Effectiveness of Interventions for the Prevention and Treatment of Substance Use Disorders Among First Nations, Métis and Inuit Populations

Policy Brief

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Executive Summary

Issue: What approaches and strategies for the prevention and treatment of substance use disorders (SUDs) among First Nations, Métis and Inuit populations are most effective?

Background: First Nations, Métis and Inuit (FNMI) peoples in Canada experience greater social and health inequities, leading to a disproportionately greater risk of negative health consequences – including higher rates of problematic substance use and poorer outcomes associated with SUDs. It is important to acknowledge that higher rates of problematic substance use are not a cultural characteristic but rather a logical outcome of cultural genocide – substance use has been applied as a colonial stereotype to dehumanize Indigenous peoples and detract attention from the conduct of state actors perpetrating systemic racism and inequity that gives rise to SUDs. In the current Canadian context, increasing rates of substance use, such as cannabis and opioids, along with rapidly growing FNMI populations have created an urgent public health situation that necessitates effective prevention and intervention strategies to reduce the harms associated with SUDs for FNMI peoples. However, FNMI populations have remained understudied in substance use treatment research, and there is still debate as to whether interventions should follow traditional Western treatment approaches or whether they need to be adapted to be more culturally appropriate and effective.

Methods: A scan of published literature was conducted to examine and synthesize evidence related to interventions for substance use disorders in FNMI populations.

Findings: Overall, while there is a substantial range of literature on the topic, limited studies were found on the *effectiveness* of interventions, highlighting some of the methodological challenges with evaluating cultural interventions. Some key findings that emerged included the importance of culture as part of a holistic approach to treatment and recovery and the value of integrating Western treatment methods with traditional Indigenous approaches to healing and wellness to better meet the needs of FNMI clients. However, it is not yet clear how cultural approaches can be implemented most effectively or which aspects of either culture-based or culturally adapted programs are most successful. Given the distinct heterogeneity among and between First Nations, Métis and Inuit peoples and communities across the country, it is likely that there is no single best approach that would meet the needs of all FNMI clients, underscoring the need for more adaptive, culturally specific and needs-based treatment programs that reflect distinct community circumstances.

Policy Implications: To overcome the limitations of the available evidence, FNMI peoples and governments, researchers, as well as mainstream governments have identified the need for further research

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in order to develop more effective evidence-based programs and interventions that address the needs of FNMI peoples with SUDs in Canada, including more culturally-based measurement tools and methods. In addition, implications for service providers involved in substance use treatment programs with FNMI populations include greater educational and training efforts to enhance their cultural awareness and competency. More broadly, there is a need for a comprehensive, multidisciplinary approach to prevention and intervention at a systemic level that would address the social and economic determinants of health and well-being. An important next step would involve continued efforts among researchers, practitioners, and policymakers to bridge the gap between Western and distinct Indigenous approaches to health. This would require concrete action to implement solutions that have already been identified through engagement with FNMI communities. In the long term, significant changes to health and social systems are needed in ways that support healthy behaviours and remove barriers to treatment and care for FNMI peoples with substance use issues in Canada.

Effectiveness of Interventions for the Prevention and Treatment of Substance Use Disorders among First Nations, Métis and Inuit Populations

1.0 Introduction

1.1 What is the Issue?

First Nations, Métis and Inuit (FNMI) peoples [1] in Canada experience greater social and health inequities than people who do not identify as First Nations, Métis or Inuit. These inequities stem from the intergenerational effects of colonialism, racism, residential school experiences and other discriminatory policies. The resulting trauma from these historical and structural factors has led to a disproportionately higher risk of negative health consequences – such as mental health problems and problematic substance use – in FNMI populations that have continued into the present. This includes high rates of alcohol, tobacco (excluding traditional uses of tobacco for ceremony) and illegal drug use, which have been observed in FNMI communities for several decades. For example, a report from 2000 found that death rates from alcohol use were almost twice as high among Indigenous peoples in Canada compared to the general population, and deaths from illicit drugs were about three times as high (AHF, 2007). It is important to acknowledge that the higher rate of problematic substance use among FNMI populations is not a cultural characteristic, but rather a logical outcome of cultural genocide – substance use has often been applied as a colonial stereotype to dehumanize Indigenous peoples and detract attention from the conduct of state actors perpetrating systemic racism and inequity that gives rise to these negative health consequences (Holmes & Antell, 2001).

> *"The myriad of social, historical and cultural factors that have dramatically impacted First Nation[s] people has, as such, placed the issue of substance abuse and related mental health issues atop the priorities for First Nations individuals, communities and leaders."* (Sullivan & NNAPF, 2013, p. 1)

In the current context, problematic alcohol and drug use remain the most commonly reported challenges facing First Nations communities according to a recent survey [2] of First Nations youth and adults across Canada – even greater than housing and employment challenges (FNIGC, 2018). In recent years, rising rates of prescription and synthetic drug use including opioids have also become a pressing public health concern, with an unprecedented increase in overdose deaths. While the opioid epidemic affects communities across all of Canada, First Nations communities have been disproportionately impacted. There is a clear need for more effective prevention and intervention strategies to reduce the harms associated with problematic substance use among FNMI populations – especially for those at even greater risk, such as pregnant women and youth.

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[1] See section 1.4 on terminology.

[2] Based on the First Nations Regional Health Survey (RHS) Phase 3 – a cross-sectional survey of First Nations people living on reserves and in Northern communities across Canada; conducted from March 2015-December 2016.

1.2 Why is the Issue Important?

This issue is important for several reasons. First, as noted above, there is a disproportionate burden of substance use disorders (SUDs; see Section 4.1.1) in FNMI populations, including higher rates of morbidity and mortality. However, despite the greater risk of substance use problems and poorer outcomes associated with SUDs among FNMI peoples, they have remained understudied in substance use treatment research – particularly disaggregated studies reflecting the diversity of Indigenous peoples (Niccols et al., 2010). As a result, effective intervention strategies and approaches to reduce this burden for FNMI populations have not yet been clearly identified and a significant unmet need for treatment remains – as evidenced by high treatment dropout rates and underutilization of services for SUDs among FNMI peoples (Leske et al., 2016; Skewes, 2020; Marsh et al., 2015a).

Second, there remains debate as to whether interventions for FNMI peoples should follow traditional Western treatment approaches or whether they need to be adapted to be more culturally appropriate and effective. While there is growing interest in culture as an intervention, the exact role of FNMI cultures in addressing substance use problems and promoting recovery is not yet well understood. To develop more effective treatment programs and interventions, more research is needed to better understand the needs of FNMI peoples at risk of substance use disorders through culturally informed strategies and community-based research.

1.3 Overview of the Policy Brief

This policy brief examines the literature on interventions for the prevention and treatment of substance use disorders in FNMI populations, with a focus on cultural and needs-based interventions that are reflective of the distinct community circumstances, as well as any available evidence on the efficacy of these interventions. Examples of existing approaches and programs are reviewed and compared to help inform our understanding of best practices and challenges related to addressing problematic substance use among FNMI peoples, versus people who do not identify as First Nations, Métis, or Inuit. After summarizing findings from the empirical literature, implications for policy and practice based on the findings are provided.

1.4 A Note on Terminology

Throughout this report, the terms "substance use issues," "problematic substance use," and "substance use disorder" are used to reflect current understandings of substance use and to avoid the negative connotations associated with terms such as "abuse" and "addiction." We are guided by the approach followed in the Honouring Our Strengths framework, which states:

> *"'Substance use issues' is used to describe a broad range of issues and concerns related to, and resulting from, substance use. this includes problematic use (e.g., substance abuse and potentially harmful use, such as impaired driving, using a substance while pregnant, or heavy episodic/binge drinking) and substance addiction or dependence (e.g., substance use disorders, as defined by diagnostic classification systems, such as the DSM–iv). These issues are typically experienced by individuals, families, and communities alike, and their impact may be physical, psychological, emotional, behavioural, social, spiritual, familial, or legal in nature."* (Assembly of First Nations et al., 2011, p. 6)

In the Canadian context, the term "Indigenous" refers to all Aboriginal peoples of Canada. The Canadian Constitution recognizes three groups of Aboriginal peoples: First Nations (including those registered under the *Indian Act* of Canada and those who are not), Inuit, and Métis. In this report, we follow other Canadian authors and researchers, such as Allan & Smylie (2015), by using the term "Indigenous" to describe:

> *"Individuals and collectives who consider themselves as being related to and/or having historical continuity with 'First Peoples', whose civilizations in what is now known as Canada, the United States, the Americas, the Pacific Islands, New Zealand, Australia, Asia, and Africa predate those of subsequent invading or colonizing populations."* (Allan & Smylie, 2015; p. 1).

However, we acknowledge that there is no universally accepted definition of Indigenous peoples and support individuals and communities in self-identification. Furthermore, although the term "Indigenous" is used as a collective term for all Indigenous peoples and identities, it is important to note that Indigenous peoples are not a homogeneous group – Indigenous Peoples of Canada are a diverse population with distinct histories, languages, cultural practices and spiritual beliefs. Therefore, we have used disaggregated terms as much as possible (i.e. First Nations, Métis and Inuit, or FNMI) when referring to individuals, groups, communities, or populations. In addition, the plural form of "First Nations," "First Peoples," or "Indigenous peoples" is used to represent and respect the many distinct groups, bands, and communities. We also recognize that due to this rich diversity, the impacts of historical events and policies on mental health and substance use outcomes, as discussed in this report, may differ for First Nations, Métis and Inuit peoples; as well as between communities living on versus off-reserve (Firestone et al., 2015a).

Exceptions to the terminology described above have been made when citing specific sources or data that used other terms, including literature from countries outside of Canada.

2.0 Objectives

The main objectives of this policy brief are:

- To examine the literature on intervention strategies and treatments for substance use disorders among First Nations, Métis and Inuit populations and any evidence of their effectiveness;
- To provide an overview of existing programs and approaches in Canada and other jurisdictions and identify gaps in knowledge; and
- To develop insights on best practices and methods to help inform future research, policies, and practice.

3.0 Research Methods

A scan of the literature was conducted in early 2022 to determine the breadth of information available and to identify, collect, and synthesize information relevant to the issue of interventions for substance use disorders in FNMI populations. Various search engines, research portals, and institution-specific websites were utilized for the identification and collection of relevant data, with a focus on any evidence regarding the efficacy of interventions. Two main categories of data sources were selected: 1) peer-reviewed journals found in electronic databases; and 2) internet-based grey literature, including published reports; websites of relevant organizations or groups; dissertations and theses; white papers and working papers; government publications and legislation; and webinars or presentations.

Search strategies were developed and refined after the results were reviewed. Sources were included in the literature scan if they were found to contain variables of interest and keywords relevant to the research objective. A hand search of reference lists from relevant studies was also used to supplement searches. Data sources were limited to those published in English. In addition, in order to gather the most relevant and current information, the search was focused mainly on recent data sources published in the last ten years, or no earlier than the year 2000. Given the limited research published in Canada on the topic, we included evidence from other countries, such as the United States (US) and Australia, where relevant.

A list of keywords and search terms used in the literature scan are provided below. Throughout the search process, keywords were added, deleted, or modified as different terms were discovered to enhance the search strategy.

Keywords: Indigenous, Canada, addictions, substance use, opioid use, substance use disorders, Canada, interventions, treatment, prevention strategies, recovery, programs, culture, First Nations, Métis, Inuit.

4.0 Background

4.1 Understanding Substance Use and Trends in Canada

4.1.1 Substance Use Disorder in Canada

Substance Use Disorder (SUD) (commonly known as "addiction") is when someone regularly uses psychoactive substances despite continued negative consequences (GC, 2022b). Psychoactive substances (commonly known as "drugs") are substances that affect mental processes, including mood, thinking or behaviour (Health Canada, 2018). While some people may not experience significant harm related to their substance use, others experience negative impacts on their lives (CMHA Ontario, 2019). Understanding and describing the difference between non-problematic or casual use compared to problematic use or chronic dependence often uses the 4C's approach (CAMH Ontario, 2019; CAMH, 2012):

- Constant **cravings**,
- Loss of **control** of amount or frequency of use,
- The **compulsion** to use, and
- **Continued** substance use despite consequences.

4.1.2 Statistics on substance use for the general population

In Canada, it is estimated that approximately 21% of the population (about 6 million people) will meet the criteria for SUD in their lifetime (CMHA Ontario, 2019). Some of the most commonly used psychoactive substances include alcohol, tobacco, prescription medications (such as opioid painkillers or anti-depressant drugs), and cannabis. A smaller number of Canadians use other drugs such as cocaine, heroin, ecstasy and methamphetamine (Health Canada, 2018).

National trends of substance use in Canada by demographics assert that alcohol is the most commonly used psychoactive substance, with about two-thirds of Canadians aged 15 and older reporting alcohol consumption in the last 30 days (GC, 2020). This is supported by data on the overall costs [3] attributable to substance use in Canada, which shows that the greatest proportion of costs in 2017 were due to alcohol (36%) and tobacco (27%) (CCSA, 2017). However, the use of recreational cannabis is also increasing in Canada since its legalization in 2018. Data from the Canadian Cannabis Survey conducted annually by Health Canada shows that past 30-day cannabis use increased from 15% to 17% among

[3] Estimated costs include healthcare costs (i.e., hospitalizations, physician time, prescription drugs), lost productivity (including disability), criminal justice (policing, courts, and corrections), and other costs (ie., workplace drug programs, research and prevention).

adult Canadians (aged 16+) in 2021, with the highest rates among males (21%) and young people (22% of those aged 16-19; 33% of those aged 20-24) (GC, 2021b).

The opioid crisis is also growing in Canada, driven by both illegal and prescription opioid use, with devastating consequences in terms of hospitalizations and deaths (CPHA, 2016). Opioids such as fentanyl, morphine, oxycodone and hydromorphone are medications that may be used to help relieve pain but also affect the mind, mood, and mental processes and can cause euphoria (GC, 2021a). Data from 2015 estimated that one in six Canadians use prescription opioids, making opioid use the fourth most common form of substance use in Canada (Belzak & Halverson, 2018). The opioid epidemic affects people in communities across Canada, although opioid-related deaths are more common overall among males than females (Belzak & Halverson, 2018). Between January and June 2021, there were 3,515 apparent opioid-related deaths – or nearly 19 deaths per day – of which 96% were accidental (GC, 2022a). Among accidental apparent opioid-related deaths in 2021:

- 3 in 4 were male;
- 71% were among young and middle-aged adults (20 to 49 years);
- 28% were among older adults (50 years or greater);
- 87% involved fentanyl and 14% involved fentanyl analogues; and
- 90% involved non-pharmaceutical opioids.
- Based on information from 6 provinces and territories, 59% of accidental opioid-related deaths also involved a stimulant, reflecting the polysubstance nature of this crisis (GC, 2022a).

4.1.3 Overview of treatment approaches in the general population

SUD is a complex but treatable disease that affects brain function and behaviour (Miller, 2022; NIDA, 2019). Based on scientific research, the following key principles should form the basis of an effective treatment program (NIDA, 2019, p. 2-3):

- No single treatment is suitable for everyone;
- Treatment plans must be reviewed often and modified to fit the patient's changing needs; and
- People need to have quick, equitable access to long-term treatment,

These principles highlight the need for individualized treatments and modalities that address not only the symptoms and causes of substance use issues but also their consequences (Miller, 2022). Treatment options depend on several factors (e.g. type of substance, length and severity of use); however, in general, approaches include counselling, medication, treatment for other co-occurring symptoms, and long-term follow-up to prevent relapse (NIDA, 2019; Legg, 2018) (see Section 5.3 for further information about treatment approaches in Canada).

Depending on the severity of the SUD, treatment may require admission to a rehabilitation facility or program, which can take different forms. For example (Miller, 2022; NIDA, 2020):

- A medically managed detoxification program in the short-term can help stabilize the patient and help them overcome the symptoms of withdrawal from drugs or alcohol.

- Inpatient and residential rehabilitation programs are long-term, live-in settings where patients receive supervised treatment and structured care plans to overcome their substance use problems.
- Outpatient rehabilitation and intensive outpatient programs allow individuals to attend therapy and receive treatment on their own time as patients do not need to be on-site or live at the facility.

Medications are often an important part of treatment, especially when combined with behavioural therapies (NIDA, 2019). Various medications may be used to help reduce cravings and manage withdrawal from opioids, alcohol, tobacco, benzodiazepines, and other sedatives (NIDA, 2012). For example, methadone, buprenorphine, and naltrexone can be effective in helping individuals addicted to heroin or other opioids reduce their drug use (NIDA, 2012). For those in recovery from alcohol use disorders, medications like acamprosate, disulfiram, topiramate and naltrexone can be used to decrease continued drinking behaviour (NIDA, 2012).

Counselling and other behavioural therapies are the most commonly used forms of treatment – either following or concurrent with medication (NIDA, 2019). Behavioural therapies for SUD are a standard follow-up from detoxification and aim to help people change behaviours and attitudes around using a substance, as well as strengthen life skills (Legg, 2018). Different types of therapy include, but are not limited to, cognitive behavioural therapy, mindful-based relapse prevention, guided self-change and personality-targeted brief interventions (Legg, 2018; Morin et al., 2017).

4.1.4 Statistics on substance use for First Nations, Métis and Inuit populations

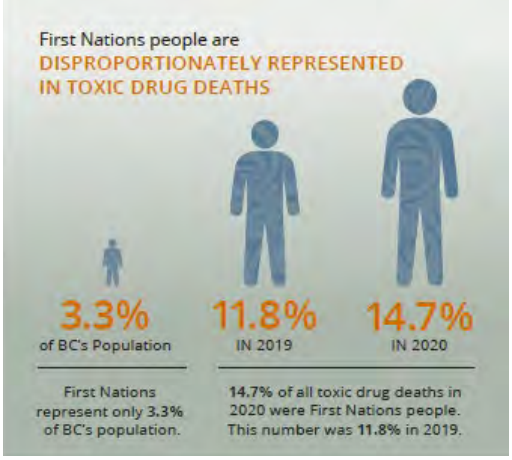
Currently, disaggregated data about FNMI peoples who use substances is lacking in Canada. However, data from the last decade still shows significant rates of substance use among FNMI populations, particularly for youth and women. For example:

- In 2012, smoking rates among Canadian First Nations, Métis and Inuit youth were at least three times higher (31% in Métis, 33% First Nations, 56% Inuit youth) compared to their non-Indigenous peers (11% of youth aged 15 to 19). Smoking initiation also begins at an earlier age on average among FNMI youth than other Canadians (Jetty, 2017).
- National data from 2012 [4] indicated that rates of heavy drinking [5] were higher among FNMI population groups (35% for off-reserve First Nations peoples, 30% for

[4] Data sources were the 2011 National Household Survey (NHS) and the 2012 Aboriginal Peoples Survey (APS), which was a national survey of First Nations people living off reserve, Metis, and Inuit (excluding those living on reserves).
[5] Defined as five or more drinks on one occasion at least once a month in the 12 months preceding the survey.

Métis, 39% for Inuit) compared to non-Indigenous adults aged 12 and over (23%). Heavy drinking was found to be even more common among FNMI youth aged 12 to 24 (Kelly-Scott & Smith, 2015).

- Additional data [6] from the 2012 Aboriginal Peoples Survey on illicit drug use showed that the percentage of FNMI adults who had tried cannabis, hashish, prescription drugs for recreational purposes or street drugs (i.e., cocaine, speed, solvents or steroids) was approximately 66% (Cao et al., 2018).
- A cohort study that followed 610 Indigenous young peoples who used illicit drugs in British Columbia from 2003 to 2014 found high premature death rates among the study population. Specifically, young Indigenous peoples who used drugs were 9.6 times more likely to die than other Indigenous peoples in the province and 12.9 times more likely to die compared to all Canadians of the same age. Mortality rates were highest for young Indigenous women compared to males and those using injection drugs (Jongbloed et al., 2017).
- Data on the impact of the opioid crisis in British Columbia also shows that First Nations peoples are overrepresented among overdose rates and deaths from overdose, with the gap between non-First Nations peoples growing wider each year. In 2018, First Nations peoples accounted for almost 13% of overdose deaths in the province – 4.2 times greater than the rest of the population and an increase from previous years (11% in 2017). First Nations women are especially at risk – findings showed that First Nations women experienced eight times more overdose events and five times more overdose deaths than women who did not identify as First Nations in 2018 (BCW & PHSA, 2020; FNHA, 2019).
- Data from the First Nations Health Authority in British Columbia also shows a dramatic increase in deaths due to illicit drug toxicity [7] in 2020 among First Nations peoples – an increase of 119% compared to 2019 (FNHA, 2021). Findings showed the disproportionate impact of the toxic illicit drug crisis on First Nations peoples - despite representing 3.3% of the population in British Columbia, 14.7% of all toxic drug deaths in 2020 were First Nations peoples (FNHA, 2021).



Source: FNHA, 2021

[6] The APS was a national probability sample of First Nations people living off reserve, Métis, and Inuit. The original dataset for the survey included individuals aged 6 and older; however, findings on illicit drug use were limited to those aged 19 and older.

[7] According to the British Columbia Coroners Service, this includes street drugs (controlled and illegal), such as heroin, cocaine, MDMA, methamphetamine, illicit fentanyl, etc. and medications obtained on the street (not prescribed).

- Opioid use has also reached near epidemic levels in northwestern Ontario, affecting rural and remote First Nations communities. In the 49 First Nation communities represented by the Nishnawbe Aski Nation, up to 80% of the adult population was estimated to use opioids illicitly in 2009, leading the Chiefs-in-Assembly to declare a public health emergency (Jumah, 2017). Similarly, rates of opioid use disorder were estimated to be twice as high among high school students in the same population in 2011 compared to the mainstream average (Srivastava et al., 2020). Moreover, the prevalence of opioid use during pregnancy in this region has risen, affecting up to 30% of pregnancies (Jumah, 2017).

> *"Supporting Indigenous communities in building a culturally appropriate evidence base is key to addressing substance-related harms and the opioid crisis in those communities. There is no issue more important to me as Canada's Minister of Health than the opioid crisis. It is one of the most serious public health issues facing Canada."* - *The Honourable Ginette Petitpas Taylor, Minister of Health* (Public Health Agency of Canada, 2019, p. 4)

4.2 Risk Factors and Reasons for Substance Use Among First Nations, Métis and Inuit Populations

First Nations, Métis and Inuit peoples in Canada are at greater risk of substance use issues due to several factors, and understanding the impact of these risk factors is critical for research on health and substance use among FNMI populations (Gone et al., 2019; Urbanoski, 2017; Firestone et al., 2015a; Firestone et al., 2015b). As described below, this includes broader societal and structural factors that affect all FNMI communities, as well as certain individual-level factors such as sex and exposure to violence, which can intersect to increase risks even further.

4.2.1 Structural factors

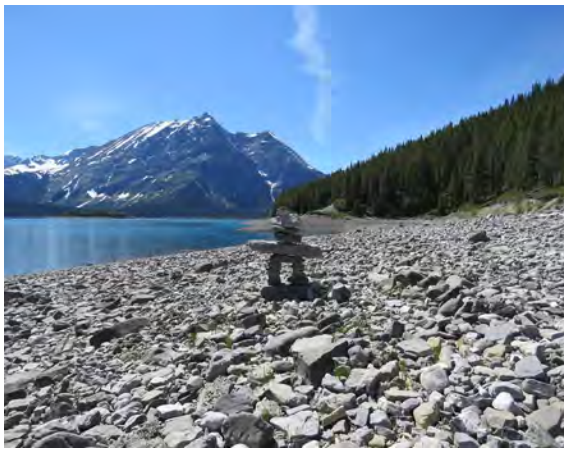
Structural risk factors refer to factors that place FNMI peoples at greater risk which are beyond their ability to control, such as poverty, inadequate housing, and inequitable access to services (Martell, 2013). Furthermore, the links between each of these structural risk factors have created a "cycle of structural disadvantage" that affects poor outcomes for FNMI peoples in Canada (First Nations Child & Family Caring Society, 2013). For example, problematic substance use is related to both poverty and poor housing conditions; all of which increase the likelihood of child welfare involvement and reduce access to health and social services. In addition, the lack of sufficient resources, funds and support for programs and essential services for First Nations families and communities creates additional stressors and further exacerbates the impacts of these risk factors (Fallon et al., 2021).

Structural risk factors also include both historical and current experiences of racism and discrimination within public services and systems (including health, social services, cultural, political, and socioeconomic processes) that have led to multiple exclusions from opportunities and decision-making and ultimately to negative health consequences for FNMI peoples (PAHO, 2019).

As described by Allan & Smylie (2015), the health and well-being of FNMI peoples have been fundamentally impacted by racism and colonization to the extent that Indigenous health cannot be understood outside the context of past and current colonial policies and practices. A key illustration of the impact of colonial policies on the social determinants of health is the 1876 *Indian Act* and its related provisions and amendments – legislation that has endured to the present day[8] and has profoundly affected the experiences of several generations of First Nations peoples in Canada (RCAP, 1996; Martell, 2013). Some of the impacts of the *Indian Act* include (Allan & Smylie, 2015; RCAP):

- Dispossession of First Nations peoples from their land through movement onto reserve lands controlled by the federal government;
- Disruption of traditional economies (e.g.: hunting, gathering, inter-Nation trade) which cut off sources of food and created dependence on colonial authorities;
- Assigning the government the power to determine "Indian" status;
- Allowing almost every aspect of daily life, including social and political processes, for First Nations peoples to be regulated or controlled;
- Obstructing the transmission of cultural knowledge, values and identity through practices such as banning traditional ceremonies; and
- Promoting discriminatory provisions against First Nations women which undermines their roles and denies their rights.

The Report of the Royal Commission on Aboriginal Peoples (RCAP, 1996) [9] determined that the *Indian Act* accorded First Nations peoples a distinctive place within the Canadian federation that was marked by disparities in legal rights which would never have been applied to anyone else in Canada. This served to set First Nations peoples apart from other Canadians and has been the source of a great deal of criticism from both First Nations leaders and people who do not identify as First Nations, Métis or Inuit. More recently, following a complaint made by the First Nations Child and Family Caring Society and the Assembly of First Nations, the Canadian Human Rights Tribunal (CHRT) issued a landmark ruling in 2016 which found that the Canadian government was racially discriminating against First Nations children by underfunding services to ensure their



[8] While the *Indian Act* has undergone several amendments since it was originally passed, including a major revision in 1951, it created a legislative framework that has continued to the present in essentially the same terms and form in which it was originally drafted (RCAP, 1996).

[9] The Report of the Royal Commission on Aboriginal Peoples (RCAP) concerns government policy with respect to the original historical nations of this country. The RCAP was established by Order in Council on August 26, 1991, and it submitted its report in October 1996. The report can be found online at the following link: https://www.bac-lac.gc.ca/eng/discover/aboriginal-heritage/royal-commission-aboriginal-peoples/Pages/final-report.aspx

safety and well-being (CHRT, 2016). The evidence indicated that the inequitable provision of child and family services, particularly prevention services, has led to service gaps, denials, delays, and adverse impacts overall for First Nations children and families living on reserves, and the government was ordered to reform these programs. [10]

In the current context, ongoing racism and discriminatory policies have led to continuing disparities in social determinants of health between FNMI peoples and Canadians who do not identify as First Nations, Métis or Inuit. This includes higher rates of unemployment, poverty, unstable housing, and inequities in access to critical supports and services such as education, health care, and social services – all of which significantly affect the health and well-being of FNMI peoples and contribute to poorer outcomes associated with elevated rates of problematic substance use (Health Canada, 2018; BCW & PHSA, 2020; Shahram et al., 2017).

Health Canada (2018) has recognized that *"experiences with historical and intergenerational trauma, including the impact of colonization, loss of traditional culture and language, and experiences with Indian Residential Schools, have all contributed significantly to the elevated risk of mental health issues and substance use amongst Indigenous peoples."* One pathway that describes how these historical experiences have led to an increased risk of substance use disorders among FNMI peoples is through the reliance on substances as a coping method to deal with the resulting trauma (Nutton et al., 2015; Wilk et al., 2017). Indeed, research from Canada supports an association between residential schooling (either having attended oneself or having parents who attended) and substance use problems, including alcoholism (Shahram et al., 2017; Ross et al., 2015).

4.2.2 Individual factors

In the general population, research has shown an association between substance use disorders and other mental health conditions, as well as histories of trauma or abuse – particularly among women. For example, estimates from studies in the U.S. have shown that (Bishop et al., 2017; Niccols et al., 2010):

- People with SUDs are up to 4.5 times more likely to receive a diagnosis of another psychiatric disorder compared to those without SUDs;
- Between one- and two-thirds of women with SUDs had histories of childhood physical and/or sexual assault;
- Between 30-59% of women with SUDs also experience post-traumatic stress disorder (PTSD), compared to 11% of women in the general population;
- Problematic alcohol use can be up to 15 times higher among women who have experienced intimate partner violence compared to other women.

[10] Canada received several non-compliance orders and challenged the Tribunal's orders regarding compensation to First Nations children and families in Federal Court. In September 2021, the Federal Court dismissed Canada's challenge and following an appeal, the Parties finally reached an Agreement in Principle on long-term reform of First Nations child and family services in December 2021. The agreement will ensure that Canada implements the necessary reforms and provides non-discriminatory funding of services. A final settlement agreement will be reached by the Fall of 2022 (First Nations Child & Family Caring Society, 2022).

Besides physical, sexual, and emotional abuse, other adverse childhood experiences can also increase the risk of subsequent problematic substance use, including neglect, substance use among family members, family breakups, incarceration of family members, and exposure to violence in the home (BCW & PHSA, 2020).

Among FNMI populations, there is a clear link between substance use issues, mental health issues and experiences of trauma – whether from historical trauma experiences that have been passed on through generations or recent experiences of trauma, abuse and violence (Marsh et al., 2015b). [11] However, data on the prevalence of concurrent mental health and substance use disorders among FNMI populations in Canada is limited (Firestone et al., 2015a).

Data from the 2012 Aboriginal Peoples Survey showed the importance of social support variables as correlates of illegal drug usage among FNMI adults in Canada – such as residential mobility and strength of community ties. For example, drug use was more likely among those who moved more frequently and those with weaker ties to their community (Cao et al., 2018). Findings also indicated greater drug use among FNMI males compared to females; those with younger age; and those with higher education and income levels. Other factors that have been identified in qualitative research as factors that may promote substance use disorders among Indigenous youth in Canada include family addictions and alcoholism; association with others who use drugs and alcohol; loss of support; loss of a loved one; and lack of cultural identity (Hansen & Hetzel, 2018).

Finally, it should be noted that while much research continues to focus on the relationship between individualized risk factors (i.e., behaviours) and problematic substance use among FNMI populations, research is increasingly applying a social determinants of health framework, including Indigenous-specific determinants of health (McKenzie et al., 2016). This involves a strengths-based approach that focuses on protective factors rather than 'deficits,' including the role of traditional culture in FNMI peoples' health and wellness – as described in Section 5.1.

[11] As discussed in Section 1.4, it should also be noted that the impacts of historical events and policies on mental health and substance use outcomes may differ for First Nations, Métis and Inuit people; as well as between communities living on versus off-reserve (Firestone et al., 2015a).

4.3 Effects and Impacts of Substance Use and SUDs

Substance use disorders have profound consequences for FNMI populations – affecting individuals as well as their families and communities. This includes not only the direct health consequences of SUDs - such as an increased risk of morbidity and mortality, but also indirect social, emotional, and mental health effects. For example, research shows that substance use can increase the risk of violence, accidents, power imbalances in intimate relationships, and involvement with the criminal justice system for FNMI men and women – all of which can worsen or create new experiences of trauma (BCW & PHSA, 2020; AHF, 2007).

The harmful effects of problematic substance use can be even greater for specific sub-groups of FNMI populations, such as women and children. As described by Niccols et al. (2010), gender can influence both the risk of problematic substance use and its consequences. While women have lower rates of substance use than men, the physical and mental health impacts can be more severe for women, who often have fewer resources and social supports available to them. These impacts may be particularly damaging for pregnant FNMI women, as evidence suggests that the use of alcohol and other drugs during pregnancy can significantly affect pregnancy outcomes and the child's health and development (Niccols et al., 2010). Substance use issues among parents can affect their children in other ways as well, such as increasing the risk of child welfare involvement or removal of the child – which may then increase the risk of relapse among parents and of subsequent substance use problems for the child (Niccols et al., 2010; Allen et al., 2022). However, despite these risks, there are few treatment programs specifically for FNMI women with substance use disorders and their children in Canada (Niccols et al., 2010; RAEB, 2018).

5.0 Overview of Prevention and Intervention Strategies

5.1 Western vs. First Nations, Métis and Inuit Models of Healing

Existing approaches to the treatment of substance use disorders are embedded within broader health systems and models, including the Western medical model as well as traditional ways of healing practiced by FNMI peoples. While both paradigms aim to improve health, there are significant differences between them in how substance use and SUDs are viewed and addressed, as discussed in this section and Table 1. It is also important to note that although these two approaches are discussed as separate and distinct models, it is possible – and increasingly common – to combine aspects of both traditional and Western treatment approaches, as evidenced by recent examples of programs being adapted by some FNMI communities (Niccols et al., 2010) (e.g., see Section 6.4 on adapting programs).

5.1.2 Western medical approach

In the Western biomedical model, health is viewed as the absence of disease and approaches to treatment involve a separation of the mind and body (Rowan, 2014; LaVallie & Sasakamoose, 2021). Accordingly, addressing SUDs from a Western medicine perspective

tends to focus on the individual as a separate, independent entity and involves unidimensional treatment approaches based on medication and behavioural interventions (Venner et al., 2021). Examples of typical treatments following this approach include detoxification, pharmacotherapy, counselling, and 12-step programs (e.g., Alcoholics Anonymous) (Niccols et al., 2010).

5.1.2 Healing approaches among First Nations, Métis and Inuit populations

In contrast to Western medicine's focus on the individual, approaches to substance use prevention and interventions among FNMI peoples are based on traditional beliefs and worldviews about a holistic approach to health and wellness (AHF, 2007). This approach emphasizes the following key points which must be taken into consideration when addressing substance use behaviours and treatment (AHF, 2007; Sullivan & NNAPF, 2013):

- All aspects of well-being (i.e., physical, emotional, mental, spiritual) are equally important and are interconnected;
- Individual health is connected to the health of broader systems – including family, community, nation, and the environment; and
- Balance in these areas must occur throughout the lifespan.

As described by Niccols et al. (2010), the well-being of individuals is connected to the well-being of the collective (i.e., children, family, community, and the land) in such an interdependent way that understanding the health and wellness of an individual apart from their community is not possible. Similarly, treatments must consider the person as a whole in order to be effective, rather than focusing on only one aspect of their health and well-being (i.e. physical or mental health) (Rowan et al., 2014).

In order to address each of these aspects of individual health while also strengthening the health and well-being of families and communities, Indigenous approaches to treatment and prevention must be multidisciplinary, often including a wide range of therapeutic activities (AHF, 2007; Poirier, 2015). In addition, according to Hansen & Hetzel (2018), spirituality is one of the most critical dimensions of healing from an Indigenous perspective; thus, any approaches to substance use recovery for FNMI peoples must acknowledge the spiritual domain. Table 1 summarizes some of these key aspects of Indigenous approaches to treatment in comparison to conventional Western approaches.

Table 1: Key differences between Western and Indigenous approaches to treatment

Western	Indigenous
Secular focus	Spiritual focus
Unidimensional treatment approach	Multidimensional treatment approach
Mind-body separation	Holistic approach
Focus on individuals	Focus on individuals, families, and communities as a whole
Goal is absence of disease	Goal is wellness
Value abstinence	Promote harm reduction

Incorporating the beliefs and practices of the community and culture into prevention and treatment are also important components of Indigenous healing models (AHF, 2007). Therefore, common activities and practices within treatment programs for FNMI populations are often reflective of these core beliefs, such as: the importance of interconnectedness between people and the land and the healing powers of the natural world; opportunities for culturally relevant experiential learning; and restoring cultural identity and values to help boost the sense of belonging, self-esteem and community support (AHF, 2007; Hansen & Hetzel, 2018; Niccols et al., 2010) Examples of therapeutic activities based on these beliefs include:

- On-the-land healing camps and connections with nature,
- Sweat lodges, cedar baths, smudging, and other spiritual ceremonies,
- Storytelling, art therapy, sharing circles,
- Cultural celebrations and feasts,
- Sacred dances, and
- Support groups such as peer support networks and parenting circles.

5.2 Shifting Towards a Harm Reduction Approach

Western approaches to the treatment of substance abuse disorders have historically focused on achieving abstinence or complete cessation of any substance use and success is measured in terms of sobriety – such as the 12-step program followed in Alcoholics Anonymous (Hansen & Hetzel, 2018). However, research has generally shown that most addiction treatment programs are not successful in terms of long-term recovery from SUDs and maintenance of sobriety; therefore, many substance users require ongoing services beyond a specific "completion" date of their treatment program (Hansen & Hetzel, 2018; AHF, 2007). Recognizing that recovery from problematic substance use does not always mean abstinence (Health Canada, 2018), modern treatments in Canada and other countries have since evolved towards a broader approach that encompasses other forms of health promotion and harm reduction strategies, including medication-assisted therapy and supervised consumption sites (AHF, 2007; Health Canada 2018). The premise underpinning harm reduction is an acknowledgement of the existence of drugs and

substance use disorders and a focus on promoting safer drug use practices in an effort to reduce the health risks and other negative social or economic harms associated with their use (Hansen & Hetzel, 2018; Health Canada, 2018). The Government of Canada now acknowledges harm reduction as "a critical part of a comprehensive public health approach to substance use" (Health Canada, 2018).

Traditional SUD recovery programs that focus on achieving sobriety may be especially irrelevant or inappropriate for FNMI populations, who suffer intergenerational trauma from residential schooling and other discriminatory practices. As a result of these ongoing effects, it may be more difficult for FNMI peoples – especially youth – to avoid drugs and alcohol and maintain abstinence (Hansen & Hetzel, 2018). Therefore, treatment programs specifically focused on FNMI peoples tend to follow harm reduction principles in their approach to care and recovery, rather than abstinence. For example, aftercare or continuing care is a crucial component of treatment for SUDs among FNMI populations because it involves accepting relapse as a normal and predictable part of the healing process and helps to create an action plan to prevent relapse or minimize harm if it does occur (AHF, 2007).

According to the AHF (2007), research increasingly shows that a harm reduction approach within a culture-based framework is effective for not only substance use treatment programs, but other health promotion efforts as well. Another reason for the use of harm reduction strategies in First Nations communities relates to the onset of prescription drug misuse in these communities, which has shifted the focus of interventions from abstinence-based models that typically address problematic alcohol use toward harm reduction service models to better address current needs (Marsh, 2021).

5.3 Overview of SUD Treatments and Services in Canada

In Canada, treatment for problematic substance use is a shared responsibility between all levels of government as well as civil society groups such as local public health units, universities and research organizations, medical associations, and other stakeholders (Health Canada, 2018). More specifically, the federal government provides leadership and funding for health care services, including treatment services, while provincial and territorial governments hold the responsibility of providing these services to citizens (Health Canada, 2018). In addition, the federal government offers treatment services to specific populations, including First Nations peoples.

The current *Canadian Drugs and Substances Strategy*, announced in 2016, includes four pillars that guide the federal government's response to all substance use issues: prevention, treatment, harm reduction, and enforcement (Health Canada, 2018). Under these broad categories, treatment services for SUDs vary depending on individual needs, ranging from

those that address immediate distress to those that provide long-term care. These needs include early identification and intervention; management of withdrawal symptoms; inpatient and outpatient services, and ongoing recovery and follow-up (Health Canada, 2018). Treatment may include medications (e.g. methadone, buprenorphine-naloxone) and/or psychosocial treatment (e.g. cognitive-behavioural therapy; counselling; motivational interviewing. However, while medication can be effective for certain purposes, such as stabilizing the patient, managing symptoms, and reducing cravings, it is not always appropriate or available for all cases (Health Canada, 2018).

In Canada and other high-income countries such as the U.S. and Australia, government-approved guidelines for appropriate treatment methods often recommend the use of integrated or comprehensive programs that include additional non-medical supports provided in conjunction with other treatments, which target various risk factors that can also affect health and substance use (e.g., assistance with basic needs such as housing and food; education and employment services; parenting support and child care) (Health Canada, 2018; RAEB, 2018). These types of integrated programs generally require cross-sectoral collaborations between disciplines or agencies. For example, partnerships between health and social service providers can enhance the range of services offered to pregnant women using substances and those with concurrent disorders such as mental illness (RAEB, 2018; AHF, 2007).

Besides treatment programs for adult substance users, additional services may be needed for any children who may have been exposed prenatally to harmful substances. While prenatal drug exposure and its effects on the fetus and developing child is not the focus of this brief, it is becoming an increasingly urgent public health issue due to the rise in maternal use of substances such as cannabis and opioids. For instance, the incidence of neonatal abstinence syndrome (NAS) resulting from withdrawal from in-utero drug exposure (most often related to maternal opioid use) increased fivefold in the U.S. from 2004 to 2014, leading to increased hospital admissions and costs (Anbalagan & Mendez, 2021).

5.4 Treatment Considerations for First Nations, Métis and Inuit Populations

As mentioned in Sections 5.1 and 5.2, traditional approaches to the treatment of substance use disorders from a Western influence are not necessarily appropriate or relevant for FNMI peoples. Therefore, the development and implementation of treatment programs for FNMI populations must consider cultural, social and historical factors in order to provide more effective and culturally competent services and supports.

As described by Brady (1995), many Indigenous peoples, as well as social scientists, have attributed problematic drug and alcohol use among FNMI communities to the loss of cultural integrity resulting from colonization. Accordingly, reconnecting FNMI peoples to their cultural and spiritual roots and identities through cultural interventions is seen to be

an essential component of treatment and recovery from SUDs and may even be an important preventive or protective factor associated with reduced problematic substance use as well (Brady, 1995; Poirier, 2015).

Examples of treatment approaches that more appropriately address the needs and unique experiences of FNMI peoples with SUDs include interventions that focus on **harm reduction** (see Section 5.2) and those that are **trauma-informed**. As described by Pride et al. (2021), Indigenous communities and service providers have increasingly called for trauma-informed approaches to mental health and problematic substance use interventions. Such an approach involves integrating considerations of intergenerational and historical trauma throughout the assessment, treatment, and recovery process to help address the trauma experienced by FNMI peoples and prevent re-traumatization (Pride et al., 2021).

Characteristics of an Indigenous Approach to SUDs

The Aboriginal Healing Foundation (2007, p.60) has identified ten key characteristics that define an Indigenous approach to SUD prevention and intervention (see below):

1. An Aboriginal approach identifies and addresses the underlying causes of addictive behaviours unique to the historical experiences of Aboriginal peoples in Canada
2. The wisdom of Aboriginal cultures and spirituality is at the very heart of healing and recovery
3. The relationship between suffering, resilience, experiential knowledge, and spiritual growth is acknowledged and honoured
4. The interconnectedness among individuals, families, and communities is strengthened
5. The differing pace at which individuals, families, and communities move through the stages of healing is understood and respected
6. Healing encompasses a range of traditional and contemporary activities with an equally valued role for everyone in the circle of care
7. Community health and community development are inseparable
8. Culture is healing
9. Legacy education is healing
10. Healing is a lifelong journey of growth and change.

It is also important to note that this is a general description; however, culturally-based substance treatment programs are quite diverse as they draw on the traditions and practices of many different Indigenous communities. Programs are often designed to be specific to each place or community rather than following one pan-Indigenous approach (Rowan et al., 2014).

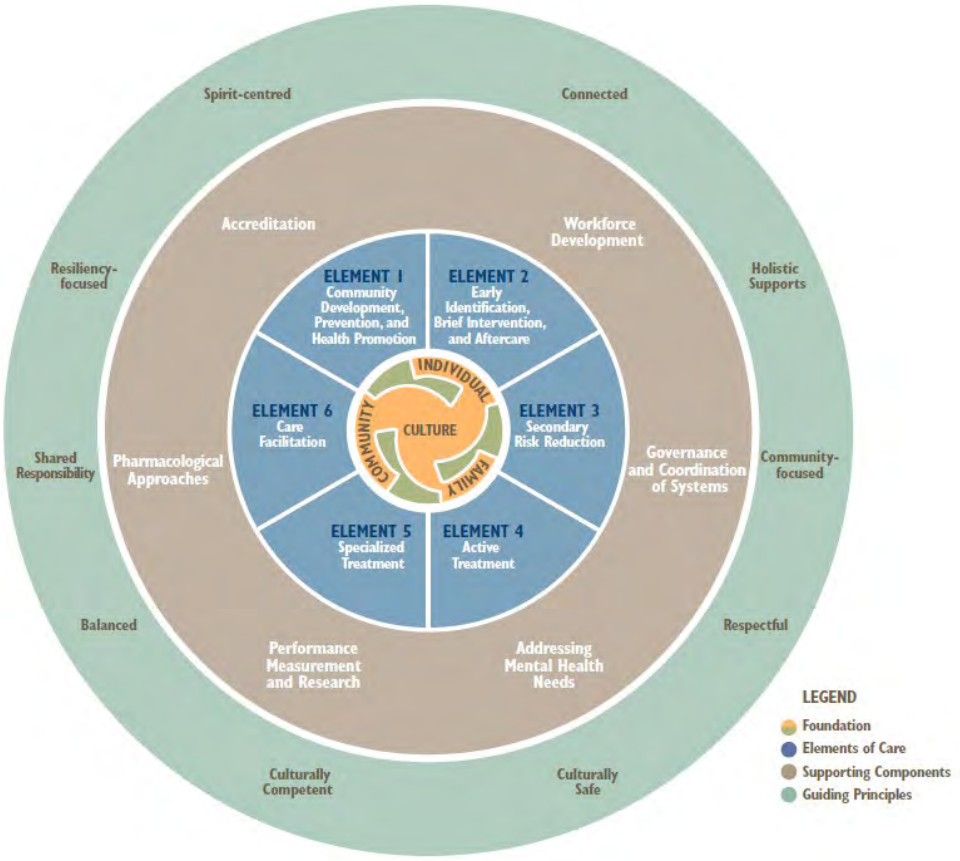
5.4.1 Importance of cultural safety

Under the National Native Addictions Partnership Foundation's (NNAPF) *Honouring our Strengths* framework model for addressing substance use issues among First Nations peoples in Canada, the foundation of health and wellness is a system of care that is holistic,

strengths-based, and attends to culture (Sullivan & NNAPF, 2013). According to the framework, a central component of this system of care is the need for service providers to understand and support the needs of First Nations peoples in a culturally competent and culturally safe way. Other principles developed to guide practitioners in this systems approach, as shown in Figure 1, include care that is respectful, focused on resiliency and community, spirit-centered, balanced and connected.

The systems approach reflects a comprehensive continuum of care that includes a range of community-based services and supports as well as engagement of other related partners and sectors who have a role in addressing substance use issues among First Nations peoples (Assembly of First Nations et al., 2011). Figure 1 presents the six elements in the continuum of care as well as six key supports.

Figure 1: Systems of Care Model (Source: Health Canada, 2011, p.16)



As described below, the principles of cultural safety and competence are important for guiding the delivery of health services and supports to respond more effectively to First Nations peoples (Sullivan & NNAPF, 2013):

- ***Cultural competence***: requires service providers to be aware of their own worldviews and beliefs as well as being knowledgeable and open to the cultural realities of the people they serve.
- ***Cultural safety***: extends beyond cultural awareness and sensitivity to include attention to cultural, historical, and structural differences in care and access to services.
- ***Cultural relevancy:*** requires acting in a culturally competent way to ensure that actions based on culture respect the diversity of individuals, families, and communities.

One model of a program that actively works to implement culturally safe treatment for FNMI patients is the FIR (Families in Recovery) model of care, which serves substance-using pregnant women in British Columbia (BCW & PHSA, 2020; see Section 6.3.2, p. 33) for further description of this program). All assessments, care plans and programs are developed and delivered within a framework that incorporates principles of harm reduction, trauma-informed practice, and cultural safety. The team follows the definition of cultural safety provided by the San'yas Indigenous cultural safety training, which focuses on: "*fostering a climate where the unique history of Indigenous peoples is recognized and respected in order to provide appropriate care and services in an equitable and safe way, without discrimination*." (BCW & PHSA, 2020, pg. 19).

5.5 Treatment Barriers for First Nations, Métis and Inuit Populations

Just as Western treatment models have evolved (as described in Section 5.2), treatment services for FNMI populations with substance use issues have also shown progress and change, moving from services that were largely based on the Alcoholics Anonymous model toward treatment centres that incorporate a broader use of therapeutic interventions as well as culturally-specific programming (Assembly of First Nations et al., 2011).

There are now formal national organizations and partnerships in place whose mandate is to advocate for integrated, holistic approaches to healing and wellness for FNMI communities of Canada. Specifically, the National Native Addictions Partnership Foundation (NNAPF) was established in 2000 in response to a review of the national drug and alcohol program (NNADAP, see Section 6.3.2) to help implement recommendations to improve services for FNMI communities. In 2015, the NNAPF merged with the Native Mental Health Association of Canada (NMHAC) to form the new Thunderbird Partnership Foundation (TPF), which brings together the work of both organizations to support culturally-based mental health and addiction services (TPF, 2022).

However, despite these advancements, many challenges and barriers remain in accessing care and treatment services for FNMI peoples with SUDs. As shown in Table 2, these barriers include systemic and structural factors stemming from colonialism and discrimination; geographical or financial barriers; and a lack of culturally based options and awareness from health providers.

Table 2: Barriers to accessing and receiving care for problematic substance use among First Nations, Métis and Inuit peoples

Type	Examples
Barriers stemming from individual, family, or community-level factors	• Lack of readiness for treatment or fear of forced treatment (Niccols et al., 2010) • Lack of family or community support (Venner et al., 2021) • Fears and stigma associated with substance use o For some, this includes a perception that problems with substance use reflects a loss of spirituality and would bring shame (Poirier, 2015)
Barriers specific to unique populations	• Safety concerns, especially for women who have experienced violence in the past and do not feel safe entering co-ed treatment programs (Niccols et al., 2010) • Pregnant and parenting women who use substances may avoid disclosing their substance use while seeking prenatal care or may avoid care altogether, thereby putting themselves and their infant at greater risk – due to fears of child welfare involvement or criminal charges (BCW & PHSA, 2020)
Barriers stemming from systemic factors	• Loss of trust in the healthcare system due to historical experiences of racism, violence and discrimination (LaVallie & Sasakamoose, 2021; Poirier, 2015) has led to a reluctance to seek treatment and challenges with developing an effective relationship with medical professionals of different backgrounds • Lack of cultural awareness from health care professionals and service providers (BCW & PHSA, 2020) • Negative attitudes, stereotypes and responses from health care providers (Niccols et al., 2010)
Barriers due to structural, organizational or geographical factors	• Constraints due to financial resources or geographical location, especially in remote communities and reserves (Poirier, 2015) • Inability to attend residential treatment centres that exist far from individual's home communities (Jiwa et al., 2008) • Difficulties obtaining transportation or child care in order to attend treatment programs or services (Victor et al., 2019) • For those who are able to attend residential treatment programs, they are often unable to remain on prescribed medication due to challenges getting the medication at home in their own community or receive little to no aftercare (Poirier, 2015; Jiwa et al., 2008) • Challenges attracting and retaining health care providers in these areas (Wendt, 2021; Venner et al., 2021) • Lack of First Nations, Métis or Inuit providers • Lack of options for culturally safe care or treatment services that incorporate cultural practices (BCW & PHSA, 2020)

5.6 Impact of the COVID-19 Pandemic on Treatment Services

Additional considerations for substance use treatment among FNMI peoples stem from the ongoing COVID-19 pandemic and its associated public health restrictions that have been implemented since 2020. Not only must researchers, health care practitioners, and others involved in addressing substance use issues with FNMI populations take into account the unique cultural, social, and historical factors that affect FNMI peoples with SUDs, but they must now also perform this work in the context of the pandemic.

SUD is a medical condition that often requires psychological and physical treatment from health care providers (GC, 2022b). However, since the implementation of public health measures aimed at containing the spread of the SARS-CoV-2 virus (COVID-19), there has been a substantial decrease in the availability and capacity of substance use treatment and harm reduction services (CCSA, 2020). The decline in access to support services, among other factors, has resulted in many clients returning to or engaging in higher-risk substance use (CCSA, 2020). Subsequently, these circumstances, combined with increased toxicity in the drug supply, have contributed to alarming increases in toxic illicit drug deaths (Imtiaz et al., 2021).

Researchers such as Wendt (2021) have noted that the COVID-19 pandemic has disproportionately impacted vulnerable populations who experience disparities in risk factors for poorer COVID-19-related outcomes, such as those with chronic health or mental health conditions. This includes FNMI communities, which tend to have fewer resources and lower access to adequate healthcare services due to colonization, racism, and discriminatory polices; thereby increasing their risk even further.

The COVID-19 pandemic has likely exacerbated substance use issues in FNMI communities, with emerging data suggesting an increase in opioid overdose rates among First Nations peoples. For example, B.C.'s First Nations Health Authority data showed a disproportionate increase in overdose deaths among First Nations peoples in 2020 compared to the rest of the province (Bellrichard, 2020). The percentage of overdose deaths in the province among First Nations peoples increased from 9.9% in 2019 to 16% in the first half of 2020.

> *"Despite expanded harm reduction education, services and supports for First Nations people, we continue to be disproportionately represented in both COVID-19 and toxic drug events. This reflects the persistence of root causes and the inequity in the provision of health care services and supports for First Nations people in BC."*
>
> – *Colleen Erickson, Chair of the First Nations Health Authority* (FNHA, 2021)

Some of the ways in which the pandemic has affected opioid use and other substance use problems for FNMI communities include (Bellrichard, 2020; Wendt, 2021):

- Changes in the street drug supply due to supply chain disruptions have led to increased toxicity
- Limited access to supervised consumption sites and other harm reduction and treatment services
- Restricted participation in culturally relevant treatments such as traditional Indigenous healing practices that can aid in recovery

- Greater isolation due to public health restrictions led people to stay home alone more often, which may have increased maladaptive coping strategies.

Efforts to adapt and adjust to the changing circumstances of the pandemic have led to some improvements in access to needed treatment services for SUDs. For example, healthcare providers in Canada, including Indigenous-serving SUD treatment centres, have expanded outpatient services through the use of telemedicine (Wendt, 2021). As a result, some patients who previously had limited access to medications and other in-person services due to geographical challenges have had increased access during the pandemic. However, some barriers in access to these adapted services remain, particularly for some FNMI communities – such as limited Internet access, concerns about privacy during virtual sessions, and difficulty engaging and communicating through telemedicine services (Wendt, 2021).

6.0 Research Findings

6.1 Overview of the Literature and Approach

As described in Section 3.0, published literature was scanned to examine evidence related to interventions for substance use disorders in FNMI populations. This section provides an overview of the findings from the literature review, highlighting common themes and key points.

Overall, while there is a substantial range of literature on the topic, limited studies were found on the *effectiveness* of interventions. Most of the available literature focused on describing culturally appropriate methods and approaches to treatment for FNMI peoples, but there was a lack of quantitative evidence to evaluate these methods. As discussed by Niccols et al. (2010), there may be several reasons for the reliance on descriptive research on this topic, including methodological challenges in applying standard research designs such as randomized controlled trials (RCTs) to Indigenous culture-based programs; limited resources and funding; and difficulties establishing the appropriate foundation for Indigenous research through community engagement and partnerships with FNMI leaders and researchers.

Despite these challenges, some key findings from the literature still emerged (see Section 7.1) – including the importance of culture as part of a holistic approach to treatment and recovery, and the value of integrating Western treatment methods with traditional Indigenous approaches to healing and wellness to better meet the needs of FNMI clients in ways that reflect the distinct community circumstances.

Besides these common themes, the review also highlighted the diversity of programs, services, and interventions across Canada and the challenges in measuring their impact – especially from a culturally relevant perspective. For example, many studies described community-based programs developed specifically for the local context and people; while these findings may provide important insights into effective treatment strategies for FNMI populations, they may not be generalizable to all FNMI communities or populations. Researchers such as Jiwa, Kelly, and St. Pierre-Hansen (2008) further note that community-based treatment programs often do not have sufficient evaluation and outcome data as they are inherently difficult to measure (see Section 7.3 on Limitations of the Literature for further discussion).

Results from the literature review are described in the following section. First, an overview of assessment methods and approaches is presented to provide some context on the issue of evaluating substance use treatments and interventions in FNMI populations. Much of this background is based on lessons from the three-year study called "*Honouring Our Strengths: A Renewed Framework to Address Substance Use Issues among First Nations in Canada,"* which resulted in a national framework for addressing substance use issues among First Nations peoples in Canada. Next, a description of different types of treatment programs for FNMI peoples in Canada is provided, along with specific examples and models and any evidence of their impact.

Finally, results from evaluation studies and review studies are considered. While this report focuses on interventions in Canada, findings from other jurisdictions are also discussed where relevant. In addition, evidence related to a range of substances and populations is included as applicable. For example, some of the reviewed programs target youth while others focus on adult substance users; some focus on problematic alcohol use while others primarily target opioid use. Programs for pregnant women are not the primary focus of this report, yet some findings relevant to this population group are also described.

6.2 Overview of Assessment Methods

Existing measures and indicators of health and wellness designed for the general population may not adequately reflect important dimensions of FNMI peoples' experience and ways of understanding, which can lead to misleading results (FNIGC, 2020). Researchers have noted the overreliance on Western-based assessments to evaluate Indigenous wellness in the context of substance use disorders and a lack of validated tools that are rooted in FNMI cultures (Fiedeldey-Van Dijk et al., 2017). Given the difficulties in defining and measuring culture as an intervention for health and wellness from a Western perspective, there is a need for more culturally appropriate assessment tools and methods to evaluate the impact of distinct Indigenous cultural and needs-based interventions for substance use treatment (Fiedeldey-Van Dijk et al., 2017).

In an effort to close this gap, researchers involved in the *Honouring Our Strengths: Indigenous Culture as Intervention in Addictions Treatment* project developed and validated a measure of the effectiveness of culture as an intervention called the Native Wellness Assessment (NWA). The NWA is the first instrument to measure the effect of cultural interventions on wellness and was designed specifically for evaluating drug and alcohol

treatment programs for First Nations peoples in Canada (Fiedeldey-Van Dijk et al., 2017; TPF, 2015). The assessment is a 66-item questionnaire [12] that has been statistically and psychometrically validated [13] as a reliable measure of change in wellness over time and is fit for use in treatment centres that provide Indigenous cultural programs (Fiedeldey-Van Dijk et al., 2017; TPF, 2015). Findings from the NWA will be used to establish an evidence base for the role of Indigenous culture in addressing substance use problems and to inform the development of community-based substance use treatment programs and policies for FNMI peoples in Canada and elsewhere (Fiedeldey-Van Dijk et al., 2017; Assembly of First Nations et al., 2011).

The First Nations Mental Wellness Continuum Framework (FNMWCF) [14] is another resource that can help guide the development of wellness indicators within an Indigenous cultural context (FNIGC, 2020). The FNMWCF was developed in response to the growing need within First Nations communities in Canada for a coordinated and comprehensive approach to mental health and addictions programming and services (AFN & TPF, 2015). The model includes a number of elements that create a foundation for supporting First Nations' mental wellness and is based on the recognition that optimal mental wellness involves a balance between the mental, physical, spiritual and emotional aspects – across multiple levels of the individual, family, and community (FNIGC, 2020; AFN & TPF, 2015). The framework is meant to be used to inform future programming decisions; support communities in shaping their services; and promote a more integrated and coordinated approach to treatment programs and services across sectors and jurisdictions – with the ultimate aim of improving First Nations mental wellness outcomes.

[12] Self-report and observer report versions of the questionnaire are available. When an individual cannot complete the survey themselves due to mental, physical, language and/or educational constraints, the parallel observer version can be completed by a staff member of the treatment center or someone close to the client, such as a relative or a friend.

[13] The validation study was done among a total of 177 participants at 12 treatment centres in the NNADAP system across Canada; and the NWA – both the self-report and observer versions - was completed at three time points during treatment to test changes over time in the same clients.

[14] The FNMWCF was developed as a collaboration between the Assembly of First Nations, Health Canada's First Nations and Inuit Health Branch, the National Native Addictions Partnership Foundation, the Native Mental Health Association, and Indigenous mental health leaders from various non-governmental organizations and communities.

Research Spotlight: Two-Eyed Seeing

The concept of two-eyed seeing is commonly cited in the literature on substance use treatments and interventions for First Nations, Métis and Inuit peoples as a way of integrating Indigenous and Western worldviews, knowledge systems, and research methods. Two-eyed seeing originated in 2004 and has been described by one of its founders as "learning to see from one eye with the *strengths* of Indigenous knowledges and ways of knowing, and from the other eye with the *strengths* of Western knowledges and ways of knowing, and to using both these eyes together, for the benefit of all" (Bartlett et al., 2012). Since its introduction, the concept has been used in other forms of Indigenous research and clinical practice and has been adopted as a guiding principle by institutions such as the Institute for Integrative Science & Health at Cape Breton University and the Canadian Institutes of Health Research's (CIHR) Institute of Aboriginal People's Health (Hall et al., 2015; CIHR, 2011).

An example of the use of two-eyed seeing to guide research is the three-year *Honouring Our Strengths* study. The project was based on the understanding that traditional cultural interventions are important for healing and wellness, and that the measurement of the effectiveness of culture as an intervention should prioritize FNMI methodologies and knowledge while still meeting Western scientific standards (Hall et al., 2015). Accordingly, the project team was guided by two-eyed seeing at each stage of the research process – from formulating the research questions, to collecting data, and applying principles of Indigenous data governance. Numerous benefits of this approach to the research process were noted by the researchers. For example, the team's application of FNMI concepts such as storytelling and knowledge gardening helped to overcome limitations of Western understandings of data collection and research grant timeframes. According to the researchers, the experience of applying two-eyed seeing through First Nations governance of the research process not only helped to bridge the divide between Indigenous and Western ways of knowing, but also demonstrated how research can contribute to cultural renewal for FNMI peoples (Hall et al., 2015).

Similar benefits of two-eyed seeing have been noted by other researchers in the area of substance use treatment. For example, Marsh et al. (2016) chose to follow a two-eyed seeing approach in their study examining the effectiveness of blending traditional Indigenous healing practices into the Western treatment model of Seeking Safety as this approach can encourage more respectful, understanding and trusting relationships between Indigenous and non-Indigenous research collaborators. Rowan et al. (2014) also applied a two-eyed seeing approach to their scoping study of cultural interventions to treat substance use issues in Indigenous populations. The researchers found this method to be effective as a strategy for conducting scoping reviews because it accepts and integrates different ways of knowing, thereby helping to address the diversity of research designs and methods within the literature and promoting the translation of knowledge in more meaningful ways for FNMI communities (Rowan et al., 2014).

6.3 Substance Use Programs for First Nations, Métis and Inuit Peoples in Canada: Types and Evidence of Impact

Programs for the prevention and treatment of substance use disorders among FNMI peoples in Canada include residential in-patient treatment centres, integrated community-based programs, and land-based programs. In addition, some programs are targeted toward specific population sub-groups, such as youth or pregnant women. An overview of some existing programs in Canada and their potential benefits or impact is provided below.

6.3.1 Land-based programs

Given the importance of being on the land as a core aspect of health and wellness for FNMI peoples, land-based programs are a common approach to addressing root causes of problematic substance use and supporting healing and recovery in FNMI communities (Hotıì ts'eeda et al., 2019; Health Canada, 2018). A comprehensive definition of land-based healing according to the Kwanlin Dün First Nations (KDFN) is provided below:

> *"…a health or healing program or service that takes place in a non-urban, rural or remote location on a land base that has been intentionally spiritually cultivated to ensure the land is honoured and respected. The land is understood to be an active host and partner to the people engaged in the healing process. The cultivation of a land base under the stewardship of First Nation people is usually done through the development of an intimate spirit based relationship through ceremony, offerings, expression of gratitude and requests for permission from the land to enter and use it for healing purposes."* (Redvers, 2016, p.26)

- Land-based programs vary according to their local contexts, including the geographic location and people involved; however, a key element of these programs is the inclusion of a variety of culturally-based activities that take place on the land, such as medicine walks, hunting and fishing, and arts and crafts workshops (TPF, 2015).
- While some programs take place entirely on the land (i.e. at a camp), others are only partially land-based and may be included as part of a broader initiative such as a program based at a residential facility or community-based programs (Hotıì ts'eeda et al., 2019).
- According to the Thunderbird Partnership Foundation (Assembly of First Nations et al., 2011), the objectives of land-based programs can typically be classified as either 'treatment/intervention' or 'prevention/empowerment.'

Despite the potential benefits of land-based programs, a scoping review study of Indigenous land-based healing programs in Canada found few published studies or evaluations of these programs (Hotıì ts'eeda et al., 2019). For example, among 22 reviewed sources that described such programs, only four included an assessment or evaluation of program outcomes or impact. Findings from this review described several "wise practices" [15] that were attributed to the success of land-based healing programs, including the following:

[15] The term "wise practices" was used instead of "best practices" to better reflect the diversity among First Nations, Métis and Inuit peoples and be more relevant across different settings.

- A foundation in FNMI culture and spirit (the most commonly cited practice across programs)
- Community-driven
- Input from Elders as leaders
- A focus on fostering healthy relationships
- Ensuring cultural and personal safety

Interestingly, several of the reviewed programs endorsed blending mainstream Western ways (e.g. trauma-informed counselling) with traditional knowledge of FNMI peoples (e.g. healing circles and spiritual ceremonies) in their approach to land-based healing. However, each of these blended frameworks still privileged the ways of FNMI peoples by integrating certain Western therapeutic techniques into an Indigenous culturally-based approach, rather than the other way around (Hotìì ts'eeda et al., 2019).

Specific examples of land-based healing programs in Canada are described below, along with any available evidence of their effectiveness:

1) Carrier Sekani Family Services (CSFS) program in north-central British Columbia

CSFS is a health and wellness social services agency that has served 11 First Nations bands in British Columbia since 1990. The agency offers various services and programs, including a land-based healing program [16] that uses culture and the natural environment to aid in recovery from SUDs (Dobson & Brazzoni, 2016). The program design is an example of a blended model where Western clinical interventions are integrated into traditional cultural practices to help clients achieve greater depth (Dobson & Brazzoni, 2016). For example, all staff are formally trained in contemporary Western interventions for substance use and mental health issues and provide one on one counselling sessions as part of the 28-day program. However, participants also engage in a variety of cultural activities which are seasonally inspired and reflect traditional living and culture.

- In 2011, a research project [17] was initiated to evaluate the effectiveness of using culture as a health intervention in alcohol and drug treatment. Overall findings from the project provide evidence that cultural interventions in substance use treatment are beneficial in improving client functioning in all areas of wellness (Rowan et al., 2014). One of the outcomes of this research, which included CSFS as well as several other treatment centres, was that "*cultural healing knowledge and practice is as*

[16] The service is offered through a residential treatment program held over the summer months on a sacred site at Ormond Lake – a traditional fishing ground. A one or two-week program is also offered during the winter.

[17] The research group involved the Assembly of First Nations, Centre for Addiction and Mental Health, National Native Addictions Partnership Foundation, and the University of Saskatchewan and was part of the larger "Honoring our strengths: culture as intervention" project along with 11 other treatment centres across Canada.

valuable to the program as is formal mental health and addiction education and practice" (Dobson & Brazzoni, 2016, p. 14-15).

- Feedback from CSFS clients and communities has also been positive – the treatment approach is well-received by Carrier people, who report preferring this type of treatment over more strictly Western based treatments (Dobson & Brazzoni, 2016).

2) Charles J. Andrew Youth Treatment Center (CJAY) in Atlantic Canada

The Charles J. Andrew Youth Treatment Centre – a ten-bed residential healing centre which opened in 2000 in Newfoundland – is an example of a treatment program that is partially land-based and partially clinical. The program serves Innu, Inuit, and First Nations youth and their families and aims to empower them through a holistic healing program strongly influenced by traditional Indigenous values, beliefs and practices (CJAY, n.d.). The two components of the 16-week treatment plan are a clinical trauma-informed program and the Nutshimit land-based program – both of which are family-centered and address impacts of intergenerational trauma, problematic alcohol and substance use, and other forms of abuse. Through the land-based component, which draws on Indigenous connections and respect for the land, families are taught responsibility, self-sufficiency and survival skills (e.g. hunting and fishing, canoeing, berry-picking, pitching a tent, and traditional crafts), and engage in spiritual practices and storytelling (CJAY, n.d.). Additional services and supports provided through the program include aftercare services and support to help manage transitions back home, school-based interventions and workshops, and wrap-around services to meet families' needs through various community partnerships (CJAY, 2020; TPF, 2015).

- Findings from an evaluation of family reunification data from 2019 to 2020 show that successful completion of the program had positive effects on reunification with family for children in care. Out of 16 children who were in care when they came to the centre, 13 returned home with their parents, resulting in a reunification rate of 81% (CJAY, 2020).

6.3.2 Residential and community-based programs

At the national level, the primary network in place to respond to substance use issues among First Nations peoples is the National Native Alcohol and Drug Abuse Program (NNADAP), which encompasses almost fifty First Nations addiction treatment centres as well as hundreds of community-based prevention programs (TPF, 2022). The NNADAP, which became a Cabinet-approved program in 1982, aims to help fund Indigenous-owned and run initiatives, most of which use a blend of culturally-specific and more mainstream Western approaches to treatment, and can include inpatient and outpatient services (Health Canada, 2018). [18] However, the availability of NNADAP centres may not be adequate given the size and spread of the FNMI populations across the country; and there

[18] A directory of NNADAP treatment centres can be found on the Government of Canada's website: https://www.sac-isc.gc.ca/eng/1576090254932/1576090371511.

is currently a lack of treatment services covering northern Canada and the territories (Niccols et al., 2010).

In addition to the NNADAP, another network of in-patient residential treatment centres across Canada [19] – the National Youth Solvent Abuse Program (NYSAP), provides culturally appropriate treatment and recovery programs aimed specifically at youth (GC, 2019). The NYSAP centres follow a continuum of care approach that includes pre-treatment and post-treatment care involving the youth's families, with each treatment cycle lasting approximately 180 days (GC, 2019).

At the local or community level, a large range of treatment programs target various population groups and substance users. The following examples highlight various community-based, Indigenous-led treatment programs in Canada that have been cited in the literature as models for achieving positive outcomes.

1) Example of an opioid treatment program

Cree Nations Treatment Haven – which began in 2011 in Ahtahkakoop Cree Nation in Canwood, Saskatchewan – is the first methadone maintenance therapy program to be offered in a First Nations community in Canada (Poirier, 2015). Methadone maintenance programs involve long-term opioid substitution and are often considered the best treatment option for the general population; however, there are challenges using this treatment among First Nations populations, often related to access barriers. As discussed by Poirier (2015), methadone maintenance programs are more effective when coordinated with other services through a multidisciplinary treatment approach. An example of a model that incorporates these additional components is the *Matrix Model of Intensive Outpatient Alcohol and Drug Treatment*, which combines multiple evidence-based practices (i.e., cognitive-behavioural therapy, motivational interviewing techniques, relapse prevention) along with practical, social, and environmental supports (i.e. support groups, family education).

Cree Nations Treatment Haven follows this Matrix model but has adapted it to better fit its clients' cultures and needs. The centre offers inpatient and outpatient programs as well as other culturally relevant programs and activities to help aid in full recovery and achieve greater balance between the physical, emotional, mental, and spiritual elements of well-being.

- A preliminary evaluation of the first 15 months of the program found that opioid use decreased considerably, with 82% of participants who terminated use (Poirier, 2015; Andkhoie, 2012). A 2015 evaluation [20] of 30 clients who were receiving methadone maintenance therapy in the program also found positive outcomes, including a decrease in drug use and high-risk behaviours (80% of clients), and a majority reported improvements in other needs such as housing, employment, and family support (Poirier, 2015). In addition, significant associations were found

[19] Including ten centres as of 2019.

[20] The evaluation consisted of a variety of self-report questionnaires, with one single-item clinician completed measure of improvement. Results suggested a bias towards socially desirable responding, with clients reporting greater self-rated improvement overall compared to clinician ratings.

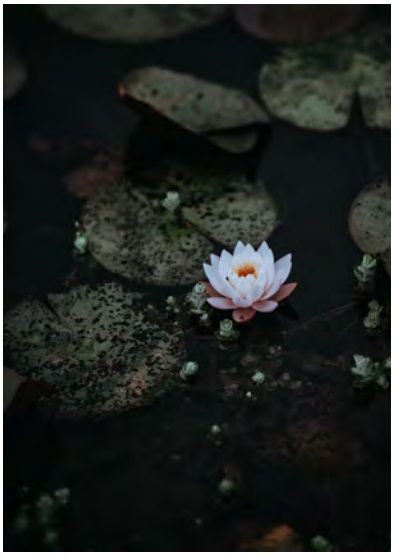
between self-reported improvement and lower life status problems as well as lower expectancy to use drugs or relapse; while other outcomes showed non-significant correlations with improvement. [21]

2) Examples of alcohol treatment programs

The **Alkali Lake Community Healing Model** is one of the more well-established community-based programs for prevention and intervention in Canada, which began in British Columbia in the 1970s and has since inspired other communities to follow the same healing model (AHF, 2007).

- The community of Alkali Lake is well-known as a success story for addressing addictive behaviours and their underlying causes through a culturally based healing approach (AHF, 2007; McCormick, 2000). After alcohol was introduced into the community by fur traders, followed by trauma from residential schools, severe problems such as alcoholism, abuse, and illness became widespread among the community members. However, through community-led action – including stopping liquor sales on the reserve, establishing a voucher system, providing employment opportunities for those who went into treatment, and reintroducing First Nations spiritual tools and activities by traditional healers, the alcohol problem was gradually brought under control, with a reduction in the rate of alcoholism from 95% to 5% in ten years (McCormick, 2000).

The **Kwae Kii Win** program, which opened in 2012 at the Shelter House located in Thunder Bay, Ontario, is one of 13 managed alcohol programs in Canada, which aims to reduce harm from alcohol for people experiencing unstable housing and severe alcohol dependence by helping to manage and regulate their alcohol consumption, as well as providing other individualized supports including counselling and ongoing health assessments (Shelter House, n.d.; Hammond et al., 2016).



- A preliminary evaluation [22] of the program conducted among a sample of participants who self-reported an Indigenous identity in 2013 found that program participants experienced fewer alcohol-related harms and improvements in health and quality of life after completing the program compared to their pre-program outcomes and compared to a usual treatment control group (Pauly et al., 2013). Significant reductions in

[21] Other outcomes showing non-significant correlations with self-reported improvement included self-esteem, decision-making, peer socialization, less depression, and lower overall problem scores.
[22] The study was a small-scale mixed methods study that collected quantitative and qualitative data from 18 program participants compared to 20 control group participants (drawn from the emergency homeless shelter run by the same organization who also met the program eligibility requirements). All study participants self-reported an Indigenous identity.

health, social, and legal service utilization among program participants over a six-month follow-up period were also observed. For example, participants had 42% lower police contacts and 37% lower hospital admissions while on the program compared to when they were off the program.

- A cost-benefit analysis of the program was also conducted to compare the cost of program administration to societal costs for program participants versus a control group (Hammond et al., 2016). Results showed that the program is likely to substantially reduce health, social services, and criminal justice system costs for those eligible to participate, demonstrating that the program can be a cost-beneficial way to address homelessness and severe alcohol dependence. Specifically, every dollar invested in treatment was estimated to lead to savings between $1.09 and $1.21. Moreover, the lack of available data on certain factors and services may have resulted in an underestimate of the total societal benefits of the program.

3) Examples of pregnancy programs

Integrated responses to the issue of substance use among pregnant women began across Canada in the 1990s, aiming to address the many barriers in access to prenatal services for these women – including FNMI women (Nathoo et al., 2013). While they were initially based primarily on a biomedical model, newer programs have since been developed that draw on Indigenous knowledge and incorporate considerations of harm reduction, cultural safety, and trauma-informed care (Nathoo et al., 2013). In addition, recognizing that no single service provider can meet all of the needs of women who are using substances during and after pregnancy, integrated approaches that consider the needs of both mother and child through partnerships at all levels of service delivery are now more common (Nathoo et al., 2013).

A review by Niccols et al. (2010) noted positive results from evaluations of comprehensive, integrated treatment programs for pregnant or parenting women with substance use issues; however, the review found few programs for FNMI women and their children despite their high needs (Niccols et al., 2010). A more recent literature review on legislative and policy responses targeted toward pregnant FNMI women using harmful substances also found several benefits of integrated treatment programs, which generally provide a range of services. For example, reported outcomes of these programs from across Canada and the U.S. include improvements in maternal substance use, maternal mental health, birth outcomes, child developmental outcomes, access to services, and child custody (RAEB, 2018).

There are several programs targeting substance-using pregnant women in Canada, although not all of these examples specifically target FNMI women. While pregnancy programs are not the focus of this report, a few examples of programs that aim to treat substance use problems among FNMI women are described below. For further information, an overview of policy responses to address problematic substance use (primarily cannabis and opioid use) among pregnant women and their children has been previously published (RAEB, 2018).

a) Families in Recovery (FIR) Model of Care

- FIR Square is a specialized perinatal service which opened in 2003 at the BC Women's Hospital and Health Centre in Vancouver, British Columbia and was the first of its kind in Canada to support pregnant and postpartum women using substances as well as infants exposed to substances (BCW & PHSA, 2020). Through an interdisciplinary team-based model, the program focuses on stabilization and harm reduction with a recovery-oriented approach to care (BCW & PHSA, 2020). Substance use treatment follows the Seeking Safety model; while additional services include counselling, education, support with parenting and life skills, assistance with child custody issues and basic needs, nutrition information, and recreation therapy; and are provided by a range of team members – including physicians, social workers, Elders, counsellors, dieticians, and others.
- The treatment model is rooted in a bio-psycho-social-spiritual framework that recognizes the complex interactions of factors behind problematic substance use. This approach aligns with holistic Indigenous approaches to healing and wellness [23], which is important given that the majority of women at FIR (approximately 70%) identify as Indigenous. Following this approach, specific Indigenous cultural programming is offered, which includes activities such as Elder teachings, drumming, ceremonies, an Indigenous wellness garden, and access to land-based healing.
- FIR recognizes that transition planning is a critical step in the recovery process and offers a comprehensive approach to discharge that includes a client-led transition plan with community and peer supports. The FIR team also plays an important role in interfacing with child welfare workers to help eliminate child removals when possible and ensure safe and supportive processes for women and families involved with child welfare services.
- While published evidence on the impact of the program could not be found, FIR noted plans to conduct research and evaluation in collaboration with the Women's Health Research Institute and will continue to engage women with lived experience to help guide planning and quality improvements to the program.

b) Mothering Project

- The Mothering Project, developed in 2013 in Winnipeg, Manitoba, is a community-based program providing services and supports to substance-using women and their children (up to three years of age) who are at risk of child welfare involvement. In addition to addictions services, the program provides parenting support, counselling, childcare, health services, and support for basic needs, as well as traditional holistic approaches to care to better meet the needs of FNMI clients (RAEB, 2018).

[23] It should be noted that Indigenous approaches to healing and wellness are significantly varied, and the use of this terminology may present a generalized view of the diverse cultures and practices among and between First Nations, Métis and Inuit peoples (see Section 1.4 on terminology).

- A 2015 article by the Canadian Centre for Policy Alternatives noted positive outcomes from an informal assessment of the program. For example, after 16 months in the program, almost half (47%) of women had reduced their substance use and over one-third (36%) of women abstained from drugs or alcohol. The assessment also revealed improvements in service connectedness and cost savings compared to government care, indicating that the Mothering Project is both cost-efficient and effective as a prevention-focused, community-based program for vulnerable mothers (O'Brien, 2015).

c) Healthy, Empowered and Resilient (H.E.R.) Pregnancy Program

- This program supports at-risk pregnant and parenting women and their newborns in inner-city Edmonton, Alberta by working to reduce barriers to accessing health and social services and addresses issues such as problematic substance use and family violence (Khan & Wanke, 2013). The program targets street-involved women, a majority of whom have substance use problems and identify as Indigenous (RAEB, 2018, CATIE, 2018). Services include harm reduction services, parenting support, prenatal care, health education, and assistance with child and family services.
- An evaluation of the program conducted from 2011 to 2013 found improvements in client substance use and access to needed services and resources. For example, out of those who reported substance use while pregnant, 40% eliminated use, 37% reported safer use, and 26% reported reduced use at least once while connected to the program; however, 37% reported increased use (CATIE, 2018; Khan & Wanke, 2013). In addition, of the recorded births during the evaluation period, just over half (53%) were able to remain in the care of the mother rather than being placed into care – a much higher percentage than would have been expected without program intervention (CATIE, 2018).

6.4 Evidence on Adapting Programs for First Nations, Métis and Inuit Populations

As described by researchers such as Ivanich et al. (2020) and Leske et al. (2016), approaches to the prevention of problematic substance use among FNMI populations can take one of three different strategies:

1) ***Culturally unadapted programs*** – those that have not been modified in any way to be consistent with the clients' values, contexts and worldviews
2) ***Culturally adapted programs*** – modifying an established evidence-based treatment or intervention to align with the local culture and context
3) ***Culture-based or culturally grounded programs*** – designing an original program from the ground up by building prevention or intervention strategies based on culturally informed and relevant values and beliefs

While culturally grounded programs are likely to show a stronger fit within FNMI communities, they also require intensive community engagement and can take a long time to develop. In contrast, culturally adapted programs are generally more efficient and have the benefit of prior research evidence and theory to enhance the likelihood of effectiveness;

however, there is a lack of available guidance to ensure that programs are adapted in culturally safe and appropriate ways (Ivanich et al., 2020). According to Ivanich et al. (2020), the choice of which strategy will be the most appropriate and effective for a specific project or program depends on several factors, including the goals of the community and the availability of existing programs that could align with those goals.

In a systematic review of the literature on the effectiveness of culturally adapted vs. unadapted vs. culture-based interventions for FNMI adults with SUDs, Leske et al. (2016) found some support for several different types of both culturally adapted and unadapted interventions in improving substance use outcomes. However, due to a lack of studies and the heterogeneity of the interventions included in the available studies, the authors determined that the evidence remains inconclusive regarding the effectiveness of any one intervention or the degree to which cultural adaptations can improve outcomes for FNMI populations.

Findings from specific programs and case studies in Canada and the U.S. suggest that evidence-based treatments used in non-Indigenous populations can successfully be adapted for use among FNMI populations. Two examples are described below, and some of the lessons from this research are summarized in Table 3.

1) *Bii-Zin-Da-De-Dah* (BZDDD) – "Listening to One Another"

BZDD was developed in response to community calls for action amid rising rates of substance use initiation among youth and has been implemented across selected Ojibwe reservations in the upper Midwest U.S. and Canada. With the goal of preventing early initiation of substance use, the program was based on a common prevention program for youth and their families called the *Iowa State Strengthening Families Program for Parents and Youth* (SFP 10-14). This model was selected due to substantial evidence of its effectiveness and alignment with community priorities and needs, such as the need to intervene early (i.e. during early adolescence) and include families in the process (Ivanich et al., 2020).

- The program has undergone four major iterations in its development and adaptation beginning in 1996 and recently completed a five-year randomized controlled trial (RCT) from 2015 to 2020. With each iteration, feedback from participants and community members was incorporated and further modifications were made to make the program more meaningful and relevant for the communities. The third iteration, implemented with four First Nations communities in Canada, was used to establish a working model of the adaptation process that could be applied across multiple FNMI groups and communities.
- While results from the RCT are not yet available, positive outcomes from the entire process have been documented, including strengthening community partnerships;

promoting community engagement and interest; and strong recruitment rates using a culturally appropriate recruitment process.

- BZDD has also been certified as a Canadian Best Practice by the Public Health Agency of Canada and has been used in some after-school programming, demonstrating its flexibility and ability to be adapted across jurisdictions (Ivanich et al., 2020).

2) Indigenous Healing and Seeking Safety Model (IHSS)

Research by Marsh (2016; 2021) also shows the effectiveness of combining Western and Indigenous approaches to treat substance use disorders among FNMI peoples. This research is based on the Western treatment model called Seeking Safety (SS) – a psycho-educational counselling program that has been implemented worldwide and translated into 14 languages and has been shown in several studies to have positive results for treating SUD and PTSD (Marsh, 2021; Hien et al., 2019). While the Seeking Safety model is considered a more mainstream treatment approach, it is also convergent with traditional Indigenous healing methods [24] as it complements many Indigenous values such as holism, spirituality, honesty, respect, and relational connection (Marsh, 2016; Marsh, 2021).

- Findings from a qualitative exploratory study conducted after a 13-week implementation period of the treatment program in Sudbury, Ontario [25] suggested that incorporating traditional Indigenous healing practices into the SS model could further increase the benefits of the program and help to enhance the health and well-being of FNMI participants (Marsh, 2016). Some of the culturally-based methods incorporated in the program included sweat lodge ceremonies, smudging, sharing circles, sacred bundles, and Elder teachings. Of the participants who completed the program in this study (17 out of 24 participants), all showed significant improvements in reported substance use and symptoms of intergenerational trauma, and 14 participants were substance free (Marsh, 2016).
- Following the initial implementation study, the authors developed a pre-post [26] quasi-experimental community trial to evaluate the effectiveness and impact of an intervention for FNMI patients suffering from both SUD and intergenerational trauma. The intervention was initiated at the Benbowopka residential treatment centre in 2016 and follows the combined Indigenous Healing and Seeking Safety (IHSS) model; informed by a collaborative and culturally appropriate approach. While findings from the evaluation study are not yet available, the research aims to highlight the ways in which Indigenous and Western knowledge can co-exist to improve treatment approaches for FNMI communities (Marsh, 2021).

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[24] As mentioned previously in this report, it should be noted that Indigenous approaches to healing and wellness are significantly varied, and the use of this terminology may present a generalized view of the diverse cultures and practices among and between First Nations, Métis and Inuit peoples (see Section 1.4 on terminology).

[25] Participants in the study were recruited from several addiction treatment or recovery centres in Sudbury and included 24 people who self-identified as Indigenous.

[26] The pre-intervention study spanned 2013 to 2016; and the post-intervention study was from 2018 to 2020.

Table 3: Key elements for success when adapting programs for First Nations, Métis and Inuit participants (Based on Ivanich et al., 2020 and Marsh, 2016; 2021):

✓ Rigorous process based on best practices in participatory research and prevention science
✓ Built on a foundation of a longstanding partnership between the research team and First Nations, Métis and Inuit communities
✓ Strong community engagement and consultation at all stages of the research process
✓ Incorporate guidance from many partners to ensure diversity in expertise and knowledge – i.e. parents, youth, Elders, First Nations, Métis and Inuit scholars, clinicians and service providers, and other community members
✓ Ensure that program materials and activities reflect the local context and culture of participants to enhance cultural relevance and meaning
✓ Comprehensive training of all program staff and facilitators

6.5 Other Empirical Results from the Literature on Efficacy of Interventions for First Nations, Métis and Inuit Populations

Along with the examples described in the previous sections, other results from specific studies that have examined the effectiveness of substance use treatment programs and approaches for FNMI populations are presented in Appendix A. Studies include samples from Canada, U.S., Australia and New Zealand; and the majority are review studies, qualitative studies, or exploratory studies, with few experimental or quasi-experimental studies. Details on the types of treatment programs targeting various substances are also described.

In addition to these individual studies, several review studies have been published to synthesize the literature on interventions for SUDs among FNMI peoples. The findings from these review studies confirm the lack of available evidence on the effectiveness of interventions and highlight some of the limitations in the literature as well as some encouraging results. Summaries of selected review studies are provided below, as well as in Appendix A:

- **Pride et al. (2021)**
  - A recent scoping review was conducted to examine the literature on trauma-informed substance use interventions and strategies for Indigenous peoples in Canada and other countries. Findings from the review noted a limited number of studies reporting quantitative outcomes from interventions; as most sources were conceptual or qualitative studies. The lack of evidence on the effects of trauma-informed cultural interventions reduces the ability to identify best practices that could inform the development of more effective, evidence-based interventions to address SUDs among FNMI peoples. However, results still highlighted the importance of conducting research that considers the historical and intergenerational effects of colonization and the need to address trauma and substance use concurrently while integrating cultural components into any treatment program.

- **Jiwa, Kelly & St. Pierre-Hansen (2008)**
  - In a systematic review of the literature on culturally based and community-based substance use interventions for Indigenous clients, Jiwa et al. (2008) found that most studies were descriptive or opinion articles, with few quantitative, qualitative, or mixed-methods studies identified. However, from the available evidence, the authors concluded that community-based addictions programs are appropriate alternatives to residential treatment facilities for Indigenous populations, as they allow individuals to be treated in familiar environments where they can rely on support from family and friends. One promising approach in particular was a community mobile treatment model in which a team of workers comes to the community and provides holistic prevention, harm reduction, treatment and aftercare services to the community as a whole. However, in order for this approach to be successful, strong community engagement and leadership are needed.
- **Rowan et al. (2014)**
  - A scoping study of cultural interventions to treat SUDs in Indigenous populations was conducted to examine characteristics of programs as well as reported outcomes and effects on wellness. Several research designs were employed across the 19 reviewed studies; however, none were true experimental designs and just over half (53%) were quasi-experimental. All studies involved integrative treatment programs that incorporated both Western and Indigenous culture-based interventions, with sweat lodge ceremonies being the most common cultural intervention. Studies reported outcomes on four dimensions of wellness, the most common being physical wellness (90% of studies), and the least common being spiritual health (37% of studies), with a majority of studies also reporting on emotional health (74%) and mental wellness (53%). Results provided evidence that Indigenous cultural interventions may be effective for improving client functioning in all areas of wellness, including reducing or eliminating problematic substance use in almost three-quarters (74%) of studies. However, the diversity of interventions across programs, settings and studies made it difficult to compare outcomes or isolate components of effective programs. The authors also noted that causal relationships between interventions and outcomes could not be determined on the basis of the study designs and analyses, demonstrating the need for additional research to produce more robust evidence.
- **Dale et al. (2019)**
  - Mutual support groups are one of the oldest and most common forms of treatment to promote long-term recovery from SUDs (Dale et al., 2019). However, this systematic review of the literature on SUD recovery mutual support groups for Indigenous peoples found limited empirical data on the acceptability and outcomes of this type of intervention for Indigenous peoples in colonized countries (Canada, United States, Australia, New Zealand). Findings were limited to four studies in the U.S., and methodological differences between the studies limited the ability to meaningfully interpret results. Findings also highlighted the need to consider the heterogeneity of Indigenous populations and communities when designing and implementing interventions such as mutual support groups, as each support group

model may need to be modified significantly in order to meet the unique needs of different FNMI clients.

- **Snijder et al. (2020)**
  - This systematic review assessed the evidence base related to substance use prevention programs for Indigenous adolescents in four countries (U.S., Canada, Australia and New Zealand). The majority of programs included in the review were culture-based [27] (58%), and the majority were either school-based (50%) or were delivered in a combination of settings including school and family or community. Results indicated that prevention programs for Indigenous youth could effectively reduce problematic substance use, with reductions observed in substance use frequency and intention to use, delayed initiation, and improvements in substance-related knowledge and attitudes. The researchers identified four key components of beneficial programs: 1) substance use education; 2) skills development (i.e., problem-solving, decision making, self-management skills); 3) cultural knowledge enhancement (i.e., integration of cultural activities, learning about traditional beliefs and practices, and use of culturally appropriate artwork); and 4) community involvement in program development. However, a limitation of this review was that the majority of included studies (54%) were assessed as having a weak quality rating, and only 19% had a strong rating; demonstrating the need for more rigorously conducted evaluation studies to strengthen the evidence base around substance use prevention for Indigenous youth.

7.0 Conclusions and Implications

7.1 Summary of Findings

As discussed in Section 6.1 and in the findings from the review studies described above, there is limited evidence on the effectiveness of interventions to treat substance use disorders in FNMI populations. However, based on the available evidence, some critical elements that can enhance the impact of treatment programs and promote wellness for FNMI peoples with substance use issues include:

- Culture-based programs; founded on Indigenous culture and knowledge (Hansen & Hetzel, 2018; Urbanoski, 2017; Rowan et al., 2014; Antonio & Chung-Do, 2015);
- A multidisciplinary and holistic approach to treatment that addresses the social determinants of health (Poirier, 2015; RAEB, 2018; AHF, 2007; Rowan et al., 2014; Venner et al., 2021; Urbanoski, 2017);
- Programs that are community-based and developed through strong community engagement and partnerships; using a two-eyed seeing approach (Jiwa et al., 2008; Marsh, 2021; Victor et al., 2019; Venner et al., 2021; Rowan et al., 2014);
- Programs that promote a renewed sense of cultural identity (Niccols et al., 2010; Pride et al., 2021; Mckenzie et al., 2016; Nutton et al., 2015);

[27] The remaining studies evaluated either a culturally adapted program (38%) or an undadapted program (one study; 4%).

- Trauma-informed practice that address the lasting impacts of intergenerational trauma and coexisting mental health concerns (Niccols et al., 2010; BCW & PHSA, 2020);
- Programs that focus on harm reduction rather than abstinence (AHF, 2007; Hansen & Hetzel, 2018; BCW & PHSA, 2020; Pride et al., 2021);
- Treatment that ensures cultural safety (BCW & PSHA, 2020; Hotìì ts'eeda et al., 2019);
- Recovery oriented care with inclusion of aftercare services to prevent relapse (BCW & PSHA, 2020; AHF, 2007);
- Integration of mainstream Western and traditional First Nations, Métis and Inuit approaches (Hotìì ts'eeda et al., 2019; BCW & PSHA; Marsh, 2021); and
- Comprehensive or integrated treatment programs that provide a range of services and supports to address various risk factors (RAEB, 2018; BCW & PHSA, 2020; Niccols et al., 2010).

7.2 Implications of the Findings

The findings from this review have important implications for research, practice and policy – some of which are discussed in this section.

7.2.1 Implications for service providers

One of the barriers to accessing and receiving effective treatment for SUDs among FNMI peoples identified in this review was a lack of Indigenous-led treatment options and a lack of cultural awareness from health care professionals and service providers who do not identify as First Nations, Métis or Inuit (Marsh, 2021). Therefore, there is a need for greater educational and training efforts to enhance the cultural awareness and competency of health providers, counsellors, addictions specialists and other staff and front-line workers involved in substance use treatment programs with FNMI populations.

Researchers such as LaVallie & Sasakamoose (2021) have suggested that addiction and mental health workers should receive specialized training to develop their skills and knowledge to better recognize and respond to the inequities that FNMI peoples experience within the health system. This training should occur within a strengths-based, trauma-informed understanding of the historical effects of colonization and racism (LaVallie & Sasakamoose, 2021). Greater awareness among service providers of the historical and structural factors that contribute to problematic substance use, including intergenerational trauma, has been acknowledged as crucial for providing the best possible care within a culturally safe and supportive environment (BCW

& PHSA, 2020). The Aboriginal Healing Foundation's [28] report on substance use issues among Indigenous peoples in Canada also concluded that cultural competency is an essential aspect of substance use treatment services and emphasized the need for all workers to enhance their knowledge of culture-based approaches to treatment and recovery in order to better understand and meet the needs of FNMI clients (AHF, 2007).

Another important component of effective treatment services identified by the FIR Model of Care is a strong awareness of community resources and support among service providers. Ensuring that FNMI clients know which supports are available to them and how to access them once they leave the treatment program is a key part of the discharge and transition process.

Practice Spotlight

Examples of recent educational and training initiatives for health care and other service providers working with FNMI populations can be found at the national and local level.

- In British Columbia, the Families in Recovery (FIR) program (see pg. 33) has implemented a plan for education and training activities to ensure the sustainment of desired practice changes. This includes formal, structured learning events or programs, with both classroom training and online learning modules; as well as performance support activities such as coaching, mentoring, role play, team discussion and peer support, and job aides (BCW & PHSA, 2020).
- At the national level, the Indigenous Physicians Association of Canada and the Association of Faculties of Medicine of Canada developed a set of recommended FNMI health core competencies for medical schools across Canada (IPAC & AFMC, 2008). The aim of these core competencies is to enhance the curricula around FNMI health by providing medical students, faculty and practitioners with the "knowledge, skills, and attitudes to engage in both patient and community-centered approaches to health care delivery with and for FNMI peoples" (IPAC & AFMC, 2008, p.5). Importantly, the framework recognizes that successful implementation of the recommendations requires knowledge and application of a cultural safety lens by health care providers.

7.2.2 Implications for policy

Findings from this review on the impact and acceptability of specific community-based programs for FNMI peoples with problematic substance use may be informative for developing similar treatment programs and grassroots activities in other communities across Canada. However, some researchers have noted that more action is necessary in order to make a significant impact on rates of SUDs and associated harms among FNMI populations. According to Victor et al. (2019, p.54), "*Single programs are insufficient without changes to policies, budgets, and institutional structures, the absence of which allow the cycle of poverty, addiction, violence, and marginalization to continue*." The Aboriginal

[28] The Aboriginal Healing Foundation ceased operations in Canada in 2014.

Healing Foundation has also stated that community-based programs are only one component of a long-term solution to promote health and wellness among FNMI peoples. As described in Section 5.1, an Indigenous approach to healing recognizes the interconnectedness of individual health to the health of broader systems; accordingly, there is a need for a more comprehensive approach to prevention and intervention at a systemic level that would address the social and economic determinants of health and well-being (AHF, 2007).

Policy Spotlight

With the introduction of the updated Canadian Drugs and Substances Strategy (CDSS) in 2016, the Government of Canada has committed to a comprehensive public health approach to substance use prevention that addresses the root causes of problematic substance use. This includes the social determinants of health that are uniquely experienced by First Nations, Métis and Inuit peoples and racialized communities in Canada, such as racism, discrimination, and historical trauma. As an example, the Government has stated their support for land-based programs as way to strengthen protective factors for FNMI patients with problematic substance use using a culture-based approach. This strategy also aligns with the Truth and Reconciliation Commission's Calls to Action, which includes a call to recognize the value of Indigenous healing practices and apply them to the treatment of FNMI patients.

Several researchers have also identified the need for greater integration across systems and service levels in order to increase access to culturally appropriate treatment along the continuum of care (Victor et al., 2019). For example, in their review of policy responses for substance use in pregnant women, the Ontario Ministry of Health and Long-Term Care noted the benefits of integrated treatment programs that target several risk factors affecting problematic substance use among FNMI women. However, the implementation of such comprehensive programs that combine a number of different health and social services and supports along with SUD treatment requires collaboration across disciplines and agencies. The review identified a few existing programs and strategic frameworks in Canada and the U.S. that have made use of cross-sectoral partnerships between government and communities to provide a range of services that meet the needs of pregnant women using substances. In addition, jurisdictional guidelines in Australia and New Zealand specifically recommend the use of partnerships between Indigenous health services and mainstream services to meet the needs of Indigenous women using harmful substances. However, there is still a need for more information about how existing policy responses that address problematic substance use in the general population might differentially impact specific sub-populations, such as FNMI peoples.

It is also important to consider policy responses to address problematic substance use among Indigenous youth – especially given the high proportion of young people among FNMI populations in Canada (Statistics Canada, 2017). [29] The young and rapidly growing

[29] In 2016, the average age of Canada's Aboriginal population was 32.1 years, almost a decade younger than the non-Aboriginal population (40.9 years) (Statistics Canada, 2017).

Indigenous population represents an unprecedented opportunity for significant change through effective prevention and early intervention programs to reduce the harms of SUDs among youth and future generations of FNMI peoples (AHF, 2007).

Other policy implications from the studies in this review include considerations for licensing and regulation of treatment programs and providers. According to LaVallie & Sasakamoose (2019), licensing and accreditation bodies in Canada should acknowledge the unique qualifications needed to provide culturally appropriate health and well-being services for FNMI peoples – including treatment services for SUDs. For example, this may involve specialized training in cultural knowledge, cultural safety and trauma-informed practice as recognized skills and competencies.

7.3 Limitations of the Literature

As discussed throughout this report, there are several gaps in the existing literature that limit our ability to understand and identify effective evidence-based approaches to treating SUDs in Indigenous populations, especially with respect to First Nations, Métis and Inuit peoples in Canada.

Some of these gaps identified in this review include: a lack of rigorous evaluation studies and methods in general and a lack of evaluation of cultural interventions in particular; small sample sizes in many studies; poorly defined features of some programs; few studies from Canada; a scarcity in research specific to distinct Indigenous groups or communities such as Inuit and Métis; and a near absence of follow-up studies to assess long-term outcomes from treatment programs. These limitations contribute to an overall dearth of sufficient quantitative evidence about the approaches and outcomes of cultural and needs-based interventions (Marsh, 2021). However, as noted by some researchers (Rowan et al., 2014; Snijder et al., 2020), it is important to keep in mind that scientific evaluation methods may not fit with Indigenous cultural values and worldviews; therefore, any review of the academic literature may not adequately capture Indigenous knowledge on the topic or may not be culturally relevant or meaningful for FNMI peoples.

Another recurring limitation noted in the literature is the challenge of defining and measuring cultural and needs-based interventions and their impact using existing tools and methods. For example, outcomes that are important from First Nations, Métis and Inuit perspectives, such as healing and wellness, are inherently difficult to define and measure in ways that honour Indigenous values and beliefs (Hotiì ts'eeda et al., 2019). Comparisons and generalizations of findings across studies are limited not only by differences in study methods and definitions, but also by the diversity of Indigenous programs, settings, and communities across the country (Leske, 2016; Hotiì ts'eeda et al., 2019; Rowan et al., 2014). Moreover, many programs, such as integrated treatment programs, combine several different interventions into one multifaceted, holistic approach, making it difficult to isolate the possible effects of any one intervention (Leske et al., 2016; Rowan et al., 2014).

7.4 Future Research Needs

To overcome the limitations of the available evidence, FNMI peoples and governments, researchers and mainstream governments have identified the need for further research to develop more effective evidence-based programs and interventions that address the needs of FNMI peoples with SUDs in Canada. Importantly, research should attend to geographical and cultural differences through a distinctions-based approach that recognizes the unique needs, circumstances, and interests of the many different FNMI communities across the country (Allen et al., 2022).

Future studies of the efficacy of interventions should aim to apply sound study designs and methods using controlled conditions where possible, such as the inclusion of a comparison group and clearly defined intervention components and outcomes (Rowan et al., 2014). Stronger study designs – both quantitative and qualitative – will help ensure more robust evidence on treatment effects and improve our understanding of causal mechanisms by which culture influences substance use outcomes (Rowan et al., 2014; Urbanoski, 2017). However, in cases where traditional scientific methods such as RCTs are not appropriate for use with FNMI populations, alternative research designs (e.g. cluster RCTs and multiple baseline designs) should also be considered (Snijder et al., 2020).

The involvement of FNMI communities and leaders must be a critical part of this process. Community engagement and participation is essential for any research involving FNMI populations, and research on SUD interventions in particular has shown the benefits of a *two-eyed seeing* approach which recognizes and values both Indigenous and Western worldviews in developing, implementing, and evaluating treatment programs. Future research on SUD prevention and treatment should ensure that Indigenous ways of knowing are incorporated into the research process and should reflect the goals and priorities of the local communities (Snijder et al., 2020). As an example, a recent study by Venner et al. (2021), as discussed by Skewes (2020), provides a successful model of conducting substance use treatment research with Indigenous communities through a community-based participatory research framework, built on long-term relationships and transparency to build trust and address concerns related to participation in clinical trials.

Challenges with measuring and defining outcomes from treatment programs for FNMI populations also point to the need for more culturally-based measurement tools or methods specifically for use within FNMI populations (Snijder et al., 2020). This includes developing and validating measures of Indigenous healing and wellness in the context of substance use treatment and recovery and expanding the use of existing measures such as the Native Wellness Assessment to establish a stronger evidence base for the role of diverse FNMI cultures in addressing substance use issues (Rowan et al., 2014; TPF, 2015).

Finally, researchers have noted the importance of including gender analyses in research to evaluate substance use interventions for FNMI peoples. Given the gender differences in risk factors and consequences of SUDs – including disproportionate rates of family violence and fewer resources and social supports for Indigenous women, prevention and intervention programs should be gender-sensitive and gender-specific to better address the needs of FNMI men and women (AHF, 2007). Future studies could help to inform more appropriate

and effective treatments by specifically examining how gender intersects with culture to influence substance use and treatment outcomes (Rowan et al., 2014).

7.5 Conclusion

Rising rates of substance use such as cannabis and opioids in Canada along with the rapidly growing First Nations, Métis and Inuit populations have created an urgent public health situation that necessitates effective prevention and intervention strategies in order to reduce the harms associated with substance use disorders for FNMI peoples. There is growing interest in cultural and needs-based interventions for addressing problematic substance use in FNMI communities. The evidence reviewed in this brief suggests that culture is indeed a critical component of treatment and recovery for FNMI populations. However, it is not yet clear how cultural approaches can be implemented most effectively or which aspects of either culture-based or culturally adapted programs are most successful. Given the distinct heterogeneity among and between FNMI peoples and communities across the country, it is likely that there is no single best approach that would meet the needs of all FNMI clients, underscoring the need for more adaptive, culturally specific and needs-based treatment programs (Dale et al., 2019; Barker et al., 2019).

Instead of a single approach or strategy, most researchers agree that a multidisciplinary approach that addresses the multiple risk factors underlying health behaviours such as problematic substance use among FNMI peoples is the most promising strategy. One example of a multidisciplinary approach that has shown benefits for pregnant Indigenous women in particular is integrated treatment programs that include additional supports and services as part of the treatment – an approach that aligns with Indigenous holistic views of health. Evidence also suggests that integrating or blending aspects of Western medicine into traditional Indigenous understandings of healing and wellness can be beneficial in the context of SUD treatment and recovery. Therefore, continued efforts among researchers, practitioners and policymakers to bridge the gap between Western and distinct Indigenous approaches to health is an essential next step in addressing SUDs in these communities (Venner et al., 2021). Importantly, this would require concrete action to implement solutions that have already been identified through engagement with FNMI communities.

Some positive change in this direction has recently been observed in response to the COVID-19 pandemic, which could help promote continued efforts to improve access to Indigenous-led and community-based treatment services and supports (Wendt, 2021). However, as noted in Section 7.2.2, an enhanced focus on community-based treatment programs that are culturally safe and appropriate is just one component of a broader strategy to address problematic substance use in FNMI populations. There is still a need for longer-term solutions through significant changes to health and social systems in ways that support healthy behaviours and remove barriers to treatment and care for FNMI peoples in Canada.

> *"While First Nations across Canada continue to advocate to address inequities in health care and health service delivery to First Nations, we must continue to drive change at the community level and increase the rate and pace of change to close the health gap between our people and other Canadians."* – *Assembly of First Nations National Chief Shawn Alto* (AFN, 2011)

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Appendix A – Literature Synthesis Table

Author(s) and Year	Study Design	Study Aims	Demographics	Substance	Details of Treatment	Conclusions and Recommendations
Antonio, M., & Chung-Do, J. J. (2015)	Systematic Review	Analyze interventions focusing on mental health and substance use that utilize the Positive Youth Development (PYD) framework, incorporate culturally tailored programs, and are geared toward Indigenous adolescents	• Indigenous youth in selected English-speaking countries: - U.S.A. - Māori in New Zealand, - Aboriginal persons in Australia, - and First Nations and Aboriginal persons in Canada	• Alcohol • Tobacco • Addictions treatment (unspecified)	• PYD Framework • Culturally Tailored Programs • Elders as role models	• An emphasis on protective factors in a culturally relevant context may reduce mental health disparities and substance use behaviors among adolescents, which will enhance the overall well-being of future generations of Indigenous populations • The study found there were more favourable outcomes for interventions that included cultural components
Argento, E., Capler, R., Thomas, G., Lucas, P., & Tupper, K. W. (2019) (Note: this study was a follow-up study to	Qualitative Study using semi-structured interviews	Qualitatively explore the impact of ayahuasca-assisted therapy on addiction and other substance use-related outcomes and elucidate the lived experiences of participants	• British Columbia, Canada • First Nations band (Coast Salish) in rural southwestern BC	• Alcohol • Tobacco • Cocaine • Pharmaceutical painkillers	• Ayahuasca-assisted therapy • Group-therapy sessions • Meditation	• Narratives revealed that the retreats helped participants identify negative thought patterns and barriers related to their addiction in ways that differed from conventional therapies • All participants reported reductions in

previous quantitative results published by Thomas et al. (2013); see below)						substance use and cravings; eight participants reported complete cessation of at least one substance at follow-up • Increased connectedness with self, others and nature/spirit was described as a key element associated with reduced substance use and cravings
BC Women's Hospital and Provincial Health Authority (2020)	Report	Establish a blueprint for a perinatal substance use continuum of care that will initiate, expand and improve services. Supporting pregnant women using substances who require stabilization of substance use during pregnancy in a non-judgemental environment	• British Columbia, Canada • Pregnant women	• Alcohol • Tobacco	• Elder teachings • Drumming • Celebration • Cultural practices • Tobacco ceremony • Access to land-based healing/ceremony • Indigenous doulas • Indigenous wellness garden • Prenatal care and infant development	• It is imperative to understand the nature of perinatal substance use disorders and provide harm reduction, treatment and recovery options, care and supports that acknowledge the inherent strengths of the women, preserve the mother-infant dyad, promote parenting potential, connection to family and community and support the baby's health and development • Understand the ways that colonization, oppression, residential

						school experiences and the 60's scoop have created intergenerational trauma experiences • Due to the long-lasting of colonization, Indigenous women are impacted by high rates of trauma hence their disproportional rate of substance use
Boyd-Ball, A. (2003)	Case study analysis	Begin reversing the process of the effect of long-term historical trauma by offering culturally and historically relevant enhanced family intervention to reduce adolescent alcohol and other drug use with "The Shadow Project", a pilot study funded by the NIAAA	• USA • 60 American Indian families • Alcohol and drug inpatient treatment	• Addictions treatment (unspecified)	• Comparison of two different treatment modalities: treatment as usual and a brief family-enhanced intervention • Family-enhanced intervention specifically for American Indian families included a cultural approach to assessment and intervention, focusing on building support around the youth to attain abstinence	• Preliminary findings show that incorporating Indian stories were linked to child prosocial behavior and the percentage of days abstinent from individual drug use

Boyd-Ball, A., Dishion, T. J., Myers, M. W., & Light, J. (2011)	Pre-Post-test Study	Examine the effects of psychopathological, peer, family, and cultural predictors of American Indian adolescents' drug use following inpatient treatment	• USA • "American Indian adolescents"	• Addictions treatment (unspecified)	• 7-week treatment protocol: o Promotes abstinence o Emphasize cultural pride, awareness o Educational engagement	• This study suggests that a combination of family management and American Indian traditional cultural practices in families serves as a potential target for interventions to reduce substance use in adolescence • American Indian adolescents are often sent out of state to receive substance use treatment (similar to the practice of sending children to boarding schools for educational purposes) which is perhaps a product of the boarding school era. Thus, it is likely that some of the variability of the well-being and health of American Indian adolescents is the result of historical factors that impinged on all tribes but to varying degrees
Dale, E., Kelly, P. J., Lee, K. S. K., Conigrave, J.	Systematic Review	Retrieve empirical studies on addiction recovery mutual support	• Australia • New Zealand • Canada • USA	• Addictions treatment (unspecified)	• Mutual support groups	• Mutual support groups may become a more meaningful resource for Indigenous people if

H., Ivers, R., & Clapham, K. (2019)		groups for Indigenous peoples of Australia, New Zealand, Canada, United States of America and Hawaii				they were culturally modified
Dell, C., Seguin, M., Hopkins, C., Tempier, R., Mehl-Madrona, L., Dell, D., Duncan, R., & Mosier, K. (2011).	Systematic Review	Discuss different conceptualizations of mental health and substance abuse from Aboriginal and Western psychiatric worldviews and implications for treatment	• Canada • First Nations and Inuit youth	• Solvents	• Residential treatment programs grounded in a culture-based model of resiliency	• A health promotion perspective may assist clinicians in bridging the gap between Western and Aboriginal understanding and practice regarding substance abuse and mental health, thereby improving outcomes • There is significant need for peer-reviewed, culturally competent, psychiatric research specific to diagnosing and treating First Nations and Inuit youth who abuse substances, including solvents • The practice of storytelling illustrates the disjuncture between Western and Aboriginal responses to healing, and may be a valuable tool for knowledge

						transfer in the clinical setting
Donovan, D., Thomas, L. R., Sigo, R. L. W., Price, L., Lonczak, H., Lawrence, N., Ahvakana, K., Austin, L., Lawrence, A., Price, J., Purser, A., & Bagley, L. (2015)	Community-based and Tribal Participatory Research (CBPR/TPR)	Describe the CBPR/TPR process involved in a university-tribal partnership that led to the development of a community-informed, culturally grounded intervention to promote a sense of cultural belonging and to prevent substance abuse among tribal youth	• "American Indians and Alaska Natives"	• Addictions treatment (unspecified)	Culturally grounded social skills intervention to promote increased cultural belonging and prevent substance abuse among tribal youth	• Participation in the intervention, which used the Canoe Journey as a metaphor for life, was associated with increased hope, optimism, and self-efficacy and with reduced substance use, as well as with higher levels of cultural identity and knowledge about alcohol and drugs among high school-age tribal youth • These results provide preliminary support for the intervention curricula in promoting positive youth development, an optimistic future orientation, and the reduction of substance use among Native youth
Eibl, J., Gomes, T., Martins, D., Camacho, X., Juurlink, D. N., Mamdani,	Observational cohort study	Determine the impact that a patient's geographic status has on the efficacy of first-time	• Ontario, Canada • 17,211 patients initiating first-time MMT	• Opioids	• Methadone maintenance therapy	• The study identified regional differences in retention rates and mortality of first-time MMT

M. M., Dhalla, I. A., & Marsh, D. C. (2015)		methadone maintenance therapy (MMT) retention	during this 10-year period			• These findings may relate to geographic isolation and limited methadone program availability experienced in northern regions • Patients who have reduced access to treatment experience higher retention rates when they are able to access therapy
Greenfield, B. & Venner, K. L. (2012).	Systematic Review	Review and summarize the Substance Use Disorder (SUD) treatment research literature specific to American Indian/Alaskan Native populations	• USA • "American Indians and Alaska Natives"	• Addictions treatment (unspecified)	• Medicine wheel • Traditional healers • Healing ceremonies • Indigenous healing practices and ways of life: o Cultural identity, o Spirituality, and o Religiosity • Healing from discrimination, collectivism and historical trauma	• Recent studies have reported positive treatment outcomes for American Indians and Alaskan Natives (AI/AN); however, the extent to which these findings might generalize to all AI/AN populations is unclear due to issues with the study designs • There has been an increase in the number of studies that have included culturally adapted treatment methods • Future research should examine factors that influence treatment effectiveness and

						improve retention to bolster confidence in findings
Hansen, J. & Hetzel, C. C. (2018)	Qualitative	Explore the experiences of addiction recovery among urban Indigenous and non-Indigenous youth who attended the Saskatoon Community Youth Arts Program	• Saskatchewan, Canada	• Addictions treatment (unspecified)	• Community arts program for at-risk youth	• Research results show that Indigenous youth and non-Indigenous youth who use the services of SCYAP have meaningful insights into the ways in which they experience and understand addiction recovery • Continued support for culturally sensitive addictions programs to address the needs or marginalized urban youth would be beneficial
Lowe, J., Liang, H., Riggs, C., Henson, J., & Elder, T. (2012)	Quasi-experimental study	Use a community-based participatory research approach to develop and evaluate an innovative school-based cultural intervention targeting substance abuse among a Native American	• USA • Native American youth (Keetoowah-Cherokee students)	• Preventative • Addictions treatment (unspecified)	• Cherokee Talking Circle (CTC) culturally-based intervention	• Significant improvements were found among all measurement outcomes for the CTC culturally based intervention • The data provides evidence that a Native American adolescent culturally based intervention was significantly more effective for the

		adolescent population				reduction of substance abuse and related problems than a noncultural-based intervention • This study suggests that cultural considerations may enhance the degree to which specific interventions address substance abuse problems among Native American adolescents
Maina, G., Mclean, M., Mcharo, S., Kennedy, M., Djiometio, J., & King, A. (2020).	Scoping Review	Explore the published, international literature examining school-based substance use prevention programs for Indigenous children	• Canada • USA • Australia • Indigenous children and youth	• Preventative • Addictions treatment (unspecified)	• School-based substance use intervention programs for elementary school children	• Findings suggest that prevention programs should be culturally responsive and provide students with the knowledge and skills to prevent and manage substance use in real-life situations • Making Indigenous beliefs, values, languages, images, and worldviews central to the prevention curriculum enhanced the effectiveness, appropriateness, and sustainability of prevention programs. Indigenous communities are best

						positioned to facilitate cultural tailoring without compromising the fidelity of evidence-based prevention programs
Mamakwa, S., Kahan, M., Kanate, D., Kirlew, M., Folk, D., Cirone, S., Rea, S., Parsons, P., Edwards, C., Gordon, J., Main, F., & Kelly, L. (2017)	Retrospective cohort study	Evaluate established opioid addiction treatment programs that use traditional healing in combination with buprenorphine-naloxone maintenance treatment in 6 First Nations communities in the Sioux Lookout region of northwestern Ontario	• 526 First Nations participants in opioid-dependence treatment programs • Six First Nations communities in northwestern Ontario, Canada	• Opioids	• Buprenorphine-naloxone substitution therapy and First Nations healing programming	• The program's treatment retention rates and negative urine drug screening (UDS) results were higher than those reported for most methadone and buprenorphine-naloxone programs, despite a patient population where severe posttraumatic stress disorder is endemic, and despite the programs' lack of resources and addiction expertise • Community-based programs like these overcome the initial challenge of cultural competence. First Nations communities in other provinces should establish their own buprenorphinenaloxone programs, using local primary care physicians

						as prescribers. Sustainable core funding is needed for programming, long-term aftercare, and trauma recovery for such initiatives
Marsh, T., Eshakakogan, C., Eibl, J. K., Spence, M., Morin, K. A., Gauthier, G. J., & Marsh, D. C. (2021)	Study protocol for a quasi-experimental community trial	Determine whether patients who are treated with the Indigenous Healing and Seeking Safety (IHSS) model will have improved treatment satisfaction, improved treatment completion, and a greater reduction in health system at one-year follow-up compared to those treated within the abstinence-based model	• First-time in residential treatment program • Northern Ontario, Canada	• Addictions treatment (unspecified) • First-time patients	• Two-Eyed Seeing • Harm reduction	• There is a lack of sufficient evidence from quantitative and qualitative research studies about the needs and outcomes of cultural interventions, cost-effectiveness of multi-component treatments, and approaches to the delivery of Indigenous residential treatment programs in Canada • Indigenous knowledge and Western knowledge could coexist in an Indigenous residential addiction treatment program • Study findings will be used to inform treatment programs for intergenerational trauma and substance use disorders and

						appropriate care for Indigenous patients
Munro, A., Allan, J., Shakeshaft, A., & Breen, C. (2017)	Qualitative study, part of a three-year community-based participatory research (CBPR) project	Empirically describe a remote Aboriginal drug and alcohol rehabilitation service using three-year mixed methods community-based participatory research (CBPR)	• Australian Aboriginal and Torres Strait Islanders • 12 clients and 5 staff	• Addictions treatment (unspecified)	• Residential rehabilitation services • Therapeutic activities including: o Group and individual counselling o Cultural practices o Access to culture by being on traditional land	• This research found that Aboriginal drug and alcohol residential rehabilitation is not just about length of time in treatment, but also about the culture, activities and relationships that are part of the treatment process • Cultural elements were highly valued by both clients and staff of a remote Aboriginal residential rehabilitation service, with the country or location being fundamental to the daily practice of, and access to, culture • Developing reliable and valid assessments of the program components of culture and treatment alliance would be valuable, given this study has reinforced their perceived importance in achieving positive treatment outcomes.

						• Strengthening aftercare support programs as part of an integrated model of care was also identified as an area for improvement
Oviedo-Joekes, E., Palis, H., Guh, D., Marchand, K., Brissette, S., Lock, K., MacDonald, S., Harrison, S., Anis, A. H., Krausz, M., Marsh, D. C., & Schechter, M. T. (2018)	Clinical trial	Determine the effectiveness of injectable hydromorphone and diacetylmorphine for Indigenous participants in the Study to Assess Longer-term Opioid Medication Effectiveness (SALOME) clinical trial.	• British Columbia, Canada • Self-identifying as First Nations, Métis or Inuit	• Heroin • Opioids • Crack cocaine	• Diacetylmorphine • Hydromorphone	• After 6 months, Indigenous participants using either treatment had a significant reduction in days of street heroin use, opioid use, crack cocaine use and illegal activity. • Treatment retention did not differ by treatment arm • Indigenous people that are not engaged by first-line treatments for opioid dependence are in need of effective alternative treatments. Given the political and logistical barriers facing diacetylmorphine, hydromorphone could serve as a more accessible medication to reach and treat this population. • These needs can be most effectively met when interventions pay

						close attention to and honour Indigenous culture and the Indigenous historic context
Patchell, B., Robbins, L. K., Lowe, J. A., & Hoke, M. M. (2015)	Pretest-post-test design	Examine the effects of incorporating tribal specific cultural beliefs into a tailored substance abuse prevention intervention	• USA • At-risk rural Oklahoma Native American Indian (NAI) Plains adolescents	• Preventative • Addictions treatment (unspecified)	• 10-hour Native American Talking Circle Intervention, • School-based, group substance abuse prevention program over a 8.5-week period	• Substance use/abuse decreased significantly from baseline to post-intervention, and self-reliance increased • The Native Talking Circle Intervention based on tribal-specific values and beliefs was shown to be effective with substance abuse/use at-risk NAI Plains tribal adolescents
Poirier, N. (2015)	Thesis	Evaluate on-reserve methadone treatment programs, from clients' perspectives	• Saskatchewan, Canada • First Nations clients (majority identified as Cree) in the Cree Nation Treatment Haven program in Saskatchewan	• Opioids	• Matrix Model of Intensive Outpatient Alcohol and Drug Treatment • Methadone maintenance therapy combined with other evidence-based practices (e.g. CBT, motivational interviewing)	• Individuals in treatment reported a decrease in drug use and high-risk behaviours, and other improvements (in housing, employment, family support) since being admitted to the program • Clients with higher self-rated improvement reported greater treatment engagement, life quality, physical health, psychological

						functioning, and relationships • Culturally relevant treatment programs with a harm reduction approach may be most effective for addressing the issue of opioid use in First Nations communities
Rowan, M., Poole, N., Shea, B., Gone, J. P., Mykota, D., Farag, M., Hopkins, C., Hall, L., Mushquash, C., & Dell, C. (2014)	Scoping study	Describe characteristics of culture-based programs and examine the outcomes and effects of these interventions on wellness.	• USA • Canada	• Addictions treatment (unspecified)	• Residential treatment program • "Cultural Interventions" combined with Western-based assessments: o Sweat lodges o Ceremonial practices such as sage, cedar, or sweetgrass smudges o Social cultural activities o Traditional teachings o Dancing o Access to spiritual Elders	• Evidence from this scoping study suggests that the culture-based interventions used in addictions treatment for Indigenous people are beneficial to help improve client functioning in all areas of wellness. • There is a need for well-designed studies to address the question of best relational or contextual fit of cultural practices given a particular place, time, and population group. Addiction researchers and treatment providers are encouraged to work together to make further inroads into

						expanding the study of culture-based interventions from multiple perspectives and locations
Raghupathy, S. & Forth, A. L. G. (2012)	Systematic review	Describe an existing evidence-based, culturally relevant drug prevention intervention which transformed into a low-cost, computerized intervention digitized to reach Native American youth in reservations and rural locations	• USA • Young Native children in elementary school settings (grades 4 and 5)	• Preventative • Addictions treatment (unspecified)	• HAWK2 (Honoring Ancient Wisdom and Knowledge2: Prevention and Cessation) uses engaging multimedia features such as games, animations, and video clips to impart substance abuse prevention knowledge and skills training	• Computer-based interventions are a cost-effective way of engaging youth in prevention programming • Future studies will be needed to evaluate the long-term effectiveness and feasibility of computer-based interventions for Indigenous youth, especially for those in remote locations
Skewes, M. (2021)	Commentary on Venner (2021) study	Commentary on Venner (2021) study	• N/A	• N/A	• N/A	• Community involvement through community-based participatory research is necessary for advancing scientific knowledge and addressing treatment disparities

Snijder, M., Stapinski, L., Lees, B., Ward, J., Conrod, P., Mushquash, C., Belone, L., Champion, K., Chapman, C., Teesson, M., & Newton, N. (2020)	Systematic Review	Assess the current evidence base of substance use prevention programs for Indigenous adolescents in the USA, Canada, Australia and New Zealand	• USA • Canada • Australia • New Zealand • Indigenous youth	• Addictions treatment (unspecified)	• Skill development • Cultural knowledge enhancement • Substance-related education	• Findings showed the importance of recognizing the impacts of colonialism on current substance use; and of developing programs in partnership with Indigenous peoples • There is an urgent need for more financial and time investment in conducting rigorous evaluations using practical and alternative research designs, such as multiple baseline designs and cluster RCTs, to create a strong evidence base of what works to prevent substance use among Indigenous youth

Thomas, G., Lucas, P., Rielle Capler, N., Tupper, K.W., & Martin, G. (2013)	Small-scale observational study	Assess the impact of a traditional Indigenous treatment from South America on measures of mental and behavioral health related to problematic substance use	• British Columbia, Canada • First Nations band (Coast Salish) in rural southwestern BC	• Alcohol • Tobacco • Cocaine • Cannabis	• Retreats based on ayahuasca-assisted group therapy treatment (two ayahuasca ceremonies over four days) • Group therapy sessions	• Participation in the retreats correlated with improvements in several cognitive and behavioral states which may aid in recovery • Treatment may be associated with reductions in substance use – participants reported reductions in cocaine, alcohol and tobacco use, but not prescribed drugs (i.e., cannabis, sedatives, opiates)
Venner, K., Serier, K., Sarafin, R., Greenfield, B. L., Hirchak, K., Smith, J. E., & Witkiewitz, K. (2021).	Randomized control trial	Test the efficacy of a culturally tailored evidence-based treatment (EBT) for substance use disorders versus treatment as usual	• "American Indian and Alaska Natives"	• Addictions treatment (unspecified) – participants were diagnosed with a substance use disorder (SUD) according to the DSM-IV-TR	• Reservation-based outpatient, addiction specialty care treatment program • Cultural adaptations of two EBTs: Motivational Interviewing combined with the Community Reinforcement Approach	• There were no treatment group differences between culturally tailored evidence-based treatments for substance use disorder and treatment as usual in this randomized controlled trial with American Indian and Alaska Native (AI/AN) participants – participants in both groups improved equally with regard to substance use outcomes

						• Despite the null findings, the study provides preliminary evidence that culturally tailored SUD treatments may be effective for AI adults • A major and unique strength of the study was successfully implementing a culturally tailored EBT in partnership with a Tribal community with excellent follow-up rate
Victor, J., Shouting, M., DeGroot, C., Vonkeman, L., Brave Rock, M., & Hunt, R. (2019)	Exploratory Study	Evaluate the effectiveness of a grassroots program to address substance misuse and homelessness among Indigenous people through a holistic, culturally-based approach to healing	• Alberta, Canada • Unhoused Indigenous peoples in the Blackfoot territory in southwestern Alberta	• Opioids • Alcohol • Crystal meth • Fentanyl	• "Tipi in the Park" (later renamed I'taamohkanoohsin) program which increased access to traditional cultural resources and activities • Spirituality, cultural reclamation, cultural continuity, and communal bonds • Participation in ceremony, drumming, singing, dancing, storytelling, traditional arts, and	• Small but discernible benefits were observed in the short term: • Attendance connected people with their spirits, inspiring strength and hope for the future, and ameliorated spiritual homelessness. • The program formed a safe space where relationships were strengthened, people felt respected, and meaningful activity away from substances was available.

					traditional food gathering	• At least two participants transitioned into recovery and one obtained housing