recovery Centre's iOAT program?, 2) How does the iOAT program compare to previous programs used?, 3) What are the impacts of interruptions to participant's safer supply?, and 4) What are the impacts of being in the program on participants' lives?

Program Initiation Experience

Addressing the first research question, individuals in the current study discussed their experiences initiating the program. The importance of the low-threshold/low-barrier nature of River Stone Recovery's iOAT program were reported by many participants, who attributed their positive program initiation experiences to these aspects. Participants described that being able to walk into a welcoming clinic environment, not needing a physician's referral, and the short wait times for program initiation contributed to the low-threshold/low-barrier aspects of the program that they appreciated. Low-threshold/low-barrier, non-medicalized, and client-centered operating models for SSPs are crucial to reach individuals who are at the highest risk of experiencing opioid-related harms and are also recognized by service providers as being necessary aspects of operating a SSP (Karamouzian et al., 2023). Pauly et al. (2022), from the perspectives of PWUD, proposed a model for SSPs to operate effectively. Participants in the study, individuals with OUD, were asked to respond to the statement "safe supply would work well if…", and the results demonstrated six clusters of themes, including several falling under the umbrella of low threshold/low barrier aspects including "safe, positive and welcoming spaces", "safer supply and other services are accessible to me", "I am treated with respect", and "I can easily get my safer supply" (Pauly et al., 2022). Many substance use treatment services for PWUD have strict requirements (e.g., associated costs, undergoing detoxification prior to initiation, personal identification documentation, etc.) that act as barriers to access (Mofizul Islam et al., 2013), highlighting the importance of low-threshold services that reduce barriers and increase service accessibility.

iOAT Program Experience

With regards to the second research question, participants discussed their experiences in the iOAT program, and in comparison to previous programs they had engaged in. Participants discussed positive iOAT experiences that were related to the harm reductionist approach of the program, non-stigmatizing care (as compared to stigmatizing experiences in other healthcare settings, such as the hospital), and the program's operating practices, where there was a specific emphasis placed on carry doses, and the clinic's carry dose system. Participants also contrasted their experiences in the iOAT program to their previous experiences in traditional OAT programs.

Individuals in the current study mentioned the importance of the harm reduction philosophy used by the clinic in general, and with specific regards to the iOAT program. Participants explained that they chose the iOAT program to access a safer supply of regulated drugs, and to have the support of the clinic staff in the case of an overdose. As part of a national evaluation of SSPs, a recent study examined the impact of a SSP in Ontario, from the perspectives of program users (Henderson et al., 2024). One of the three overarching themes that emerged from their interviews was "safety" (the other themes were "renewed hope" and "feeling better"). Specifically, researchers explained that participants in their study often reported becoming engaged in the SSP to reduce harms associated with the drug toxicity crisis, and due to experiencing and/or witnessing these harms (e.g., overdoses, opioid poisoning deaths, etc.). Although the concept of safety was conceptualized as harm reduction in the current study, participants reported similar themes to those reported in the study by Henderson and colleagues (2024). In line with the importance of safety, Fischer and Robinson (2023) have stated that SSPs objectives are different than traditional OAT programs in that they should be viewed as an emergency response focused on saving lives in light of acute overdose risk and should not be compared to other OUD interventions such as OAT with respect to outcomes.

Participants in the current study also discussed the importance of the non-stigmatizing care that they were receiving in the iOAT program. Many individuals compared their current experiences in the iOAT program to those that have previously occurred in hospital settings and explained that the care that they are receiving at River Stone is non-judgemental and positive, whereas their hospital experiences were described as highly stigmatizing and negative. Non-stigmatizing care is a crucial aspect of harm reduction services (National Harm Reduction Coalition, 2020), as PWUD have been highly stigmatized and criminalized both within the healthcare system and community (Cheetham et al., 2022; Walters et al., 2022; Xavier et al., 2024). A recent study conducted in Australia examined women who inject drugs' experience of stigma and its impact on accessing healthcare services (Brener et al., 2024). Most women (75%) reported experiencing stigma from healthcare workers. In order to reduce negative experiences, 76.8% of women delayed attempts to access healthcare, 81.3% avoided discussing their drug use with healthcare workers, and 76.7% decided to not attend follow-up appointments. Scher and colleagues (2023) completed a qualitative study in British Columbia, examining PWUD perceptions of Canadian drug laws, and a main theme that emerged from their study was "stigma as a consequence of criminalization". Criminalization refers to the punitive prohibition approach used when individuals are found in possession of and/or using illegal substances (Scher et al., 2023). This study suggests that the criminalization of substance use may have increased the likelihood of experiencing negative healthcare experiences for substance users due to the impact of criminalization on stigma towards PWUD. Low-threshold/low-barrier harm reduction and safer supply models, such as automated-dispensing machines, may be beneficial in improving PWUD access to healthcare services despite previous stigmatizing experiences (Bardwell et al., 2024). Furthermore, given the high level of unmet healthcare needs in PWUD, it may be important for safer supply programs to ensure access to primary care onsite, by healthcare professionals who have experience working with PWUD. Ensuring non-stigmatizing care within SSPs, as was reported by participants in the current study, is necessary as individuals with OUD report unmet healthcare needs as a result of experiencing stigma (Judd et al., 2023; Paquette et al., 2018).

Additionally, many participants discussed the differences in their iOAT program experience as compared to their experiences in OAT programs. Participants explained that OAT was terminated as it was not sufficiently meeting their needs or due to other reasons such as being discharged for missing doses, appointments, etc. SSPs, and specifically iOAT programs, are beneficial to reach individuals who have not responded or benefited from first-line treatment (i.e., OAT; Friedmann et al., 2024; Karamouzian et al., 2023). Many participants also mentioned that while on OAT, they were using substances outside of the program, and often reported switching to iOAT to return to intravenous modes of administration which allow them to experience euphoria. Achieving euphoria has been identified as important to participants in additional research examining SSPs as well (Bardwell et al., 2023; Henderson et al., 2024). Prolonged substance use is often associated with experiencing anhedonia (i.e., a lack of pleasure and interest in previously enjoyable activities), and the euphoria achieved from using substances intravenously temporarily reduces this negative affective state (Monroe & Radke, 2023). Safer supply should be provided in a manner that allows individuals to select their method of consumption to further reduce reliance on the illicit drug market (Pauly et al., 2022), in order to prevent the harmful consequences associated with using unregulated substances.

Participants in the current study also discussed the program's operations related to carry doses, and their experiences receiving carry doses as part of the iOAT program. Participants reported challenges accessing carry doses but explained that carry doses were beneficial to allow for travel and decrease the time spent at the clinic. Increasing the accessibility and provision of OAT take-home (i.e., carry) doses has been shown to increase program retention and engagement, without increasing overdose occurrences (Gomes et al., 2022b). iOAT programs differ in their carry dose regulations, however, increasing the provision of carry doses could have similar impacts to those demonstrated with increasing OAT take-home doses. Having a variety of safer supply models (e.g., automated-dispensing machines, pharmacy pick-up, supervised consumption, etc.) may be beneficial in reaching individuals with differing needs.

Individuals receiving iOAT at River Stone also reported challenges related to the form of carry doses (i.e., 8 mg pills) not meeting their tolerance needs. Participants reported that the carry doses were less potent as compared to the liquid form that they receive normally within the iOAT program. The clinic provides hydromorphone carry doses in pill form as there are challenges with providing the carry doses in the liquid form. Specifically, the doses are only viable in the syringes for a few hours, and a full vial of hydromorphone would contain more doses than necessary for any individual

(River Stone Recovery Centre, personal communication, July 15, 2024). Reports of carry dose diversion were rare among participants. In the cases of diversion, participants explained that they diverted their medications in exchange for money or to purchase other substances, due to the carry doses not meeting their needs or not sufficiently countering their withdrawal symptoms. Ensuring that individuals are provided with carry doses in their preferred form could reduce the occurrences of diversion (Fischer & Robinson, 2023), as individuals might be less likely to divert their medications if it was meeting their needs, as was explained by participants in the current study.

Safer Supply Interruptions

Participants discussed interruptions to their safer supply, either from being hospitalized or arrested, and the impacts of such interruptions, addressing the third research question. Participants mentioned that the inability to access safer supply resulted in withdrawal symptoms, and that stigmatization in these settings further contributed to the negative experience of the interruption, often resulting in unmet needs. To reduce experiencing stigma and to access their safer supply, some individuals reported leaving the hospital before receiving care. Discharge against medical advice is common in individuals with OUD and has been attributed both to interruptions in accessing substances resulting in withdrawal symptoms, and to stigma experienced in these settings (McNeil et al., 2014; Simon et al., 2020). This results in the revolving door phenomenon, where PWUD tend to return to the hospital with more serious conditions, usually stemming from their previous unmet healthcare needs (McNeil et al., 2014). Concerns surrounding the lack of provision of safer supply in healthcare and criminal justice settings were also voiced by service providers (Karamouzian et al., 2023), as interruptions can reduce an individual’s tolerance levels, subsequently increasing their overdose risk. Specific to hospital settings, Labonté and Young (2021) suggested that intravenous hydromorphone could be safely administered to hospitalized individuals receiving safer supply, which would increase the likelihood that people with OUD would receive treatment for their medical needs and reduce negative healthcare experiences.

iOAT Outcomes

The fourth research question was addressed in the current study, with participants discussing the impacts of the iOAT program on their lives. Participants reported improvements in many areas of their lives, such as in their mental and physical health, financial stability, personal relationships, safety, and quality of life. Participants also reported decreased engagement in criminal activities. Many of these changes were related to the reduced need to access substances from the illicit drug market and to having a safer supply of medications, contributing to reductions in stress and increased feelings of safety, due in part to the reduction in overdoses. In other recent SSP evaluations, similar outcomes were reported by participants receiving safer supply. Henderson et al. (2024) reported decreased engagement in criminal activities and overall improvements in quality of life in individuals receiving safer supply in Ontario, similar to Kolla et al. (2024). As part of the national evaluation of SSPs, in line with the results from the current study, Kolla et al. (2024) also discussed improvements in participant's physical health (e.g., reduced withdrawal symptoms), decreased engagement in criminal activities, and increased safety (i.e., reduced overdoses), which align with the philosophy of safer supply.

In addition to the aforementioned improvements, participants in the current study also discussed challenges related to their engagement in the iOAT program. Some individuals explained that the doses of hydromorphone that they are receiving at the clinic are not sufficient when using fentanyl outside of the program. Similar experiences were reported among individuals receiving safer supply in other provinces (Haines & O'Byrne; Kolla et al., 2024). This highlights the necessity of providing safer supply medications in the proper dose and formulation, while also having a variety of medication options to more closely reflect the substances accessed from the illicit market, and to better meet the needs of individuals using highly potent substances that are flooding the illicit market (Xavier et al., 2024).

Participants also mentioned the time constraints associated with clinic attendance and transportation, and the negative impacts that it has on their mental health (due to spending a large portion of their day at the clinic or travelling to and from the clinic). Furthermore, some individuals explained that they have unmet mental health needs and that the program is not equipped with the proper resources to address these needs. Reported unmet mental health needs demonstrate the importance of wrap-around supports, as mental health comorbidities are high in individuals with substance use disorders (Bakos-Block et al., 2020), and such comorbidities can negatively impact substance use outcomes and overall well-being (Santo et al., 2022; Zhu et al., 2021). In addition, although some participants in the current study discussed improvements in their personal relationships, others mentioned challenges regarding this aspect of their lives. Specifically, individuals explained that they often did not share with their family and friends the specific nature of the program they were engaged in (i.e., iOAT), for fear of judgement or disapproval, as these individuals often disapproved of injection drug use. It is unclear whether the lack of disclosure is due to previous negative experiences when divulging iOAT participation or if it is due to participants feeling self-conscious of their participation in iOAT. Friedmann et al. (2024) mentioned that self-stigmatization within iOAT participants (i.e., feeling as the program is only for “hopeless cases”) could impact individuals wanting to access the program, and iOAT expansion. Targeting stigma at all levels, including iOAT participants’ self-stigmatization related to their program engagement, is important if the goal is to expand such services (Friedmann et al., 2024).

Follow-Up Interviews

In the current study, follow-up interviews were used to assess the longer-term impacts of iOAT program engagement, and to identify any new challenges related to participating in an iOAT program, given the limited research available on longer-term effects. Additionally, data on indicators of functioning (e.g., housing stability, substance use patterns, etc.) were collected during the follow-up interviews.

Substance Use Patterns

Participants reported on their lifetime and past 30-day substance use at the initial and the follow-up interviews, and changes in their patterns of substance use were observed. Regarding the number of days that a category of substance was used in the past 30 days, participants reported decreased use of alcohol, cannabis, crystal methamphetamines, other stimulants excluding crack, and sedatives at follow up interviews, relative to the timing of initial interviews. Participants reported increases in the number of days they had used crack, other opioids, and hallucinogens within the past 30 days, when compared to initial interviews. Changes in participants’ substance use patterns, may be related to the nature of the illicit drug supply, which is in a state of constant flux, impacting the types of substances that PWUD use but also their tolerance levels, which in turn affects the frequency at which they might access drugs to avoid withdrawal symptoms (Payer et al., 2020). Specifically, some participants may have increased their use of some substances if their needs were not being adequately met with the medications provided in the iOAT program. For example, increased frequency of use of other opioids may be related to the inadequacy of the opioids (i.e., hydromorphone) to counter withdrawal symptoms, resulting in some individuals accessing and using more opioids from the illicit drug market, as was demonstrated in other SSP evaluations (Bardwell et al., 2023; Haines & O'Byrne, 2023). Changes in other patterns of substance use, such as those reported by participants with respect to reduced crystal methamphetamines and other stimulant use may be related to participants' reduced engagement with the illicit drug market. Reductions in reliance and use of substances from the illicit drug market in individuals receiving safer supply was noted in additional SSP evaluations (Haines & O'Byrne, 2023; Kolla et al., 2024).

Longer-Term iOAT Experience

Regarding the follow-up interviews, the research questions that were formulated were 1) How do participants' experiences change after being in the iOAT program for six months, and 2) What are the new impacts and challenges of being in the iOAT program for participants? Although most participants remained satisfied with the iOAT program at the follow-up interviews, new challenges also arose. Participants discussed the stigma present in the community where River Stone is located and challenges with the medications prescribed in the iOAT program.

Participants mentioned the community stigma that is present where River Stone Recovery Centre's iOAT program is located. Some individuals expressed uncertainty regarding the future of the clinic because of the community stigma, while others discussed negative impacts of being associated with the iOAT program (i.e., challenges finding employment attributed to being seen in and/or around the program's location). The stigma reported by participants may be related to the communities' disapproval for the program's location, and to the 'not in my backyard phenomenon', which describes individuals who are less supportive of social services located within their own communities (Socia et al., 2021). Community perceptions and opinions are often related to the political context of a service's location. Morris et al. (2023) demonstrated that in the context of Alberta and Saskatchewan, individuals who are more conservative in their political stance tend to be less supportive of harm reduction initiatives. In the current study, participant's concerns related to the future of the iOAT program stemmed from the community stigma present but may also be related to the political climate in New Brunswick. Recently, the New Brunswick government has pushed for the use of forced abstinence-based treatment models to address substance use disorders (Cox, 2023), despite the ethical concerns and lack of evidence suggesting positive outcomes from forced substance use disorder treatment (Werb et al., 2016).

Public and political opinion influences funding for and the availability of harm reduction services (Wild et al., 2021). Educating the public on the impact of harm reduction services may help to improve the support, funding, and availability of services, while also targeting the community stigma that is present. Effective interventions to reduce stigma towards individuals with mental illness have included educating the public and healthcare providers and increasing contact between the stigmatized group and the public (National Academies of Sciences, Engineering, and Medicine, 2016). Similarly, efforts to reduce stigma towards individuals with substance use disorders could also focus on educating the public and healthcare providers (e.g., hospital staff), as stigmatizing community and hospital experiences were reported by participants in the current study. With regard to community stigma, several participants mentioned River Stone Recovery's efforts to increase contact with the community through inviting community partners into the clinic; continuing such efforts in combination with education may be effective in addressing the community stigma present.

Additionally, participants discussed challenges related to both the iOAT medication type, and the medication composition. Some participants explained that when using highly potent substances from the illicit drug market (e.g., fentanyl), the hydromorphone prescribed in the iOAT program was insufficient to manage their withdrawal symptoms. Participants explained that alternative medications, such as fentanyl and heroin, would better meet their needs. Injectable heroin in supervised settings has been shown to be effective in the treatment of severe OUD in numerous randomized control trials, including trials completed in Canada (Strang et al., 2015). Due to its demonstrated effectiveness, Health Canada has approved injectable heroin to be used in the treatment of severe OUD (Health Canada, 2019). Challenges related to the medications that are available in SSPs have been discussed in other recent evaluations (Haines & O'Byrne, 2023; Henderson et al., 2024; Kolla et al., 2024), demonstrating the importance of considering the medication types, and ensuring that they most accurately reflect the substances that are available in the illicit drug market.

Participants also expressed concerns surrounding the medication composition, with some individuals being under the impression that the medication contained Narcan, and that it was causing them to experience withdrawal symptoms. Some individuals expressed that these challenges with the medication composition could be due to the pharmaceutical brand of medication that the clinic was using. Similar experiences were reported by participants at an SSP in British Columbia (Kolla et al., 2024), where individuals felt that the brand name medication, Dilaudid® was stronger than the generic drug, hydromorphone. As was reported by SSP service providers, due to many factors (i.e., governing physician board regulations, availability and production of the substance, etc.), SSPs may not be able to access the preferred medication brand (Karamouzian et al., 2023). However, providing SSP users with knowledge of these challenges, and informing them of the medication brand that is being used, may help to foster feelings of trust.

In the current study, some of the participants who mentioned that the medication type and/or composition was not meeting their needs also discussed that because of this, they tended to divert their carry doses. Although diversion was infrequently reported during the follow-up interviews, participants who did divert their carry doses reported that they did so to access their preferred medication type from the illicit drug market. As mentioned earlier, providing medications and carry doses in the form and type that program users want is important, and may help to reduce the instances of diversion (Friedmann et al., 2024). However, River Stone has recently changed their policies to only allow for the provision of methadone as carry doses, instead of the previously used hydromorphone carry doses (River Stone Recovery Centre, personal communication, July 15, 2024). This change occurred in April 2024 and was explained to be due to the political pressures and negative views towards other SSPs in Canada, specifically related to concerns surrounding the diversion of carry doses.

Longer-Term iOAT Outcomes

The second research question was addressed in the follow-up interviews when participants discussed the new impacts and challenges of being in the iOAT program.

Participants discussed many of the same outcomes as were mentioned during the initial interviews (e.g., improvements in well-being, safety, etc.), although they also mentioned new challenges and outcomes of being in the iOAT program. Specifically, many individuals divulged that they were considering, or in the process of, switching to alternative programs. Some participants explained that alternative programs were being considered due to the intensive nature of the iOAT program, and the daily attendance requirements. Many participants explained that they planned to switch to an OAT program, and specifically mentioned their interest in switching to Sublocade®, a monthly OAT injection. Individuals who discussed switching to Sublocade® explained that they felt that the decreased time commitments associated with the monthly injection would benefit their well-being. Other participants explained that switching to an OAT program was the next step in their recovery plan, with their long-term goal being abstinence. Lastly, other participants explained that they were content with the structure of the iOAT program but were considering ceasing their engagement or switching programs due to the medications not meeting their needs. These individual differences present in participants' reasons for considering alternative programs highlight both the importance of individualized care (Volkow, 2020) and having a variety of programs available to individuals with OUD seeking treatment or services (Kolla et al., 2024).

In addition to considering alternative programs, many individuals in the current study also reported decreased clinic attendance as a long-term iOAT outcome during the follow-up interviews. Participants reported that they were only attending the clinic twice daily, as opposed to three times a day. Decreased clinic attendance was attributed to the time constraints associated with daily attendance impacting employment opportunities, or due to transportation barriers. Challenges with daily attendance requirements and transportation were also mentioned during the initial interviews in the current study and have been reported in additional SSP evaluations as well (Henderson et al., 2024; Kolla et al., 2024). These findings further demonstrate the importance of individualized care, and the consideration of individual goals (e.g., employment) and constraints (e.g., transportation challenges) when planning the care and treatment of those with OUD (Volkow, 2020).

Implications

The findings from the current study have many important implications, including both empirical and clinical implications, which are discussed below.

Research Implications

The results from the current study contribute to the growing body of research supporting the effectiveness of SSPs in mitigating the harms associated with the drug toxicity crisis. Positive program experiences were reported in the current study, along with improvements across different areas of participant's lives, such as in their mental health and financial stability, in addition to decreased frequency of use of several substances and participation in criminal activity. The current study also identified challenges related to being enrolled in an iOAT program, such as challenges with transportation, daily attendance, and what was perceived as the inadequate medications that are currently available within the program. Non-stigmatizing care and a low-threshold, harm reduction approach to the program's operations were central to the reported positive experiences and outcomes mentioned by participants. Although some of these aspects have been reported in other studies assessing SSPs (e.g., see Henderson et al., 2024 and Kolla et al., 2024), these findings contribute to the body of literature in that, although there are regional differences in illicit drug markets, there appears to be a 'common SSP experience' for clients, where non-stigmatizing and harm reduction focused care contribute to the outcomes reported by SSP clients. Furthermore, most SSP evaluations have been conducted at one time point, which is why the current study included initial interviews and follow-up interviews approximately six months later. The follow-up interviews demonstrated that over time, the goals of some individuals engaged in the iOAT program changed, with some individuals expressing their goals of abstinence and plans to taper off of the program at the follow-up interviews, and others wanting to find employment and switching to a monthly OAT injection. The goals and needs of iOAT clients differ, and changes in these aspects over time are expected, as was reported in another iOAT evaluation (Oviedo-Joekes et al., 2023). This further demonstrates the importance of individualized care that is responsive to the changing goals and needs of individuals in these programs.

The national evaluation of SSPs, which included the site evaluation that composes this thesis, was designed to include interviews with both service providers and clients, however, interviews occurred separately and at different time points. Future research may consider using a focus group approach where service providers and clients can engage in discussion simultaneously to identify the program's strengths and challenges. Facilitating such research could help to bridge the gaps that are present between the understanding and experiences of service providers when compared to that of clients. Given that SSPs are relatively newer harm reduction programs, further research should continue to focus on examining these models. Krausz et al. (2024) recently discussed concerns regarding the lack of evidence-based studies examining the efficacy of SSPs, specifically non-supervised models, and suggested that larger scale randomized controlled studies of SSPs are needed before further implementation of such programs. As such, future research may consider using randomized controlled trials to examine program effectiveness. However, SSPs operate as harm reduction services, and a non-medicalized approach is important to reaching individuals with severe OUD (Pauly et al., 2022), especially given the stigmatizing healthcare experiences reported by PWUD. To refrain from the over-medicalization of SSP research, a mixed-methods evaluation including focus groups with clients and service providers, along with collecting quantitative data on client outcomes, may be more appropriate. Krausz et al. (2024) also recommended integrating psychosocial care within SSP models. Given the unmet mental health and social needs that were identified by participants in the current study, and the high rates of both mental health comorbidities (Bakos-Block et al., 2020) and social challenges (e.g., unstable housing; Milaney et al., 2021) in PWUD generally, future research examining if outcomes and retention improve when psychosocial interventions are integrated with SSPs would be beneficial. Furthermore, examining the impact of uninterrupted access to safer supply in hospital and jail/prison settings is relevant, given the negative impacts of such interruptions to participants' safer supply that were identified in the current study. Interruptions to safer supply influence tolerance levels, and overdoses are the leading cause of death one week after being released from jail/prison settings (Borschmann et al., 2024), highlighting the importance of such research.

Clinical Practice Implications for SSPs

The current study also has implications for clinical practices related to operating a SSP and to the treatment of individuals with OUD. Participants in the current study repeatedly emphasized the importance of the non-stigmatizing care that they were receiving as part of the iOAT program, and of the importance of the low-threshold and harm reduction approach of the program in meeting their needs. Future programs should also focus on these aspects of non-stigmatizing care in low-threshold, harm reduction environments. Furthermore, the current study demonstrated the central value of individualized care in the treatment of OUD, as individual differences (i.e., in goals, substance use experiences, etc.) were present among participants. Individual differences also highlight the importance of having a variety of programs available to those with substance use disorders, so that there are appropriate options for all individuals seeking services or treatment, at all stages of their recovery.

Implications for River Stone Recovery Centre

The current study evaluated River Stone Recovery Centre's iOAT program, from the perspectives of individuals in the program, and therefore has implications for the clinic and the clinic's operating practices. Specifically, the suggestions provided by participants for program modifications may be used to inform program changes, where relevant. For example, River Stone Recovery Centre might consider expanding their iOAT program to include the provision of a safer supply of other medications (e.g., fentanyl), as was suggested by participants. Fentanyl patches were reported to be effective for individuals receiving them within the SAFER program in Victoria, British Columbia, although the need for other consumption methods (i.e., smokable fentanyl options) was also identified (Kolla et al., 2024). Related to the expansion of available medication options, the River Stone Recovery Centre is part of a national research trial examining the use of lisdexamfetamine (i.e., a medication used in the treatment of attention deficit hyperactivity disorder) for methamphetamine use disorder (Armstrong, 2024; Canadian Institutes of Health Research, 2024). Although stimulant replacement therapy is already offered at River Stone Recovery Centre, the national research trial may further assist in River Stone's ability to treat concurrent substance use disorders. Participants in the current study reported frequent use of stimulants, such as crystal methamphetamines, in addition to their opioid use. In Canada during the year of 2023, there were 3,479 suspected stimulant toxicity deaths (Public Health Agency of Canada, 2024), demonstrating the importance of also addressing stimulant use.

Strengths and Limitations

The current study aimed to assess the experiences of individuals engaged in River Stone Recovery Centre's iOAT program, using a qualitative design emphasizing the perspective of participants. As such, a strength of the study was that the iOAT program was evaluated from the perspectives of those using the program, which allowed for an understanding of the impact of the program on participants' lives and for any unmet needs or challenges to be identified. Program evaluations from the perspective of PWUD is critical, as identifying unmet needs can inform program changes, while also identifying the aspects that are important to PWUD and their positive program experiences. PWUD have also been, and continue to be, a highly stigmatized group, that has been underrepresented in research, also demonstrating the importance of hearing from their perspective and validating their experiences (Brener et al., 2024). Highlighting the importance of including PWUD in research, a participant in the study by Kolla et al. (2024) said "…get a voice. And if we get a voice, maybe we'll get some change. And if we get some change, maybe people will stop dying" (p. 6). PWUD were involved in the study design (e.g., providing input on the research questions and the semi-structured interview guide), and continue to be engaged throughout current and future research dissemination. Furthermore, the longer-term impacts of iOAT program engagement and challenges were also identified, demonstrating an additional study strength, given the limited research available examining longer-term outcomes.

Although there are many strengths of the current study, there are also limitations that are important to consider. The interviews with iOAT participants occurred at River Stone Recovery Centre's location, which may have influenced participants' willingness to disclose their experiences honestly. However, participants were informed that their participation in the interviews would not influence the services that they receive in the iOAT program, and the interviews were conducted in a private location to ensure confidentiality. Participants in the study were quite forthcoming with information regarding their experiences, and discussed topics (e.g., diversion) that under different circumstances, may have influenced their ability to continue in the iOAT program (from being banned due to diversion). Because of the openness of participants during the interviews, concerns surrounding their willingness to answer questions honestly are minimal.

In addition, the current study was an evaluation of an iOAT program located in a relatively small city in New Brunswick, and therefore, the results from the project may not be reflective of the experiences of individuals receiving services elsewhere, due to factors such as differences in drug supply, population density, and community stigma. However, similarities in outcomes and challenges are noted between the findings of the current study and those drawn from other evaluations (e.g., reduced engagement in criminal activities, improvements in quality of life, challenges with medications available, transportation barriers, etc.). The iOAT program evaluated also has specific operating rules that vary from other SSPs generally (e.g., daily supervised dosing, carry dose regulations, etc.). Although the results may not be completely generalizable to

SSPs across Canada, it is important to evaluate programs regionally (i.e., in New Brunswick), as there are factors (e.g., the nature of the illicit drug market, politics, community perceptions, etc.) that differ regionally. An additional limitation of the current study is that not all iOAT users who participated in the initial interviews were available (due to incarceration or being banned from the clinic) to participate in the follow-up interviews, further impacting generalizability. However, efforts were taken to contact all individuals who were not initially available to invite them to participate in the follow-up interviews. These efforts resulted in one participant who had left the program being recruited to complete the follow-up interview. Lastly, the current study implemented a qualitative design, and although it was not the purpose of the current study, including quantitative assessment of participant outcomes (e.g., examining if frequency of use differs statistically from initial to follow-up interviews, etc.), would be beneficial to add to the literature examining SSP effectiveness.

Conclusion

Given the presence of the opioid toxicity crisis and its unpredictable nature, expanding harm reduction services is critical in the continuum of care offered to individuals with OUD. The results from the current study support the impact of SSPs in reducing the harms associated with the drug toxicity crisis, while also improving the quality of lives of participants. Challenges related to program accessibility (e.g., transportation, daily attendance) and the medications that are available within SSPs were identified, demonstrating possible areas of improvement for new programs being implemented. The current study offers further evidence that SSPs have an important role to play in the lives of PWUD. In addition to continuing SSP evaluations, future research should examine the recovery pathways of PWUD to identify where SSPs fit within a long-term trajectory for drug recovery.

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Table 1

Demographic Statistics for Initial and Follow-Up Interviews

	Initial Interviews				Follow-Up Interviews			
Variable	*M*	*SD*	%	*n*	*M*	*SD*	%	*n*
Age	34.10	6.34			34.28	6.16		
Gender								
Woman			52.4	11			55.6	10
Man			47.6	10			44.4	8
Ethnicity								
European origin			81.0	17			83.3	15
BIPOC			19.0	4			16.7	3

Note. *N* = 21 (initial interviews); *N* = 18 (follow-up interviews). BIPOC = Black, Indigenous, and people of colour.

Table 2

Descriptive Outcome Statistics

	Initial Interviews		Follow-Up Interviews			
Variable	%	*n*	%	*n*	*M*	*SD*
Overdose History						
Lifetime overdose			72.2	13		
Past 6-month overdose			27.8	5		
Past 6-month overdose rate					1.06	3.52
Housing						
Unhoused	42.9	9	44.4	8		
Housed	57.1	12	55.6	10		
Income Source						
Social assistance	100	21	94.4	17		
Paid job	14.3	3	27.8	5		
Other government programs	9.5	2	5.6	1		
Illegal Activities	9.5	2	5.6	1		
Jail/Prison History						
Lifetime incarceration	81.0	17	77.8	14		
New incarcerations (past 6-month)			38.9	7		
Past Substance Use Treatment						
Residential Facility	38.1	8				
Outpatient Facility	90.5	19				
Detoxification	52.4	11				

	Initial Interviews		Follow-Up Interviews			
Variable	%	*n*	%	*n*	*M*	*SD*
Methadone Maintenance Therapy	47.6	10				
Buprenorphine/Suboxone®	38.1	8				
HIV Diagnosis	0	0	0	0		
HCV Diagnosis	81.0	17	72.2	13		
HCV Treatment	64.7	11	84.6	11		

Note. *N* = 21 (initial interview); *N* = 18 (follow-up interview). Unhoused = homeless or staying at shelters; HIV = Human Immunodeficiency Virus; HCV = Hepatitis C Virus. Percentages do not always add up to 100% as certain response choices are not mutually exclusive or due to missing data. Percentages for HCV treatment are reflective of the number of individuals receiving treatment of those with an HCV diagnosis.

Table 3

Substance Use Descriptive Statistics

	Initial Interviews						Follow-up Interviews					
	Yes		No				Yes		No			
Substance	%	*n*	%	*n*	*M*	*SD*	%	*n*	%	*n*	*M*	*SD*
Alcohol (used in the past 30 days)	19.0	4	81.0	17			0	0	100	18		
Alcohol (30-day count)					0.33	0.80					0	0
Cannabis (used in the past 30 days)	95.2	20	4.8	1			61.1	11	38.9	7		
Cannabis (30-day count)					11.14	13.85					4.06	8.29
Crack (used in the past 30 days)	14.3	3	85.7	18			44.4	8	55.6	10		
Crack (30-day count)					0.33	0.91					2.39	6.96
Crystal methamphetamine (used in the past 30 days)	100	21	0	0			94.4	17	5.6	1		
Crystal methamphetamine (30-day count)					22.24	10.05					18.17	10.04
Other Stimulants (used in the past 30 days)	33.3	7	66.7	14			5.6	1	94.4	17		
Other Stimulants (30-day count)					1.23	2.26					0.06	0.24

	Initial Interviews						Follow-up Interviews					
	Yes		No				Yes		No			
Substance	%	*n*	%	*n*	*M*	*SD*	%	*n*	%	*n*	*M*	*SD*
OAT drugs (non-prescribed; used in the past 30 days)	4.8	1	95.2	20			5.6	1	94.4	17		
OAT drugs (non-prescribed; 30-day count)					0.10	0.44					0.17	0.71
Other Opioids (used in the past 30 days)	76.2	16	23.8	5			61.1	11	38.9	7		
Other Opioids (30-day count)					7.48	9.09					9.33	12.86
Sedatives (used in the past 30 days)	42.9	9	57.1	12			5.6	1	94.4	17		
Sedatives (30-day count)					2.29	4.19					0.28	1.18
Hallucinogens (used in the past 30 days)	4.8	1	95.2	20			5.6	1	94.4	17		
Hallucinogens (30-day count)					0.19	0.87					1.11	4.71
Dissociatives (used in the past 30 days)	0	0	100	21			0	0	100	18		
Dissociatives (30-day count)					0	0					0	0
Other drugs (used in the past 30 days)	9.5	2	90.5	19			5.6	1	94.4	17		
Other drugs (30-day count)					0.57	2.20					0	0

Note. Substances reported are non-prescribed. Other stimulants = any other stimulants excluding methamphetamines (e.g., cocaine, speed, Ritalin, Dexedrine, Adderall, amphetamines); dissociatives = phencyclidine, ketamine, GHB, etc.); other drugs = any other substances (e.g., new psychoactive substances, anabolic steroids/ hormones, nitrous oxide, nitrites, diet pills, over-the-counter medicine for allergies, colds, cough, or sleep, etc.). Percentages do not always add up to 100% due to missing data.

Table 4

Themes Identified Using IPA for Initial Interviews

Group Experiential Themes	Group Experiential Sub-Themes	Personal Experiential Themes
Program Initiation	Low-Threshold/Low-Barrier	
Characteristics and Philosophy of the Program	Harm Reduction	
	Negative Hospital Experiences	
	iOAT vs. OAT	
	Program Operations	
	Clinic Staff	
	Group Doctor's Appointments	
Participants' Outcomes in iOAT	Interruptions to Safer Supply	
	Peer Relationships	
	Satisfaction with Program	
	Physical Health	
	Mental Health	

Group Experiential Themes	Group Experiential Sub-Themes	Personal Experiential Themes
	Financial Stability	
	Engagement in Criminal Activities	
	Personal Relationships	
	Safety	
	Substance Use	
	Quality of Life	
	Barriers to Accessing Safer Supply	
Suggestions for Improvement	Clinic Rules	Increased carry dose accessibility
		Changing carry dose form
		Carry doses as an alternative to nighttime medications
		Immediate dose changes

Group Experiential Themes	Group Experiential Sub-Themes	Personal Experiential Themes
		Attending the Clinic Twice Daily and
		Receiving Carry Doses for Other Doses
		Increased Number of Doses/Day
	Additional Services	Increased Doctor Appointments (one-on-one)
		Harm Reduction Supply Accessibility
		Increased Programming
		More Snacks and a Larger Water Station
	Access	Additional Transportation Assistance
		Increasing the Clinic's Operating Hours
		Increasing PWUD's Knowledge of Program
		Having Additional Program Locations
		Larger Dosing Area and Waiting Room

Table 5

Themes Identified Using IPA for Follow-Up Interviews

Group Experiential Themes	Group Experiential Sub-Themes	Personal Experiential Themes
Program	Wait Times for Doctor's Appointments	
	Community Stigma	
iOAT Medications	Medication Type	
	Medication Composition	
Carry Doses	Clinic's Carry Dose System	
	Diversion	
Alternative Programs		
New Outcomes of iOAT	Decreased Attendance	
New Suggestions for Improvement		Increased Support with Program Goals
		Having a Safe Injection Site
		Expanding Medications Available

Appendix A

Client Questionnaire

Safer Supply Programs Study

Interview Guide

Client #

On behalf of the study team, I'd like to thank you for agreeing to participate. To begin, I'd like to go over a few details of the interview. The goal of the study is to learn about patient and provider perspectives and experiences of new safe supply programs. In this interview, I will be asking you about your experiences of trying to get care in an SSP model, your interactions with various providers in the program, and what impacts the program has on your health and HIV and/or HCV prevention/treatment. I'm going to start by asking some information about you like your age and gender, your housing and work situation. I would like to remind you that this interview will be audio recorded and should take about an hour to complete. The information you provide me with today will be combined with what we hear from others. All the information you provide is confidential and your decision to participate in this interview will in no way impact the services you receive. Some of the questions are about matters which some people find sensitive and personal. You do not have to answer any question that you don't want to, and you can stop taking part in the interview at any time. If you do not understand a question, please ask me to make it clearer for you.

Is it okay to start the interview now?

TURN ON TAPE RECORDER

STATE PARTICIPANT #

Client Questionnaire (when entered online, all will have "(99) Prefer not to answer" as an option)

I want to start off by asking you a few questions about yourself for context.

1) **What year were you born?**

   ____

2) **What is your gender?**

   (1) Cis man

   (2) Cis woman

   (3) Transgender man

   (4) Transgender woman

   (5) Non-binary or gender fluid

   (6) Other, please specify: ___________________________

3) **Do you identify as First Nations, Métis, and/or Inuit?** If yes, select all that apply.

	Yes (01)	No (00)
a) Yes, First Nation	❑	❑
b) Yes, Métis	❑	❑
c) Yes, Inuit	❑	❑

4) **In our society, people are often described by their race or racial background. For example, some people are considered "White" or "Black" or "East/Southeast Asian," etc. Which race category best describes you?** Select all that apply.

	Yes (01)	No (00)
a) Black (African, Afro-Caribbean, African Canadian descent)	❑	❑
b) East Asian (Chinese, Korean, Japanese, Taiwanese descent)	❑	❑
c) Southeast Asian (Filipino, Vietnamese, Cambodian, Thai, Indonesian, other Southeast Asian descent)	❑	❑
d) Indigenous (First Nations, Métis, Inuk/Inuit)	❑	❑
e) Latino (Latin American, Hispanic descent	❑	❑
f) Middle Eastern (Arab, Persian, West Asian descent, e.g., Afghan, Egyptian, Iranian, Lebanese, Turkish, Kurdish, etc.	❑	❑
g) South Asian (South Asian descent, e.g., East Indian, Pakistani, Bangladeshi, Sri Lankan, Indo - Caribbean, etc.)	❑	❑
h) White (European descent)	❑	❑
i) Another race category not described above, please specify:		

5) **Most often in the last 30 days, where did you live?**

(1) Supportive or transitional group housing

(2) An apartment, house, or condo (you rent)

(3) An apartment, house, or condo (you own)

(4) Staying with friends, family, or partner

(5) A hotel/ motel or room that I rent by the night/ week or month

(6) Shelters

(7) Homeless and living on the street, abandoned building, tent/encampment, car/vehicle, outside

(8) Isolation site, physical distancing site or other COVID-19 related housing

(9) In a long-term care facility

(10) Other, Please specify : ________________________

6) **People can get income from a lot of sources. In the past 12 months, did you…**

Please include part-time jobs, contract work, self-employment, and any other paid work.

(0) Have a paid job

(1) ODSP/ OW

(2) Other government programs

(3) Sex work

(4) Other illegal activities?

7) **Have you ever been in jail or prison?**

(0) No [SKIP TO Q8]

(1) Yes

8) **Have you been to jail or prison in the past 12 months?**

(0) No

(1) Yes

9) **Have you previously engaged with addictions treatment?**

	Yes (01)	No (00)
a) Live in addiction treatment	❑	❑
b) Detox	❑	❑

c) Outpatient addiction treatment	❑	❑
d) Methadone maintenance therapy	❑	❑
e) Buprenorphine/ Suboxone®	❑	❑

10) **Have you ever received an HIV+ diagnosis?**

(0) No [SKIP TO Q11]

(1) Yes

11) **Are you taking any medications for HIV?**

(0) No

(1) Yes

12) **Is your viral load suppressed/ undetectable?**

(0) No

(1) Yes

13) **Have you ever received a hepatitis C+ diagnosis?**

(0) No [SKIP TO Q14]

(1) Yes

(99) Refused

14) **Have you taken any medications for HCV?**

(0) No- never

(1) Yes- But did not finish the treatment

(2) Yes- Finished the treatment

(3) Yes- now

SUBSTANCE USE

In this section I will ask you a few questions about your substance use. These include substances not prescribed to you by a physician (or other health care provider) and/or substances which you use in ways other than how they were prescribed. For each group of substances, I will ask if you've ever used them before, if you've used them in the past 30 days, on how many days, and what your main route of administration (smoking, injection, other) was.

15) **Which of the following substances have you *used for non-medical reasons and in the past 30 days*? What was your main route of administration?**

Substance(s) Groups	I.		II.		III.	IV.
	Ever?		Past 30 days?		On how many days in the past 30 days did you use this drug?	Main Route of Administration last 30 days
	Yes (01)	No (00)	Yes (01)	No (00)		Smoke (S) Inject (I) Other (O)
A) Alcohol (beer, wine, liquor, etc.)	❑	❑	❑	❑	______ day(s)	N/A

B) Cannabis (marijuana, pot, grass, hash, weed, THC, etc.)	❑	❑	❑	❑	______ day(s)	
C) Crack	❑	❑	❑	❑	______ day(s)	
D) Crystal Meth (ice, jib, glass, tina)	❑	❑	❑	❑	______ day(s)	
E) Any other stimulants or uppers (e.g., cocaine, speed, Ritalin, Dexedrine, Adderall amphetamines, methamphetamines)	❑	❑	❑	❑	______ day(s)	
F) Any OAT drugs (e.g., methadone, Suboxone®/ buprenorphine, Kadian®)	❑	❑	❑	❑		
G) Any opioids (e.g., heroin, morphine, Dilaudid®, fentanyl, codeine, Percocet®, Percodan®, OxyContin®, oxycodone, Vicodin®, etc.)	❑	❑	❑	❑	______ day(s)	
H) Sedatives/hypnotics/ anxiolytics/barbituates or	❑	❑	❑	❑	______ day(s)	

downers (e.g., Valium®, Xanax®, Ativan®, Klonopin®, Ambien®, Sonata®, phenobarbiral, etc.)						
I) Hallucinogens (e.g., LSD, acid, peyote, mescaline, psilocybin, ecstasy [MDMA, molly], bath salts, DMT, etc.)	❑	❑	❑	❑	______ day(s)	
J) Dissociatives or phencyclidine and related substances (e.g., PCP [angel dust], ketamine [special K, vitamin K]), GHB, etc.)	❑	❑	❑	❑	______ day(s)	
K) Any Other drugs (e.g., new psychoactive substances, anabolic steroids/ hormones, nitrous oxide [laughing gas, whippets], nitrites [poppers], diet pills [phentermine], over-the-counter medicine	❑	❑	❑	❑	______ day(s)	

for allergies, colds, cough, or sleep, etc.) Other – please specify: ________________						

16) Have you **ever injected any drugs** for non-medical reasons**?**

- ❑ (0) No
- ❑ (1) Yes
- ❑ (99) Prefer not to answer the question

Appendix B

Follow-Up Client Questionnaire

Safer Supply Programs Study

Wave 2

Interview Guide

Client #

On behalf of the study team, I'd like to thank you for agreeing to participate in this second interview. As you might remember, the goal of the study is to learn about patient and provider perspectives and experiences of new safe supply programs. In this interview, I will be asking you about how you have been doing since the last time we talked, what has changed or stayed the same and the impact of the program on your health. I'm also going to start by asking some information about you like your housing and work situation. I would like to remind you that this interview will be audio recorded and should take about an hour to complete. The information you provide me with today will be combined with what we hear from others. All the information you provide is confidential and your decision to participate in this interview will in no way impact the services you receive. Some of the questions are about matters which some people find sensitive and personal. You do not have to answer any question that you don't want to, and you can stop taking part in the interview at any time. If you do not understand a question, please ask me to make it clearer for you.

Is it okay to start the interview now?

TURN ON TAPE RECORDER

STATE PARTICIPANT #

Clients Questionnaire (when entered online, all will have “(99) Prefer not to answer” as an option)

I want to start off by asking you a few questions about yourself for context.

17) **What year were you born?**

____

18) **What is your gender?**

(1) Cis man

(2) Cis woman

(3) Transgender man

(4) Transgender woman

(5) Non-binary or gender fluid

(6) Other, please specify: ___________________________

19) **Do you identify as First Nations, Métis, and/or Inuit?** If yes, select all that apply.

	Yes (01)	No (00)
a) Yes, First Nation	❑	❑
b) Yes, Métis	❑	❑
c) Yes, Inuit	❑	❑

20) **In our society, people are often described by their race or racial background. For example, some people are considered “White” or “Black” or “East/Southeast Asian,” etc. Which race category best describes you?** Select all that apply.

	Yes (01)	No (00)
j) Black (African, Afro-Caribbean, African Canadian descent)	❑	❑
k) East Asian (Chinese, Korean, Japanese, Taiwanese descent)	❑	❑
l) Southeast Asian (Filipino, Vietnamese, Cambodian, Thai, Indonesian, other Southeast Asian descent)	❑	❑
m) Indigenous (First Nations, Métis, Inuk/Inuit)	❑	❑
n) Latino (Latin American, Hispanic descent	❑	❑
o) Middle Eastern (Arab, Persian, West Asian descent, e.g., Afghan, Egyptian, Iranian, Lebanese, Turkish, Kurdish, etc.	❑	❑
p) South Asian (South Asian descent, e.g., East Indian, Pakistani, Bangladeshi, Sri Lankan, Indo - Caribbean, etc.)	❑	❑
q) White (European descent)	❑	❑
r) Another race category not described above, please specify:		

21) **Most often in the last 30 days, where did you live?**

(1) Supportive or transitional group housing

(2) An apartment, house, or condo (you rent)

(3) An apartment, house, or condo (you own)

(4) Staying with friends, family, or partner

(5) A hotel/ motel or room that I rent by the night/ week or month

(6) Shelters

(7) Homeless and living on the street, abandoned building, tent/encampment, car/vehicle, outside

(8) Isolation site, physical distancing site or other COVID-19 related housing

(9) In a long-term care facility

(10) Other, Please specify : ________________________

22) **People can get income from a lot of sources. In the past 12 months, did you…**

Please include part-time jobs, contract work, self-employment, and any other paid work.

(0) Have a paid job

(1) Social assistance/disability

(2) Other government programs

(3) Sex work

(4) Other illegal activities?

If yes, how often do you work?

Part-time

☐ Full-time

☐ Temporary/Contract (including shift work and under the table work)

☐ Seasonal

☐ Prefer not to answer

7) What is your current relationship status?

☐ Single

☐ Married or cohabitating

☐ Separated or divorced

☐ Widowed

☐ Prefer not to answer

Has this changed since our last interview?

8) Have you ever been in jail or prison?

(0) No [SKIP TO Q8]

(1) Yes

9) Have you been to jail or prison in the past 6 months?

(0) No

(1) Yes

10) Have you engaged with any other addictions treatment in the past 6 months ?

	Yes (01)	No (00)
a) Live in addiction treatment	❑	❑
b) Detox	❑	❑
c) Outpatient addiction treatment	❑	❑
d) Methadone maintenance therapy	❑	❑
e) Buprenorphine/ Suboxone®	❑	❑

11) Have you ever received an HIV+ diagnosis?

(0) No [SKIP TO Q11]

(1) Yes

12) Are you taking any medications for HIV?

(0) No

(1) Yes

13) Is your viral load suppressed/ undetectable?

(0) No

(1) Yes

14) Have you ever received a hepatitis C+ diagnosis?

(0) No [SKIP TO Q14]

(1) Yes

(99) Refused

15) Have you taken any medications for HCV?

(4) No- never

(5) Yes- But did not finish the treatment

(6) Yes- Finished the treatment

(3) Yes- now

<u>SUBSTANCE USE</u>

In this section I will ask you a few questions about your substance use. These include substances not prescribed to you by a physician (or other health care provider) and/or substances which you use in ways other than how they were prescribed. For each group of substances, I will ask if you've ever used them before, if you've used them in the past 30 days, on how many days, and what your main route of administration (smoking, injection, other) was.

***16)* Which of the following substances have you *used for non-medical reasons and in the past 30 days*? What was your main route of administration?**

<table>
<tr><th rowspan="3">Substance(s) Groups</th><th colspan="2">I.</th><th colspan="2">II.</th><th>III.</th><th>IV.</th></tr>
<tr><th colspan="2">Ever?</th><th colspan="2">Past 30 days?</th><th rowspan="2">On how many days in the past 30 days did you use this drug?</th><th>Main Route of Administration last 30 days</th></tr>
<tr><th>Yes (01)</th><th>No (00)</th><th>Yes (01)</th><th>No (00)</th><th>Smoke (S)
Inject (I)
Other (O)</th></tr>
<tr><td>A) Alcohol (beer, wine, liquor, etc.)</td><td>❑</td><td>❑</td><td>❑</td><td>❑</td><td>______ day(s)</td><td>N/A</td></tr>
<tr><td>B) Cannabis (marijuana, pot, grass, hash, weed, THC, etc.)</td><td>❑</td><td>❑</td><td>❑</td><td>❑</td><td>______ day(s)</td><td></td></tr>
<tr><td>C) Crack</td><td>❑</td><td>❑</td><td>❑</td><td>❑</td><td>______ day(s)</td><td></td></tr>
<tr><td>D) Crystal Meth (ice, jib, glass, tina)</td><td>❑</td><td>❑</td><td>❑</td><td>❑</td><td>______ day(s)</td><td></td></tr>
<tr><td>E) Any other stimulants or uppers (e.g., cocaine, speed, Ritalin, Dexedrine,</td><td>❑</td><td>❑</td><td>❑</td><td>❑</td><td>______ day(s)</td><td></td></tr>
</table>

Adderall amphetamines, methamphetamines)						
F) Any OAT drugs (e.g., methadone, Suboxone®/ buprenorphine, Kadian®)	❑	❑	❑	❑		
G) Any opioids (e.g., heroin, morphine, Dilaudid®, fentanyl, codeine, Percocet®, Percodan®, OxyContin®, oxycodone, Vicodin®, etc.)	❑	❑	❑	❑	______ day(s)	
H) Sedatives/hypnotics/ anxiolytics/barbituates or downers (e.g., Valium®, Xanax®, Ativan, Klonopin®, Ambien®, Sonata®, phenobarbiral, etc.)	❑	❑	❑	❑	______ day(s)	
I) Hallucinogens (e.g., LSD, acid, peyote, mescaline, psilocybin,	❑	❑	❑	❑	______ day(s)	

ecstasy [MDMA, molly], bath salts, DMT, etc.)						
J) Dissociatives or phencyclidine and related substances (e.g., PCP [angel dust], ketamine [special K, vitamin K]), GHB, etc.)	❑	❑	❑	❑	______ day(s)	
K) Any Other drugs (e.g., new psychoactive substances, anabolic steroids/ hormones, nitrous oxide [laughing gas, whippets], nitrites [poppers], diet pills [phentermine], over-the-counter medicine for allergies, colds, cough, or sleep, etc.) Other – please specify: ______________________	❑	❑	❑	❑	______ day(s)	

17) Other than at the clinic if you are receiving iOAT, have you **ever injected any**

drugs in the last 6 months**?**

(0) No

- ❑ (1) Yes
- ❑ (99) Prefer not to answer the question

18) Have you ever overdosed?

(0) No

(1) Yes

(99) Prefer not to answer the question

19) Have you ever overdosed in the last 6 months?

(0) No

(1) Yes, IF YES, how often?

(99) Prefer not to answer the question

If you have overdosed in the past 6 months, can you explain what caused this overdose? Did you receive naloxone?

Appendix C

Semi-Structured Initial Interview Guide

Client Interview Guide

Experiences of negotiating care - I'm going to ask you about accessing the safe supply program.

1) **Please 'walk' me through how you got into the program.**
    a) How and when did you get into the program?
    b) How long did it take to get into the program? Were you ever on a waitlist?
        a. Do you know why? How did you feel about being on a waitlist?
    c) How was that experience? Easy, complicated, scary?
    d) Who or what helped to get into the program? What did they say about the program?
2) **Before you got into the safer supply program:**
    a) Were you using opioid agonist therapy (OAT e.g., methadone, Suboxone®) before this program? Where were you accessing OAT before? How does safe supply compare with OAT?
    b) Have you ever been prescribed opioid medications, and under what circumstances?
3) **Can you tell me about the medications that are prescribed for you in the program, and how that got figured out?**
    a) How much input do you have in your dose?
    b) Have you ever needed your dose changed? How did that go for you?

c) How has your dose changed since you started? What's that process like for you?

d) Do you feel like you are on the right dose now?

e) Have you ever been offered methadone while on safer supply? Why?

IF YES TO OAT:

f) What was the transition from methadone/ Suboxone® to safer supply like? Did you continue to be prescribed methadone/ Suboxone® or another opioid like Kadian while you transitioned?

g) Is the person who prescribes you safe supply different than your OAT prescriber? Do you still see your OAT prescriber? What did your OAT prescriber say about the program before you started it? How do they feel about it now?

4) **Since you've been on safe supply, have you ever had an interruption to your safer supply like being hospitalized, arrested, or moving?**

   a) What was the impact?

   b) Have you ever been impacted by a disruption in medication supply, like your medication not being available?

5) **When did you first attend the program? Was it before or after COVID started?**

IF BEFORE:

a) How has the program changed since the start of COVID?

b) Have you had any interruptions in seeing your doctor or nurse practitioner, or pharmacist as a result of COVID? What has that been like for you? Have you had any issues connecting virtually?

c) How did COVID affect your substance use (e.g., How often use, drugs available, where use)?

IF AFTER:

d) How did you first see your doctor or nurse practitioner?

e) What was that like for you? Have you had any issues connecting virtually?

f) How did COVID affect your substance use (e.g., How often use, drugs available, where use)?

Experiences with service providers –I have a few questions about the service provider you interact with at the safer supply program.

6) **What are appointments with your doctor or nurse practitioner at the SSP program like?**

a) How long do you usually wait for your appointments?

b) What's been good or positive about these appointments? What's been not so good? Why?

c) What kind of things do they ask about?

d) What's it like to talk to them about your drug use?

e) What happens if you miss an appointment?

f) What other things does your doctor or nurse practitioner do for you during visits?

g) Do you trust your doctor/ nurse practitioner? What did they do to build this trust?

i. IF NO: What could they do to build more trust with you?

7) **What was it like for you the first time you went to pick up your dose at the pharmacy?**
    a) What's it like now?
    b) Have you changed pharmacies? Why?
    c) What happens if you miss your dose at the pharmacy?
    d) What could be done to make going to the pharmacy better? Why?
8) **How does your experience in the safe supply compare with your experiences in other health care settings?**
    a) How do these relationship(s) with safer supply docs compare with other health care settings?
9) **In addition to your doctor/ nurse practitioner, who else do you interact with at the safer supply program and what is like for you?**
    a) Case manager, outreach workers, patient navigator?
    b) Interacting with peers, support groups and activities?

Now I have some questions about the impact being in this program has had on your life, and what has changed in your life as a result of being on safe supply

10) **What are some of the impacts for you being on the program? Such as:**
    a) More time? Stability in your life? Consistency?
    b) Able to share with friends, or sell to make money?
    c) Health? Wellbeing?
    d) How you use drugs? Overdose frequency? Patterns of drug use?
    e) Personal safety?
    f) HIV/HCV testing?

g) Antiviral/retroviral treatment (ART) initiation and adherence, and engagement in care?

h) Housing, food security, income?

i) Family and personal relationships?

j) Why have these things changed?

11) **Are you getting what you hoped for out of the program?**

a) Has anything bad happened as a result of being on the program?

12) **Have you ever received carry doses? Yes/no What has your experience been like?**

If yes: Sometimes doctors are worried about people losing, sharing, or selling doses. What are some of the reasons that these things happen?

a) Have you ever lost a dose, or had it stolen? How often does it happen?

b) Have you ever shared your pills? Why?

c) Have you ever sold any of your pills? Why?

d) What's been your experience of losing or sharing or selling doses?

13) **What makes it easy and/or hard to stay in the program?**

a) What would make it easier to stay in the program?

14) **(For women, trans, non-binary, LGBTQ and/or BIPOC ONLY)**

What does the program do to address your needs as a __________________ person? What could it do better?

Finally,

15) **If you could change the safer supply program, what would you do? Why?**

Thank you again so much for taking the time to speak with me today. If you have any further comments or questions about the study after today, please feel free to give me a call.

Honorarium

Appendix D

Semi-Structured Follow-Up Interview Guide

Client Interview Guide

1) **Are you still on the iOAT program? IF NO: why did you chose to go off the program/ what happened?**
2) **Since we last spoke, have there been any significant changes to the program? How have these changes affected your experience?**
3) **Since we talked last, has anything changed about the medications that are prescribed for you in the program?**
    h) If yes, what changes were made (frequency, quantity, prescription type)?
    i) Why were these changes made?
    j) How did that go for you? How have things changed for you since the change was made?
    k) How has your dose changed since you started? What's that process like for you?
    l) Do you feel like you are on the right dose now? What makes you think that?
4) **In the last 6 months, have you ever had an interruption to your safer supply like being hospitalized, arrested, or moving?**
    a) What was the impact?
    b) Have you ever been impacted by a disruption in medication supply, like your medication not being available?

Experiences with service providers –I have a few questions about the service provider you interact with at the safer supply program.

5) **Have there been any changes in the last 6 months to your appointments with your doctor or nurse practitioner at the SSP program? What are your appointments looking like? How are they going?**

   h) How long do you usually wait for your appointments?

   i) What's been good or positive about these appointments? What's been not so good? Why?

   j) What kind of things do they ask about?

   k) What's it like to talk to them about your drug use?

   l) What happens if you miss an appointment?

   m) What other things does your doctor or nurse practitioner do for you during visits?

   n) Do you trust your doctor/ nurse practitioner? What did they do to build this trust?

      i. IF NO: What could they do to build more trust with you?

6) **In the last six months, how have your experience in the safe supply compared with your experiences in other health care settings?**

   a) How do these relationship(s) with safer supply docs compare with other health care settings?

   b) How have been your interactions with others involved in the program (case manager, outreach workers, peers, support group leaders)? How are these relationships going?

Now I have some questions about the impact being in this program has had on your life, and what has changed in your life as a result of being on safe supply.

7) **<u>In the last six months</u>, what are some of the impacts for you being on the program? Such as:**

   k) More time? Stability in your life? Consistency?

   l) Sharing drugs with friends, or sell to make money?

   m) Health? Wellbeing?

   n) How you use drugs? Overdose frequency? Patterns of drug use?

   o) Personal safety?

   p) HIV/HCV testing?

   q) Antiviral/retroviral treatment (ART) initiation and adherence, and engagement in care?

   r) Housing, food security, income?

   s) Family and personal relationships?

   t) Why have these things changed?

   In sum, has the program helped you achieve any of your short term or long-term goals? If yes, how so? If no, Why and how could it help you better achieve these goals?

8) **How does your experience in the program right now compare to where you were at six months ago? Are you getting what you hoped for out of the program?**

   What has improved? Gotten worse?

9) **Have you received a carry dose in the last 6 months? Since we last spoke, has anything changed to the carry dose system?**

   If yes: Sometimes doctors are worried about people losing, sharing, or selling doses. What are some of the reasons that these things happen?

e) Have you ever lost a dose, or had it stolen? How often has it happened in the last 6 months?

f) In the last 6 months, have you ever shared your pills? Why?

g) Sold any of your pills? Why?

h) What's been your experience of losing or sharing or selling doses?

10) **Do you see yourself staying in this program long-term? Why or why not? What makes it easy and/or hard to stay in the program?**

b) What would make it easier to stay in the program?

c) Are there any unmet needs? Anything missing in the program?

11) **(For women, trans, non-binary, LGBTQ and/or BIPOC ONLY)**

What does the program do to address your needs as a __________________ person? What could it do better?

Finally,

12) **If you could change the safer supply program, what would you do? Why?**

Thank you again so much for taking the time to speak with me today. If you have any further comments or questions about the study after today, please feel free to give me a call.

Honorarium & Signature

Appendix E

Research and Ethics Board Approval

Dr. C. Brunelle

Department of Psychology

UNB Saint John

Dear Caroline,

As Chair of the Research Ethics Board at the University of New Brunswick (Saint John), I have reviewed your revised application and appendices for your research project titled **"Improving healthcare and outcomes for people who use drugs in Canada: A national evaluation of safe supply sites" - (UNB REB File #2022-064)** for its compliance with Tri-Council Policy (TCP) and with UNB Policy (UPRIH). On the basis of the review, I am pleased to inform you that this research appears to be in compliance with TCP and UPRIH. Accordingly, please consider this E-mail to represent official notification of REB approval of your project for a period of three years (April 6, 2022 – April 6, 2025). Thank you for accepting the recommended modifications to the application and appendices which were suggested. All modified materials have been added to your project file.

If you require an official hard copy letter to satisfy a funding body, please inform our REB office (reb@unb.ca) as soon as possible. If the funds for this research project are held until REB approval, you will have to inform the Office of Research Services at UNB of this approval to release your funds.

Please note that, in the future, if you find that you must make any changes to your protocol, those changes must be considered and approved by the REB before they are implemented. To initiate changes, please submit the REB Case Modification Request form, available online through the Research Ethics page of the Office of the VP (Research).

Annual Reports for this project are due on the 15th of January each year, provided that this date is at least six months after the date of project approval. Final reports are due 90 days after project completion. Both reports can be found on our website at http://www.unb.ca/research/ors/forms/index.php#ethics.

If you have not already done so, please send an e-mail copy of your project summary (your answer to question # 1 of the ethics application form) to reb@unb.ca as soon as possible, including your REB File # in the subject line. Thank you for your co-operation in this matter.

Best wishes for the successful completion of your research project.

Dr. Beth Keyes, Chair

Research Ethics Board

UNB Saint John

Appendix F

River Stone Recovery Centre's Letter of Support

River Stone Recovery Centre

348 King Street,
Suite 120
Fredericton, NB
E3B 1E3

P: 506-447-9634
F: 506-447-9635
www.riverstone.recoverynb.ca

25 February, 2022

We at River Stone Recovery Centre look forward to taking part in *Improving healthcare and outcomes for people who use drugs in Canada: A national evaluation of safe supply sites.* We are supportive of this research, which will assess the impact of our injectable opiate agonist therapy (iOAT) program for patients with refractory opiate use disorder who have not benefitted from traditional oral therapies.

We understand that in order to evaluate the impact of our program, Dr. Caroline Brunelle's team will conduct interviews with approximately 20 of our iOAT patients, and will compensate patients for their time. I have reviewed and feel comfortable with the proposed questions.

CCross

Christine Cook-Cross
Christine.Cross@recoverynb.ca
506-259-6746

Appendix G

Recruitment Poster

PARTICIPANTS NEEDED!

We are conducting interviews for a study on injectable Opioid Agonist therapy (iOAT).

Researchers at the University of New Brunswick in Saint John are conducting a study entitled Improving healthcare and outcomes for people who use drugs in Canada. This is part of a larger national evaluation of safe supply programs.

To participate: You must have been enrolled in the iOAT program at River Stone Recovery Centre for a least a month and be age 19 or older.

What Will I Be Asked to Do?

You will be asked to participate in a 60-minute interview which will ask you about your:

- Substance use
- Use of substance use services
- Your experiences at River Stone Recovery and the impact of iOAT on your life

You will receive a $30 cash honorarium to thank you for your time!

Talk to clinic staff or contact the research assistant directly at XXXXXXXXX@unb.ca for further information.

Principal investigator: Dr Caroline Brunelle, Department of Psychology, University of New Brunswick, (506) 648-5797, cbrunell@unb.ca

The study has been reviewed by the Research and Ethics Board at the University of New Brunswick-Saint John Campus and is on file as REB#2022-064.

Appendix H

Informed Consent Form

TITLE OF STUDY

An evaluation of safer supply programs in Canada: The River Stone Recovery Centre

PRINCIPAL INVESTIGATOR

Caroline Brunelle, PhD, Department of Psychology, University of New Brunswick, Saint John Campus

Adrienne Thornton, Research Assistant, Department of Psychology, University of New Brunswick, Saint John Campus

PURPOSE OF STUDY

You are being invited to participate in this study because you are receiving injectable opioid agonist therapy (iOAT) at River Stone Recovery Centre. This study is part of an evaluation of five safe supply sites in Canada, which is led by Dr. Daniel Werb, Director of the Centre on Drug Policy Evaluation at Saint Michaels' Hospital in Toronto. We are doing this study because there is not a lot of research on the experiences of people who use drugs and live in smaller settings. If you participate, we will ask you about your drug use and your past access to healthcare. We will also ask you about your experiences and motivations for enrolling in iOAT. We hope that this study will improve services and better support people who use drugs in New Brunswick.

WHO CAN PARTICIPATE?

Anyone over the age of 19, who has been enrolled in the iOAT program for more than one month can participate.

PROCEDURE

If you decide to participate in this study, you will be asked to take part in an interview about your substance use and access to iOAT. Before the interview begins, we will ask you for some information about you such as your age and gender. This interview will be approximately one hour long. Your answers are up to you, and you can choose not to answer some questions. We will record the interview but will remove anything that can identify you (for example, if you use people's names). The interview will be erased once it is transcribed. You will receive $30 as a thank you for your time for the interview. The interview can take place on site at River Stone Recovery in a private room or it can also be completed over the phone or via video telecommunications (Zoom).

POTENTIAL RISKS/DISCOMFORTS

There are no anticipated major risks to participating in this study. There is potential for the discussion of illegal activities during the interview (drug use, drug dealing). However, no information will be disclosed to police unless there is a concern that a child is being abused or that a person may be harmed. Other than these exceptions, everything you say will be kept confidential. Your answers will not be shared with staff at River Stone Recovery Centre. There is a possibility that some questions may make you feel uncomfortable because of their personal nature. You don't have to answer a question if you don't want to. The decision to participate in this study is entirely your own. The services you receive at this clinic will in no way be affected by your decision to participate or not. You can withdraw your participation from the study at any time. Upon withdrawing from the study, any information collected from you will be destroyed at your request. You will not lose your compensation. At the end of the study, you can ask to be connected with the staff at River Stone if you want any extra support or we can connect you to relevant services. Furthermore, the CHIMO helpline is accessible 24/7 at 1-800-667-5005.

POTENTIAL BENEFITS

Although you will not directly benefit from participating in this study, sharing your experiences will improve healthcare access and iOAT services for those in New Brunswick.

QUESTIONS

If you have questions after you read this form, ask the investigator from the study to explain. You should not sign this form until you are sure that you understand the study. If you have questions about this research, you may contact the primary investigator, Dr. Caroline Brunelle at (506) 648-5797 or at cbrunell@unb.ca. If you have concerns and wish to speak with someone not involved in the study, you can reach the chair of the UNB Saint John Research Ethics Board Dr. Beth Keyes at (506) 648-5994. This study has been reviewed by the Research and Ethics Board at UNB-SJ and is on file as REB # 2022-064.

PRIVACY AND CONFIDENTIALITY

Your interview responses are anonymous. Your consent form and the recorded interviews will be stored in a locked filing cabinet or on a password protected USB file at the University of New Brunswick. Only the research team will have access to the recorded interview. We will destroy the original interviews once the interviews have been transcribed and removed of any identifiers. If the research is published, no names or identifying information will be used.

Information collected for this study will be kept for 5 years before being destroyed or deleted.

By signing this consent form, you agree that

You understand what the study is about, and your questions have been answered.

You agree to participate.

_____________________________ _____________________________

Signature Printed name

Date____________________________

Curriculum Vitae

<u>Candidate's Full Name:</u> Adrienne Thornton

<u>Universities Attended:</u>

University of New Brunswick, Saint John, Master of Arts, Experimental Psychology, 2022 – Current

University of New Brunswick, Saint John, Bachelor of Science, Honours in Psychology, 2018 – 2022

<u>Conference Presentations:</u>

Thornton, A. N., Brunelle, C., Scherf, J. (2024, November). Evaluating an Atlantic Canadian Injectable Opioid Agonist Treatment Program From the Perspective of Program Users. Oral Presentation. *Association for Multidisciplinary Education and Research in Substance use and Addiction's 48th Annual National Conference.* Chicago, IL.

MacQuarrie, A. L., **Thornton, A. N.,** Brunelle, C. (2024, April). Predictors of Public Opinion on Harm Reduction: Drug Decriminalization and Safer Supply Programs. Poster Presentation. *2nd Annual Student Psychology Studies Symposium*. Saint John, NB.

Thornton, A. N., Brunelle, C., MacQuarrie, A. L. (2023, October). Factors Influencing Canadian Public Attitudes Towards Safer Supply Programs. Oral Presentation. *Canadian Society of Addiction Medicine (CSAM-SMCA) 2023 Scientific Conference*. Victoria, BC.

Thornton, A. N., Brunelle, C., MacQuarrie, A. L. (2023, May). Factors Influencing Attitudes Towards Safer Supply Programs (SSPs). Poster Presentation. *1st Annual Student Psychology Studies Symposium*. Saint John, NB.

Thornton, A., Roach, S., Moore, J. (2022, June). Effects of Anthropogenic Noise on the Song of Hermit Thrush (*Catharus guttatus*). Oral Presentation. *Science Atlantic Psychology Conference*. Antigonish, NS.

Moore, J., Roach, S., **Thornton, A.** (2022, July). Impacts of Noise on the Territorial Defence of Hermit Thrush (*Catharus guttatus*). Oral Presentation. *Animal Behaviour Society Conference*. San Jose, Costa Rica.

<u>Publications:</u>

Thornton, A. N., MacQuarrie, A. L., Brunelle, C. (2023). Factors Influencing Attitudes Towards Safer Supply Programs for People Who Use Drugs: Findings from An Atlantic Canadian Province. *Journal of Drug Issues*. doi: 10.1177/00220426231205520

<u>Academic Awards:</u>

Graduate:

2023-24 Maritime Strategy for Patient-Oriented Research (SPOR) Support for People and Patient-Oriented Research and Trials (SUPPORT) Unit Trainee Support Program ($10,000)

2023-24 New Brunswick Health Research Foundation (NBHRF) Master's Scholarship ($7,000)

2023 New Brunswick Health Research Foundation Knowledge Translation Grant ($1,100)

2023 CSAM-SMCA Conference Presenter Subsidy ($500)

2023 GSA Travel Award ($150)

2023 SGS Travel Award ($300)

2022-23 New Brunswick Innovation Foundation STEM & Social Innovation Award ($4,000)

2022-23 Graduate Research Award ($9,000)

Undergraduate:

2021-22 UNB Saint John Campus Scholarship

2019-20 N. Myles Brown Undergraduate Scholarship

2018-19 Alumni Entrance Scholarship

2018-19 Deanna Craig Bradley Memorial Scholarship

2018-19 J. K. Flemming Scholarship

2018-19 Science Discovery Scholarship