



HARM REDUCTION INTERVENTIONS  
FOR CHRONIC AND SEVERE ALCOHOL  
USE AMONG POPULATIONS  
EXPERIENCING HOMELESSNESS  
A LITERATURE REVIEW



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## EXECUTIVE SUMMARY

This report presents a literature review of current research evidence on harm reduction approaches and interventions for severe and chronic alcohol use in housing support initiatives such as the Housing First (HF) model or transitional and emergency housing for individuals who are experiencing homelessness. The impetus for the project has resulted from the community-engaged scholarship and consultation between University of Regina faculty, students and Carmichael Outreach Inc., and it is informed by the agency's direct experiences with clients, who in addition to stable housing, require supports for their chronic alcohol problems and health social issues.

A review of the literature showed that HF programs are compatible with alcohol harm reduction plans that do not require abstinence from alcohol or other psychoactive substances as a prerequisite for receiving and maintaining housing supports. Therefore, the goal of the present literature review on harm reduction for chronic and severe alcohol use, including its non-beverage forms, is to inform discussion, advocacy and future decision-making for evidence-informed interventions for alcohol moderation among individuals who are experiencing homelessness and housing instability. Moreover, the literature review has helped us "take stock" of current evidence related to Managed Alcohol Programs (MAPs) and the factors that can facilitate or impede their full implementation into practice.

Managed alcohol programs are harm reduction initiatives that are used to decrease the negative health and social consequences of severe and chronic alcohol use without expecting the cessation of use (Pauly et al., 2016; Stockwell, Pauly, Chow, Vallance, & Perkin, 2013). Beverage alcohol is provided at specific intervals and in quantities that are determined by program staff in consultation with the client. For many clients of MAPs, abstinence-based programs present a goal that is not attainable, or that has not worked for them in the past due to the complexity of their health and social conditions (Podymow, Turnbull, Coyle, Yetisir, & Wells, 2006). Managed Alcohol Programs provide people who are experiencing homelessness or housing instability a safe place to manage their alcohol use in addition to shelter and other day-to-day supports, such as medical care, and social and cultural connections (Pauly et al., 2016; Stockwell et al., 2013).

In order for MAPs to be successfully implemented, there must be policies in place to reduce the potential of outside alcohol consumption among clients. This is important as an increase in alcohol consumption can lead to significant alcohol-related harms (Chow et al., 2017). Furthermore, staff that are knowledgeable about harm reduction principles are a necessary component of MAPs. To adapt MAPs to cultural contexts and demographics (Ramsperger & Ramage, 2017), it is essential to consider Indigenous perspectives and worldviews when planning MAP initiatives. This could include access to and consultation with Elders, traditional healing such as sweat ceremonies, smudging or other cultural practices (Alaazi, Masuda, Evans, & Distasio, 2015).

While there is the potential to increase alcohol consumption in clients who continue drinking outside of the programs, MAPs have been shown to improve quality of life for clients and decrease costs associated with public services, such as emergency and hospital services. Clients of MAPs have reported improvements in social life, health, safety, and legal conditions (Stockwell et al., 2017; Vallance et al., 2016). MAPs have provided clients with a sense of control over their lives which in turn leads to healing, recovery, and reconnection with the community (Stockwell et al., 2013).

The literature review suggests that MAPs have operated in Canada in various contexts – as part of residential, single-site Housing First model or day programs in shelters and emergency-based shelter accommodations. As many cities experience detrimental consequences of housing crises and social isolation of their most vulnerable community members who also have severe alcohol use problems, community-based agencies providing housing support programs have been accommodating their clients using the principles of MAPs in order for their HF programs to be utilized to their full capacity. Stockwell and Pauly (2018) suggest that many housing support programs across Canada might be using the principles of MAPs to operate quietly when serving the populations with complex needs to avoid public criticism or the risk of being shut down.

It is important to recognize that there are more than just abstinence-based ways to support people with severe alcohol problems, and MAPs provide a more compassionate response to people who have complex issues and run out of treatment and housing options. Researchers and community partners need to collaborate to develop and pilot test the initiatives based on the principles of managed alcohol programs that would be tailored to local context and communities.

## INTRODUCTION

The combination of alcohol use and housing instability presents increased vulnerability to stigma and marginalization as well as negative health and social consequences, including injuries, illness, and death (Aubry, Klodawsky, & Coulombe, 2012; Fazel, Khosla, Doll, & Geddes, 2008).

The higher rates of severe alcohol dependence among populations experiencing homelessness than in the general population (Fazel et al., 2008) are related to additional health risks that include more harmful ways of alcohol consumption, such as non-beverage alcohol use, that can lead to severe intoxication, alcohol poisoning, injury, freezing and death (Aubry et al., 2012; Pauly et al., 2016; Stockwell & Pauly, 2018).

## NON-BEVERAGE ALCOHOL USE

For people living in marginalized conditions, “illicit” forms of alcohol present an accessible alternative to standard alcohol beverages since non-beverage alcohol (NBA) can be found in several products - medicinal compounds, aftershaves, industrial spirits, or fire lighting liquids (Lachenmeier, Rehm, & Gmel, 2007)<sup>1</sup>. Alcohol in these products can be denatured by adding other ingredients, such as methanol, to discourage their ingestion (Lachenmeier et al., 2007). Other alternatives to deter consumption of products as a substitute for alcoholic beverages include using bittering agents to make NBA undrinkable, removing the tax exemption on products such as mouthwash, and making them financially less affordable; as well as decreasing bottle/packaging sizes of these products (Lachenmeier et al., 2007; Lachenmeier et al., 2013). Countries like as Australia and some European countries made it illegal to denature alcohol used in medicinal products (Lachenmeier et al., 2007). Conversely, researchers in Russia found that most brands of commercial products do not indicate the alcoholic strength on the label; this is significant, as consuming 21% or 29% alcohol makes a difference in terms of health effects (Lachenmeier et al., 2007; Lachenmeier et al., 2013).

The low cost of NBA makes them affordable alternatives to beverage alcohol (Lachenmeier et al., 2013; Neufeld, Lachenmeier, Hausler, & Rehm, 2016). The combination of a lower cost combined with a higher alcohol content creates an incentive for people who are dependent on alcohol and have a difficulty affording beverage alcohol (McKee et al., 2005). Moreover, NBA is readily available and can be accessed in places where beverage alcohol is typically unavailable, such as in hospitals (Lachenmeier et al., 2013).

Chronic ingestion of NBA can cause serious health effects, including organ damage (Lachenmeier et al., 2007; Lachenmeier et al., 2013). Added compounds, such as methyl salicylate and thymol have serious harmful effects. Methyl salicylate is hydrolyzed to salicylate after ingestion and drinking 510 mg/person/day of methyl salicylate would cause significant toxic effects to the gastrointestinal system, central nervous system, hematological system, as well as disturbances in the acid-base balance of the body. Additionally, thymol has been shown to cause gastric pain, nausea, vomiting, central hyperactivity such as talkativeness, convulsions, coma, and cardiac and in severe cases, respiratory collapse (Lachenmeier et al., 2013).

A concern related to the consumption of NBA is the potential for alcohol poisoning due to the much higher percentage of alcohol in these products than in beverage alcohol (Lachenmeier et al., 2007). Because of the high alcohol content, NBA products should be diluted prior to

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<sup>1</sup> Community agencies in Regina observed that hand sanitizers, mouthwash, hairspray or isopropyl alcohol have been commonly consumed by individuals with chronic and severe alcohol problems.

ingestion; however, diluting NBA may not occur, as people who are consuming NBA may reach a level of intoxication that inhibits them from doing this (McKee et al., 2005).

According to Soar, Papaioannou, and Dawkins (2016), participants in their cohort study who ingested alcohol gel demonstrated poorer cognitive performance and psychological health when compared to men experiencing homelessness who consumed only beverage alcohol or the control group - those who did not identify alcohol use as a problem for them (Soar et al., 2016). The participants who ingested alcohol gel had significantly poorer visuo-spatial abilities and reported both retrospective and prospective memory deficits and higher anxiety levels than both beverage alcohol misusers and the control group (Soar et al., 2016). The findings suggest that alcohol gel ingestion can be related to more complex psychosocial problems, such as mental illness, or different IQ score before and after chronic alcohol gel ingestion among the participants (Soar et al., 2016).

## ADDRESSING NON-BEVERAGE ALCOHOL USE AMONG POPULATIONS EXPERIENCING HOMELESSNESS

Emerging research suggests that harm reduction interventions, such as Managed Alcohol Programs (MAPs) can address non-beverage alcohol use by prescribed doses of alcohol of known quality at regular intervals, and thus create safer and more stable living environments for their clients (Pauly et al., 2016). It is therefore important that this model, along with other harm reduction approaches, becomes part of the comprehensive programs for individuals that need both harm reduction and housing supports.

Over the past two decades, different approaches to supporting individuals who are experiencing homelessness and use psychoactive substances have been developed and introduced to the communities. Largely, emergency shelters and temporary housing supports have been the primary response to homelessness in Canada (Employment and Social Development Canada, 2016). Although shelters provide much needed access to different types of supports, such as food, clothing, and some type of counselling or health care, the complexity of needs related to chronic and severe alcohol use among individuals experiencing homelessness requires continuous and intensive supports. Models that are part of transitional housing efforts, such as “wet” shelters, rapid re-housing or the ones for chronic homelessness, such as the Housing First (HF) model, utilize a variety of strategies to address homelessness among those who experience negative consequences of their alcohol use (Cunningham, Gillespie & Anderson, 2015).

## HOUSING SUPPORTS FOR PEOPLE WITH CHRONIC AND SEVERE ALCOHOL PROBLEMS

The Housing First model, developed for individuals who experience chronic homelessness, is a well-documented evidence-based model (At Home/Chez Soi, 2016). Despite the high rates of mental health and substance use issues experienced by clients of the HF Model, harm reduction interventions for chronic and severe alcohol use is often an overlooked component of the model in real-world settings. The principles of the HF model emphasize consumer choice and self-determination in terms of housing and support recovery orientation with access to a harm reduction environment to mitigate the negative consequences of the use of psychoactive substances. Although both drug and alcohol use problems are associated with chronic homelessness, the rates of chronic and severe use of alcohol, including its non-beverage forms, among individuals experiencing homelessness are disproportionately high while harm reduction

interventions addressing these problems are less developed (Fazel et al., 2014; Homeless Hub, n.d.).

Similar to the HF model, rapid re-housing is an emerging housing support initiative that aims to help with accessing permanent housing by families and individuals who experience transitional or episodic homelessness without pre-conditions or “readiness” related to their substance use issues (Gillespie et al., 2015). The small body of evidence suggests that rent assistance, moving costs, and case management focused on housing stability are the usual components of rapid re-housing. Harm reduction of severe and chronic alcohol use within this housing support model yet to be defined and evaluated (Gillespie et al., 2015).

Transitional housing initiatives such as “wet” shelters respond to chronic and severe alcohol use of their clients by providing a 24-hour in-shelter harm reduction program that allows people who are intoxicated but do not present a safety risk for themselves or others to use the shelter; some shelters use MAPs programming and include some form of alcohol administration (Svoboda, 2008). The support is aimed at individuals who have problems remaining housed even if alcohol use is permitted, engage in hazardous ways of alcohol use or use non-beverage alcohol (Svoboda, 2008). In the context of providing comprehensive support and assistance to homeless populations, MAPs can be considered an extension of the Housing First, or “wet” shelters principles to achieve client’s inclusion and higher quality of life.

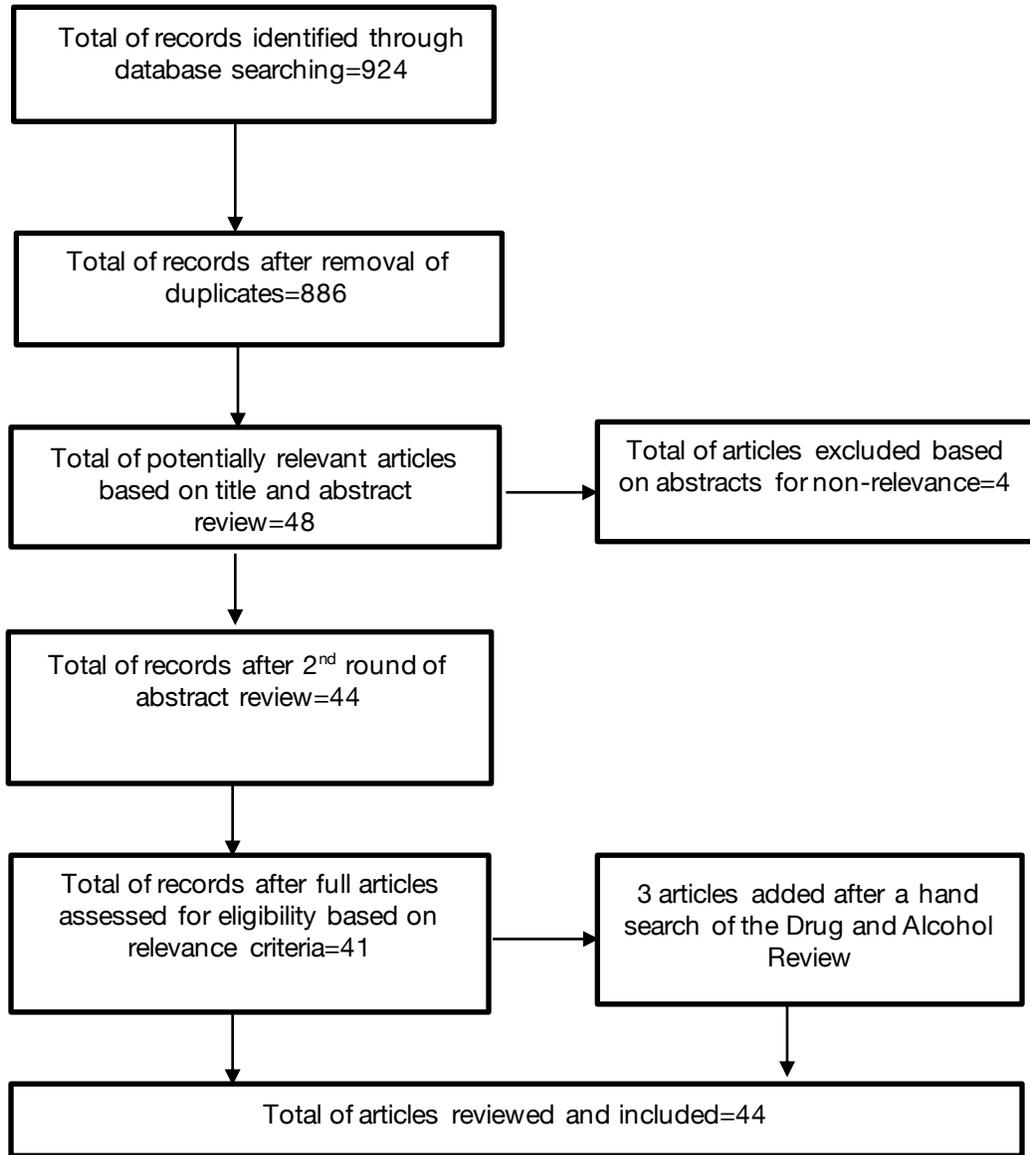
## METHOD

A review of the literature on alcohol harm reduction, specifically managed alcohol programs (MAPs), was conducted to identify the current evidence available for the implementation of strategies to mitigate the harmful effects of chronic/severe alcohol use and non-beverage alcohol use. The search was completed based on the following research questions: (1) What evidence-informed models of alcohol management are currently available in the Housing First model and similar housing supports for s populations experiencing homelessness? (2) What are the necessary components of the evidence-informed alcohol management in the Housing First model or similar housing initiatives for populations experiencing homelessness? (3) At the agency level, what are the facilitators and barriers to adoption, implementation, and sustainability of harm reduction interventions for chronic/severe alcohol use among the individuals who experience homelessness? (4) At the community and system level, what are the facilitators and barriers to adoption, implementation, and sustainability of harm reduction interventions for chronic and severe alcohol use among the clients of the Housing First programs or similar housing support initiatives?

A search of Canadian and international peer-reviewed literature published between 2003 and 2018 was conducted in the following four databases: CINAHL, MEDLINE, Social Services Abstracts, and Web of Science. Only English language publications were included. The search was not limited by study design. In all databases, a search was conducted using keywords: managed alcohol program\*, managed alcohol, homeless\*, alcohol\*, harm reduction, severe alcohol\*, surrogate alcohol, housing first, alcohol management, Indigenous, Aboriginal, and First Nations. In addition to the searches in the databases for peer-reviewed articles, a search using the same keywords was conducted on the Internet for publicly available articles and reports (e.g. Canadian Institute for Substance Use Research, Homeless Hub, and World Health Organization). A complete list of results as well as search strategy is available from the authors.

The literature searches yielded a total of 924 results. Once duplicates were removed, a total of 886 articles remained. After the first screening of titles and abstracts, a total of 48 articles were determined to be relevant to the study's inclusion criteria. Although many articles and reports included HF model and harm reduction for severe alcohol use, we included other types of housing supports for severe alcohol use to make the literature review more comprehensive. A relevance assessment of the abstracts was independently conducted by four reviewers. Following this review, 44 articles remained. The remaining articles were reviewed in their entirety by one reviewer. This review yielded 41 articles that met the inclusion criteria: participants were aged 18 and over, homeless or in unstable housing, and alcohol use was mentioned. Additionally, the special section of the *Drug and Alcohol Review* journal was hand-searched, which resulted in three articles being added to the literature review. The articles were grouped according to the research questions; as well, three thematic areas have emerged from the reviewed literature that we considered relevant to the research questions: 1) the Housing First Model and harm reduction interventions, such as MAP for chronic and severe alcohol use, 2) "wet" shelter- based MAPs for homeless populations with chronic and severe alcohol use; and 3) culturally relevant interventions for specific populations (e.g. Indigenous people). Most of the articles are from Canada, the United States, Australia, and the United Kingdom; two are from Germany, and two are from Russia. Figure 1 depicts the literature screening process.

Figure 1: Literature screening process



## RESULTS

### RESEARCH QUESTION 1: WHAT EVIDENCE-BASED MODELS OF ALCOHOL MANAGEMENT ARE CURRENTLY AVAILABLE IN THE HOUSING FIRST MODEL AND SIMILAR HOUSING SUPPORTS FOR POPULATIONS EXPERIENCING HOMELESSNESS?

#### HOUSING FIRST

##### *DEFINITION AND HISTORY*

Housing First (HF) is a harm-reduction approach to ending homelessness (Clifasefi, Collins, Torres, Grazioli, & Mackelprang, 2016) and a client-oriented approach to accessing housing that does not require abstinence from substance use or participation in psychiatric treatment (Burlingham, Andrasik, Larimer, Marlatt, & Spigner, 2010). According to Clifasefi et al. (2016), HF “strives to support housing retention, reduce substance-related harm, and improve various quality-of-life domains” (p. 846). There are two approaches to HF: scattered-site and single-site housing, also known as Permanent Supportive Housing (PSH). In scattered-site HF programs, clients who are homeless are provided with individual housing units (i.e. apartments) in a community with access to health and social supports (Clifasefi et al., 2016; Collins, Clifasefi, Dana, et al., 2012; Collins, Malone, & Larimer, 2012; Collins, Malone, & Clifasefi, 2013). Originally developed in the early 1990s by Tsemberis and colleagues in New York City, the scattered-site HF approach is now being implemented across the United States and Canada (Collins, Clifasefi, Andrasik et al., 2012; Collins et al., 2013). As for single-site housing, clients live in units in a stand-alone building with access to supportive services such as case management and medical care (Clifasefi et al., 2016; Collins, Clifasefi, Dana, et al., 2012; Collins et al., 2013).

##### *ALCOHOL USE AND HARM REDUCTION IN HOUSING FIRST PROGRAMS*

According to Collins, Malone, and Larimer (2012), harm reduction “describes a set of compassionate and pragmatic approaches that aim to minimize harm related to alcohol use and maximize quality of life for affected individuals and their communities” (p. 117). However, in their rapid review and analysis of the literature on HF and harm reduction in the US and Canadian open-access literature, Watson, Shuman, Kowalsky, Golembiewski, and Brown (2017) found that most of the articles reviewed did not discuss harm reduction. Articles that did identify harm reduction as being part of HF, it was implied that harm reduction is compatible with HF rather than integral to the HF philosophy (Watson et al., 2017). This could be interpreted as harm reduction being an optional component of HF rather than regularly integrated into HF programs. Furthermore, there were only a few articles that described how to implement harm reduction strategies (Watson et al., 2017). While most of the articles noted that abstinence is not a requirement of HF programs, it is unclear if clients of HF programs would lose their housing if they continued their substance use (Watson et al., 2017).

In the qualitative case study on women’s experiences in HF, Burlingham et al. (2010) found that escape from intimate partner violence or a parental home, poor health, abandonment and widowhood were the contributing factors to their homelessness. Similarly, in other qualitative studies, clients of the HF programs indicated that alcohol use was often a coping mechanism to deal with trauma, stress and psychiatric problems; as well as to address withdrawal symptoms, such as shaking and seizures (Clifasefi et al., 2016; Collins, Malone, & Larimer, 2012). Accordingly, the complex issues experienced by chronically homeless populations with severe alcohol problems require tailored and comprehensive interventions (At Home/ Chez Soi, 2016).

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### *HOUSING FIRST VS HOUSING THAT REQUIRES ABSTINENCE*

Most HF clients have made multiple attempts at abstinence-based treatments, which have not worked for a variety of reasons. Some of the clients in the study by Clifasefi et al. (2016) indicated that they were not able to achieve longer-term sobriety until moving into the single-site HF program. As one client put it “I’ve never sobered up at a place where you’re supposed to sober up-so they never worked for me. I’ve been to many 3-month programs and ... I would walk out of there and get a bottle. So those things never worked for me either. And I did sober up [at a single-site HF], although I don’t think that’s their mission whatsoever” (Clifasefi et al., 2016, p. 851). Similarly, when exploring the experiences of women with substance use issues and homelessness, Burlingham et al. (2010) found that four of the seven study participants had been asked to leave ‘traditional’ housing due to relapse into alcohol use. To the contrary, in the qualitative case study on clients’ adjustment to an HF program, Collins, Clifasefi, and Andrasik, et al. (2012) found that the HF programs create a sense of community, increases clients’ feelings of belonging which provided a safety net for clients to seek care for both physical and psychological problems. Stability of housing likely increases the level of responsibility regarding having personal space to take care of which in turn leads to an increased effort to reduce drinking, the decrease of alcohol-related problems and staying housed (Burlingham et al., 2010; Collins et al., 2013; Collins, Malone, Clifasefi, et al., 2012). Comparably, in a randomized control trial on the impact of HF on substance use problems for homeless people with mental illness, clients reported spending less money on alcohol over the study in comparison to the control group, with a significant decrease in spending observed at 24 months and overall decreased in alcohol-related problems (Kirst, Zerger, Misir, Hwang, & Stergiopolus, 2014). These changes are attributed to an internal commitment to change – “a more important factor in alcohol-use behaviour change than formal treatment attendance” (Collins, Malone, & Larimer, 2012, p. 937).

In a case study done on housing retention in a single-site HF program, 46.5% of the clients interviewed for the study stated that they would not have been able to maintain housing with an abstinence requirement (Collins et al., 2013). Although many clients expressed interest in cutting back on their alcohol consumption, some were not interested or unable to abstain from alcohol entirely due to a variety of reasons (Collins, Clifasefi, Dana, et al., 2012).

The harm reduction approach used in the HF model enables staff to create stronger, more empathetic relationships with clients. This involves accepting clients where they are at in their recovery as well as following the client-driven approach to harm reduction (Collins, Clifasefi, Andrasik, et al., 2012). Most of the participants in a qualitative study on single-site HF felt supported by staff members; nevertheless, the tension between the clients and staff most likely due to the difficult transition from homelessness to housing was also reported (Clifasefi et al., 2016).

Conversely to research reporting the challenges with implementing HF principles into practice, Collins, Clifasefi, Dana, et al., (2012) report that many staff members of HF program supported the harm reduction model and understood that abstinence might be unrealistic for some clients. The HF program incorporated the principles of a MAP that provide clients with the opportunity to have staff keep their alcohol for them and then distribute it in amounts and a schedule agreed upon with clients. Clients that participated in the MAP had more frequent contact with staff which translated into more opportunities for harm-reduction interventions, such as encouraging clients to reduce their consumption of non-beverage alcohol. Clients reported that they had reduced their drinking or became abstinent and enjoyed a greater sense of control when they did not drink to intoxication (Collins, Clifasefi, Dana, et al., 2012). Similarly, Collins, Malone, Clifasefi, et al. (2012) found that clients in the HF program experienced a decrease in their quantity of alcohol

as well as their total days drinking over the two years of the study. Findings of this case study revealed that for every three months in the study, clients decreased their self-reported alcohol use on typical and peak drinking occasions by 7% and 8% respectively; as per self-report, the means for peak drinks decreased from 40 drinks to 26 drinks, and more clients also experienced days that did not involve drinking to intoxication (Collins, Malone, Clifasefi, et al., 2012). At baseline 54% of the clients reported at least one day within the past month that they did not drink to intoxication; by the two-year follow-up, 73% of clients stated they experienced one or more days without drinking within the past month (Collins, Malone, Clifasefi, et al., 2012).

By contrast, some clients that are part of MAPs indicate that they had found it challenging to stop or reduce their alcohol intake due to the harm-reduction approach found in the program. This was due in large part to the availability of alcohol as well as being invited to participate in socializing activities that involved alcohol consumption (Collins, Clifasefi, Dana, et al., 2012). In a case study by Collins et al. (2013), the authors found that staff in the HF program were willing to help clients who were interested in maintaining sobriety find abstinence-based treatment or housing.

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### *SCATTERED AND SINGLE-SITE HOUSING FIRST PROGRAMS*

Both scattered-site and single-site HF models demonstrate positive outcomes for chronically homeless people with severe alcohol use; single-site HF programs have “been associated with reduced publicly funded service utilization and association, decreased alcohol use and problems, and increased housing retention” (Clifasefi et al., 2016, p. 846). This is due in part to increasing clients’ access to service providers as well as establishing a sense of stability and connection to the community (Clifasefi et al., 2016). In a cohort study on public service use for people experiencing chronic homelessness with severe alcohol use by Henwood et al. (2015), the authors found that there was a significant reduction in overall public service use for people with severe alcohol use who were in a scattered-site HF program.

In a two-year cohort study in which housing- and non-housing related outcomes for adults with problematic substance use, including problematic alcohol use, were compared, Cherner Aubry, Sylvestre, Boyd, & Pettey (2017) found that clients who received scattered-site HF housing “moved into housing more quickly, reported a greater proportion of time housed, were more likely to spend the final six months housed, and had longer housing tenure” (p. 226) at 24 months than the comparison group. Although the comparison group in the study by Cherner et al. (2017) showed more rapid improvement on problematic alcohol use, both groups improved over time. Other non-housing related outcomes showed that the groups had similar improvement on community functioning by 24 months; the comparison group had a greater increase in total quality of life, such as family relations and improvements in mental health by 24 months (Cherner et al., 2017). A significant improvement over time in both groups was reported for finances, leisure, and social relations (Cherner et al., 2017). Some of the lower improvements in HF clients are likely related to the severity and chronic nature of their complex issues and the need for tailored services that would address their functioning in health, substance use and overall quality of life (Cherner et al., 2017).

The positive effects of HF program were reported in a mixed methods case study on substance use outcomes among homeless clients with serious mental illness. Padgett, Stanhope, Henwood, and Stefancic (2011) found that clients of the HF program were less likely to use psychoactive substances, including alcohol and illicit drugs than the study participants in the abstinence-based programs during the study year.

## RESEARCH QUESTION 2: WHAT ARE THE NECESSARY COMPONENTS OF THE EVIDENCE-INFORMED ALCOHOL MANAGEMENT IN THE HOUSING FIRST MODEL OR SIMILAR HOUSING INITIATIVES FOR POPULATIONS EXPERIENCING HOMELESSNESS?

### MANAGED ALCOHOL PROGRAMS

Managed alcohol programs as an approach aiming at preventing severe health and social consequences especially experienced by people who are homeless or unstably housed have been adopted in the context of different supportive housing initiatives, such as the Housing First model, emergency homeless shelters (Podymow, Turnbull, Coyle, Yetisir, & Wells, 2006) or in other residential care facilities (Collins, et al., 2013).

#### *DEFINITION AND HISTORY OF MANAGED ALCOHOL PROGRAM*

Managed alcohol programs are a harm reduction strategy that aims to reduce the harmful consequences of NBA use as well as stabilize drinking patterns of homeless people with severe alcohol dependence (Pauly et al., 2016; Stockwell et al., 2013). Stabilizing drinking patterns may lead to a reduction in binge drinking and withdrawal symptoms (Chow et al., 2017). MAPs provide beverage alcohol, such as beer or wine, to program participants in set amounts at regular intervals throughout the day (Erickson et al., 2018; Pauly et al., 2016). In addition, supports such as housing, meals, and medical care are often offered (Chow et al., 2017; Erickson et al., 2016). Most of the clients who participate in a MAP have tried abstinence-based treatment several times (Podymow Turnbull, & Coyle, 2006). The first Canadian MAP - the Annex Program - was established in Seaton House, the largest homeless shelter in Toronto in 1997 after three homeless men froze to death when they were denied adequate shelter due to their alcohol use (Evans, Semogas, Smalley, & Lohfeld, 2015; Stockwell et al., 2013; Pauly et al., 2016). Most of the MAPs provide some form of accommodation, whether on-site or in the community (Evans, 2012; Evans et al., 2015; Pauly et al., 2016; Pauly et al., 2018; Stockwell et al., 2013). Depending on the type of housing offered, whether permanent or transitional, housing was sometimes contingent on the participation in the MAP (Pauly et al., 2016). However, some of the MAPs operate in a permanent supportive housing setting where just a few of the units are set aside for MAP clients; other units are for affordable housing for anyone. Some of the MAPs operated through a shelter (Podymow, Turnbull, & Coyle, 2006)

#### *ADMISSION CRITERIA*

All potential MAP clients must meet specific program criteria to enter the program. Program eligibility criteria vary from program to program; however, there is some commonality between the sites. Common criteria for admission into a MAP include chronic homelessness, severe alcohol dependence, a high rate of police or emergency services contact, repeated attempts at abstinence-based treatment programs, and/or harm to themselves or the public (Chow et al., 2017; Pauly et al., 2018; Stockwell et al., 2017; Vallance et al., 2016). Some of the programs require that health care professionals, such as physicians or nurses, screen potential clients (Stockwell et al., 2013). Assessment tools such as the Alcohol Use Disorders Identification Test are used to determine the severity of alcohol use of potential clients (Chow et al., 2017). One of the MAP programs offers shelter based palliative care and to be accepted into the program, in addition to chronic homelessness, the client must have no natural caregivers, be lacking the financial resources for care, and be diagnosed with a life-threatening illness (Podymow, Turnbull, & Coyle, 2006).

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## STAFFING

In the studies that mentioned staffing, all were found to have staff on-site 24 hours per day. For example, at a MAP in Ottawa, Ontario, client care workers were available for, among other things, help with activities of daily living, medication dispensing, and accompaniment to medical appointments (Podymow, Turnbull, & Coyle, 2006). In his case study of Mountainview, a supportive housing program in Hamilton, Ontario, Evans (2012) identified that clients receive 24-hour support from program staff. This support is important to the health and wellbeing of MAP clients. In their cohort study, Pauly et al. (2016) looked at the Kwae Kii Win Centre in Thunder Bay, Ontario and determined that the program staff contribute to a sense of safety and security that the clients feel.

In addition to program support staff, health care providers, such as physicians and nurses, are integral to many of the MAPs reviewed as access to primary health care is a main focus of MAPs. Several of the shelter-based MAPs had nurses on-site 24 hours per day with physicians visiting the program at least once per week (Evans, 2012; Evans et al., 2015; Podymow, Turnbull, & Coyle, 2006; Podymow, Turnbull, Coyle, Yetisir, & Wells, 2006). If medical care was not available on-site, program staff would facilitate access to physicians and nurses in the community (Vallance et al., 2016). Social service providers, as well as counselling services, were also available at most of the sites. Access to onsite healthcare services is significant for many reasons, one being that clients, who may be ill or requiring end-of-life care, can be cared for in their home. For example, one of the clients who was interviewed for the study by Evans (2012) passed away and was cared for at the Hamilton's Mountainview by nurses and physicians. In the shelter-based palliative care at a MAP program in Ottawa, Ontario, nurses were available 24 hours per day, seven days per week (Podymow, Tunrnbull, Coyle, 2006). The nurses' role was to help with daily living activities. Physician services were also available 24 hours per day, seven days per week (Podymow, Tunrnbull, Coyle, 2006).

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## ALCOHOL ADMINISTRATION PRACTICES

Managed Alcohol Programs differ in their approach to alcohol administration. Most of the programs dispense alcohol between the hours of 0700 and 2300 hours daily at 60-90-minute intervals (Evans, 2012; Evans et al., 2015; Kidd, Kirkpatrick, & George, 2011; Pauly et al., 2016; Podymow, Turnbull, Coyle, Yetisir, & Wells, 2006; Stockwell et al., 2013). However, there are programs that have staff dispense alcohol to clients daily as opposed to hourly (Pauly et al., 2018). Clients in these programs are usually provided with alcohol up to three or four times per day (Pauly et al., 2018). The dosing for these clients is highly individualised and provides clients with more control over the management of their alcohol intake (Pauly et al., 2018).

The alcohol administered by program staff ranges in alcohol volume and includes beer, wine, or spirits. Most of the MAPs provide clients with wine that is 12% alcohol on average by volume in serving sizes that range from 4-7 ounces (Pauly et al., 2016; Podymow, Turnbull, Coyle, Yetisir, & Wells, 2006; Stockwell et al., 2013). In addition to wine, some of the programs give clients a choice of spirits or beer. The serving size for sprits ranges from 1.5-3 ounces, and beer ranges from 12-14 ounces (Podymow, Turnbull, Coyle, Yetisir, & Wells, 2006; Stockwell et al., 2013). The serving size is tailored to each client (Stockwell et al., 2013). The staff of some of the MAPs have the authority to adjust each client's 'dose' based on their behaviour in the program (Evans, 2012). Moreover, individualised dosing is considered for residents who are prone to seizures or are taking medication that might interact with alcohol (Pauly et al., 2018).

Worth mentioning, some of the MAPs offer non-alcoholic beverages and 'near beer' to residents who wish to abstain from alcohol but still be able to participate in the daily rhythm of the program

(Evans et al., 2015). This gives residents the opportunity to continue to participate in the social aspect of drinking but reduces the urge to drink heavily in public (Evans et al., 2015).

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### *PROCEDURES AND REGULATIONS*

All the MAPs reviewed have policies in place so that staff adjust doses or not serve alcohol to clients who are overly intoxicated (Chow et al., 2017; Pauly et al., 2016; Stockwell et al., 2013). In addition, drinking outside of the program is strongly discouraged (Pauly et al., 2016; Vallance et al., 2016). The MAPs have individualised their procedures and regulations. For example, some of the programs require that participants be on site for anywhere from 30-90 minutes prior to receiving their next dose (Chow et al., 2017; Pauly et al., 2016; Stockwell et al., 2013). In one program, if a client leaves the grounds of the MAP, they cannot have any more alcohol for the rest of the day (Kidd et al., 2011). In many of the programs, residents are not allowed to store alcohol onsite for consumption later (Pauly et al., 2016; Vallance et al., 2016). To discourage the consumption of outside alcohol onsite, some of the MAPs allow staff to conduct room searches in addition to pat downs of the clients upon their return to the MAP (Chow et al., 2017). Furthermore, many of the programs have policies in place that repeated outside drinking can lead to a review of the client's participation in the MAP (Chow et al., 2017).

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### *SUPPLEMENTARY SERVICES*

In addition to providing alcohol harm reduction, all the MAPs offered other services. Aside from providing accommodation, other services include meals and recreation. Clients of the programs are offered anywhere from one to three meals per day (Evans et al., 2015; Pauly et al., 2018; Vallance et al., 2016). In some of the programs, clients have unlimited access to food as well as groceries on-site and clients are often involved in the preparation and/or clean-up of meals (Vallance et al., 2016). The provision of food services is usually part of the MAPs in the form of one to three meals per day (Pauly et al., 2018). MAPs that operate as day programs only do not provide accommodation but do support clients in finding and maintaining housing.

Some form of recreation programming is available to the MAP participants, and these programs are available both inside and outside the programs (Pauly et al., 2018; Vallance et al., 2016). Some of these activities include crafts, music, and life skills training (Pauly et al., 2016; Pauly et al., 2018). Some of the programs also offer exercise programming to combat the weight gain that is often experienced after stabilization in the MAP (Pauly et al., 2018). If programming is available in the community, transportation is provided (Vallance et al., 2016).

Money management with staff helping clients to manage their money can also be provided. In the cases where clients contribute to the cost of alcohol administration, staff helps clients to budget their money. While some MAPs consider this essential to mitigating clients' financial vulnerability, others consider money management inconsistent with clients' self-determination and empowerment (Pauly et al., 2018).

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## POTENTIAL RISKS IN RELATION TO ALCOHOL USE IN MANAGED ALCOHOL PROGRAMS

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### *POTENTIAL TO INCREASE ALCOHOL CONSUMPTION*

While MAPs do stabilize drinking patterns and reduce heavy episodic drinking, there is the potential to increase the consumption of alcohol among clients due to drinking every day as opposed to previous patterns and taking days off or drinking outside of the program (Stockwell et al., 2013). The harms of having fewer days of abstinence from alcohol include an increased

risk of alcohol-related liver problems and other associated harms (Stockwell et al., 2013). For example, clients of Mountainview in Hamilton, Ontario were free to leave the grounds of the program at any time and drinking alcohol outside of the program was, although discouraged, not prohibited (Evans, 2012). This was also true at the Kwae Kii Win Centre in Thunder Bay (Pauly et al., 2016). However, as previously mentioned, many of the programs have policies in place to discourage drinking outside of the MAP. These procedures and regulations can be difficult for some clients to follow. In their study, Pauly et al. (2013) noted that MAP clients expressed concern related to the protocol of residents having to be present for at least 90 minutes prior to receiving their next dose. The clients of this MAP understood the importance of this protocol; however, they stated that the policy made it difficult to leave and participate in activities outside of the program (Pauly et al., 2013). Furthermore, some of the clients did not understand the reason behind room searches and would like to see an alternative approach to finding outside alcohol that is being brought into the program (Pauly et al., 2013).

Chow et al. (2017) state that it is important for managers of MAPs to implement policies that deter outside drinking, as well as an assessment tool for outside drinking, to decrease the serious consequences of alcohol-related harms. In addition, to combat increased alcohol consumption, Stockwell et al. (2013) recommend that MAPs offer medication to help clients with days of abstinence as well as referrals to detox. In their selective literature review on MAPs and Indigenous healing methodologies, Ramsperger and Ramage (2017) suggest that clients may drink outside of the program as they do not want the alcohol that is being offered at the MAP; therefore, clients' alcohol preferences be considered when determining what type of alcohol is served.

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#### *DEATHS IN MANAGED ALCOHOL PROGRAMS*

Some clients of MAPs pass away while living in the MAP. In his qualitative case study of a Mountainview, a residential facility that provides medical care with a MAP in Hamilton, Ontario, Evans (2012, p. 190) found that “out of few dozen men who cycled through the program eight clients of the MAP had passed away since its opening in 2006”. Evans (2012) notes that most of the clients of the MAP are seriously ill prior to entering the program, and their health deteriorates despite the best efforts of the health care providers. Having seen friends pass away from liver cirrhosis while in a MAP program leads to many of the clients confronting their own mortality and encourages them to take a personal interest in their health (Evans et al., 2015). In the retrospective study of shelter-based palliative care by Podymow, Turnbull, and Coyle (2006), 28 consecutive patients that were admitted to the program died between 2001 and 2003. At admission, the diagnosis most responsible for death were cirrhosis, malignancy, and HIV, with average time from admission to death being four months (Podymow, Turnbull, & Coyle, 2006).

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#### *BENEFITS ASSOCIATED WITH MANAGED ALCOHOL PROGRAMS*

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##### *A SAFE SPACE*

The MAP clients that were interviewed by researchers stated that MAPs are significantly safer than drinking, and living, on the street or shelter (Evans et al., 2015; Kidd et al., 2011; Pauly et al., 2016; Vallance et al., 2016). Many people who suffer from homelessness and chronic alcoholism are forced to drink in public places such as parks, as they have nowhere else to go; this often leads to dangerous situations such as harassment and victimization (Brown, Skulsh, Morgan, Kuehlke, & Graham, 2017). Additionally, people experiencing homelessness who are intoxicated are often placed in custody overnight or taken to the hospital (Pauly et al., 2016; Vallance et al., 2016).

MAP clients are safe from violence of the street, drinking in unsafe locations, as well as the stigma of alcohol use and homelessness (Kidd et al., 2011; Pauly et al., 2016). In a cohort study on MAP clients' perception of housing and quality of life by Pauly et al. (2013), the MAP clients, as well as the staff, stated that people sleeping on the street often "sleep with one eye open" and are constantly at risk of being assaulted. Furthermore, MAP clients are less likely to engage in risky behaviour such as sleeping in unsafe places and stealing NBA (Vallance et al., 2016). MAP clients feel that the programs provide personal security as well as control over the amount of alcohol that they consume (Evans, 2012). Clients of MAPs see the program as a safer and more regulated way to drink alcohol (Evans, 2012). In addition, MAP clients often experience periods of abstinence from alcohol (Evans et al., 2015).

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### *RECOVERY, HEALING, AND RECONNECTION*

Many MAP clients state that, since enrolling in a MAP, they become aware that change is possible and often necessary (Evans et al., 2015). Furthermore, clients attribute MAPs to allowing them to make positive choices that impact their ability to take control over their health and relationships (Stockwell et al., 2013). MAPs provide clients with a supportive, encouraging environment in which recovery can happen (Evans et al., 2015). This, in part, is due to program staff accepting clients for who they are and treating them with respect while providing care in a non-judgmental manner (Evans et al., 2015; Pauly et al., 2013; Pauly et al., 2016). Many of the clients state that they feel a sense of belonging as well as a sense of family and home (Evans et al., 2015). The sense of home is created through the physical environment as well as the supportive relationships among the clients and staff (Evans et al., 2015; Kidd et al., 2011). Furthermore, MAPs provide clients with the stability and "time, energy, and resources to engage in constructing identity and meaning and purpose in life" (Kidd et al., 2011, p. 110). Additionally, MAP clients can accept supports that are offered to them because of the consistency of alcohol provided (Vallance et al., 2016). MAP clients report improved relationships with family as well as other MAP participants (Stockwell, 2013). Clients of MAPs report reconnecting with family members that they have not seen for many years (Evans, 2012; Pauly et al., 2013).

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### *IMPROVED HEALTH OUTCOMES*

Managed Alcohol Programs provide clients with harm reduction and health care services that they may not otherwise access. Additionally, clients are more aware of their medical conditions and personal health concerns (Evans et al., 2015; Podymow, Turnbull, & Coyle, 2006; Vallance et al., 2016). In their case study on the effectiveness of a shelter-based MAP in Ottawa, Podymow, Turnbull, and Coyle (2006) found that 88% of the MAP clients had at least one chronic medical or psychiatric illness. Medication compliance improved among the MAP clients with 88% of clients taking their medication as prescribed 80% of the time (Podymow Turnbull, & Coyle, 2006). In their case study of a MAP in Ontario, Evans et al. (2015) found that many of the clients of the MAP in their study saw improvements in their liver function tests since starting the program. Improvement in liver function was also found in a cohort study done by Vallance et al. (2016). However, in the cohort study on alcohol-related harm reduction by Stockwell et al. (2013), the authors found that the number of clients in the MAP in their study who met the criteria for alcohol-related liver damage increased from two to five after the first six months of the program. This may have occurred regardless of entry into the MAP (Stockwell et al., 2013). For these MAP clients, confronting the prospect of dying from liver cirrhosis gave them the motivation to decrease, or discontinue, their consumption of NBA as well as binge-drinking (Stockwell et al., 2013).

Managed Alcohol Programs have also been shown to improve health outcomes for people who require end-of-life care. In a qualitative case study by McNeil et al. (2012), the authors studied a MAP that offers end-of-life care for people who are homeless and addicted to alcohol. Often, end-of-life service providers have regulations in place that deter homeless people with severe alcohol dependence from accessing care (McNeil et al., 2012). This can lead to homeless people dying alone with unmet care needs (McNeil et al., 2012). McNeil et al. (2012) found that harm reduction programs, such as MAPs, can reach people experiencing homelessness who are addicted to alcohol and offer end-of-life care that, while not necessarily formal palliative care, meets the basic needs of this population while minimizing hardships. In their case study, Podymow, Turnbull, and Coyle (2006) also studied a MAP that offers shelter based palliative care to people experiencing homelessness who consume alcohol. Many of the clients in this program would have been excluded from other palliative care programs due to their addiction or lifestyle; 68% of the clients might not have sought other forms of care and may have died homeless without adequate pain and symptom management (Podymow, Turnbull, Coyle, Yetisir, & Wells, 2006).

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### *REDUCTION IN ALCOHOL USE*

In the cohort study done by Stockwell et al. (2017) the authors determined that MAP clients who participated in the program for two months or more drank NBA alcohol on fewer days than the control participants. The results from Vallance et al. (2016) also support this; clients of their study reported drinking NBA on significantly fewer days than the control participants. A reduction in NBA use is important as it reduces the risk of long-term alcohol-related illness such as liver disease and certain cancers (Chow et al., 2017). Additionally, clients in both studies reported significantly less social, health (including withdrawal seizures), safety, and legal harms related to alcohol in comparison to controls (Stockwell et al., 2017). In their study, Podymow, Turnbull, and Coyle, (2006) found that MAPs provide a safe space for people to medically detoxify from alcohol. This is significant as unsupervised medical detoxification can lead to an increased risk of morbidity and mortality.

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## *SHELTER-BASED MANAGED ALCOHOL PROGRAMS*

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### *OPERATING PROCEDURES*

“Wet” shelters vary in their hours of operation as well as services that are provided. For example, Annex in Toronto operates as an emergency 24-hour shelter that utilizes the principles of MAP (Svoboda, 2006). The Annex accepts referrals to the program and admits homeless men who otherwise have difficulty accessing emergency shelters due to alcohol use problems, among other reasons (Svoboda, 2006). Clients are free to stay in the program daily which means a bed will be reserved for them or stay any day on a first come first served basis (Svoboda, 2006). In their case study, Grazioli, Collins, Paroz, Graap, and Daepfen (2017) investigate a drop-in centre in a French-speaking part of Switzerland. The centre is open from 1200 to 1900 hours daily (Grazioli et al., 2017). On their first visit, clients meet with the centre’s staff to learn about the centre’s rules and then sign an agreement regarding the rules and sanctions if the rules are not followed (Grazioli et al., 2017). An emergency warming shelter in Inuvik, NWT that opened in 2013 was a response to an increasing number of people in Inuvik experiencing homelessness and aims to keep people from dying from exposure provides services from 1900 to 0900 (Young & Manion, 2017).

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### *ALCOHOL CONSUMPTION ONSITE*

The policies around alcohol use onsite vary from shelter to shelter. Annex Harm Reduction Program in Toronto's Seaton House serves alcohol to clients from 0800 to 2300 each day at one to two drinks every 1 to 1.5 hours (Svoboda, 2006). As for the drop-in centre in Switzerland, clients bring their own alcohol to consume onsite which is given to staff on arrival (Grazioli et al., 2017). There is no restriction on the type of alcohol; however, NBA is not common in Switzerland. Therefore, there is no regulation on its consumption (Grazioli et al., 2017). Clients can drink one beverage at a time and must request additional beverages from the centre's staff (Grazioli et al., 2017). Staff at the centre reserve the right to stop serving clients if they believe that the client's drinking is putting themselves or other clients or staff in danger (Grazioli et al., 2017). In Inuvik, NWT, drinking is prohibited onsite (Young & Manion, 2017). However, if people have been drinking, they are still allowed to stay at the emergency warming shelter (Young & Manion, 2017). This contrasts with the permanent homeless shelter that exists in Inuvik that turns away people who are intoxicated (Young & Manion, 2017).

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### *INTERVENTIONS TO REDUCE HARMS ASSOCIATED WITH CHRONIC ALCOHOL USE*

Clients in the Annex – program can store their alcohol onsite for personal use (Svoboda, 2006). If clients are storing NBA onsite, they are offered beverage alcohol in exchange for the NBA (Svoboda, 2006). According to the study done by Grazioli et al. (2017), having staff serve alcohol to clients at the drop-in allows staff to engage in harm reduction counselling that includes safer-drinking strategies such as “tips for tapering and maintenance drinking to avoid alcohol withdrawal, buffering the effects of alcohol on the body by taking B-complex vitamins and eating before and during use” (Grazioli et al., 2017, p. 66). Clients in this study reported a reduction in alcohol use; each month clients showed a 4% and 5% decrease in alcohol consumption on typical as well as peak drinking days, respectively (Grazioli et al., 2017). Furthermore, clients demonstrated a 7% reduction in alcohol-related harms for every month in the study and a significant improvement in mental health-related quality of life (Grazioli et al., 2017). According to Young and Manion (2017), clients of the Emergency Warming Centre in Inuvik reported that they intended to reduce their alcohol consumption or had already done so.

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### *SUPPLEMENTARY SERVICES*

Staff at the Annex program support clients in a variety of ways such as helping with activities of daily living which includes eating and personal hygiene as well as transportation and accompaniment to medical appointments (Svoboda, 2006). Snacks and non-alcoholic beverages are offered free of charge in the centre in Switzerland, and lunch is served at a reduced price (Grazioli et al., 2017). A nearby drop-in centre that serves users who use drugs intravenously provides nursing care for that centre as well as the one allowing alcohol consumption onsite (Grazioli et al., 2017). The staff at the shelter in Inuvik try to help clients improve their quality of life by providing meals in addition to a warm place to sleep. Both clients and staff expressed concern over the lack of services available for people experiencing homelessness both in the centre as well as in the community; staff identified that rehabilitation and mental health services were lacking in the community, while the clients of the centre noted that it was difficult to obtain employment or go back to school without a place to shower or wash clothes (Young & Manion, 2017).

### INDIGENOUS PEOPLES, HOMELESSNESS AND ALCOHOL MISUSE

According to Ramsperger and Ramage (2017), Indigenous people in Canada are overrepresented in the homeless population due to decades of historical trauma. For their literature review, Ramsperger and Ramage (2017) consulted with Elders in and around Calgary who stated that an understanding of Indigenous history is important to understanding the trauma that has led to addiction in many Indigenous communities.

In their case study of precarious housing among Indigenous people living in urban centres in Alberta, Shier, Graham, Fukuda, and Turner (2015) found that many of the Indigenous survey respondents were unemployed and had not completed high school. Furthermore, close to half of the respondents self-reported having an addiction to drugs or alcohol at the time of the survey (Shier et al., 2015). Indeed, people living in precarious housing are 3.229 times more likely to have an addiction to drugs or alcohol (Shier et al., 2015). Public policy and program efforts need to focus on educational attainment which, hopefully, would increase income levels. Furthermore, “addictions treatment is an important health and social issue that needs to be addressed as a component part of initiatives to improve housing situations for Indigenous people at-risk of living in precarious housing situations” (Shier et al., 2015).

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### *FEELINGS OF ISOLATION AND DISCONNECTION FROM SOCIAL NETWORKS*

In their case study of Indigenous peoples’ experiences in an HF program in Winnipeg, Alaazi et al. (2015) found that many of the clients expressed concern around the restriction of guests in their apartments. This often leads to a feeling of loneliness and isolation among clients (Alaazi et al., 2015). Furthermore, most of the clients saw their home as a family space, with the definition of family extending beyond the nuclear family (Alaazi et al., 2015). One of the key informants indicated that once Indigenous clients reestablish connections with their home community and family, the clients often have a lot of family coming to visit for extended periods of time, which often creates tension with the landlord (Alaazi et al., 2015). According to Alaazi et al. (2015) “Western normative standards and tenancy agreements restricting guest activities are thus antithetical to efforts at reintegrating the participants” (p. 34-35). While the staff of the HF program attempt to accommodate clients, who felt disconnected from friends and family, the program did lack adequate resources to accommodate clients who would prefer a family-type housing arrangement (Alaazi et al., 2015).

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### *INDIGENOUS HEALING PRACTICES IN MANAGED ALCOHOL PROGRAMS*

In their selective literature review on MAPs and Indigenous healing methodologies, Ramsperger and Ramage (2017) state that “from a traditional Indigenous cultural viewpoint addiction is perceived beyond the biomedical model of mainstream medicine” (p. 10). Indigenous wellness goes beyond the focus of the biomedical model of physical illness to include the mind, body, emotion, and spirit of a person (Ramsperger & Ramage, 2017). For many Indigenous peoples, alcohol has its own spirit that negatively affects the Indigenous way of life and Indigenous people, when under the influence of alcohol, are no longer connected to their spirit, and alcohol treatment and harm reduction need to support returning the spirit to Indigenous people (Ramsperger & Ramage, 2017).

Both Indigenous and non-Indigenous clients in the study by Clifasefi et al. (2016) expressed interest in having traditional Indigenous healing practices, such as talking circles, incorporated in the HF programming. The importance of Indigenous healing practices was also mentioned in

the study done by Alaazi et al. (2015). Many of the clients indicated that sweat ceremonies and smudging were important to their health and wellbeing (Alaazi et al., 2015). As per Alaazi et al. (2015), “In many Indigenous cultures, spaces for smudging and sweat ceremonies are often indistinguishable from spaces of inhabitation, and these spatial settings blend in complex ways to produce Indigenous therapeutic spaces, intimately connected to the land” (p. 35). However, adhering to Indigenous cultural practices was difficult in the assigned housing (Alaazi et al., 2015). Smudging was often restricted due to smoke detectors, and there is a notable absence of sweat lodges in Winnipeg (Alaazi et al., 2015). While the staff of the HF program did plan for clients to participate in sweat ceremonies in communities outside of Winnipeg, many participants expressed concern that they were not able to access a sweat lodge when they needed to (Alaazi et al., 2015). Ramsperger and Ramage (2017) found that sweat ceremonies promote psychological, physical, and spiritual wellbeing through detoxification and purification and contribute to Indigenous identity. Clients and staff also felt that staff needed more cultural awareness training to appropriately care for clients and both clients and staff would like to see more cultural diversity among staff members that would reflect the diversity among clients (Clifasefi et al., 2016).

Ramsperger and Ramage (2017), found that Elders play an important role in the healing process and “can promote a connection to culture, identity, and support traditional knowledge and wisdom “(p. 12). Elders provide leadership and guidance both through traditional Indigenous ceremonies as well as conversation; as such they can help Indigenous MAP participants to reconnect with their culture (Ramsperger & Ramage, 2017).

RESEARCH QUESTION 3: AT THE AGENCY LEVEL, WHAT ARE THE FACILITATORS AND BARRIERS FOR ADOPTION, IMPLEMENTATION, AND SUSTAINABILITY OF HARM REDUCTION INTERVENTIONS FOR CHRONIC/SEVERE ALCOHOL USE AMONG THE CLIENTS OF THE HOUSING FIRST PROGRAMS OR SIMILAR HOUSING SUPPORT INITIATIVES?

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#### PROGRAM CHARACTERISTICS

Rigorous evaluation of MAPs and their delivery has been under way in 14 MAPs across Canada, specifically with regard to participant and program characteristics that are most likely to lead to positive outcomes of MAPs (Pauly & Stockwell, Centre for Addiction Research BC, University of Victoria). As a national study of MAPs is still under way, there is limited evidence on program structuring at this time.

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#### BARRIERS TO ADOPTION AND IMPLEMENTATION OF MANAGED ALCOHOL PROGRAMS

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##### *LACK OF TRAINED STAFF*

Research suggests that when harm reduction principles for alcohol misuse are adopted, some staff members of single-site HF programs had difficulty putting these principles into practice (Clifasefi et al., 2016). To diffuse tension and maintain professionalism, orientation programming that would include “information and interactive exercises to promote new residents’ and staffs’ (a) practical understanding of the single-site HF approach; (b) understanding of roles, power dynamics, crisis de-escalation, and boundaries; (c) sense of cultural humility and respect for the diverse backgrounds; and (d) capacity for self-care” needs to be provided (Clifasefi et al. (2016, p. 853). Similarly, Collins, Clifasefi, Andrasik et al. (2012) suggest that staff and clients would

benefit from more formalized training that addresses the emotional, psychological, and physical stress that housing transitions create for clients; as well as training on trauma to better understand clients' behaviour. In addition, clients may benefit from sessions that take place over time so that staff can establish an accurate baseline and ensure that clients are adjusting well to the HF program (Collins, Clifasefi, Andrasik et al. (2012).

RESEARCH QUESTION 4: AT THE COMMUNITY AND SYSTEM-LEVEL, WHAT ARE THE FACILITATORS AND BARRIERS FOR ADOPTION, IMPLEMENTATION, AND SUSTAINABILITY OF HARM REDUCTION INTERVENTIONS FOR CHRONIC AND SEVERE ALCOHOL USE AMONG THE CLIENTS OF THE HOUSING FIRST PROGRAMS OR SIMILAR HOUSING SUPPORT INITIATIVES?

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## BARRIERS TO ADOPTION AND IMPLEMENTATION OF MANAGED ALCOHOL PROGRAMS

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### *STIGMA*

In their commentary on the Eastside Illicit Drinkers Group for Education (EIDGE), Brown, Skulsh, Morgan, Kuehlke, & Graham (2017) state that illicit drinkers, those who drink NBA and/or drink alcohol in an illegal way (i.e. drinking alcohol in public), are among the most stigmatized groups in Vancouver's Downtown East Side. One would assume that this would also be the case elsewhere in Canada and the world. Vallance et al. (2016) propose that the stigma associated with NBA use can cause mental health problems as well as deter people from seeking treatment from health care providers or traditional abstinence-based programs, such as Alcoholics Anonymous. As per Brooks, Kassam, Salvalaggio, and Hyshka (2018) people who have alcohol use disorder (AUD) report experiencing judgement and stigma from health care providers, which may lead to unnecessary suffering and inadequate care. Furthermore, according to Brown et al. (2017), "the alienation of chronic alcoholics is so extreme that many services have policies explicitly stating that they do not allow anyone deemed to be intoxicated or in possession of alcohol to participate in their programs" (S156). According to EIDGE members, they have nowhere to go to drink alcohol, which often leads to the members drinking in public spaces (Brown et al., 2017). Public intoxication often leads to harassment and dangerous situations due to impaired judgement (Brown et al., 2017).

Stigma around MAPs is also experienced when trying to determine a location for a single-site MAP. In the study of the Hamilton's Mountainview by Evans (2012), the original location for the program was in downtown Hamilton, which was proposed for the MAP to be close to other social services. However, this location changed due to concerns raised by business owners and city councillors that cited "the oversaturation of homeless services in the downtown..." (Evans et al., 2015, p. 190). Mountainview was relocated to the psychiatric hospital, which is noticeably outside of the downtown area (Evans, 2012).

As Pauly et al. (2016) state, MAPs, as a harm reduction program, are often controversial as they aim to reduce harms of alcohol use rather than take an abstinence-based approach. For proponents of an abstinence-based approach, by supporting clients' own goals regarding alcohol use and tolerating alcohol use onsite, MAPs are enabling continued, harmful alcohol use (Collins, Malone, Clifasefi, et al., 2012). Traditional abstinence-based programs "see abstinence as a necessary prerequisite to recovery and housing and, relatedly, see non-abstinence approaches as counterproductive in that they facilitate destructive drug and alcohol use and, by

extension, exacerbate housing instability” (Evans et al., 2015, p. 118). Stockwell and Pauly (2018) suggest that in Canada, many programs that use MAP principles might be operating quietly to avoid criticism and rejections of the community or being at risk to be shut down. As such, many variations of MAPs might be operating in housing supports initiatives or homeless shelters.

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### *FUNDING*

Funding for the MAPs varies and is often through multiple sources. Most of the programs are funded through clients’ social assistance payments as well as grant funding at the federal and provincial level (Pauly et al., 2016). Programs usually have difficulty securing enough funding to cover the cost of operating (Pauly et al., 2018). Many communities will not establish MAPs without having evidence-based research and best practice protocols in place. According to Brown et al. (2017), for the Vancouver Coastal Health Authority (VCH) to give funding for MAPs, evidence-based research, as well as best practices, must be established. As evidence-based research studies take time, funding for MAPs can be delayed, and this serves as a barrier to the adoption and implementation of MAPs.

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## FACTORS FACILITATING THE ADOPTION AND IMPLEMENTATION OF MANAGED ALCOHOL PROGRAMS

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### *REDUCTION IN PUBLIC SERVICE USE AND COST SAVINGS*

Both HF-related, and shelter-based MAPs have shown the promise in service use and overall cost saving for the communities and health and social services. Specifically, clients of the shelter-based MAP program at Annex in Toronto showed a significant decrease in emergency room visits. On average, clients visited the emergency room 10.7 days per year before the program and only 2.9 days after 27 months in the program (Svoboda, 2006). The number of inpatient days dropped from 4.2 days to 0 days within the same period (Svoboda, 2006). In addition, the number of days spent in prison was an average of 8.5 which decreased to 0 after 27 months in the Annex program (Svoboda, 2006).

Managed Alcohol Programs help to move people experiencing homelessness who drink alcohol out of emergency shelters as well as from the street (Evans, 2012). This is significant as people who are struggling with chronic homelessness make up the largest percentage of emergency shelter costs (Evans, 2012). Furthermore, MAPs reduce emergency room visits, hospital admissions, and police encounters (Vallance et al., 2016). Vallance et al. (2016) discovered that MAP clients in their study had a decrease of 32% in hospital admissions as compared to when the clients were not in the MAP. In addition, MAP clients in this study had a -33% difference in police contacts leading to custody while in the MAP as compared to not being in the MAP (Vallance et al., 2016). In their study, Podymow, Turnbull, and Coyle (2006) found that there was a 36% reduction in emergency room visits and a 51% reduction in police encounters among the MAP clients. If clients were in contact with police due to intoxication in the community, police officers who knew the person was a MAP client would often take them back to the MAP instead of to the holding cell (Pauly et al., 2016). Hammond, Gagne, Pauly, and Stockwell (2016) prepared a cost-benefit analysis for a MAP in Ontario and found that MAP clients “spent 94.5% less time receiving detoxification treatment, 42.5% less time receiving inpatient treatment, and 67% less time in police custody than prior to program entry” (p. 12). As for the monetary costs of these services, MAP clients decreased their public service utilization costs by \$15,165 (64.8%) compared to the costs incurred prior to entry into the program. Hammond et al. (2016) estimate that there are a savings of between \$1.09 and \$1.21 for every dollar that is invested in a MAP.

As for end-of-life care, Podymow, Turnbull, and Coyle (2006) determined that the shelter-based MAP cost \$125 per day (in 2006 dollars) whereas traditional palliative care and tertiary care in hospital cost \$684 and \$633 per day (in 2006 dollars) respectively. The care at the MAP included housing, food, nursing care, a client care worker, medical supplies, as well as physician costs. Furthermore, the need for emergency care for terminally-ill homeless people who use alcohol was reduced (Podymow, Turnbull, & Coyle, 2006).

## CONCLUSIONS/RECOMMENDATIONS

The reviewed literature suggests that MAPs, which have emerged as a response to several health and social crises and tragic but preventable deaths of individuals experiencing homelessness and severe alcohol use, are a promising harm reduction practice (Evans et al., 2015; Stockwell et al., 2013; Pauly et al., 2016). Overall, the positive effects of MAPs are experienced at individual, agency, and community/societal levels whether they operate as part of permanent housing support programs or day programs at shelters and more stable accommodations.

Individuals in MAPs experience reduced non-beverage alcohol use, smoother patterns of alcohol consumption that prevent alcohol poisoning and severe intoxication (Stockwell et al., 2017; Vallance et al., 2016), fewer injuries and improvements in health, personal safety and shelter from cold (Evans et al., 2015; Kidd et al., 2011; Pauly et al., 2016; Podymow, Turnbull, Coyle, Yetisir, Wells, 2006; Vallance et al., 2016) and increased quality of life (Evans et al., 2015; Kidd et al., 2011; Stockwell et al., 2013). As MAPs give clients a space to consume alcohol, the clients are able to dedicate time to self-improvement and developing self-esteem. MAPs have been shown to empower clients to take control of their health and alcohol consumption. Many MAP clients have shown improvement in their health, whether it be through medication compliance or improved liver function (Evans et al., 2015; Podymow, Turnbull, Coyle, Yetisir, & Wells, 2006; Vallance et al., 2016), among other things, and this is beneficial for both the client and community as a whole.

Despite the encouraging outcomes in reducing acute harms related to violence-related injuries, poisoning and social exclusion and housing instability, the potential risks associated with MAPs is drinking outside of a program that can lead to an uninterrupted alcohol consumption and subsequent health decline (Evans, 2012; Pauly et al., 2016; Stockwell et al., 2013). To mitigate these risks, the current research suggests that MAPs have clear eligibility and screening criteria, policies in place to discourage the consumption of outside alcohol, staff who are competent and trained to adjust a client's dose based on their needs and behaviour and offer health and social supports (Chow et al. 2017).

The literature suggests that practice of managing regular access to alcoholic beverages as part of harm reductions and housing supports have been provided in some Canadian cities with variations and adaptations to local needs (Stockwell & Pauly, 2018). In summary, at the agency or program-level, the principles of MAP suggest the following:

- Clear alcohol administration policies and protocols are developed for a MAP to be successful prior to beginning the program's operation (Chow et al., 2017; Pauly et al., 2016; Stockwell et al., 2013).
- Staff adhere to the policies and practices that are in place. If a client's 'dose' needs to be adjusted, it is necessary to do so by staff who are trained to make these decisions in consultation with the client (Evans, 2012).

- Strategies and procedures to deter outside drinking are important, and clients need to be aware of their purpose and consequences of not adhering to them (Chow et al., 2017; Pauly et al., 2013). As some regulations are difficult to follow, it is necessary for clients to be aware of their importance and how they contribute to harm reduction.
- Client-centred approach is part of the programming; clients need tailored approaches to their alcohol use, and when they are ready to move towards abstinence, the decision should be fully supported.
- Staff be available to clients to help with tasks of daily living, such as medication administration and transportation to medical appointments (Evans, 2012; Pauly et al., 2016; Podymow, Turnbull, Coyle, Yetisir, & Wells, 2006).
- Indigenous peoples who are clients in a MAP must have access to the necessary cultural supports that they require such as Indigenous Elders, healing practices, and sweat lodge ceremonies (Alaazi et al., 2015; Ramsperger & Ramage, 2017). To minimize isolation, staff must understand the importance of Indigenous social networks and support family reconnections (Alaazi et al., 2015).
- Staff maintain a non-judgemental attitude and are able to put the principles of harm reduction into practice (Clifasefi et al., 2016).
- Staff that is culturally diverse would be helpful for clients (Clifasefi et al., 2016) and when needed, cultural awareness training relevant to the population that is part of the program is recommended (Clifasefi et al., 2016).
- Primary health care is an important focus of many MAPs; therefore, access to nursing and physician services is beneficial to clients (Evans, 2012; Evans et al., 2015; Podymow, Turnbull, & Coyle, 2006; Podymow, Turnbull, Coyle, Yetisir, & Wells, 2006).

At the community and system level:

- MAPs have been shown to reduce the costs associated with public services such as emergency services, the justice system, and the healthcare system (Podymow, Turnbull, Coyle, Yetisir, & Wells, 2006; Vallance et al., 2016).
- MAPs decrease the occurrence of public intoxication as they provide a safe place for people experiencing homelessness to consume alcohol (Evans et al., 2015; Kidd et al., 2011; Pauly et al., 2016; Vallance et al., 2016).
- MAPs allow clients to live in the community while decreasing the pressure on the health care system. As clients' alcohol consumption stabilizes in the MAP, they have more time to focus on recovery and realize that change is possible (Kidd et al., 2011).
- People experiencing homelessness and have severe alcohol use problems face stigma which has significant personal consequences, including negative mental health effects (Vallance et al., 2016) and feelings of alienation and exclusion from meaningful participation in society (Brown et al. 2017)
- MAPs allow clients to live in the community while decreasing the pressure on the health care system. As clients' alcohol consumption stabilizes in the MAP, they have more time to focus on recovery and realize that change is possible (Kidd et al., 2011).

## CONSIDERATIONS OF THE LOCAL CONTEXT WITH RESPECT TO POPULATIONS EXPERIENCING HOMELESSNESS IN REGINA

Data from the 2015 homeless count in the City of Regina suggests 232 people live a homeless life with 80% reporting ill health or addiction and mental health conditions; 75% of those surveyed during the count were Aboriginal (Turner & Harding, 2015). Considering harm reduction initiatives to support individuals experiencing homelessness and severe alcohol problems is highly relevant to the community as the Regina Mayor and the Regina City Council have proclaimed that ending homelessness is one of the priorities for the City (CBC News, August 29, 2017, August 26, 2017). Accordingly, in the local context, the consideration of the above-mentioned recommendations would help address the negative consequences of chronic and severe alcohol use among people experiencing homelessness or unstable housing. When the principles of HF model or other housing supports are utilized to address chronic homelessness in individuals that have severe alcohol use problems, housing programs need to function under the framework of Harm Reduction [HR] in understanding the fact that there is more than one way to treat a problem as complex as chronic and severe alcohol use. Therefore, HF must include the option to participate in regulated and developed Harm Reduction programs such as MAPs. Without access to harm reduction supports, non-abstinence permanent or transitional housing might not fully support the clients; needs which can significantly destabilize an individual's housing stability and overall health, and therefore reduce the effectiveness of the housing program. Being a part of a MAP or other Harm Reduction interventions obviously would not be a requisite for people entering HF programs, but it should be a clearly-stated, actively developed option.

For city-wide, supportive housing based on the principles of the HF implementation to function in full capacity, scattered or single-site HF/Permanent Supportive Housing with MAP and other HR programs is a key piece to free-up resources associated with criminal justice or emergency services to provide individuals experiencing homelessness the supports they require. As mentioned previously, single-site HF programs specifically have been associated with positive outcomes, such as reduction in alcohol use and increased housing retention, and a decrease in public service use (Clifasefi et al., 2016). MAPs provide safe spaces for people who suffer from severe alcohol use problems who are also experiencing homelessness (Evans et al., 2015; Kidd et al., 2011; Pauly et al., 2016; Vallance et al., 2016). This is important as the stigma around homelessness combined with severe alcohol use problems can be harmful and contributes to victimization and dangerous situations (Brown et al., 2017; Kidd et al., 2011; Pauly et al., 2016).

Based on this literature review, the use of MAP principles can also benefit the clients of emergency shelters and transitional housing supports by giving people who may not otherwise have access to safe shelter a place to sleep and consume alcohol (Svoboda, 2006). Many emergency shelters do not allow alcohol consumption on site and turn away people who are deemed to be intoxicated. This is concerning, especially in Regina, due to environmental factors and cold weather conditions. The literature suggests that staff at "wet" shelters have opportunities to engage clients in harm reduction counselling, which contributes to safer alcohol consumption (Grazioli et al., 2017).

This literature review has been a result of a university-community partnership and it is obvious that both researchers and the community partners can help bridge the research-practice gap in this area by engaging in more community-based projects that would develop and pilot test MAPs adapted to local needs and populations, specifically Indigenous peoples, women, explore the

role of peer support in MAPs; as well as the long-term chronic harms associated with chronic alcohol use and non-beverage alcohol use.

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