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# Investigating the need for alcohol harm reduction and managed alcohol programs for people experiencing homelessness and alcohol use disorders in Scotland

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## Abstract

**Introduction and Aims.** Managed alcohol programs (MAP) are a harm reduction approach for those experiencing alcohol use disorders (AUD) and homelessness. These programs were developed in Canada and have had positive results; very few exist in the UK and Ireland. The aim of this study was to scope the feasibility and acceptability of implementing MAPs in Scotland. **Design and Methods.** Using mixed-methods, we conducted two linked phases of work. Quantitative data were collected from the case records of 33 people accessing eight third sector services in Scotland and analysed in SPSS using descriptive and inferential statistics. Qualitative data were collected in Scotland via semi-structured interviews with 29 individuals in a range of roles, including strategic informants (n = 12), service staff (n = 8) and potential beneficiaries (n = 9). Data were analysed using Framework Analysis in NVivo. **Results.** The case record review revealed high levels of alcohol use, related health and social harms, illicit drug use, withdrawal symptoms, and mental and physical health problems. Most participants highlighted a lack of alcohol harm reduction services and the potential of MAPs to address this gap for this group. **Discussion and Conclusions.** Our findings highlight the potential for MAPs in Scotland to prevent harms for those experiencing homelessness and AUDs, due to high levels of need. Future research should examine the implementation of MAPs in Scotland in a range of service contexts to understand their effectiveness in addressing harms and promoting wellbeing for those experiencing AUDs and homelessness. [Carver H, Parkes T, Browne T, Matheson C, Pauly B. Investigating the need for alcohol harm reduction and managed alcohol programs for people experiencing homelessness and alcohol use disorders in Scotland. *Drug Alcohol Rev* 2021;40:220–230]

**Key words:** managed alcohol programs, alcohol use disorder, harm reduction, homelessness, Scotland.

## Introduction

Global estimates suggest that alcohol use disorders (AUD) affect 237 million adult men (8.6%) and 46 million adult women (1.7%) worldwide [1]. In 2016, harmful use of alcohol resulted in approximately 3 million deaths (5.3% of all deaths) worldwide, and 132.6 million disability-adjusted life years [1]. In Scotland, rates of alcohol use and related harms are high, with more than 1100 deaths attributable to alcohol in 2018 [2]. Alcohol use in Scotland is estimated to cost more than £3.6 billion each year, with high costs to health, social care and criminal justice services [3]. AUDs are not equitably spread across the population,

with some groups, such as people who are homeless, being more vulnerable to alcohol and associated harms [4,5] due to social inequalities, stigma and complex social and structural processes [6]. In Scotland, homelessness affects a significant number of people, with higher rates of substance use and mental health problems than those who are not homeless [7].

Alcohol use can be the reason for people becoming homeless, a response to trauma, poverty and difficult life circumstances, and also a way of coping with being homeless [4,6,8]. People experiencing AUD and homelessness are vulnerable to a range of acute harms such as: alcohol poisoning and seizures; chronic health conditions such as liver disease and cancers; premature

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death; poor mental health; assault and injury; and almost inevitable social exclusion [9]. Access to mental and physical health-care services can be challenging for this group of people [10]. For many people who experience homelessness and AUD, treatment options are limited, abstinence-based programs can be hard to comply with because of unrealistic or undesirable goals [11], and many express a preference for harm reduction options [12] such as safer drinking approaches and alcohol friendly accommodation [13]. Many struggle to access appropriate treatment services [14] and, when they do, they often have no choice of approach to managing their alcohol use, resulting in repeated experiences of detoxification [6]. In order to keep people safe, alcohol harm reduction approaches are merited, yet, these interventions are notably lacking [13].

Managed alcohol programs (MAP) are one such harm reduction approach. MAPs provide alcohol in measured, regular doses throughout the day, along with a range of other supports including health care, housing and community activities in multiple settings including day programs, shelters, transitional and permanent housing [6]. They have been developed in Canada, and also exist in Ireland, for people who experience homelessness and AUD who find it hard to engage with higher threshold addictions services [6]. Several studies in Canada have had positive results, with participants experiencing fewer withdrawal seizures; reduced alcohol-related harms; improvements in relationships, quality of life, wellbeing and safety [15]; lower alcohol intake and use of less harmful types of alcohol [16]; ability to retain their housing throughout the study period [17]; and less harmful patterns of use [18], alongside evidence of cost-benefits [19]. MAPs have been described as 'a safer physical environment' [15; p.6], and as places for healing and reconnection [20]. Work in Canada has identified the key features of MAPs [6]. Currently, in the United Kingdom (UK), there are residential accommodation services that provide support for alcohol, including through managing alcohol use, which could be considered MAPs, albeit informally. However, no MAPs formally exist in Scotland. Research conducted in Australia has scoped the target population of MAPs to understand the alcohol use, health and social care needs [21]; however, no such work has been conducted in the UK and it is essential that MAPs are tailored to local context [22]. Therefore, the aims of this study were twofold: firstly, to examine the need and potential of MAPs, including understanding the target population; and secondly to explore a range of views on the feasibility and acceptability of MAPs for implementation in Scotland. This paper reports data on the need and potential for MAPs for Scotland, and a related paper will describe potential implementation challenges.

## Methods

A mixed-methods study was conducted to examine the potential target population for MAPs and the views of a range of stakeholders regarding the need and potential for MAPs in Scotland, utilising two linked areas of data collection, which were conducted concurrently. Quantitative data were collected via case record reviews of those accessing third sector (civil society/not for profit) homelessness services who would meet the criteria for MAPs. To be eligible for the study, individuals (for the case record review and potential beneficiary interviews) had to be homeless and have alcohol as their main substance use problem; they did not have to be formally diagnosed with AUDs. Qualitative data were collected via interviews with strategic informants (those working in commissioning-type roles or leadership in third sector organisations), those working in third sector services (staff) and those who would meet the criteria for MAPs (potential beneficiaries). Five services participated in both data collection exercises, and three participated in the quantitative data collection only.

### *Case record review: Eligibility*

The aim of the quantitative data collection was to explore the co-occurring health and social issues affecting those experiencing homelessness and problem alcohol use to understand individual circumstances of the potential users of MAPs. In order to do this, we examined the case records of people who would meet MAP inclusion criteria (potential target population). Previous studies have used a similar process to investigate the needs of a target population within a given local context [23–25]. We selected a sample of service settings that were reasonably typical of the range of types of homelessness services available in Scotland. Eight third sector homelessness services run by two service providers (Services A and B) in four cities (two large, two smaller) were approached. These services provided residential and/or drop-in services to men and women who were experiencing problems relating to homelessness and substance use, and were broadly comparable in terms of size, staffing and population. We reviewed the records of 33 people who met the study inclusion criteria. Prior to case record review data collection, all eligible clients in the sampled services were provided with a letter stating that some non-identifiable information from their case records would be extracted by a member of the research team. If they did not consent to this, they were asked to inform a member of staff within 7 days of receiving the letter. The letter was either provided to them

personally, or left in their mailbox, and followed up with a conversation about the process.

#### *Case record review: Measures collected*

A researcher (TB) visited the services on several occasions and sat with a staff member who provided information (e.g. alcohol use, housing status) by reading out relevant parts of the client's electronic and paper records. Some data were entered as they appeared in the case records, while others were calculated/amended as required. For example, units of alcohol were calculated using data from the case records (i.e. '3 litres of vodka') and calculating the number of units. One UK unit is equivalent to approximately 10 ml/8 g of ethanol. There was occasional difficulty in capturing the precise number of units when case records referred to 'bottles of vodka' or 'cans of beer'; in these cases, an estimate of units per day was made. In terms of mental health and alcohol-related cognitive impairments, it was also not always clear from the case records whether these conditions had been formally diagnosed or were self-reported by the clients. Information about diagnoses and medication was provided in some of the records. Where there was mention of these conditions in the case records, data were coded as such. These data were initially entered into an Excel spreadsheet and subsequently analysed in spss (by HC, TB and CM) using descriptive and inferential statistics to provide an overview of the potential target population, including the links between drug and alcohol use.

#### *Interviews: Recruitment*

The aim of the qualitative data collection was to understand the views of strategic informants, staff and potential beneficiaries, regarding the need and potential for MAPs in Scotland. Semi-structured interviews were conducted by two researchers (HC and TB). Strategic informants were identified through the research team's networks of those working in the field and included national organisations, statutory and third sector organisations. Purposive sampling was used to select individuals based on gender, role and organisation to ensure the sample reflected a wide range of views and experiences. In terms of staff, service managers in the eight homelessness services were asked to provide a list of staff who may be willing to be interviewed. Again, individuals were sampled purposively to ensure a range of genders and organisational roles (managers and frontline staff). Strategic informants and staff participants were contacted by email

and invited to participate in the study. Potential beneficiary participants were identified by staff in services and asked if they would participate in an interview. All potential participants were provided with an information sheet and assured that participation was voluntary.

#### *Interviews: Process*

Written informed consent was granted at the beginning of each interview. Interviews were conducted in the work/service setting of participants, or by phone and were audio recorded and lasted an average of 38 min. Interview schedules differed for each group, and covered views on the need/potential for MAPs, needs of individuals with AUDs and homelessness, and particular components of MAPs that would need to be considered for implementation (Appendix A). Three vignettes were used in all interviews to provide short descriptions of MAPs, given these were not an approach most people had heard of, and to be an aide to stimulate more in-depth discussion [26] (Appendix B). After each interview, participants were provided with a debrief sheet (to provide further information about the study and support available), and potential beneficiary participants were provided with a £10 'thank you' high street shopping voucher to acknowledge their time. These vouchers are used regularly by the research team, as required by ethical approval committees as opposed to cash. Detailed fieldnotes captured researchers' experiences and reflections of the interview as a way of enhancing reflexivity [27]. These also supported small changes to the interview schedule and vignettes to enhance clarity, and interpretation of the data.

#### *Interviews: Data analysis*

Data were transcribed in full and analysed using Framework analysis [28] in NVivo 12. Framework analysis is suited to policy-relevant research and provides a structured and transparent method of data analysis [29]. Following the stages of Framework analysis, the transcripts were combined into one dataset and read in full, then coded line by line in NVivo by HC and TB. The research questions guided the data analysis, while also coding inductively to allow for new ideas to emerge. After coding the first five transcripts, the initial thematic framework was developed (by HC and TB) and used to code the remainder of the transcripts. The data were then sorted and re-arranged into themes and sub-themes, with quotes chosen to illustrate key points (by HC, TB and TP). The case record

data were triangulated with qualitative data to better understand the needs of this particular group and how MAPs might meet their needs. Ethical approval for the study was granted by University of Stirling's General University Ethics Panel (paper 695), the Ethics Subgroup of the Research Coordinating Council of the Salvation Army, and Turning Point Scotland.

## Results

### Case record review

The case record review revealed high levels of alcohol use, related health and social harms, polysubstance use and mental and physical health problems. Table 1 shows participant demographic characteristics. The majority ( $n = 24$ ; 73%) were male and aged 30–49 years ( $n = 26$ ; 79%). By virtue of the settings selected for the review (homelessness third sector), most lived in hostels ( $n = 23$ , 70%). Physical health problems were reported for 18 people (54%), with many complex health problems including respiratory problems, joint/nerve pain, infectious diseases and hearing and visual impairments. Almost all case records reviewed ( $n = 32$ ; 97%) described the presence of mental health problems, with depression ( $n = 30$ ; 91%), anxiety ( $n = 21$ ; 64%) and post-traumatic stress disorder ( $n = 14$ ; 42%) being the most common.

Table 2 shows the alcohol and drug use information from participant case records. Alcohol use was high, with everyday alcohol use reported for 26 people (79%). The number of units consumed per day ranged from 10 to 50 units ( $n = 15$ ; 45%), 51–100 units ( $n = 6$ ; 18%), to over 100 units ( $n = 3$ ; 9%). Wine and spirits were the most commonly consumed types of alcohol. The majority ( $n = 25$ ; 75%) experienced daily withdrawal symptoms and 15 people (45%) experienced seizures at least weekly. Eleven (33%) had previously been in alcohol treatment and 20 (61%) had previous alcohol detoxifications. Alcohol-related hospital admissions were experienced by more than half ( $n = 17$ ; 51%) but only one ambulance call-out was reported. Alcohol-related cognitive impairments were reported for 10 people (30%).

Nineteen (58%) individuals used drugs as well as alcohol, with heroin ( $n = 10$ ; 30%), benzodiazepines ( $n = 10$ ; 30%), cocaine/crack cocaine ( $n = 9$ ; 27%) and cannabis ( $n = 6$ ; 18%) being the most common. Chi-square tests were performed to compare associations between drug use and daily alcohol units consumed. No association was found between number of daily alcohol units and use of heroin ( $X^2 = 5.907$ ,  $P = 0.55$ ); methadone ( $X^2 = 5.921$ ,  $P = 0.55$ );

**Table 1.** Demographic information from participant case records

	N=33
<i>Gender</i>	
Male	24
Female	9
<i>Age, years</i>	
19-29	3
30-49	26
50+	4
<i>Current housing status</i>	
Rough sleeping	9
Hostel	18
Family or friends	3
Own home/secured tenancy	3
<i>Source of income</i>	
Benefits	32
Part-time work and benefits	1
<i>Physical health problems</i>	
Physical health problems reported	18
Diabetes	1
Gynaecological problems	1
Hearing/visual impairments	4
Respiratory problems (COPD, asthma)	7
Back/joint/nerve pain	6
Pancreatitis	1
Gall stones	1
Stomach problems	3
Deep vein thrombosis	1
Skin problems	2
Epilepsy	1
Infectious diseases	2
<i>Mental health problems</i>	
Mental health problems reported	32
PTSD	14
Depression	30
Anxiety	21
Psychosis	5
Eating disorder	1
Other mental illness	1
Ambulance call outs	1

COPD, chronic obstructive pulmonary disease; PTSD, post-traumatic stress disorder.

cannabis ( $X^2 = 7.418$ ,  $P = 0.39$ ); cocaine ( $X^2 = 7.792$ ,  $P = 0.35$ ); or benzodiazepines ( $X^2 = 3.408$ ,  $P = 0.85$ ).

### Interviews

A total of 29 interviews were conducted, with 12 strategic informants (seven female, five male); eight third sector staff (five female, three male, from six services); and nine potential beneficiaries (one female, eight male, from five services). Table 3 provides interview participant characteristics.

*Theme 1. The need for MAPs.* During the interviews, all participants talked about the need for MAPs in

**Table 2.** Alcohol and drug use information from participant case records

	N=33
<i>Approximate units per day</i>	
10-30 units	4
31-50 units	11
>50 units	6
>100 units	3
No data	9
<i>Type of alcohol</i>	
Wine	9
Spirits	20
Alcopops/pre-mixed drinks	1
Beer/cider	4
Whatever is available	5
<i>Seizures</i>	
Seizures experienced	15
No data	4
<i>Withdrawal symptoms</i>	
Daily withdrawal symptoms	25
<i>Previous alcohol treatment</i>	
Experience of treatment	11
No data	22
<i>Previous alcohol detoxification episodes</i>	
Experience of detoxification	20
No data	13
<i>Alcohol-related hospital admissions</i>	
Experience of hospital	17
No data	16
<i>Alcohol-related cognitive impairments</i>	
Cognitive impairments reported	10
No data	23
<i>Drug use</i>	
Drug use reported	19
Heroin	10
Methadone	2
Cannabis	6
Cocaine/crack	9
Benzodiazepines	10
Other drugs	2

**Table 3.** Interview participant characteristics

Participants and organisations	
<i>Strategic informant participants (n=12)</i>	
Government	n=4
Health	n=5
Third sector homeless organisations	n=3
<i>Staff participants (n=8)</i>	
Third sector homeless organisation A	n=3
Third sector homeless organisation B	n=5
<i>Potential beneficiary participants (n=9)</i>	
Third sector homeless organisation A	n=2
Third sector homeless organisation B	n=7

Scotland for those experiencing homelessness and AUD and were clear that such services are currently lacking across the country. All participants were

generally positive about the prospect of introducing MAPs in Scotland, as there was a strong sense that alcohol harm reduction was underdeveloped. They talked positively about the way in which MAPs could fit into current service provision:

*'I do think there is definitely some scope for that...especially in amongst the more complex of our service users... I would love to see [a MAP in Scotland] ... anything that will help our service users I am all for'* (Staff participant 1, Third sector homeless organisation A).

*'These sorts of places would be good for people that don't want to stop [drinking] ... or if you did stop they would die'* (Potential beneficiary 1, Third sector homeless organisation A).

A participant who used homelessness services was clear that they personally would benefit from MAPs, due to the challenge of dealing with alcohol withdrawals:

*'So many times people would say to me, you know, you've got to stop drinking and that's it. But then it was actually worse for me to actually just stop drinking because then I would ... go into a fit, my shaking was ridiculous it would just make you feel even worse. That wasn't you know beneficial for me I don't think'* (Potential beneficiary 4, Third sector homeless organisation B).

Strategic and staff participants talked about an understandable focus on illicit drugs in Scotland, due to the high rates of drug related deaths, but believed that this meant that alcohol was often neglected, both in terms of service provision and policy approaches:

*'Some of the issues with our services is that they are so focused on drugs. They really are, and drug deaths, which I think is right, but we've really taken our foot off alcohol'* (Strategic participant 9, Health organisation).

*'There is a lot in place for people that take substances, I mean like drugs ... I don't think there is really any alternative, medication wise, to alcohol, other than abstinence, and it's just interesting to see those different models of using alcohol, for harm reduction, and I think that's really, really interesting'* (Staff participant 14, Third sector homeless organisation A).

Participants from all groups also talked about the lack of support for people who are experiencing both homelessness and AUD. As one strategic participant noted *'these are people who maybe don't fit into the other services ... because of their alcohol dependency'* (Strategic participant 2, Health organisation). They noted that many

services required abstinence, calling it a 'vicious circle'. They went on to describe the demands that participants were expected to comply with in order to access accommodation, which ultimately did not allow alcohol use. A potential beneficiary participant highlighted the risks of such accommodation: *'obviously just now you are not allowed to do that, so folk say well you have to drink all that before you go in and then you drink it all'* (Potential beneficiary participant 8, Third sector homeless organisation B).

While strategic and staff participants believed that the costs of initially setting up MAPs might be high, they reflected that resources could be saved because of the many perceived benefits of MAPs, such as use of health-care services, criminal justice and emergency accommodation:

*It's a strain on a lot of services, a lot of money, NHS [National Health Service] as well, and it definitely would make a big difference. You've nothing to lose because at the end of the day things clearly aren't working so I suppose it's tackling it head on* (Staff participant 3, Third sector homeless organisation A).

**Theme 2. Eligibility.** Participants also discussed the importance of being clear about who MAPs are intended for, and the individuals who might benefit from them. There was consensus across all groups that MAPs would be best suited to those who have been excluded from other services and considered 'disengaged'. One strategic participant stated that MAPs seemed to best suit those who had:

*'Probably exhausted all these services because it's a bit like, when you come in we will work with you as long as ... you are not smelling of alcohol when you come in ... you've not been drinking'* (Strategic participant 11, Third sector homeless organisation D).

As one strategic participant elaborated: *'I am assuming it would be for the most complex type folks experiencing these complex problems'* (Strategic participant 2, Health organisation). The overall view of participants was that individuals that would be best suited to provision of a MAP would be those who had tried other services and interventions, and had not benefitted from them, or who had struggled to keep tenancies, because their alcohol dependency was too severe:

*'A lot of the people that might fall under the category of a managed alcohol programme presumably are the most disengaged, who have tried, they have probably ping-ponged back and forward between all sorts of services*

*and they have a real dependency on alcohol'* (Strategic participant 1, Government).

There was also a view that those requiring MAPs were likely to have experienced traumatic circumstances and would potentially have ongoing difficulties in developing relationships with staff and other service users, which, they believed, should be accounted for in the delivery of MAPs:

*'Ongoing access and support for trauma, care and building relationships ... if they are able to see the same people over and over again that they can build relationships that then might lead to addressing deeper seated issues'* (Strategic participant 5, Health organisation).

**Theme 3. Challenges of MAPs due to polysubstance use.** Participants also reflected on the potential challenges of providing MAPs in Scotland where there are high rates of polysubstance use (concurrent use of illicit drugs and alcohol), as reflected in the case record review findings. Many staff gave anecdotal evidence of clients and residents using benzodiazepines, cocaine, cannabis and heroin, or methadone (prescribed and diverted) alongside their AUD, and the potential challenges of supporting individuals with both illicit drug and alcohol use within a MAP. Some potential beneficiaries also talked about their own and others' polysubstance use:

*'In our own service in particular ... the majority of service users are alcohol dependent. But what we have seen is a massive rise now of polydrug use, so folk who would normally have been your classic drinker are also using things like street Valium etc ... But, as I say, alcohol is still the number one drug of choice in our homeless service'* (Staff participant 6, Third sector homeless organisation B).

*'They are taking Valium...or they are smoking cannabis or heroin ... I do it, if I've no alcohol I'll get a batch of vals [Valium]'* (Potential beneficiary 2, Third sector homeless organisation B).

Overall, participants were clear that alcohol harm reduction services are needed in Scotland for people at high risk of harms due to their alcohol use and housing problems. Participants were clear that MAPs would be valuable for those who had exhausted other treatment options and were in need of alternative approaches. High rates of both alcohol and drug use among this group was viewed as a particular current concern in Scotland that needed to be considered when developing services.

## Discussion

Internationally, research on MAPs has been conducted in Australia and Canada; this is the first study in the UK to explore whether there is a need for MAPs. Our findings highlight the complexities of providing good health and social care and housing supports in light of the combined high rates of alcohol use, drug use and mental and physical health problems that participants were experiencing. The case records review revealed individuals who are not only at high risk of a range of alcohol-related harms, but are also at increased risk of drug-related death due to their use of a range of substances [30–32]. They experience high rates of health service use, morbidity and mortality [33]. Access to appropriate mental health support was also problematic for those experiencing homelessness; and while homeless-specific mental health services are most beneficial [34], these services are lacking. Previous studies in Scotland have highlighted comparable rates of alcohol use by heavy drinkers [35]. Participants reflected on the lack of current support for those experiencing homelessness and AUD, and the need for services that allow people to consume alcohol in a managed way, with additional provision of support services. The current focus on drug-related deaths in Scotland may put those who consume alcohol at greater risk of harm, as their needs are relatively invisible. Our study also shows similarities to those accessing MAPs in Canada who are typically male, with high rates of daily drinking and high levels of alcohol consumption and related harm [17,18,20,36]. This suggests the need for MAPs in Scotland, given the high levels of need and current lack of appropriate services.

The study findings highlight the need for alcohol harm reduction approaches in Scotland for those experiencing homelessness. Given the current context in Scotland in which drug-related deaths are at the highest since records began [31], and highest in Europe [37], it is not altogether surprising that approaches for those with AUDs are somewhat neglected [38], as described by our participants. Since the 1980s, the focus on substance use among those who are homeless has moved away from alcohol to both alcohol and drug use, or just illicit drug use [38]. At the same time, harm reduction approaches have almost exclusively focused on illicit drug use. Given this narrow focus within harm reduction, those who are at risk of alcohol-related harms seem to be particularly vulnerable to being invisible within current service configurations. MAPs have been found to break the 'vicious cycle' of moving through multiple agencies, with people often not receiving the care they need [20]. In the current COVID-19 pandemic, MAPs could provide safer management and supply of

alcohol, in order to reduce the likelihood of withdrawal and infection of the virus [39].

Our findings also show that many of those who were using alcohol at levels that indicate dependence were also using illicit drugs, which places these individuals at increased risk of overdose and death [31]. The high rates of polysubstance use have been regularly reported in the Canadian MAPs literature, with Erickson *et al.* reporting 41% of participants used illicit drugs [40]. Polysubstance use in this population is complex and more research is needed. Evidence from Canada suggests drugs are often used when alcohol is not available [40] or to manage withdrawals [41]. There is limited evidence from Canada regarding how drug use is managed in MAPs, with current work exploring the use of cannabis, which may be a good substitute for alcohol [42]. In addition, it is clear from the case record review and participant views that those who appear to meet the eligibility criteria for MAPs have extremely complex lives, with high rates of polysubstance use, mental and physical health problems and associated harms, as well as being homeless with the social consequences and harms that this entails. MAPs in Scotland would need to take into account the high rates of polysubstance use and mental and physical health problems among people who are homeless with AUD to ensure that the intervention is feasible and appropriate for these individuals. MAPs could provide a 'no wrong door' approach for individuals who, at present, are missing out on vital support due to a lack of appropriate, low threshold services. It is important that MAPs are tailored to the local context, taking into account these particular needs. A related paper will describe the qualitative findings in more detail in terms of potential implementation challenges, with some detail of key features. Feasibility studies are required to scope local need and key features for the development of MAPs in the local context.

### Study limitations

The study experienced a number of challenges with respect to accessing case record data. Some services were unable to identify any relevant people who agreed to their case records being accessed. In part, this was because drug use was more common for their clients. For the case records to be eligible to be included, individuals had to have alcohol use as their main problem, which may have meant that some case records were overlooked, for example, those individuals whose problems with drug use concealed their problems with alcohol use, or where individuals wished to conceal their alcohol use. Only one of the eight services allowed

alcohol consumption on site. The case record review was also dependent on staff being available to go through the records with the researcher, which meant that appointments were commonly cancelled or delayed due to changes in staff availability. While care was taken to ensure data extraction was as complete as possible, in some services, case records were partial/incomplete, particularly in relation to variables such as alcohol consumption, treatment history or hospital admissions, as these data were not routinely captured. The data in the case records were also not comparable across all services in terms of how they were captured, for example, with some recording daily drinks and others number of units. Therefore, it is likely that the data are an underestimation of the co-occurring problems, harms and alcohol use experienced by the individuals in these services. The data presented in this paper do, however, reflect the likely needs and challenges faced by a population of those accessing third sector services in four Scottish cities.

## Conclusions

This study provides a detailed exploration of both the need for, and potential of, harm reduction approaches, including MAPs, for people with AUDs who also experience homelessness. Findings highlight the high levels of alcohol consumption, mental health problems and polysubstance use amongst those whose case records were reviewed, who were deemed potentially suitable for MAPs. Findings indicate MAPs hold much promise for implementation across Scotland and potentially in the UK, in third sector homelessness services, and should be taken forward into pilot implementation and closely evaluated. There would be a need to ensure both alcohol and drugs harm reduction is integrated in any new service approaches given the high risks of overdose for those people using both. Therefore, it is imperative that the voices of those eligible for MAPs are included in the planning and implementation of MAPs. Research implications are also clear. The research community can support pilot and feasibility level implementation by working closely with service providers to translate knowledge from studies such as this into action for this group of people who are currently largely invisible and without voice. Future research should also examine the key features of MAPs to suit the local context.

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## Conflict of interest

The authors have no conflicts of interest.

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## Appendix A

### Interview schedules

### Strategic informants

1. What is your role/day to day job?
2. What are your experiences of commissioning/leading/providing/reviewing services for people with problem alcohol use?
3. What do you think is the scale and nature of severe alcohol use/problems in Scotland?
4. What particular problems do you think people who are homeless experience with their alcohol use/dependence?
5. How well do you think services you manage/commission/try to influence currently support people with more severe alcohol problems including dependency?
6. What are your experiences regarding access to structured treatment to address alcohol problems for your clients?
7. What are your thoughts on the best approaches to minimising risks/harms for this group of people?
8. What are your thoughts on the proposed intervention this study is about—Managed Alcohol Programmes?
9. How would you feel about MAPs being delivered in locally or nationally?
10. What are your thoughts on the different approaches to MAP—residential, drop in and co-op model?
11. We know that from the Canadian work on MAPs, one of the reasons people leave is due to control—people find that staff controlling their alcohol intake can be problematic. An alternative option is that people in the MAP choose their own timings for drinking the alcohol, but they will still have a set amount they can drink each day. What are your thoughts about staff versus own dosing of alcohol?
12. Any other comments or questions in regard to MAPs?
13. Anything else you would like to raise that you have not had the chance to that is relevant?

### Staff participants

1. What is your role/day to day job?

2. What are your experiences of working with/supporting people with problem alcohol use currently in your service?
  3. What do you think is the scale and nature of severe alcohol use/problems in your local service area more generally? Compared to Scotland as a whole?
  4. How many people do you think are currently in your service (or have used your service in the last 6 months) with 1) problem alcohol use (negative impacts on health and social circumstances in addition to homelessness) 2) severe alcohol disorder/dependence as recorded on a screening tool like AUDIT? What is the wider social and health profile of these clients/residents? Gender/age—any particular ethnic group who are higher risk?
  5. What particular problems do clients/residents experience with their alcohol use/dependence?
  6. How well do you think your service currently supports people with more severe alcohol problems including dependency?
  7. What are your experiences regarding access to structured treatment to address alcohol problems for your clients?
  8. What are your thoughts on the best approaches to minimising risks/harms for this group of people?
  9. What are your thoughts on the proposed intervention this study is about—Managed Alcohol Programmes?
  10. What are your thoughts on the different approaches to MAP—residential, drop in and co-op model?
  11. We know that from the Canadian work on MAPs, one of the reasons people leave is due to control—people find that staff controlling their alcohol intake can be problematic. An alternative option is that people in the MAP choose their own timings for drinking the alcohol, but they will still have a set amount they can drink each day. What are your thoughts about staff versus own dosing of alcohol?
  12. Any other comments or questions in regard to alcohol management in your service or MAPs?
  13. Anything else you would like to raise that you have not had the chance to that is relevant?
3. If you are comfortable doing so, please can you tell me a bit more about your drinking? How much? How often? What times of day? Do you drink any non-beverage alcohol (like mouthwash, methylated spirits, rubbing alcohol, hand sanitiser)? Do you drink on your own or with others? In the service or outside of the service you are currently in, or both?
  4. Have you ever tried to access alcohol treatment (including rehabilitation/detoxification)? If yes, how many times? How did you find that treatment? Please tell me about the things that worked or did not work for you if you are comfortable doing so.

## Appendix B

### *Vignettes*

#### **Vignette 1: St Peter's Centre**

St Peter's is a residential centre which is part funded and managed by a charity. Additional funds are received via clients' housing benefit. The centre is only open to people over 30 years of age, but is open to both men and women. There are 20 beds available at the centre, and they are exclusively for people on a managed alcohol program. The staff at the centre help clients to budget and manage their money, and they take a percentage of the client's money in return for providing daily drinks.

Clients are given a drink of red or white wine every 90 min between 7.30 in the morning and 10.30 at night. The amount of wine clients receive is agreed in advance between clients and their case staff, but is generally around 150 ml per drink. Clients may prefer to have a larger drink first thing in the morning at the expense of less wine in a few of their drinks later in the day, and this is considered acceptable. Staff reserve the right to withhold drinks if clients appear to have drunk more than their allocated amount. Residents are required not to drink outside of the program or they will have the number of drinks reduced.

The centre serves three meals daily, which are prepared and cleared by staff and clients on a rota. Clients are encouraged to take part in community activities, such as art and music therapy, and they are supported by former client volunteers who have moved on to live more independently. A practice nurse visits a few afternoons a week to give advice and to monitor liver function, and a GP comes to the centre one morning per week.

#### **Vignette 2: The Gale Centre**

The Gale Centre is a day centre for people who are homeless, including those in temporary accommodation.

### **Potential beneficiaries**

1. How long have you lived here/been using this service?
2. This is a study about how to provide good support to individuals with problem alcohol use. Do you consider yourself to have problems with alcohol? Would you mind telling me more about any problems you have in different areas of your life? Are any of these created by drinking too much or made worse by drinking?

The centre is used by around 25 people each day, and about 80% are men. The average age of clients is 44 years. The staff at the centre advise clients on the financial and housing help that they can get, as well as running a part time health clinic with a practise nurse. Clients can also use showers and a laundry.

Not all clients at the Gale Centre are part of the managed alcohol program. There are regular sessions about the MAP and educational opportunities to learn about strategies for safer drinking and staying healthy. Those who want to join buy their own alcohol. Clients give their alcohol to the centre staff when they arrive, and one-third rations of the drink are given at mid-morning, again at lunchtime, and then at the mid-afternoon session where there is usually a social activity. Clients do not have to remain at the centre all day, but they are welcome to stay for activities, free tea and coffee, and cheap lunches. Clients have to be on site for an hour before being given their drink ration. This is so that staff can monitor them, and make sure that they have not had too much to drink during their time spent elsewhere. If a client seems too drunk then their ration will be declined, and given back at the end of the day.

Some clients who are able to stay in St Peter's choose not to go, and use the MAP at the Gale Centre instead. These clients may be worried that the rules will be too rigid, that they will not be able to stay with friends, partners and family members, and that they will be confined to the building by the schedule of the drinks.

### **Vignette 3: Dunn Street Centre**

Dunn Street Centre is a drop-in centre that is open daily. In some ways it's the same as other drop-in centres in town - the staff at the centre advise clients on the financial and housing help that they can get, as well as running a part time health clinic with a practise nurse. Clients can also use showers and a laundry. It is different because some of the people who use Dunn Street have learned to make their own wine in the centre's 'Master Brewer' program, and together they run a co-op that supplies the drinks for the centre's managed alcohol program. This gives them confidence because they have learned a new skill, and helps them to build friendships with each other as they need to work together to make decisions. It also keeps down the costs as the people who use it drink the wine that is made there.

People pay a fee to be members of the managed alcohol program, and this pays for the wine making costs. They can then drink the homemade wine. At the moment, about 25 people are in the scheme. There is also an alcohol exchange system, where members can trade in their non-beverage alcohol (like mouth wash or hand sanitiser) for drinks supplied by the Brew Co-op. The wine made by the co-op is stronger than wine that can be bought in shops, and the co-op now makes 200 l per week.