

A COST-BENEFIT ANALYSIS OF A CANADIAN MANAGED ALCOHOL PROGRAM

A report prepared by the Centre for Addictions Research of British Columbia
for the Kwae Kii Win Centre Managed Alcohol Program

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LIST OF ABBREVIATIONS

AHCS	At Home/Chez Soi
CARBC	Centre for Addictions Research of British Columbia
CBA	Cost-Benefit Analysis
ED	Emergency Department
MAP	Managed Alcohol Program
MOHLTC	Ontario Ministry of Health and Long-Term Care
TAU	Treatment-As-Usual

1 INTRODUCTION

In March 2012, Shelter House opened a 15-bed Managed Alcohol Program (MAP) at the Kwae Kii Win Centre in Thunder Bay, Ontario. The mission of Shelter House (2013, p. 5) is “to provide basic needs, dignity, and comfort to people living in poverty and stimulate action to address the root causes of homelessness.” At the Kwae Kii Win Centre, MAP participants are provided with permanent access to adequate housing and supports to help manage and regulate alcohol consumption consistent with a Housing First approach. MAP recipients are typically individuals with severe alcohol dependence and long histories of homelessness, public intoxication, and regular consumption of non-palatable alcohol (Hajdu, 2014, p. 4; Pauly et al., 2013, p. 12; Shelter House, 2013, p. 5).

The Centre for Addictions Research of British Columbia (CARBC) conducted an evaluation of the program in December 2013 and found that MAP recipients had experienced fewer alcohol-related harms and improvements in health and quality of life outcomes when compared to their outcomes prior to program entry and to a treatment-as-usual (TAU) control group (Pauly et al., 2013, p. 18). CARBC also found that MAP recipients had experienced significant reductions in health, social, and legal service utilization over a six-month study period in comparison to a control group including a:

- x 43% reduction in police contact
- x 88% reduction in withdrawal management service utilization
- x 37% reduction in hospital admissions
- x 47% reduction in emergency department visits (Pauly et al., 2013, pp. 34-36).

The purpose of this study is to assess these initial findings further by conducting a cost-benefit analysis (CBA) of the

homelessness is widely visible and places considerable strain on public resources and businesses (Patterson, Somers, & McIntosh, 1997, p. 25). It is estimated that over 235,000 individuals experience homelessness each year in Canada, with over 35,000 individuals experiencing homelessness on any given night (Gaetz, Gulliver, & Richter, 2014, p. 5).

A wide body of literature exists that demonstrates the significant costs that homelessness imposes on society. Researchers who study resource utilization patterns find that homeless

and (iii) “social” comprising problems relating to housing, relationships, employment, finances, and crime (Rehm et al., 2001, p. 1418).

Alcohol dependence contributes to binge drinking, consumption of non-beverage alcohol (e.g. mouthwash, cleaning products, and cough and cold remedies), violent behaviours, criminal behaviours, suicide, job instability, poor compliance with treatment, public inebriation, more frequent ED visits, and increased mortality (Caton et al., 2005, p. 1754; Egbert, Reed, Powell, Liskow, & Liese, 1985, 474; Hibbs et. al, 1994, p. 305).

3.3 Relationship between Homelessness and Alcohol Dependence

Severe alcohol dependence is sometimes associated with homelessness or housing instability (Cordray & Lehman, 1993, p. 355). Although homelessness cannot be explained by alcohol dependence alone as many of those with addictions challenges never experience homelessness, an individual in an unstable housing situation, often due to low income, is at an increased risk of becoming homeless if they have alcohol use problems. Once on the streets, an individual with alcohol dependence has little chance of obtaining housing as they face significant barriers to obtaining health care, including substance use treatment services and recovery supports and in some cases, even without shelter as a consequence of alcohol use (Mackler, Mtnfug(, M)-11(tnfug(o)-4(seCatnfug(

seek to reduce harms for a particular population, primarily by providing access to stable housing, which can have intrinsic health and social benefits, and also through tolerating continued use of alcohol. MAPs take this approach a step further by providing beverage alcohol of known quality and quantity to program participants at regular intervals to replace patterns of non-beverage alcohol consumption which may be more hazardous.

Initial research on Housing First interventions for homeless individuals with severe alcohol dependence has shown that the provision of non-abstinence based housing can reduce the harms of alcohol use and contribute to improved health outcomes and quality of life for recipients (Collins et al., 2012a, p. 111; Collins et al., 2012b, p. 511; Collins, Malone, & Larimer, 2012d, p. 931; Larimer et al., 2009, p. 1349; Pauly et al., 2013, pp. 5-6; Podymow et al., 2006, p. 47). Studies have also shown that participants in supportive housing programs that tolerate alcohol consumption reduce their utilization of ambulance, detoxification, inpatient, ED, and policing services (Podymow et al., 2006, p. 47; Thornquist et al., 2002, p. 300). However, to our knowledge, there has not been an economic analysis of the costs and benefits associated with the implementation of MAPs.

4 METHODOLOGY

Table 1 outlines the time periods that service utilization data is collected and analyzed for each study group. Shelter utilization data is provided by Shelter House and collected for the period from March 2011 to February 2012 for MAP recipients prior to program entry and for the control group for the period from September 2012 to August 2013. CARBC provides detoxification, inpatient, ED, and police detention data for MAP recipients for the periods of September 2012 to August 2013 while in treatment and September 2008 to February 2012 prior to program entry and for the control group for the period from September 2008 to February 2012 in the report *Towards Alcohol Harm Reduction: Preliminary Results from an Evaluation of a Canadian Managed Alcohol Program* (Pauly et al., 2013).

Service	MAP participants while receiving treatment	MAP participants prior to receiving treatment	Control group
Emergency shelter	September 2012 – August 2013	March 2011 – February 2012	September 2012 – August 2013
Detoxification, inpatient, ED, and police detention			

The cost of a police detention is unavailable for the 2012/2013 fiscal year. Instead, the reported cost of a police detention from the Toronto site of the At Home/Chez Soi Study (Mental Health Commission of Canada, 2012, p. 48) is used as a proxy. The cost of a police detention in Thunder Bay is presumed to be the same as in Toronto.

Service	Per diem rate (\$)
Emergency shelter	57.48
Detoxification	179.14
Inpatient	1,266.98
ED	280.80
Police detention	349.00
MAP	80.29*

* The annual cost of MAP delivery was \$29,306 per participant after excluding the cost of program evaluation.

Service use costs

such, post-treatment comparisons that do not account for potential initial differences between the groups suffer from the threat to validity that the groups are dissimilar in ways that affect outcomes.

Despite the selection of less mobile individuals for the control group, many participants in both the treatment and control groups reside in Thunder Bay for part of the year and return to, often remote, Indigenous communities for significant lengths of time (Pauly et al., 2013, p. 14). The utilization of services in communities other than Thunder Bay is unaccounted for in this study. These considerations arguably to a greater to the control groups as they do not have access to stable housing in Thunder Bay. This limitation therefor likely underestimates the benefits associated with MAP treatment.

The Kwaie Kii Win Centre is located directly across a lane from the emergency shelter where control group participants frequently resided during the study period. The proximity of the facilities increases the likelihood of interaction between the two groups. Also, two individuals from the control group joined the MAP during the study period. This analysis excludes the findings for these individuals.

The amount of time spent in police custody is unavailable for this study. The length of each detention is assumed to be one day to partially mitigate this limitation. However, the amount of time spent in police detention is likely underreported as any lengthier stays are unaccounted for. Additionally, any differences in the crimes committed by participants in the treatment and control groups are also unaccounted for. Again, this likely results in underreporting of the benefits associated with MAP treatment as there was evidence that the Thunder Bay police were more likely to return MAP participants to their stable accommodation (Pauly et al., 2013).

5 FINDINGS

This section includes a comparison of the service utilization patterns and associated costs for MAP participants while in treatment, prior to program entry, and for the control group during the study period. This section also includes estimates of service utilization not monitored as part of the MAP evaluation. This information is used to estimate the cost savings associated with MAP participation by comparing 1) service utilization costs for MAP participants while in MAP and prior to program entry and 2) service utilization costs for MAP participants while in MAP and for the control group.

5.1 Service Utilization Patterns

Table 3 provides a breakdown of the annualized service utilization patterns of each study group. MAP participants spent an average of four days receiving inpatient treatment, visited the ED 14 times, and were detained four times by the police while in treatment. The provision of supporting housing eliminated the utilization of shelter services by MAP participants while in MAP whereas MAP participants had previously spent an average of 99 nights at the emergency shelter, typically with intermittent shelter utilization patterns consisting of months with frequent utilization followed by months without any stays. These individuals also spent an average of 19



Service	MAP participants while in MAP (\$)	MAP participants prior to MAP (\$)	Control group (\$)
Emergency shelter	0	5,691	5,572
Detoxification	184	3,378	3,712
Inpatient	4,673	8,136	7,575
ED	3,915	3,670	7,328
Police detention	1,478	4,521	4,922
Total	10,251	25,415	29,109
MAP	29,306	N/A	N/A
Total (including MAP)	39,557	25,415	29,109

* Figures may not add up due to rounding.

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