# Overview

Managed Alcohol Programs (MAPs) provide regulated doses of alcohol to residents in supportive accommodation to address seemingly intractable health and social problems experienced by people with alcohol dependence, use of non-beverage alcohol and unstable housing. The Station Street MAP was evaluated for housing stability, access and use of health care services, social functioning, harms and patterns of alcohol use and changes in health (see www.carbc.ca for a more detailed report).

## Methods and Measures

A mixed method qualitative and quantitative approach including: in-depth surveys, liver function tests, physician assessments, daily alcohol administration and health records, and qualitative interviews with a small sample of people - seven participants and seven staff. The main purpose was to inform implementation of a multi-site national study of MAPs.

## Improved Outcomes

- All participants maintained their housing and expressed high satisfaction with housing quality.
- Participants reported greater wellbeing and positive changes in their lives.
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- Physician and participant ratings of mental health measures improved.
- Reduction in frequency and quantity of non-beverage alcohol consumption.

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## Health and Social Functioning

Both MAP participants and staff perceived improvements in the participants' physical and mental health, social functioning and relationships. Physician ratings of health and social functioning showed improvements from baseline to 6 months. Most MAP participants also reported improved mental health at 3 and 6 months. [illegible] of mental health, the Short Form 12 (SF-12) Mental Component survey. A score of 50 is considered "normal". Six people scored below 50 at baseline but at both 3 and [illegible] showed an increase (i.e., improvement) on this scale.

Participants' self-rated physical health, however, declined at 3 and 6 months. Figure 2 shows the results of the Short Form 12 Physical Component survey. As with the SF-12 Mental Component, a score of 50 is "normal". Six [illegible] further declines at 3 and 6 month follow-up. Two showed some improvement.

In addition, liver function test results indicated some deterioration with an increase in the number of participants meeting criteria for alcohol-related liver [illegible] on the program. This may have occurred regardless of being on the program

## Alcohol-Related Harms

Staff noted that participants were less volatile and hostile after starting the program, and more likely to maintain medical treatment and attend medical appointments. One [illegible] You know, ...clients that used to be really aggressive, and kind of scary for staff, and had a history of punching staff in the face at other projects when they were drinking rubbing alcohol, don't anymore, now they're crocheting and taking exercise classes and....watching Who Wants to Be a Millionaire and....it's a lot better." Staff also noted a decrease in police and ambulance calls to the building since initiation of MAP, and police were never called for any MAP-related incident.

Participant responses to the quantitative interviews indicated a decrease in the number of alcohol-related harms at 3 and 6 months for the majority of participants as shown in Figure 3. The extent of this reduction in self-reported harms was less for most participants by 6 months and varied by type of harm. Participants reported decreased harms between baseline and 6 months for [illegible] harms. Physical health problems, assaults, and passing out improved at three months and then returned almost to baseline levels at six months. Furthermore, data collected on emergency department visits showed that only two participants were frequent emergency department attendees before starting the program, and

that there was no clear reduction in the emergency room visits for these participants or the others.

## Non-Beverage Alcohol Consumption

At baseline, four participants reported drinking non-
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rubbing alcohol. Surveys and qualitative interviews both clearly showed that while some continued using non-beverage alcohol on the MAP, they did so at a lower level and less frequently. Figure 4 shows participants' reports of how frequently they used non-beverage alcohol at baseline, 3 and 6 month follow-up.

## Total Alcohol Consumption

The participants consumed on average 16 to 18 standard drinks per day while in the program - including both MAP-administered and non-MAP drinks. However, this varied by individual and time. At baseline, participants self-reported an average of 15 drinks per day – most likely an underestimate of the actual consumption compared with staff reports of MAP-administrative drinks. Figure 5 shows the average number of drinks per day for all participants over monthly periods from the beginning of the MAP as recorded by the staff while administering the alcohol. A "MAP drink" is a drink administered by a MAP staff member according to the prescribed schedule. A "non-MAP" drink is alcohol a MAP participant obtains themselves outside of the program and self-report the next day to MAP staff - if they attended the lounge. The average number of non-MAP drinks declined from 12
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reinstatement of this pattern after a period of abstinence. At baseline, four participants were severely alcohol dependent, two were moderately dependent and one was mildly dependent according to SADQ scores. Figure 6 shows SADQ scores for participants at baseline, 3 and 6 months. After 3 months in the MAP, all participants reported fewer signs of alcohol dependence. However, at 6 months, two participants showed an increase in degree of dependence over baseline measures. Four other participants maintained their reductions in degree of dependence, and one showed no change from baseline.

## Challenges Implementing a MAP

[illegible] of MAP, they did discuss some issues that need to be addressed in the development and implementation of MAPs. Concerns were raised that not all participants [illegible] be included on the program and that stricter eligibility criteria may need to be applied; there were some who thought the dose of alcohol was too high or administered too frequently for particular individuals. These two [illegible] deterioration in physical health on some indicators and suggest potential for chronic harms of alcohol use. MAPs appear to successfully reduce acute health and social problems and strategies related to reducing chronic harms are discussed below.

Further, staff indicated that it was necessary to provide good information about the program in advance to non-drinking residents of the housing complex to help them understand the program's purpose. They also suggested that anyone setting up a MAP consider costs [illegible] to administer alcohol as well as designated space. Also, it was felt that there needed to be public education about the program to facilitate understanding of the needs and avoid misinterpretation in the wider community. However, [illegible] several very positive media reports published about the program.

# Discussion

[illegible] [illegible] program management and research consideration. Firstly, [illegible] chronic problems with alcohol, and need for housing and supports, there were promising reductions in the acute and social harms of alcohol use associated with participation in this particular MAP. There were some

[illegible] harms

| Patterns of Risky Drinking | Heavy Episodic Drinking | Non-Beverage Alcohol (NBA) Consumption | Drinking in Unsafe Settings | High Volumes of Alcohol Consumed Over the Long-Term |
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| Potential harms | Violence, injuries, [illegible] unstable housing, legal and social problems | Exacerbate chronic diseases, higher ethanol consumption, poisoning | Violence, injuries, [illegible] with police, intoxication from hurried consumption | Liver cirrhosis, cancers, other chronic diseases, dependence, housing and social problems, [illegible] |
| Potential MAP [illegible] | Smooth drinking pattern, fewer injuries [illegible] housing, improved relationships | Reduced consumption of NBA | Shelter from cold, protected supply of alcohol, personal safety, food | Housing security, reduced consumption, improved nutrition |
| Potential MAP risks | Higher blood alcohol concentrations if non-MAP consumption continues | Increased ethanol consumption if MAP drinks are additive | Less exercise, unhealthy weight gain for some | Fewer abstinent days may increase liver disease risk |
| Remedial Strategies | 1. Protocols to manage non-MAP drinking | 1. Protocols for non-MAP drinking<br>2. Ensure no increase in ethanol consumption | 1. Incorporate leisure and physical activities<br>2. Nutrition advice | 1. Strict eligibility criteria<br>2. No increase in amount or frequency of use<br>3. Medication to assist with regular days off<br>4. Offer detox referrals |

[illegible]

of intoxication for most participants after joining the program. Three participants showed some reduction in alcohol consumption after 6 months, three showing an increase (in two cases quite marked) and in one case there was no change. As such, a major objective of the program, namely harm reduction, appears to have been met for the majority of participants.

[illegible] are some areas of potential concern (see Figure 7). In particular, the deterioration in physical health was suggested by results of a well validated and widely used self-report scale (the SF-12) and also liver function tests. One participant with extremely raised liver function test [illegible] advice. The provision of regular doses of alcohol to this population may successfully reduce more acute health and social problems, but not necessarily chronic physical health concerns for all participants. While some deterioration in physical health would likely have occurred if they were not on the program, there may be increased risk due to drinking every day in the program (Royal College of Physicians, 2010) unlike previous less regular patterns that included some non-drinking days. On the plus side, the more regular and smoother pattern of drinking appeared to have reduced frequency of [illegible]

# References

Canadian Homelessness Research Network. (2012).
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