Foundation for Alcohol Research & Education

Alcohol use disorder and cognitive impairment among older homeless persons:

Implications for service delivery

Elizabeth Conroy, Health Services & Outcomes Research Group
UNIVERSITY OF WESTERN SYDNEY
Lucy Burns, National Drug and Alcohol Research Centre
UNIVERSITY OF NSW
Stephen Wilson, Independent Consultant

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Alcohol use disorder and cognitive impairment among older homeless persons: Implications for service delivery

A report prepared for the Foundation for Alcohol Research & Education

Elizabeth Conroy[1], Lucy Burns[2] & Stephen Wilson[3]

[1] Health Services & Outcomes Research Group, UWS

[2] National Drug and Alcohol Research Centre, UNSW

[3] Independent Consultant

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Executive Summary

This report presents the findings of a pilot study examining the needs of older homeless clients with a history of problematic alcohol use and early cognitive decline. Additionally, the study considered 'best practice' service responses for this particular client population.

A client survey was conducted with 50 participants who were recruited from the Haymarket Foundation in Sydney. Alcohol use disorder was highly prevalent in the sample. Three-quarters of the sample were diagnosed with lifetime alcohol dependence and 21% were diagnosed with lifetime alcohol abuse. Similar proportions of the two alcohol disorder groups had drunk daily and drunk to intoxication in the past year however the median largest number of drinks consumed in a single day in the past year was higher for the alcohol dependent group. The rate of mild cognitive impairment (MCI) was higher among those with lifetime alcohol dependence relative to participants with lifetime alcohol abuse. Among those with MCI, 39% scored in a range similar to that of an Alzheimer's disease sample.

Interviews with key stakeholders emphasised the need for persistent engagement with this population and the adoption of a harm minimisation approach as a pragmatic alternative to abstinence-based treatment. In particular, harm reduction strategies were often described as the first step in achieving abstinence in the longer-term. Of critical import were the comments by stakeholders regarding improvements in cognitive functioning with reduced alcohol intake. This was a strong argument against the placement of younger-aged clients in aged care facilities or other long-term residential options. It also highlighted the need for a short-term residential program that could provide a structured environment to address alcohol use and associated cognitive impairment and allow clients to transition back into the community.

Wintringham, a specialist age care provider in Melbourne, provides a good example of how such a transitional service could operate. Wintringham has developed particular expertise in the management of older persons with chronic histories of homelessness and dependent drinking. Through their direct clinical experience and service evaluation they provide evidence for how best to manage this client population. Similar to comments made by several key stakeholders, Wintringham staff highlighted the importance of understanding a client's trigger points, being proactive in managing these and providing a consistent staff response. The added value of Wintringham's experience is documented evidence that changes in cognitive functioning do occur within a harm reduction framework and that these changes are evidenced relatively quickly resulting in a step-down to less structured care environments.

The present study fell short of being able to develop a protocol for the management of alcohol use among older homeless clients with MCI and although further work in this area needs to be undertaken, key stakeholders commented on the benefit of this project in highlighting the significant needs of this client group. Several recommendations are made, including: targeted assessment of MCI among homeless clients, improved referral pathways through the establishment of formal links with neuropsychological services and other community health services, and the development of partnerships with agencies (e.g. *arbias*) with particular expertise in alcohol-related brain injury.

Background to the project

The impetus for the present study was based on a growing recognition of the ageing of the homeless population and the changing health and social needs accompanying this. In particular, it was acknowledged that substance use – and alcohol use in particular – remained a critical feature of client presentations and that the interaction between ageing and continued alcohol misuse added further complexity to the management of this client group.

This project focuses on the intersection between ageing, alcohol use disorder and associated cognitive impairment in the homeless population. The following sections give a brief overview of the literature on homelessness, alcohol use and associated cognitive impairment followed by a description of the Haymarket Foundation.

Homelessness in Australia

Homelessness is a broad construct and is typically defined according to four levels as described by Chamberlain and MacKenzie (Chamberlain and MacKenzie, 1992):

1. Primary homelessness – lack of conventional accommodation e.g. sleeping on the streets or in makeshift dwellings such as cars
2. Secondary homelessness – temporary accommodation such as emergency accommodation services or refuges, 'couch surfing', and temporary stays in hotels, hostels and boarding houses
3. Tertiary homelessness – insecure tenures or accommodation comprising of a single room without a private bathroom or kitchen, such as longer-term stays in hostels and boarding houses
4. Marginally housed – inadequate accommodation e.g. overcrowding

Using the first 3 categories in the above definition, there were an estimated 104,676 persons classified as homeless on census night in 2006 (Chamberlain and MacKenzie, 2006). Persons aged 45 years or older accounted for 29% of the total homeless population including 10% aged 55-65 years and 7% aged 65 years or older. With regard to the homelessness service system, clients aged 50 years or older represented 11.2% of all clients accessing Commonwealth-funded supported accommodation services in 2009-10 (Australian Institute of Health and Welfare, 2011b).

The causes of homelessness among older adults are varied. In the context of an ageing Australian population, there is a concomitant ageing of the homeless population. While some older adults have a longstanding history of homelessness, advanced age also creates a specific vulnerability for first-time homelessness. For example, older persons with a reduced income may have less capacity to adapt to stressors in the housing market and age-related decline in health status may also precipitate a housing crisis. Older adults may also experience similar risk factors to younger homeless adults. A comparative study of elder homelessness in Australia, the UK and the US found the specific antecedent events of current homelessness among those aged 50 years or older were: housing in disrepair or being sold, difficulties paying rent/mortgage, death of a loved one, marital breakdown, and disputes with the landlord or neighbours (Crane et al., 2005). Additionally, a number of other contributory factors were identified including financial problems, relationship problems, mental health problems, physical

health problems, alcohol problems, gambling problems, loss of income or work difficulties, bereavement and criminality.

Of import is the accelerated ageing process observed among adults with a history of homelessness. For example, the prevalence of chronic diseases among homeless persons aged 50-60 years is similar to that of domiciled adults who are 10-20 years older (Garibaldi et al., 2005, Gelberg et al., 1990, Brown et al., 2011). Additionally, age-adjusted mortality rates are almost four times higher in the homeless population compared to the general population (Hibbs et al., 1994).

Alcohol use and homelessness

Alcohol use is common in the Australian population with 80% of participants surveyed in the 2010 National Drug Strategy Household Survey (NDSHS) consuming at least one alcoholic beverage in the preceding 12 months (Australian Institute of Health and Welfare, 2011a). One-fifth of those surveyed were classified as drinking at levels likely to cause harm, including physical harms such as liver cirrhosis, psychological harms such as depressed mood and social harms such as family breakdown.

Alcohol use disorder[1] is highly prevalent among persons who are homeless or at risk of homelessness. Previous Australian research documented the 12-month prevalence of alcohol use disorder at 35% among a random sample of people accessing homelessness services in inner Sydney (Teesson et al., 2000). This compares to 4.3% (Slade et al., 2009) and 6.5% (Hall et al., 1999) of the Australian general population classified with 12-month alcohol use disorder in the National Survey of Mental Health and Well-Being (NSMHWB; conducted in 1997 and 2007).

Studies comparing problematic alcohol use among younger and older cohorts of the homeless population have reported mixed findings. One USA study found elevated rates of lifetime alcohol use disorder but lower rates of lifetime drug use disorder among older versus younger homeless males but no difference in substance disorder rates among women (DeMallie et al., 1997). A more recent study failed to find a significant difference between younger and older homeless males with regard to lifetime alcohol use problems but did find a higher rate of lifetime drug use problems among younger versus older homeless persons (Hecht and Coyle, 2001). The measure of alcohol and drug use problems used in this study however was self-perceived substance use problems rather than a diagnosis of substance use disorder and this may have contributed to the difference in findings between these two studies. The findings of these two studies can be compared to the cohort effects of substance use found in the general population. Findings from the 2007 NSMHWB demonstrate higher rates of substance use disorder among younger versus older adults however data on alcohol use disorder is not separately provided (Australian Bureau of Statistics, 2008). With regard to alcohol use specifically, the 2010 National Drug Strategy Household Survey showed that although 12-month prevalence of alcohol use was highest in the younger age

[1] Defined by the DSM-IV as alcohol dependence (diminished control over drinking as indicated, for example, by the development of tolerance and the experience of withdrawal symptoms) and alcohol abuse (recurrent harmful use). American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision. Washington, DC: American Psychiatric Association.

groups, a greater proportion of persons aged 50 years or older drank daily relative to younger adults (Australian Institute of Health and Welfare, 2011a).

The National Survey of Homeless Assistance Providers and Clients (NSHAPC) conducted in the United States in 1996 found the likelihood of a homeless adult having a *current* alcohol problem declined with increasing age (Dietz, 2009); this analysis was based on a sub-sample of persons aged 50 years or older. This same study found four additional predictors of current alcohol problems among older homeless persons: the presence of a comorbid drug problem, the presence of a comorbid mental health problem, being male, and being currently homeless (c.f. previously homeless or marginally housed). An Australian study found differences among currently homeless clients aged 50 years or older depending on whether they were first-time homeless or had prior experience of being homeless. Those with a history of homelessness were significantly more likely to self-report an alcohol use problem and a comorbid mental health problem compared to those who had no prior experience of homelessness (Rota-Bartelink and Lipmann, 2007).

The relationship between alcohol use and homelessness is complex. Alcohol use disorders are both a cause and consequence of homelessness and significantly interact with a range of other lifestyle factors such as poor nutrition, chronic health conditions, and violent victimisation that contribute to premature ageing and early mortality amongst this group.

Cognitive impairment and homelessness

Cognitive impairment is highly prevalent among the homeless population and likely related to a high exposure to traumatic brain injuries from falls and assaults as well as injury resulting from prolonged and hazardous substance use (including alcohol-related brain injury and hypoxia from drug overdose). The prevalence of cognitive impairment varies depending on the age of the sample and the measures of cognitive functioning that are used. For example, almost one quarter (24%) of a US homeless sample were classified with cognitive impairment using the Mini-Mental State Exam (MMSE) and 28% of the sample showed evidence of executive dysfunction as measured by the Trail Making Test (Brown et al., 2011). In contrast, the prevalence of cognitive impairment (also measured using the MMSE) was 10% in a sample of homeless persons in Sydney (Buhrich et al., 2000). Those classified with cognitive impairment were significantly older than those without impairment and this was the only significant predictor of cognitive impairment; length of hostel stay and presence of mental disorder were not significantly associated with cognitive impairment. The rate of cognitive impairment was higher still among a Glasgow sample of older homeless persons (mean age 53 years) where 78% were classified as hazardous drinkers, 61% had a lifetime diagnosis of alcohol dependence, and 82% screened positive for cognitive impairment using the Addenbrooke's Cognitive Examination (Gilchrist and Morrison, 2005).

Alcohol misuse is a well known risk factor for traumatic brain injury (see Taylor et al., 2003 for a review) as well as being associated with its own specific pattern of brain injury, collectively termed alcohol-related brain injury (ARBI) (Vetreno et al., 2011). Additionally, there is growing evidence of the impact of drinking on mild cognitive impairment (MCI); MCI is an important health indicator because it represents a stepping stone between normal ageing and dementia (Patterson and Gass, 2001). A longitudinal study of same-sexed twin pairs found total alcohol consumption as well as binge drinking in middle adulthood were associated with greater cognitive

impairment in later life (Virta et al., 2010). Moreover, a Chinese study examined cognitive functioning in a sample of patients two years after initial MCI diagnosis and found heavy drinking (>2 drinks per day) was associated with greater cognitive decline and an accelerated dementia transition rate compared to moderate drinking (≤2 drinks per day) (Xu et al., 2009).

One study examined cognitive impairment among patients attending an outpatient drug treatment service and found comparable neuropsychological functioning between clients with a history of homelessness and those that had never experienced homelessness (Bousman et al., 2010). This suggests that substance use may be a strong risk factor for cognitive impairment among homeless individuals.

The Haymarket Foundation

The Haymarket Foundation is a non-government organisation with an objective of providing medical, psychological and welfare services to the homeless people of inner Sydney, particularly those who are chronically homeless. In addition to providing crisis accommodation, The Haymarket Foundation runs a primary health care clinic, a needle and syringe program, a psychological counselling service, transitional housing for homeless persons leaving drug rehabilitation, and stabilisation beds and case management for homeless persons with complex needs. The joint focus on homelessness, mental health and drug and alcohol issues at the Haymarket reflects the origins of the Haymarket Clinic in the 1970s as a clinic for Sydney's homeless and socially disadvantaged people provided by volunteers from Sydney Hospital.

The Haymarket Foundation provides services at two sites: Bourke St, Darlinghurst (commonly referred to as the Haymarket Clinic) and Regent St, Chippendale (commonly referred to as the Haymarket Centre). The Darlinghurst site operates the primary health clinic, secondary needle exchange, drug and alcohol counselling service and transitional housing program. This site is situated within the South Eastern Sydney Local Hospital Network, with St Vincent's Hospital being the most proximal mainstream health care facility. St Vincent's Hospital, under the auspices of the Sisters of Charity, is a tertiary-level health care provider and has identified homeless persons as a vulnerable population requiring targeted and integrated service provision. The Homeless Health Service was established in 2010 and is co-located alongside community health, drug and alcohol service and mental health in a single building on-site at the hospital campus.

The Chippendale site operates an accommodation service (comprising of crisis, medium-term, and substance use stabilisation beds) and is situated within the Sydney Local Hospital Network. The nearest mainstream health care facility is Royal Prince Alfred Hospital (RPAH) located at Camperdown. Similar to St Vincent's, RPAH is a tertiary-level health care provider and provides drug and alcohol and mental health services on-site at the hospital campus albeit located in different buildings. In addition to established links with RPAH, the Chippendale site has developed partnerships with community-based general practitioners that have an understanding of homelessness health issues.

The co-location of both homelessness-focused and mental health and drug and alcohol services within the one agency makes The Haymarket Foundation one of the few examples in Australia of an agency providing integrated service delivery across the homelessness, mental health and drug and alcohol domains.

Aims

This project sought to develop an understanding of the health and treatment needs of older homeless persons with a history of problematic alcohol use and associated cognitive impairment and how services could best be configured to meet the needs of this group. Specifically, this study aimed to:

1. Document the prevalence of lifetime alcohol use disorders and current cognitive impairment among clients accessing services provided by the Haymarket Foundation;
2. Gather evidence on the best approach for managing older homeless clients who continue to use alcohol and show evidence of cognitive impairment within the present service delivery system; and
3. Develop a protocol for the management of older homeless persons who present to the Haymarket Foundation services.

Methodology

The project methodology comprised three components:

1. A face-to-face client survey to assess alcohol use disorder and cognitive impairment of older homeless persons accessing services provided by The Haymarket Foundation;
2. A series of in-depth interviews with key experts across the sectors of homelessness, aged care, drug and alcohol, and disability; and
3. A case study of Wintringham, a specialist provider of aged care services for the elderly homeless in Melbourne, Victoria.

The conduct and findings of each component are reported separately in the sections that follow.

Client Survey

Sample

Clients were recruited from the Haymarket Centre and the Haymarket Clinic by way of a poster displayed at each site. Clients were eligible to participate if they were aged 45 years or older and had been homeless within the past six months. A broad definition of homelessness was used and included:

- Primary homelessness: sleeping rough on the street or in a car or other makeshift dwelling
- Secondary homelessness: staying in an accommodation service, hotel or motel, or staying with family or friends because they had nowhere else to live
- Tertiary homelessness: living in a boarding house/hostel or caravan (insecure tenure)

Such a definition reflects the broad client group that the Haymarket Foundation serves.

The total sample size was 50; 54% were recruited from the Centre and the remaining participants were recruited from the Clinic. Table 1 shows the demographic characteristics of the participants, stratified by site. Participants recruited at the two sites appeared to have similar demographics profiles. The majority of participants were male with a mean age of 50 and were Australian born. Eighteen percent of participants spoke a language other than English with their families and 14% identified as Indigenous Australian.

A little over half (53%) of participants had achieved a minimum of 10 years of education. The mean age at which participants left school and gained their first employment was approximately 16 years. Only one participant was currently employed and this was in a part-time capacity. The remainder of the sample were in receipt of government benefits. Approximately one quarter of the sample were unemployed, which was defined as looking for work and available to start work immediately. The majority of participants however can be considered outside of the labour market, predominantly because they are unable to work due to long-term disability or illness; 10% of participants indicated they were retired.

Almost half of the sample had ever been married however a minority were currently engaged in a serious, long-term relationship. Similarly, although approximately two-thirds of participants had children, only one participant had dependent children.

Table 1 Demographic characteristics of participants at the Haymarket Centre and the Haymarket Clinic (n=50)

	Centre	Clinic	Total Sample
% male	70.4	87.0	78.0
Mean age	49.0	50.8	50.4
% Australian born	74.1	65.2	70.0
% who speak a language other than English with their family	14.8	22.7	18.4
% identifying as ATSI	14.8	13.0	14.0
% Less than 10 years education	50.0	56.0	52.8
Mean age first left school	15.0	16.0	15.6
Mean age first employed	16.0	16.0	16.2
% unemployed	22.2	27.3	24.5
% not in the labour market	74.1	72.6	73.4
% in receipt of government benefit	96.3	95.6	96.0
% ever married	51.8	34.8	44.0
% currently in serious, long-term relationship	7.4	4.3	6.0
% ever had children	66.7	65.2	66.0
% who have dependent children/students	3.7	0.0	2.0

Procedure

Ethics approval was obtained from the University of New South Wales Human Research Ethics Committee (UNSW HREC 10194). Face-to-face interviews were conducted by trained research interviewers (employed by the National Drug and Alcohol Research Centre) on-site at both the Haymarket Centre and Haymarket Clinic. The research interviewers attended the Centre and Clinic at specified times on a weekly basis. Interested participants could either put their name down in advance to participate in the study or simply turn up at one of the specified times. All participants provided written informed consent prior to being interviewed. The interview took approximately one hour to complete and included questions on homelessness history, social support,

lifetime and recent alcohol and other drug use, alcohol use disorder, cognitive functioning, acquired brain injury, and psychological symptoms. All participants were reimbursed with a $30 gift card (regardless of whether they completed the interview).

Measures

The interview comprised the following sections:

Personal details

This section included questions on age, ethnicity, education, relationships and children.

Money and work

This section included questions on income and employment status.

Homelessness history

Six homelessness states were assessed: sleeping rough, staying with family/friends, staying in a hotel/motel, staying in crisis or temporary accommodation service, staying in a boarding or rooming house, and staying in a caravan. For each homelessness state, participants were asked how often they had ever experienced the homelessness state, the total time ever spent in the homelessness state, and the age at which they first experienced the homelessness state. These questions were developed by one of the authors for a previous study measuring intergenerational homelessness.

Social support

Social support was measured using the Medical Outcomes Study Social Support Survey (Sherbourne and Stewart, 1991) which has demonstrated high reliability and high convergent and discriminant validity. The 19 item scale reflects multiple dimensions of functional support, including emotional and physical support. Social support was measured in relation to the participant's present situation and excluded Haymarket Foundation staff and other health/welfare professionals.

Cognitive impairment

Cognitive impairment was measured using two measures: the Montreal Cognitive Assessment (MoCA) (Nasreddine et al., 2005) and the Prospective and Retrospective Memory Questionnaire (PRMQ) (Smith et al., 2000). The PRMQ comprises 16 items, with each item characterised along 3 dimensions – retrospective versus prospective memory, short- versus long-term memory, and self- and environmentally-cued memory. The PRMQ has demonstrated high reliability and construct validity for an overall general memory scale and two sub-scales of retrospective and prospective memory. Moreover, the interpretation of the PRMQ is facilitated by the availability of norms, although these are not derived from an Australian population. Possible scores range from a minimum of 16 to a maximum of 80, with higher scores indicating greater impairment. The MoCA was developed as a screening instrument for mild cognitive impairment and includes a series of tasks designed to measure short-term memory recall, visuospatial abilities, executive functioning, attention and working memory, language, and orientation to time and place. Scores of 26 or higher indicate normal cognitive functioning (maximum score is 30). The MoCA demonstrates good internal consistency and high sensitivity and specificity for detecting mild cognitive impairment. Additionally, the MoCA has been shown to be efficacious in assessing mild cognitive

impairment among persons with substance use disorder (Copersino et al., 2009). Both instruments measure current functioning.

Acquired brain injury (ABI)

Four categories of ABI were assessed: traumatic brain injury (TBI) such as penetrating and closed head injuries; hypoxic events such as severe blood loss, stroke or opioid overdose; toxic events such as alcohol related brain injury (ARBI); and infectious processes such as meningitis or encephalitis. Participants were asked if they had ever experienced each type of ABI (prompted by specific events) and the number of separate incidents experienced (i.e. lifetime prevalence). These questions were created specifically for the study in consultation with medical practitioners.

Chronic health problems

Participants were asked whether they had ever been diagnosed by a health professional with a series of chronic health conditions (e.g. asthma, diabetes, hepatitis C, and dental problems) and if so, the last time they had experienced symptoms (i.e. lifetime and recent prevalence). These questions were designed as proxy indicators of chronic health conditions not being adequately managed. The questions were drawn from previous work with homeless persons undertaken by the authors and based on items in the National Survey of Mental Health and Wellbeing.

Psychological symptoms

Psychological wellbeing was measured using the Brief Symptom Inventory (BSI) (Derogatis, 1993). The BSI is a 53-item self-report screening tool for psychological distress and asks how often a symptom has been experienced in the preceding 7 day period. The screener produces three global indices of distress and nine symptom dimension scores: anxiety, paranoid ideation, depression, hostility, somatisation, obsessive compulsive, interpersonal sensitivity, psychoticism, and phobic anxiety. The BSI demonstrates good reliability and validity. Norms are available for both psychiatric patient and general population groups.

Substance use

Frequency of substance use in the past month was measured for 9 drug classes: nicotine, alcohol, cannabis, amphetamine, cocaine, opioids, sedatives, inhalants and hallucinogens. This measure was derived from a similar measure used in the Illicit Drug Reporting System. Alcohol use disorder was assessed using the Composite International Diagnostic Interview (CIDI), a structured clinical interview developed by the World Health Organisation and validated for use in culturally different populations. The CIDI yields ICD-10 and DSM-IV diagnoses of mental disorder. The present study utilised the Alcohol Use Disorders section only.

Findings

This section provides an overview of the key findings of the Client Survey. Results presented are descriptive only; further analysis of the data will be undertaken to determine important correlates of cognitive impairment among homeless individuals with lifetime alcohol use disorder.

Homelessness

The prevalence of different homelessness states among the participants is shown in Table 2. Almost all participants had ever slept rough (94%) and stayed in crisis accommodation (90%). High proportions of participants had also stayed in motels and boarding/rooming houses because of a lack of more secure accommodation. A little over one half of the sample had also stayed with friends or family and one third had stayed in a caravan. The homelessness histories of the present sample are similar to that found in another Sydney-based study that recruited 250 clients from five short/medium-term accommodation services and two emergency/outreach services throughout greater metropolitan Sydney (Flatau et al., 2011).

Table 2 Prevalence of different homelessness states and mean age first experienced

	Ever homeless (%)	Mean age (yrs)
Slept rough	94.0	31.2
Family/ friends	56.0	24.6
Stayed in motel	68.0	32.7
Crisis accommodation	90.0	33.8
Boarding/ rooming house	74.0	29.1
Caravan	36.0	26.4

The earliest mean age of onset for the different homelessness states was approximately 25 years of age for staying with family and friends, followed by 26 years for staying in a caravan, 29 years for boarding/rooming house, and 31-34 years for sleeping rough, crisis accommodation and staying in a motel. This pattern suggests participants experienced precarious housing situations before first experiencing primary homelessness and accessing supported accommodation services. This has important implications for early intervention efforts in stemming the progression from marginal and tertiary homelessness to primary homelessness.

The mean age participants first experienced any form of homelessness was 29 years, however there was substantial variability in age of onset. For example, 29% of participants first experienced homelessness prior to the age of 18, 49% before they were 25 years old, and 29% first experienced homelessness when they were aged 40 years or older. Considering the two most common forms of homelessness only – sleeping rough and staying in crisis accommodation – the mean age of onset is slightly older at 30 years. The proportion of participants who first experienced either of these homelessness states before the age of 18, before the age of 25 and when they were aged 40 years or older was 27%, 44% and 29%, respectively.

Figure 1 shows the frequency with which participants experienced each homelessness state. Staying in a caravan was least common, although for approximately 18% of participants who experienced this homelessness state it was experienced periodically and a further 12% of participants had frequent exposure. Sleeping rough and staying in a boarding house had the highest prevalence of frequent exposure whereas staying with family or friends was commonly reported as occurring 'sometimes'. Considering the two most common forms of homelessness – sleeping rough and staying in temporary accommodation services – 56% of the total sample had experienced either of these homeless states quite often or very often.

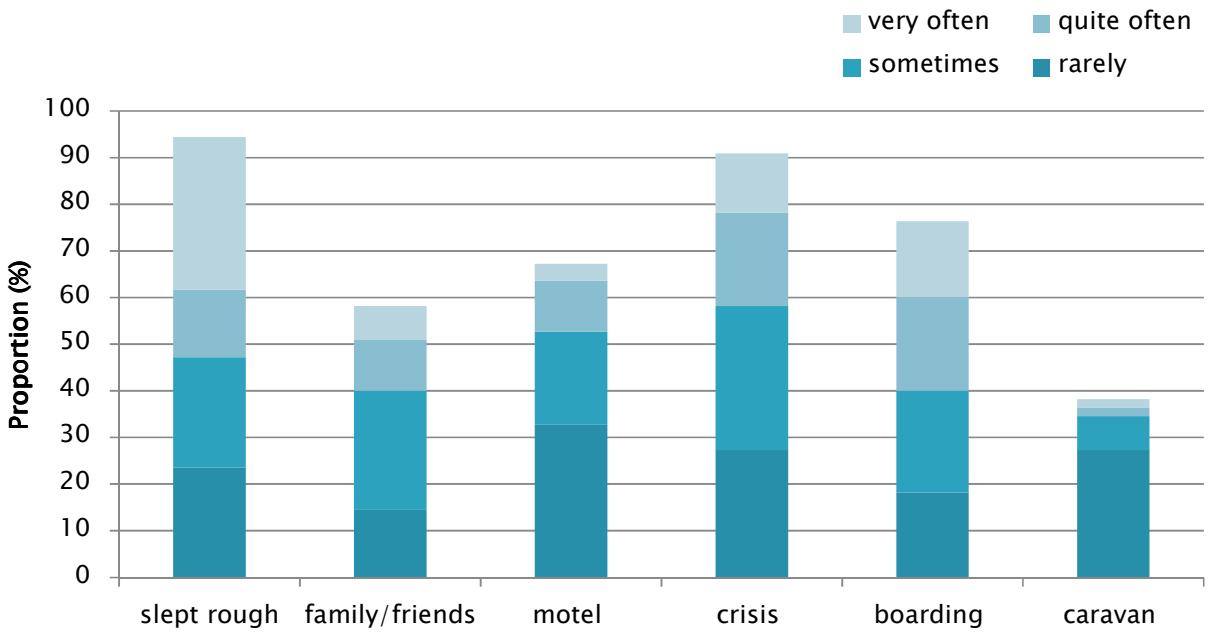

Figure 1 Frequency of exposure to different homelessness states among homeless individuals accessing support

Figure 2 shows the cumulative time spent in each homeless state across a participant's lifetime. Homelessness chronicity was defined for each type of homelessness as twelve months or longer cumulative time spent in that homelessness state. The prevalence of chronic homelessness was 62% for sleeping rough, 33% for staying with family or friends, 17% for staying in motels/hotels, 55% for crisis/temporary accommodation services, 58% for boarding/rooming houses and 7.5% for caravan parks. Approximately two-thirds of participants (62%) were classified as being chronically homeless, defined as twelve months or longer total time spent either sleeping rough or staying in temporary accommodation services.

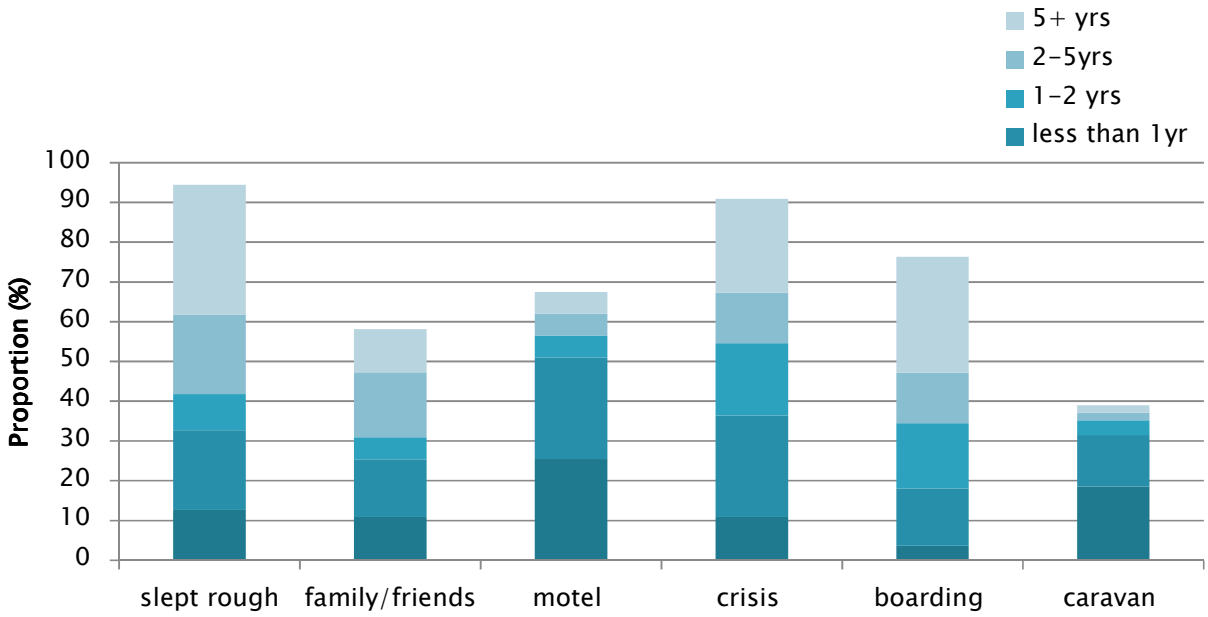

Figure 2 Cumulative time spent in the different homelessness states among homeless individuals accessing support

Alcohol use disorder[2]

The lifetime prevalence of alcohol use disorder in the sample was 95.5%. Approximately three-quarters (75%) of the sample met the criteria for alcohol dependence (defined as diminished control over drinking) and 20.5% met the criteria for alcohol abuse (defined as recurrent harmful drinking (see Figure 2 below).

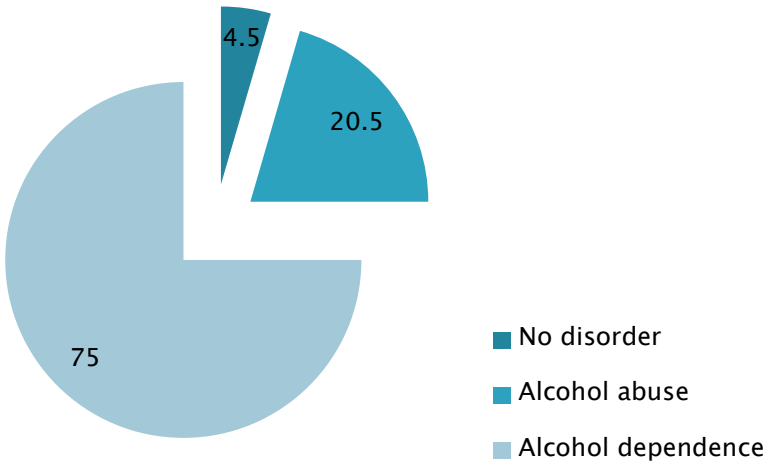

Figure 2 Lifetime prevalence of alcohol use disorder among homeless individuals accessing support

Table 3 shows the drinking behaviour and access to treatment among participants classified with an alcohol use disorder (AUD). The median age that AUD participants first drank alcohol was 13 years while the median age of onset of regular drinking was 16 years. Participants were asked about the number of drinks they typically had when they had drunk in the past 12 months and the largest number of drinks consumed in a single day in the past year. The median number of drinks typically consumed in the past year was slightly higher and the median largest number of drinks consumed was substantially higher among those with lifetime alcohol dependence compared to those with lifetime alcohol abuse. Compared to participants with lifetime alcohol dependence, a greater proportion of participants with lifetime alcohol abuse had ever abstained from drinking although the number of attempts at abstinence was similar for the two groups.

A little more than one-half (56%) of the alcohol abuse group had ever sought treatment for their drinking, a rate which was substantially lower than the alcohol dependent group (88%). While the median age at which participants first sought treatment was similar for both groups - 31 years – those with alcohol dependence had accessed a greater number of health professionals. Among those who had ever talked to a health professional, 20% of the alcohol abuse group and 48% of the alcohol dependent group considered they had received helpful or effective treatment. While the entire alcohol abuse group had received professional treatment for their drinking in the past 12 months, only one-third of the alcohol dependent group had done so. Similar proportions of each group had ever been hospitalised because of their drinking. Attendance at self-help groups was more common among alcohol dependent participants compared to alcohol abuse participants.

[2] There was incomplete or missing data for eleven participants on these measures; the findings in this section are based on a reduced sample size of n=44

Table 3 Alcohol use and alcohol treatment among participants with alcohol use disorder

	ABUSE (n=9)	DEPEND (n=33)
Median age first time ever drank an alcoholic beverage	13.0	13.0
Median onset of regular drinking (12 drinks in same year)	16.0	16.0
Median number of drinks consumed on any drinking day in past year	7.0	9.5
Median largest number of drinks consumed in one day in past year	18.0	25.0
% ever abstinent	50.0	29.0
Median number of quit attempts	4.0	5.0
% ever talked to health professional about drinking	55.6	87.9
Median age first talked to health professional about drinking	30.5	31.0
Median number of professionals ever accessed	1.5	6.7
% ever had effective treatment	20.0	48.3
% received treatment in past 12 months	100.0	31.0
% ever hospitalised overnight because of alcohol	60.0	51.7
% ever attended self-help group	40.0	65.5

Figure 3 shows the drinking patterns of those participants who drank every day or nearly every day in the past year. Almost 40% of the alcohol dependent group and one-third of the alcohol abuse group had drunk daily or almost daily in the preceding twelve months. Slightly greater proportions had consumed five or more drinks every day or almost every day and one quarter of each group had drunk enough to feel intoxicated every day or almost every day.

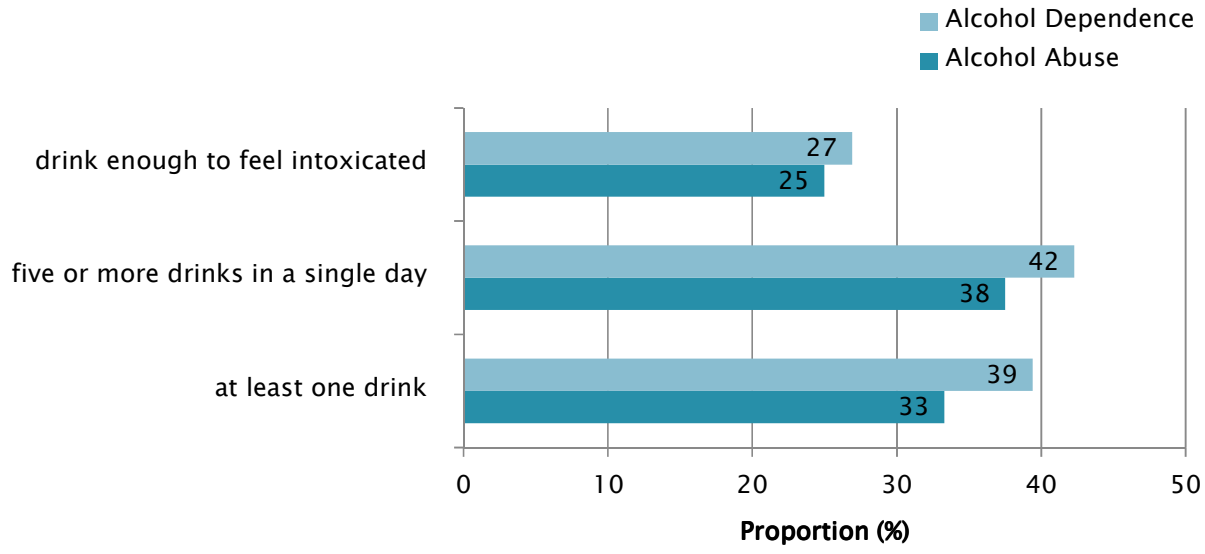

Figure 3 Proportion of homeless individuals accessing support who reported having at least one drink, five or more drinks, and drinking to feel intoxicated every day or nearly every day in the past twelve months

Participants classified with recent (12-month) alcohol dependence were asked how difficult it was to stop or go without drinking in the past twelve months. Approximately one-third of participants denied any difficulty, one-third reported some difficulty and another third found it very difficult or impossible to stop drinking (Figure 4).

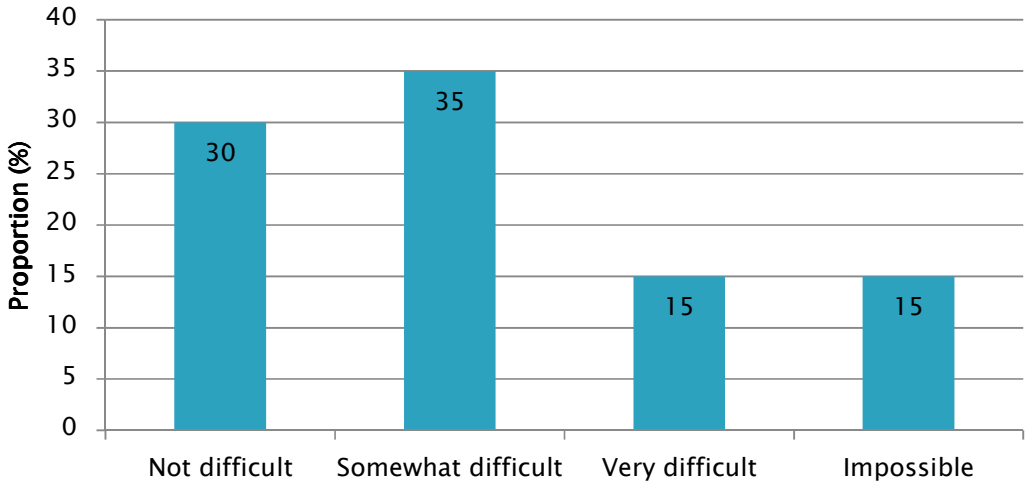

Figure 4 Proportion of homeless individuals with 12-month alcohol dependence who had difficulty in the past 12 months stopping or going without alcohol

Participants were also asked about the impact their drinking had on various aspects of their life. Despite the high prevalence of alcohol use disorder in the sample, only 23 participants reported any problems in the past year because of their drinking. Four participants mentioned physical health problems, five participants mentioned mental health problems, three participants mentioned problems with motivation and decision making, and five participants mentioned employment problems. For example, one participant stated:

> *"It's brought me down mentally and physically. It's ruling my life. It's started to destroy my life – that's what I'm scared of. I don't think this is the way I should be going. It's going to kill me."*

And another:

> *"It puts me in some really dark pits of depression. I can't function at all and I isolate myself – lock myself away. It's taken all my spirituality away from me. It dulls my thinking."*

A further group of participants talked about drinking as a means to escape problems, including other drug use. Some of their comments are shown below:

> *"Feel really down but drinking makes things go away (problems) and helps me to sleep because I live on the street."*
>
> *"I drank to cover everything that was going on in my life. I put a mask up to numb everything. The urge is always there."*
>
> *"I drink to forget about my wife who I was with for 27 years – I drink to get it off my mind."*
>
> *"Takes my mind off doing drugs."*

Whilst a number of clients reported a need for professional help and assistance in dealing with their issues around alcohol, some clients declared they did not need help either because they had no intention of changing their drinking or they felt that change had to come from within. For example,

> *"Nothing – I should just not drink."*
>
> *"None. 'Cos I'm not going to stop unless I die."*

Among those who wanted some assistance, the type of help they wanted varied. Figure 5 shows that residential treatment was the least common form of help suggested by participants, and although the numbers are small, it is consistent with feedback from Haymarket Foundation staff regarding client's preferences for community-based interventions. This preference arises for two reasons. First, although clients might identify as having a drinking problem they do not necessarily want to abstain from drinking altogether. Second, clients with chronic homelessness histories are fatigued by the rules and regulations that are part of residential treatment and support services.

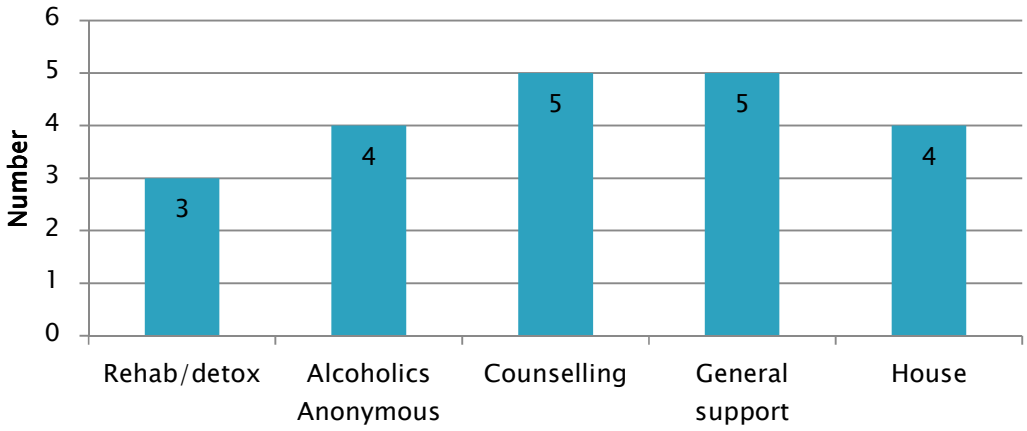

Figure 5 Number of homeless individuals accessing support who wanted specific forms of help for problematic alcohol use

A few participants believed that if their housing and economic circumstances improved then their drinking would reduce as a natural consequence.

> *"If I had a place and a job I reckon I'd be sweet. I wouldn't drink if I had a job."*

> *"Need housing to get away from people; [need] to work on money – around too many people who drink."*

One client in particular expressed sheer exasperation about the need for help:

> *"Just help me stop. I don't know the answers. If I did I would be doing it."*

Other substance use

Nicotine use was highly prevalent among participants. Eighty-five percent of participants had smoked within the past month. Among those who had smoked in the past month, the mean number of cigarettes smoked per day was 25 and the mean number of days smoked was 19.

Table 4 Nicotine use among homeless persons accessing support

	%
% current smoking	85.4
Mean number of cigarettes per day	25.2
Mean number of days smoked	19.0

The past month prevalence of illicit substance use was highest for cannabis (43.8%) followed by sedatives (22.9%), amphetamines (20.8%), and opioids (14.6%). Cocaine (4.2%) and hallucinogen (2.1%) use in the past month was rare and there was no inhalant use. Figure 2 shows the frequency of substance use by type of substance. Approximately one third of those who used cannabis or opioids in the past month did so daily compared to 10% of those who had used sedatives. Use of amphetamine in the past month was less than daily while use of cocaine and hallucinogens was weekly or less. The proportion of participants who had used any illicit drug daily or almost daily in the past month was 23%.

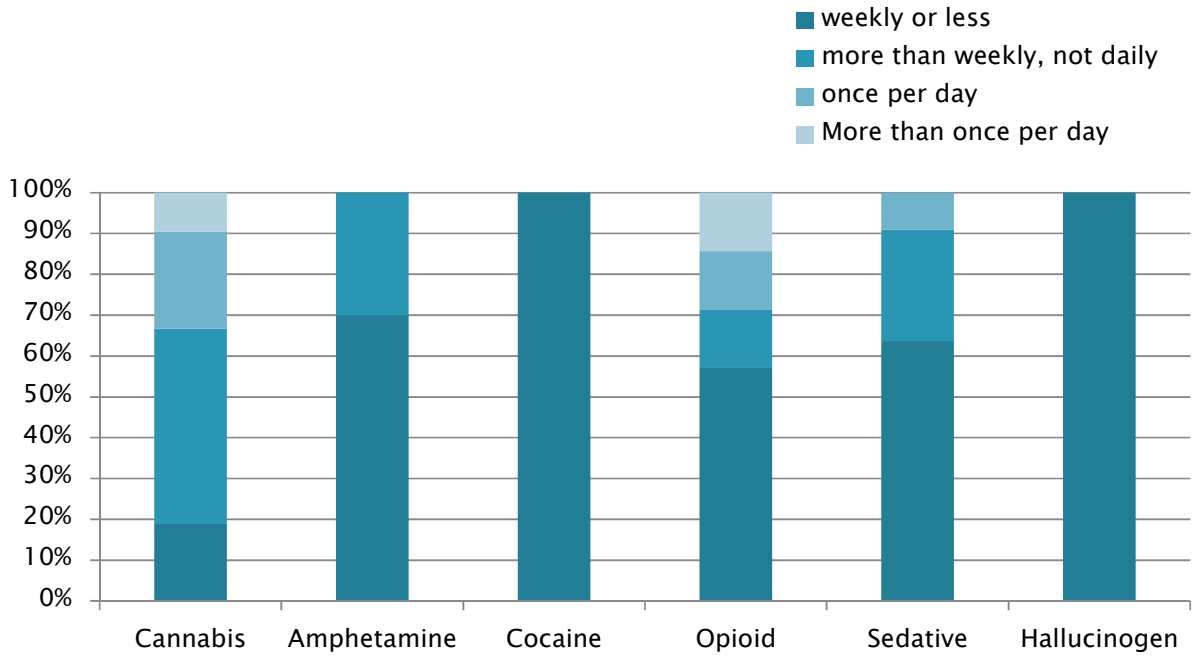

Figure 6 Frequency of substance use among homeless participants reporting use of each substance in the past month

Cognitive impairment

The prevalence of any acquired brain injury (ABI) was 88% with alcohol related brain injury (ARBI) being the most common type. Indeed, among those with any ABI, 86% had experienced an ARBI and the mean number of incidents experienced was 17. The next most common form of ABI was traumatic brain injury (TBI), which also had the second highest frequency of exposure with a mean of 8 incidents. The prevalence of hypoxic events was 53% and the mean number of events was 4. In comparison, infectious events were rare. These data need to be interpreted with caution however, as feedback from the research interviewers indicated that participants found it difficult to recall how many times they had experienced each type of ABI.

Table 5 Prevalence of indicators of acquired brain injuries (ABI) among homeless participants accessing support

	% who experienced each type of ABI	mean number of incidents among those who experienced each ABI
Traumatic brain injury (TBI)	59.2	7.6
Hypoxic events	53.1	4.3
Alcohol related brain injury (ARBI)	65.3	16.9
Infectious processes	6.1	0.5

The mean MoCA score among participants was 22. Seventy-seven percent of the total sample screened positive for mild cognitive impairment (MCI), and this rate was higher for participants diagnosed with lifetime alcohol dependence (77%) compared to participants diagnosed with lifetime alcohol abuse (56%). This is much higher than that previously reported for a homeless sample in Sydney where 10% were classified with MCI using the Mini Mental State Examination (MMSE; n=204 total sample size; 76% male; age range=18+years) (Buhrich et al., 2000). One reason for this difference may reflect the fact that the MoCA has been shown to be more sensitive in detecting MCI than the MMSE.

Among participants with MCI, the mean MoCA score was 20. In contrast, the mean score for a substance use treatment sample has been reported as 25.6 (Copersino et al., 2009). Thus, on average, participants in the present sample scored worse than a substance use treatment sample despite the high prevalence of alcohol use disorder and other substance use in this group. Although based on a small sample size and descriptive in nature, this finding does hint at the possibility that homelessness provides additional risk for cognitive impairment, perhaps because of poor nutrition and/or exposure to physical assaults. The relationship between homelessness and cognitive impairment is discussed further in relation to the findings from the key stakeholder interviews.

Previous studies comparing the efficacy of the MoCA in distinguishing between persons with MCI versus Alzheimer's disease (AD), have reported a mean score of 20-22 for the MCI group and a mean score of 16 for the AD group (Nasreddine et al., 2005, Luis et al., 2009). Figure 3 shows the degree of impairment among those in the present study who screened positive for MCI. The sample was split into two groups using a cut-off based on the mean MoCA score for the MCI group reported in the Nasreddine et al (2005) study. The present sample is most similar to samples of persons with known MCI and AD. The substantial proportion of participants with a MoCA score similar to persons with AD in previous studies suggests there is a need for neuropsychological assessment in this group.

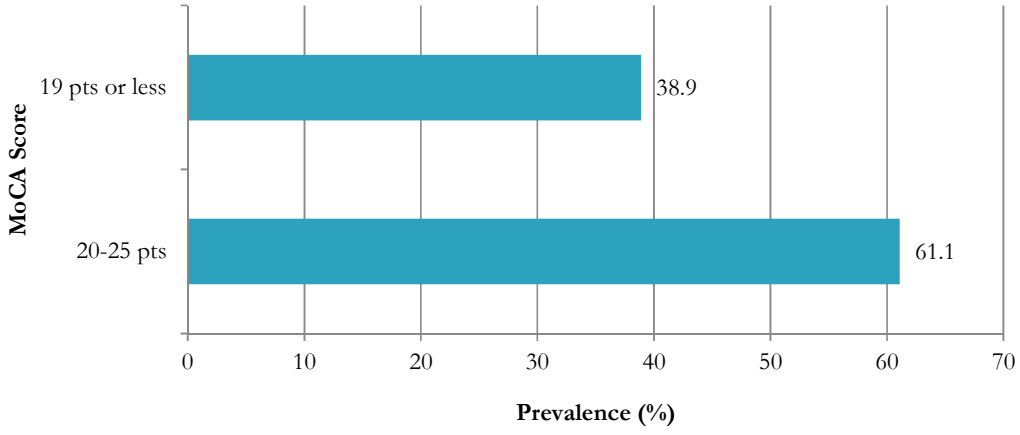

Figure 7 Degree of impairment among homeless persons who screened positive for MCI on the MoCA

Cognitive impairment among participants was also measured using the Prospective Retrospective Memory Questionnaire (PRMQ). The mean global score for the PRMQ among the total sample was 38 (from a total possible score of 80) and this was similar for participants with alcohol abuse and alcohol dependence. The mean score for the prospective and retrospective subscales was 19.7 and 18.7, respectively. The mean global score and

the two subscale scores found in the present sample are comparable to normative data obtained using a general population sample in the UK (Crawford et al., 2003). This is inconsistent with the previous finding of high MCI in the sample. One possible reason for this discrepancy in our findings is that the PRMQ may be unsuitable for the measurement of memory problems in a homeless population. Some of the items may be anchored too much in the daily activities of someone who is housed, for example:

- Do you intend to take something with you before leaving a room or going out, but minutes later leave it behind, even though it's there in front of you?
- Do you forget to buy something you planned to buy, like a birthday card, even when you see the shop?
- If you tried to contact a friend or relative who was out, would you forget to try again later?

Alternatively, the degree of cognitive impairment among participants may contribute to a lack of insight regarding their own level of functional impairment.

Psychosocial problems

Psychological distress was measured using the Brief Symptom Inventory (BSI); normative data is available for males and females and clinical and non-clinical samples. Because of the small number of females in the sample, the results for males only are presented.

The median Global Severity Index (GSI) score for the BSI was 70.3, indicating on average, male participants scored in the 98th percentile for general psychological distress. A high proportion of participants (69%) had a clinically significant score – defined as a GSI score of 63 or higher or two or more domain scores of 63 or higher.

Figure 4 shows the mean (normed) score for each of the BSI sub-scales among male participants. Research establishing the factor structure of the BSI indicates high reliability for the GSI and four sub-scales: somatisation, depression, anxiety and hostility (Skeem et al., 2006). Of these four sub-scales, the only sub-scale in the normal range was hostility. This is an unexpected finding given problems with anger are a feature of ARBI and other acquired brain injuries. Although it is possible that the low hostility score reflects a social desirability bias this explanation is unlikely given the high level of self-reported paranoid ideation which could also be considered a socially sensitive domain. Discussions with the case management and nursing/medical staff at the Haymarket Foundation suggest it might reflect a lack of insight, particularly given the high levels of cognitive impairment found in this sample.

Participants were also asked whether they had ever been diagnosed with three different categories of mental disorder – mood disorder, anxiety disorder and psychotic disorder. The prevalence of self-reported mood disorder was 57%. Approximately two-thirds (68%) of those diagnosed with a mood disorder had experienced symptoms in the past month and a further 11% had experienced symptoms in the past 12 months. Among those who self-reported a diagnosis of anxiety disorder (47%), almost half (48%) had experienced symptoms in the past month and a further 39% had symptoms within the previous year. Psychotic disorder was self-reported by 11% of participants with 17% having had symptoms in the past year and 17% within the preceding month.

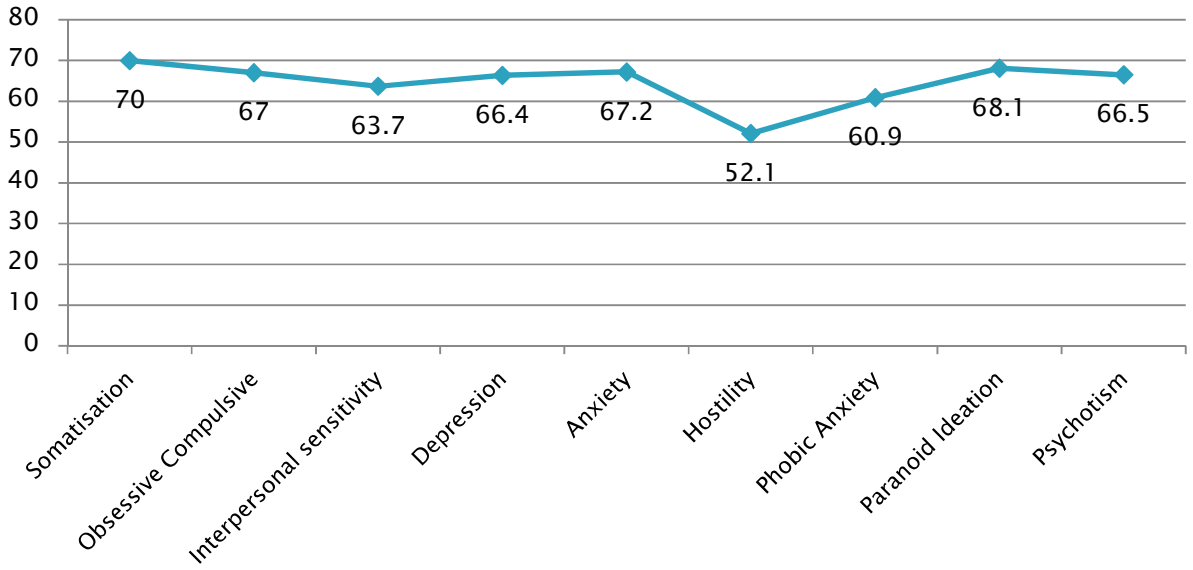

Figure 8 Median score for each of the BSI domains among male participants accessing support

As part of the BSI, participants were asked about recent suicidal ideation in the past two weeks. Figure 9 shows the extent of such thoughts in the sample. The majority of participants (63%) denied any suicidal ideation however a small proportion reported thoughts of death or dying that bothered them to a moderate (10%) or higher (10%) degree. This compares to a 12-month rate of 1.8% among males in the 2007 National Survey of Mental Health and Wellbeing. Although not directly comparable, the prevalence of suicidal ideation among the present sample is substantially greater than that of the Australian male population.

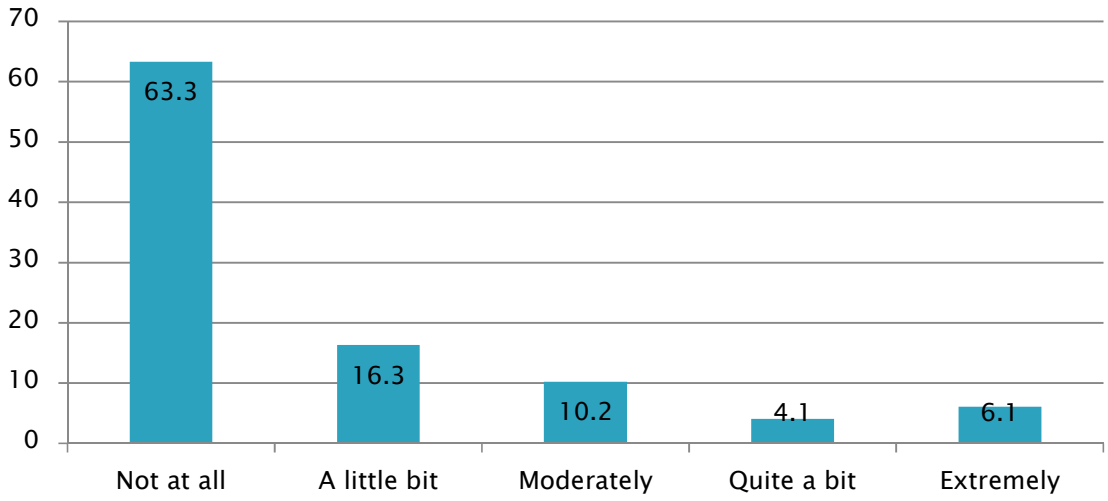

Figure 9 Proportion of homeless persons accessing support who reported thoughts of death or dying in the two weeks preceding interview

Availability of social support was measured using the MOS Social Support Survey (Sherbourne and Stewart, 1991). Participants were instructed to exclude support provided by caseworkers or other health/welfare providers in an effort to ascertain levels of informal support. Figure 10 shows the mean score for each domain and the overall index of social support among participants and comparative data from Sherbourne & Stewart

(1991). The participants scored substantially lower on all four types of social support as well as the overall index. The highest mean score was for the dimension of positive social interaction while the lowest mean score was for tangible support. Items in the latter dimension included 'someone to help you if you were confined to bed' and 'someone to help with daily chores if you were sick'.

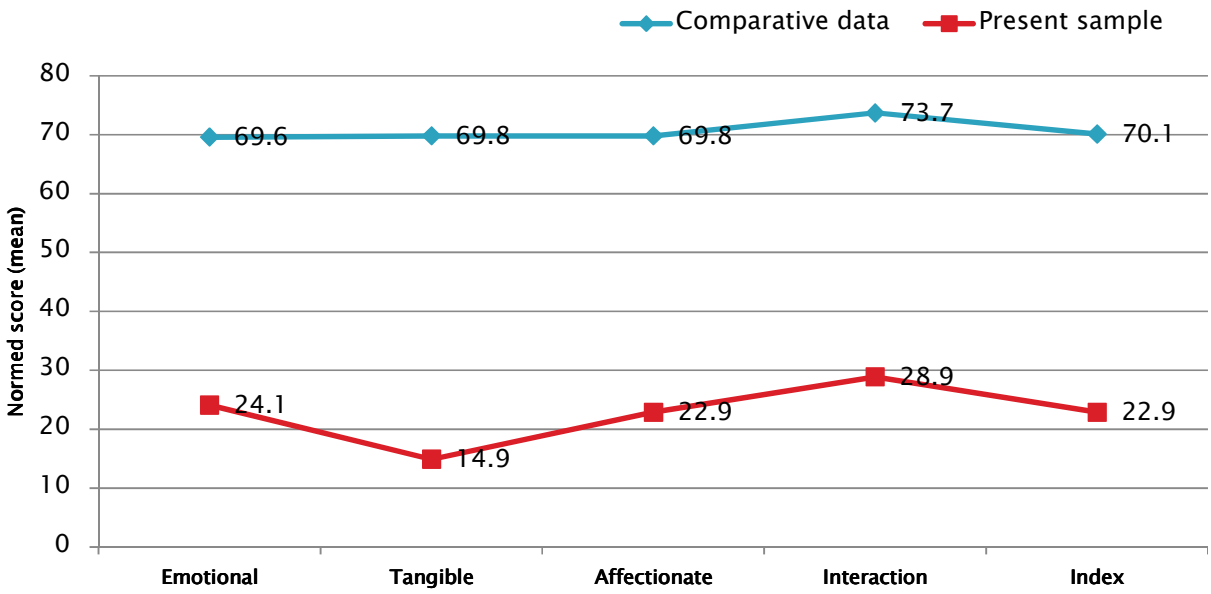

Figure 10 Mean normed scores for the MOS Social Support domains and overall index among participants accessing homelessness support and comparative data from Sherbourne & Stewart (1991)

The MOS Social Support Survey also included a single item measure of the size of an individual's social network. The median number of close family members and/or friends that participants nominated was two although this was highly variable, ranging from zero to twenty-four. Approximately one-third (33%) of participants stated they had no close family members/friends, 15% stated they had one close family member/friend and 31% stated they had two close family members/friends.

Physical health

Figure 11 shows the lifetime prevalence of physical health conditions among participants and recent symptomatology among those with the condition. The most common health conditions were dental problems (79%), heptatitis C (HCV) or other chronic infection (57%), arthritis or other joint/muscle disease (36%), eczema (32%), liver disease (30%) and high blood pressure (26%). Almost one-half of those with HCV/infectious diseases (48%) and liver disease (43%) had experienced symptoms in the past month and a little over half of those with eczema/skin problems (53%) had past month symptomatology. Among those with high blood pressure, approximately one-third (36%) experienced symptoms in the past month while the majority of those with dental problems (79%) and arthritis or other joint/muscle disease (88%) had recent symptomatology. These rates need to be treated cautiously as the number of participants with each condition was very small.

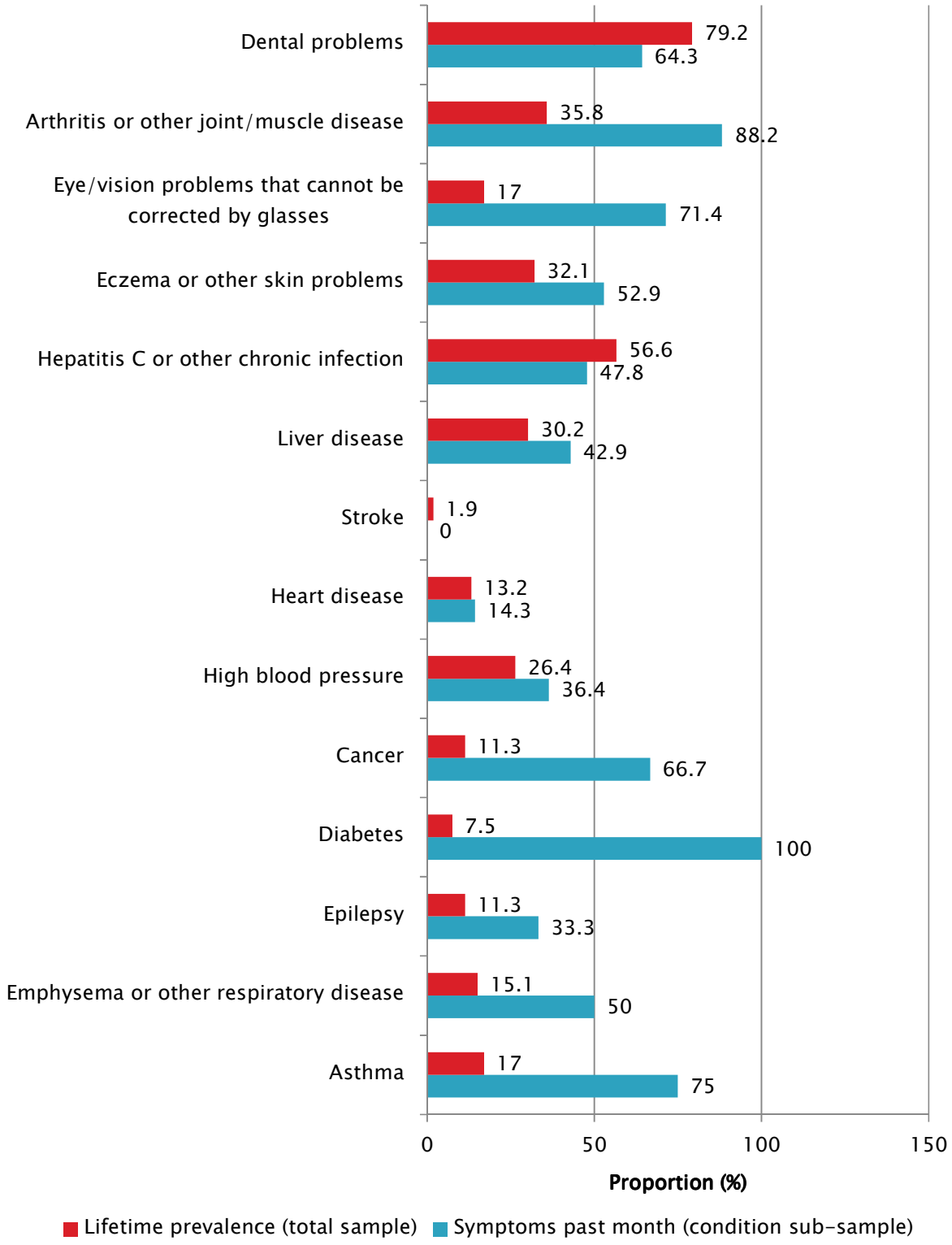

Figure 11 Lifetime prevalence of health conditions among participants accessing support and past month symptomatology among participants with each condition

Summary

The preceding sections presented the findings from the Client Survey. The sample participants had extensive homelessness histories: 94% had ever slept rough, 90% had ever stayed in temporary accommodation services, and two-thirds had a cumulative total time spent sleeping rough or staying in temporary accommodation services greater than twelve months. Staff at the Haymarket Centre believed the sample was representative of their client group whereas the Haymarket Clinic staff felt the sample did not include their clients with the more severe experiences of homelessness.

Alcohol use disorder was highly prevalent in the sample. Three-quarters of the sample were diagnosed with lifetime alcohol dependence and 21% were diagnosed with lifetime alcohol abuse. Similar proportions of the two alcohol disorder groups had drunk daily and drunk to intoxication in the past year. The median largest number of drinks consumed in a single day in the past year however was higher for the alcohol dependent group. A greater proportion of the alcohol abuse group had ever been abstinent but lifetime treatment exposure was higher for the alcohol dependent group. This latter finding was reversed when treatment in the past year was examined: relative to those with alcohol dependence, a greater number of those with alcohol abuse had received treatment in the past twelve months.

Drinking impacted on participants' physical and mental health, general motivation and employment prospects. The majority of participants indicated a preference for community-based treatment options however a few also suggested the solution to their problematic drinking was permanent housing. Haymarket Centre staff reflected on the fatigue felt by many of their clients in meeting the rules and regulations of residential-based treatment services and supported accommodation options.

The prevalence of mild cognitive impairment among the sample was high (77%). The rate of mild cognitive impairment was higher among those with lifetime alcohol dependence relative to participants with lifetime alcohol abuse. Among those with mild cognitive impairment, 39% scored in a range similar to that of an Alzheimer's disease sample. This result highlights the need for routine screening of cognitive impairment, particularly among those with a history of dependent drinking.

Finally, psychosocial problems were highly prevalent in the sample. On average, male participants scored in the 98th percentile for general psychological distress and 69% of males were classified as clinical cases. Perceived social support was extremely low among all participants and substantially lower than population norms. This has important implications for the success of community-based treatment options in this group and represents a significant challenge given the preference of participants for this type of treatment.

The next section describes the approach and documents the findings from the in-depth interviews with key stakeholders.

In-depth interviews with key stakeholders

A series of in-depth interviews were conducted with stakeholders from New South Wales and Victoria across the sectors of disability, aged care, homelessness and drug and alcohol. A brief description of each participating stakeholder is presented in Table 6. Key stakeholders were identified through a web-based search of relevant agencies, suggestions from within the research network, and recommendations from other stakeholders. We were unable to interview any stakeholders from the policy environment. In particular, this is problematic for the disability sector as this sector had recently engaged in a process of identifying the service needs of complex clients such as those with a history of homelessness, substance use and cognitive impairment.

Table 5: Description of stakeholders who participated in the research interviews

Stakeholder	Level	Agency type	Specialisation
1	Management	Residential aged care	Homelessness
2	Management	Disability service	Drug and alcohol
3	Operations	Disability service	Drug and alcohol
4	Management	Tenancy support service	Aged care
5	Clinical	Disability service	General
6	Management	Residential aged care	Homelessness
7	Management	Temporary accommodation service	General
8	Operations	Disability advocacy	General
9	Clinical	Drug and alcohol service	Aged care
10	Clinical	Drug and alcohol service	Aged care
11	Management	Community aged care service	General

Stakeholders were invited to participate in the study either by telephone or email and provided with a study information sheet. If agreeable, a date and time to conduct the interview was arranged. Interviews were conducted either face-to-face or by telephone, depending on stakeholder preference. The interviews began with a description of the stakeholder's role and degree of involvement with the target population, assessment and management of problematic drinking and alcohol-related cognitive impairment, and the challenges in implementing care for this group. All interviews were audio-taped (following consent by participants) and transcribed and transcripts analysed for thematic content using NVivo 9 research software. Three broad themes were identified using a grounded theory approach – defining the problem; treatment approaches; and aged care resource utilisation. Each of these is discussed in the sections following.

Problem definition and scope

The target population was defined as older homeless clients with alcohol use disorder and cognitive impairment and the problem was defined as one of appropriate management of client needs within the existing service

system. Stakeholders were asked to reflect on the significance of the problem for their sector and responses were typically dependent upon their own client population as a reference point. The highest significance was identified by those services dealing with primary homelessness where stakeholders suggested problematic drinking was practically ubiquitous among the long-term homeless. For example, a stakeholder from a temporary accommodation service reflected:

> *If a male is older and has been homeless for a while, there is a very strong chance of a history of drinking at least, and probably some ARBI to go with it.*

This sentiment was echoed by a disability stakeholder who talked about a recent visit to a homelessness agency where he met a small proportion of the residents:

> *I only came in contact with a small percentage, but I reckon just about every one of them that I spoke to had an ABI. I don't need a neuropsych to tell me that, do you understand? I mean an assessment. There's no question, their presentations, this is hundreds and hundreds of people in one little service, but its homelessness. This is what you'd be getting and there'd be alcohol and drugs involved.*

In contrast, a stakeholder involved in a tenancy support service for older persons estimated problematic drinking was a factor in approximately 15-20% of referrals to their service. On the flipside, similar proportions of housing problems were reported in the drug and alcohol sector: a stakeholder from an older person's drug and alcohol service indicated approximately one quarter of clients accessing their intensive treatment program presented with housing issues:

> *Only about twenty-five percent would present with housing problems though, but all of them would be alcohol dependent, early onset, and probably I'd say 80-90 percent would have cognitive impairment.*

Aside from the number of older homeless clients with alcohol-related cognitive impairment that a stakeholder was regularly exposed to, there were other issues raised by stakeholders that appeared to influence how the problem was defined and thus how it should be dealt with. Some stakeholders commented on the lack of recognition given to the problem of chronically homeless 'under-age' individuals with alcohol-related brain injury because of the challenges in defining the extent of the problem. For example, an aged care stakeholder commented:

> *... I guess we as a society really need to be prepared to be aware of how big the problem is and to resource some thought and planning into solving it. The fact that you're doing this research at all perhaps shows us that maybe it's starting to be recognised which is good, hopefully that's progress.*

The following sections discuss some of the complications in identifying the population in need.

Transience of cognitive impairment associated with chronic drinking

One factor in determining the size of the population is the extent to which the cognitive impairment can be considered permanent. Stakeholders from the mainstream aged care and rehabilitation sectors tended to underplay the extent of cognitive impairment associated with alcohol. This partly reflected the broader client group of these sectors (i.e. age-related cognitive decline such as dementia and traumatic brain injuries from falls, assaults and motor vehicles) but also reflected the view that permanent cognitive impairment cannot be

determined in the presence of continued drinking and that much of the cognitive impairment associated with drinking can be reversed with abstinence and good nutrition. The 'size' of the problem therefore is substantially reduced using this narrower definition.

> *See, I don't think you can really define the cognitive impairment as a permanent problem until you've dealt with the alcohol situation.*

This aged care stakeholder believed the impermanence of the cognitive impairment was generally true even for individuals with chronic or long-term alcohol use disorder but that it would require a longer period of abstinence, for example, up to one year. A case study example demonstrated the degree of improvement possible even with severe cognitive impairment:

> *I mean, we had a patient that came in and out of hospital for about 4 years; I haven't actually seen her for ages so I don't know what's happened to her, and she would come in literally not knowing her own name - she couldn't tell you anything - and after about 6-7 months she would be completely fine cognitively. So that's not going to be the case for everybody but you can't ignore that, you know; you have to deal with that first of all.*

This was echoed by stakeholders from the disability sector:

> *In terms of you looking for research and services, and I don't know whether you'd have access to this, but the number of people who end up in the hospital system with Korsakoff's or Wernicke's and during those periods they have severe cognitive impairment, and then, when they abstain and get their thiamine deficiency back up, then they don't have many of the problems they initially had and actually are able to function.*

And:

> *What we do know, is the moment you abstain, you won't, not only you won't deteriorate any further, apart from natural ageing, is there is evidence that you can in fact improve your functioning. You don't get cured, you've got to be careful about that, but other parts of your brain can take on and learn skills, and some of those skills that you've lost.*

This potential for recovery was also evident in the experiences of homelessness aged care providers attempting to manage alcohol use among their residents. Rather than enforcing abstinence, these stakeholders focussed on reducing the harm associated with drinking and restoring the physical and mental health of their clients. These stakeholders described improvements in their clients overall wellbeing and functioning, despite their continued drinking:

> *But once they start getting that nutrition and they start getting the medications regularly there's a huge difference in their whole well-being and even with the alcohol-related brain damage, you know, there is a slight improvement.*

This experience resonates with the comments of stakeholders from other sectors – while abstinence was clearly an important factor in restoring cognitive functioning, good nutrition (particularly thiamine intake), stabilisation of mental illness and management of physical health conditions were also imperative. One homelessness aged care provider talked about the broad range of comorbid health conditions that residents presented with:

> *... it's not just alcohol related – you know, they sometimes have a mental illness, they have cancers, they have heart disease, kidney, liver, there's so many other comorbidities that they might be suffering from.*

This stakeholder also commented on the earlier mortality of residents with these health conditions relative to the general population. The cognitive impairment is therefore only one aspect of the poor health status of these individuals and the former cannot be addressed without also addressing the latter.

The homelessness aged care stakeholders also questioned whether their facilities remained the most appropriate accommodation for some of their residents given the extent of their improvement. Similarly, the Wicking Project – which is discussed as part of the Wintringham case study (see page 44) – also noted improvements in residents resulting in them moving out of the facility and into accommodation with a lower level of support. The recognition of the transience of cognitive impairment associated with drinking thus raises two important queries. One is concerned with the configuration of services, including the appropriate use of existing resources and the need for *transitional* programs specifically tailored to this population. This query is discussed further under the theme of 'aged care resource utilisation'. The other is concerned with the valid assessment of cognitive impairment in a homeless population of drinkers who often have multiple physical and mental comorbidities. This is discussed next.

Assessment of cognitive impairment

Stakeholders described clients with alcohol-related cognitive impairments as having problems in a number of areas. Although aggression is often considered a symptom of acquired brain injuries, it was not mentioned by many stakeholders except the homelessness aged care stakeholders who described their clients as having quick trigger points. This may reflect the severity of ARBI among clients accepted into these facilities. Many stakeholders described their clients as having a diminished capacity to plan or organise and compromised problem solving skills. These impairments, as well as being unable to remember things, were often discussed by stakeholders in reference to the type and extent of support they provided to their clients. Those in the disability and drug and alcohol sectors also talked about the lack of insight that is part of the impairment associated with alcohol-related brain injury, particularly as it relates to assessment and treatment.

What was most obvious from stakeholder comments was the complexity of client presentations and the difficulty this posed for assessment. A number of stakeholders talked about the repeated insults that clients sustained over the course of their life including falls and physical assaults resulting in head injuries as well as hypoxic events such as drug overdoses. For example, a disability stakeholder commented:

So the other thing, the other point to that I was thinking about, is also that many of the people have multiple injuries to their brain because on top of the alcohol related brain injury, many of them have had falls or hits to the head or assaults and they actually have a TBI on top of the ABI from the drinking, so it's really difficult to tease that out. And probably at least 50% of our referrals have multiple brain injuries.

In addition to multiple ABI's, stakeholders also mentioned a high rate of comorbid mental disorder among their clients and the cognitive deficits that form part of the symptom profile of some disorders. The mental health problems most often mentioned were schizophrenia or paranoid or psychotic behaviour, sometimes in relation to symptoms of aggression and sometimes in relation to executive dysfunction. When asked about the distinct presentations of alcohol related cognitive impairments and schizophrenia, one homelessness aged care stakeholder commented:

Well, it can be hard to distinguish these things, they're working in tandem, I think.

One of the difficulties with ARBI relative to other ABI's is the lack of a specific aetiological event. Disability stakeholders talked about the emergence of alcohol-related brain injury over time and the consequence this had for both assessment and treatment. In particular, assessment of pre-morbid functioning for ARBI is more difficult to determine and this lack of information affects decisions regarding treatment. Moreover, it is more difficult to intervene early in the brain injury in order to limit the severity of problems experienced. As explained by a disability stakeholder:

... the impact of a sudden injury, you know, things are dealt with, ... there are very few people who receive a traumatic injury who don't receive some form of compensation and can get the support and buy-in of treatment within a timely manner. So you can hopefully prevent some of the issues and jump in ... [and] prevent problems from occurring. With ARBI you don't have that. You don't have that opportunity.

Related to this, another feature of ARBI that contributes to the delayed assessment of cognitive impairment is the lack of insight that ARBI-affected individuals display. In reference to the type of referrals coming through their agency, a disability stakeholder commented:

... and they probably acquired their ABI over a 10-15 year period and couldn't probably work out why they couldn't plan, organise, couldn't work out why, because once you've got it, you don't know it, if that makes sense. And so you don't have insight, you can't actually work out what the hell's happened in life.

Lack of insight presents a particular challenge for service provision. An individual is unlikely to present for treatment if they do not recognise that they have a problem. Moreover, even if they are 'encouraged' into treatment by others, a lack of insight will likely impact a client's motivation for change. In reference to this, stakeholders discussed the importance of routine cognitive assessments in the homeless population to increase the detection rate and early referral of clients (particularly given the discussion above regarding improvements in cognitive functioning associated with reduced alcohol intake). While neuropsychological assessments by qualified professionals were put forward as the 'gold standard', it was recognised that this was not cost effective for the majority of homelessness services. Rather, disability stakeholders advocated a stepped approach comprising of an initial screening tool followed by more in-depth assessments. For example:

We're under no misapprehension again, that drug and alcohol services don't necessarily have the funding and so forth to conduct full-blown neuropsychological assessments for each and every person that comes through the door; it would bankrupt them. We understand that. On the other hand, it's also a disappointment to us, that there are available, both locally and internationally, some really quite efficient, low-tech assessment tools that could be utilised by homeless services to get at cognitive impairment. But also, that basic thing of taking a complete history of a client when they come through – is there a history of assault, motor vehicle accidents and so forth, to get at some of the underlying issues as well.

And:

I guess, as part of it, the actual research activity was testing a model that was a three-tiered approach. First of all you use a screening tool, what we call the ABI identification checklist, which wardens in prisons were trained to use. Then there is a clinical interview, and then there was a full diagnostic neuropsych assessment. And why I mention that is because the ABI screening tool was validated, as a valid tool, with a high accuracy - using risk factors - of determining whether a

person's got an ABI or not, without going all the way to a full neuropsych assessment, which has cost effectiveness about it. That was validated, so that's now a copyrighted tool that we make available to the sector via licensing arrangements

Routine assessment of cognitive impairment was undertaken by some stakeholders and was seemingly dependent on the age of the client population or the severity of substance use problems. For example, in an older person's drug and alcohol service, cognitive functioning was assessed with the Mini Mental State Exam as part of the general assessment of clients with chronic substance use problems but not for those accessing the early intervention program (where problematic substance use was a recent development). Cognitive impairment – along with alcohol use – was also part of the general assessment of all older clients for a tenancy support program but the focus was on the functioning of the individual and not the drinking problem or the cognitive impairment per se. Because neuropsychological assessments formed part of the entry criteria for all clients accessing an aged care facility, the homelessness aged care stakeholders focused on the importance of regular reviews by psychiatrists and psychogeriatricians and ongoing monitoring by nursing staff for changes in patient functioning. Only one stakeholder reported their service did not engage in routine screening of either alcohol problems or cognitive impairment, saying:

We invite answers around drinking and health conditions and that kind of stuff but it's not, I mean they're here for a bed.

This quote exemplifies the critical role of homelessness services in providing for the immediate needs of clients and, despite being well placed (from a population health perspective) to deliver a screening program for ARBI, not necessarily being in a position to deliver this. Of critical import is the limited time that low threshold services have with a client on any one occasion and the receptiveness of clients in crisis to questions about their drinking. This is explained by a tenancy support stakeholder:

Yeah, because we often don't know how much, people won't actually divulge how much their alcohol intake is, they don't particularly want to talk about it and they perceive that questions about it aren't going to be useful to them. Whereas they will talk about things such as planning for purchasing something or working out what would be a good place to live where they could have visitors from the family kind of thing and re-establishing those links. So we tend not to focus on alcohol per se as to those other types of things.

An in-depth discussion of this and other approaches to dealing with alcohol misuse among older homeless individuals can be found within the 'treatment' theme.

Changing demographic

The previous sections have discussed the assessment and permanence of cognitive impairment in determining the extent of the problem that is the subject of this report. The size of the problem may also be cohort-dependent, given demographic shifts in both the drinking and drug use patterns of the general population. For example, a stakeholder from a specialist residential aged care facility talked about the decline in the number of clients with ARBI specifically and the increase in those with mental health problems and related this to the increase in illicit drug use among successive patient cohorts. This was echoed by a temporary accommodation stakeholder who commented that the alcohol-dependent clients tended to be older than the drug-dependent clients. This has important planning implications for homelessness agencies attempting to manage an ageing

clientele if, as indicated by the stakeholders in the present study, different cognitive and behavioural problems manifest from alcohol use compared to drug use.

Stakeholders from the disability sector commented on the impact of cohort shifts in the prevalence of harmful drinking on both the onset of ARBI and the recovery of cognitive functioning with abstinence.

> *... if you looked at the demograph of people we were seeing five and ten years ago, it was 80% male, aged between 45 and 66 and homeless, unemployed, mental health and all the works. ... but what we're seeing, what we're diagnosing formally is people aged between 25 and 35, 40 and we're seeing an increase in female demographic. We don't, we haven't got enough years' data to make evidence-based statements, but certainly anecdotally, what we're seeing is the outcome of increased alcohol use starting with binge drinking practices at 13-15, 16 years old, ... And we know from the evidence base, that it takes between 5- 8 years, sometimes 10, depending on what your nutrition and your general health circumstances are like, to in fact end up with some sort of acquired brain injury. So, starting to use and drinking at risky levels, at a much younger age. In fact, if you think about it clinically, the brain doesn't stop developing until its 20-25. So therefore, what you're doing is you're damaging the brain before its in fact even learned skills, whereas the 45-65, ten years ago, they would have cognitive impairment but the damage to the brain is existing and you preserve certain skills and you lose certain skills; the undeveloped brain is not even learning certain skills. ... The fact that people are drinking a lot earlier, but they're drinking at high volumes, uncontrolled high volumes, the damage is more dominant and much earlier.*

A trend for earlier onset ARBI is likely to increase the strain on the existing service system, particularly where there are age-related criteria determining access to some services. This follows given that younger ARBI-affected homeless individuals are likely to present in better physical health and hence be unsuitable for co-habitation with the frail elderly. This issue is discussed further in the section on 'aged care resource allocation'.

Reciprocity between housing and drinking

Related to problem definition, some stakeholders hinted at some of the mechanisms or processes that might contribute to the prevalence of alcohol-related cognitive impairment in the homeless population. A number of stakeholders commented on the bi-directional relationship between homelessness and alcohol use. The degree to which one problem caused the other varied, depending on the stakeholder's client population. For example, a drug and alcohol service provider suggested:

> *Anecdotally, you know, it's not so much that the drinking's been caused from a lack of accommodation but that the problems with the accommodation being caused from the drinking.*

In contrast, a tenancy support stakeholder commented on the capacity of some individuals to maintain their tenancy despite their excessive alcohol consumption.

> *... there's so many people that continue to maintain their alcohol intake, maintain reasonably poor health care, and still maintain their independent living. It's just that their lifestyles and life quality wouldn't be particularly good when observed from somebody else, but they're managing, they're getting by.*

Following on from this, other stakeholders commented that it wasn't dependent drinking per se but the functionality of the dependent drinker that was important in the relationship between alcohol use and homelessness. This primarily related to issues of self-care and neglect, as well as physical health comorbidities,

and to a lesser extent, problems with social behaviour. Moreover, it was the combination of problems rather than any particular individual problem that determined functional status, as explained by a housing tenancy stakeholder:

> *It's also that they often can't sustain the tenancy; they really aren't looking after themselves and the issues of neglect come up and I guess it's all the things about being able to pay your bills, look after yourself, make your way to and from home and not disturb other neighbours and those kinds of things. So it seems to be a gamut of things rather than one, because there are a lot of people who come home noisy and so forth.*

As one drug and alcohol stakeholder explained, self-care issues then become a critical focus of the support provided to clients:

> *Yes, their ability, where their level of self-care is at, what they're able to do for themselves would definitely affect where we would look to place them. Having said that, one client with extreme ABI he is in a housing provided by [housing program] but it's really not monitored. He's responsible for cooking his own meals, and cleaning, you know, all that hygiene, and it just really doesn't happen very often. So you know I have to work with him a lot on those issues as well, on nutrition, you know, hygiene. That's what I mean, it becomes pretty complex. But they don't, it doesn't seem to affect his ability to stay there.*

Neighbourhood characteristics also played a role in determining risk for homelessness for ARBI-affected individuals. A tenancy support stakeholder commented on their approach to supporting clients to remain in the community:

> *The other thing is we try and target, or when we offer places in housing, we actually start to get a good idea of which are good areas that they can live in where they're not going to be observed and monitored by other neighbours closely everyday all day kind of thing. So we have got those relationships with housing where we can say maybe this building is a better building for this person and tend towards targeting the housing to fit them as well.*

The above discussion focuses on the impact of drinking and ARBI on an individual's capacity to maintain their housing. A drug and alcohol stakeholder pointed out that the home environment could sometimes be a risk factor for problematic alcohol use, something that was also raised in the feedback sessions with Haymarket staff. This was explained in terms of social isolation, particularly for individuals whose alcohol dependence was well established and who were newly housed after chronic periods of homelessness. When asked to comment on client perceptions that their drinking problems would be resolved if they had housing (see client survey results, page 17), another drug and alcohol service stakeholder questioned whether housing was indeed the critical issue:

> *I think that would be a perception that they would have but it certainly wouldn't be the main issue. ... When the housing is resolved then it's some other issue. People that are alcohol dependent and have that long-term method with coping with life in general, you know, have much more complex issues than just the housing.*

This issue of the order in which housing and alcohol use should be addressed is considered in more detail under the 'alcohol treatment' theme.

The aged care sector: resource utilisation and adjustments for the homeless population

The aged care sector is Commonwealth-funded and designed to provide long-term residential care for the frail elderly. Access is generally restricted to those aged 65 years or older and who meet specific functional requirements as determined by aged care assessment teams. The determination of need is based on an individual's entire health status – including aged-related cognitive decline and physical frailty. This was explained by an aged care stakeholder:

> *Yeah, the entry criteria are two-fold. You don't need to stick very rigidly to the actual cut-off ages because you could be a very well ninety year old and a very unwell fifty year old, you know, so it can't often be as black and white as that.*

The two criteria – age and health status – allowed homelessness aged care services some flexibility in accepting a younger clientele. For example, one homelessness aged care stakeholder commented that approximately half of their residents were aged less than 65, with the youngest aged 40 years. The minimum age requirement however was commonly perceived as a barrier by those stakeholders outside of mainstream aged care. For example, a tenancy support stakeholder commented:

> *If they're less than 65 it's difficult, if they are less than 60 really difficult, and for some people we probably won't be able to find appropriate accommodation for them.*

This same stakeholder described the process of referring a younger aged client to aged care as a 'battle'. Another stakeholder from the homeless/aged care sector discussed the case of one of their residents that involved a lengthy legal contest. The resident was aged in their early forties, had multiple mental health and physical health problems and had been homeless for many years. As the stakeholder described:

> *There were lawyers, administrative appeals, tribunals involved, the guardianship board – he had a public guardian. So we fought very hard against the ACAT's decision and eventually won. And the lawyers in Canberra argued all sorts of things but they did eventually approve him staying here but made the stipulation that he could only be at [name of aged care facility]; of any aged care facility, this was the only one he could be in.*

In defence of the aged care criteria, a mainstream aged care provider talked about resource allocation and the inappropriate use of aged care resources for ARBI-affected individuals:

> *You have to look at the resource utilisation and you also have to look at the appropriateness of the resource for this group. So the last thing anyone wants is somebody who's clearly much younger and much stronger and fitter and you know see, a very frail elderly demented population and mixing them together is not going to be good for the young person or the old person. So there are two issues: one is the fact that there's actually a use of resources for a group that they haven't been made for and two, it is not a good outcome for either group together.*

Other stakeholders also questioned the appropriateness of aged care facilities for younger individuals with ARBI however considered such facilities to be the only available option at present. Sometimes this was explained in terms of the temporaneous nature of ARBI, given improvements in cognitive functioning with abstinence and better nutrition and medical care. Other stakeholder discussed it in terms of the differences between ARBI cognitive deficits and age-related cognitive decline. For example, a tenancy support stakeholder explained:

Well I think it's a bit tricky because I think those places are specifically designed for people over 65 and frontal lobe or cognitive impairments that aren't necessarily of an age-related illness. They're not great places for either party really, either for the older people who are living in there or for the younger person who needs prompting and lots of input but doesn't need to be cared for as such so there's nothing set up for them. Like a 55 year old with alcohol related issues, I mean they can do a lot of things but they just need very strict kind of framework within which to act and I don't think aged care is the best place for them either. In the next twenty years they're going to be told to come to the meal three times a day and have everything organised for them whereas they still can boil the kettle and there are still tasks they can achieve but they need a gatekeeper at the door if you like if anything else, to stop other people coming in and to keep an eye on them.

In addition to denying a residential place to a frail elderly person, utilisation of aged care resources for ARBI-affected individuals was also considered poor advocacy by one stakeholder:

I think from a philosophical level also, that you know, until we get to a situation where we recognise what the needs of this younger group are, we won't be going anywhere towards meeting their needs if we simply just hide it in a different location.

This quote hints at the lack of awareness and the lack of service response that many stakeholders commented upon. It is discussed in more detail under the 'alcohol treatment' theme.

There were two stakeholders involved in the provision of aged care services within the homelessness sector and they provided valuable insights regarding the challenges in delivering aged care to this population. The homelessness histories of these clients were often quite extensive and clients were typically referred to their facilities following a medical crisis that resulted in them being hospitalised. Additionally, they were often under-nourished and had a complex array of mental health needs such as acquired brain injury, mental disorder and substance use. All of this was against a background of chronic social and economic disadvantage:

Yeah, we're not mainstream, we're not the pearls and twin-sets. Our clientele's quite different.

And:

Well, a lot of them are chronically psychotic, and a lot of them have quite serious physical health issues around their lifestyles, so a lot of respiratory stuff, cardiovascular, musculoskeletal stuff, 'cos they've knocked themselves around a lot. There are a lot of issues around – it's a terrible term but – behaviour management.

The complexity of presentations influenced the way in which staff interacted with residents. For example, one stakeholder described how meals were dished up at the table in front of residents so that '*we're able to see what they're eating and give them a bigger meal if they require*'. Delivering services on-site was also raised by both homelessness aged care stakeholders as key to meeting the needs of their residents:

And I think having the younger people, the things that mark us out are having a younger cohort and also that we try and deliver all the health care services that the men need, as much as possible, on site. We don't rely on community services at all really. I shouldn't say at all, but not really. ..... We do have, occasionally use mental health crisis teams.

The benefit of delivering services on-site was that it provided consistency for the resident which was considered by many stakeholders as critical to managing the cognitive deficits shown by ARBI-affected individuals. This was

true for staff employed by the facility as well as external staff brokered to deliver services on-site (e.g. geriatrician, psychiatrist). This is explained by one stakeholder:

> *And also, with the staff it's really important to have very consistent and adequate staffing. We have, they then get to know the residents, they know what their trigger points are, we've got care plans for everyone and also the residents become very comfortable with the carer and they seem to build up a rapport and once you know what's going to trigger them you sort of try to avoid whatever that may be.*

Also of import was the design of the facility, firstly in relation to managing the challenging behaviours associated with ARBI but also because of the experience of homelessness:

> *What we have here, and what we've found to be really good, is the building. We've got pods of fifteen so we don't have a lot of residents all in together. Even though we've got sixty here, there's only fifteen to a floor. And on that floor they've got their own dining room, their own lounge, they've got another little quiet lounge as well, they've got their own room with ensuite. So they have the ability to just have quiet area and isolation. And also if they've been on the streets that security of being able to go into their room and lock it and feel safe is also extremely important. So there isn't that anger or I suppose angst about someone going to hit them or whatever.*

Finally, the complex presentations of residents also created challenges in accessing funding for service delivery. Aged care funding is providing by the Australian Government using a funding instrument that assesses care needs across three domains: activities of daily living (e.g. support for showering), behaviour, and complex care (e.g. wound care, insulin injections). Both homelessness aged care stakeholders talked about the high proportion of their residents classified as 'high need' according to this funding instrument. In particular, one stakeholder commented on the unequal funding allocated to the different domains:

> *A lot of our guys, we've got sort of medium to high sometimes in the ADL [activities of daily living domain]. Most of our guys, as you can imagine, are high in the behaviour. That's where most of ours sit – in the behaviour domain – and we've got some in the complex because we do give insulin and that sort of thing. But the money you get for someone who's high in activities of daily living is something like $64 a day, right. In complex care needs, it's about the same. In behaviour, it's something like $30. So they don't look at behaviour as being you know, as needing that nursing care where in actual fact it takes more. It's a big disadvantage so you do need to be a little bit creative.*

Addressing alcohol-related harm in the older homeless population

The previous discussions have highlighted the unique challenges in delivering appropriate services for older homeless persons who continue to drink in a harmful manner. Long-term residential care options – such as aged care facilities – were not seen as the most appropriate choice for ARBI-affected individuals for a number of reasons: 1) cognitive impairment as a result of drinking can improve with a reduction in alcohol use; 2) the nature of cognitive deficits associated with ARBI compared with normal age-related decline is qualitatively different; and 3) the physicality of middle aged or the 'young' old does not mix well with the frailty of the elderly.

This section presents the insights from stakeholders regarding their approaches to managing alcohol-related harm in this population. There are two main challenges in providing alcohol treatment for ARBI-affected individuals. The first is that ARBI-affected individuals can lack insight and as a consequence don't identify with

needing treatment. The second is that even where an ARBI-affected individual identifies as having an alcohol problem, they do not always have the capacity to maintain changes to their drinking behaviour. Additionally, the experience of homelessness adds another dimension to the complexity of treatment for ARBI. Stakeholders generally discussed two broad approaches to working with this population and although each of these will be discussed in turn, they were not raised by stakeholders in a contradictory manner; rather, they are best considered as lying along a treatment continuum.

Abstinence-based residential treatment

Despite the challenges outlined above, many stakeholders still held abstinence to be the key goal of treatment for people with ARBI. A disability stakeholder described how abstinence was not an impossible outcome but one that required planning and support:

> *Whilst this [abstinence] is ideal in terms of health reasons for the client, this may be difficult to promote due to the insight and cognitive impairments that the client has due to the ARBI. This approach would need to be supported well. I think it is an individual thing, like all treatment. It depends on the person's other supports, strengths and coping strategies. Logically, chronicity, length of time of drinking and age will impact but that doesn't necessarily mean that an older person can't abstain!*

Highly structured and highly supportive environments were often put forward as the only means of achieving abstinence among ARBI-affected individuals. This was expressed most clearly by a homelessness aged care provider:

> *Unless you make it a secure facility and dry them out and keep them sort of locked up; that's the only way they're going to stop.*

Similarly, when asked about the efficacy of addressing alcohol dependence in a homeless person's existing environment, a mainstream aged care stakeholder responded:

> *No, I don't think so, I think they have to be somewhere where there is no alcohol and there is nobody bringing them alcohol so, you know, they're really in that secure environment.*

Rehabilitation treatment that included social workers and psychologists to address not only the alcohol dependence but also a range of behaviours and living skills was considered essential by many stakeholders. One aged care stakeholder felt that residential rehabilitation to address the alcohol dependence was a critical first step to achieving housing stability:

> *So I guess what I would think is that the housing needs to be phase two. So you need phase one which is, a sort, I don't know what you would call it, some sort of residential rehabilitation centre for this group where they can access psychiatric evaluation and treatment, physical evaluation and treatment and then ongoing safe secure rehabilitation in clinical psychology and that would be probably for up to nine months or a year and then at the end of that phase you could give the housing.*

In particular, the length of residential treatment was considered critical to achieving a successful outcome, as explained by a drug and alcohol stakeholder:

I guess well my goal is abstinence-based in that case, because you know, the cycle of it. The only way they're going to improve the aspects of their life would be to remain abstinent but because they can't maintain – well, a lot of them will (or most of them do) recognise that that's what they'd like to accomplish as well – so the longer period of time they have would just increase their chances. You know, it would improve the odds. If they're away for two weeks say or even a month that would be better than ten days; if they're away for three months that would be even better.

And:

They would but I think again, if they're given a certain amount of time, where they can, you know, stabilise some different types of behaviours, and learn to respond a little bit differently over a longer period of time that they would, you know, would increase their chances of maintaining that.

Existing rehabilitation services, however, were criticised because they were not necessarily designed to deal with the cognitive impairment and behavioural problems that ARBI-affected individuals typically present with, nor did they cater specifically for the older person. As one drug and alcohol stakeholder explained, older persons require a longer treatment program (regardless of whether they have associated cognitive impairment):

Again, it's like, getting him into detox becomes quite problematic because I don't know about where you are but here the detoxes tend to be brief, you know, gauged for the younger population and he would actually need a longer-term treatment and ongoing safe environment but they don't keep him.

Additionally, there are a number of factors specific to the experience of homelessness that can mitigate the success of such programs for the homeless population. First, the waiting lists for residential treatment are often lengthy and the transient lifestyle of homeless persons may mean they are not in contact with the referring service when a treatment space becomes available. Additionally, homeless individuals may not have an appropriate follow-up environment to ensure abstinence is maintained. This was commented on by a community aged care stakeholder as follows:

Yeah, but I think again that depends on what sort of environment you put these people in. If they're under a mental health act in a psychiatric ward then they don't drink. ... But I think often the trouble is, you know, if it's just a short, so say, somebody who has very bizarre behaviour gets admitted under schedule by the emergency department ends up in a psychiatric unit for three weeks and then is discharged to exactly the same social circumstances they were in in the first place – of course they are going to go back to drinking.

A similar sentiment was proffered by a stakeholder from the drug and alcohol sector. In the following quote, this stakeholder suggested aged care facilities were an appropriate care setting for older homeless clients with ARBI who continued to drink at harmful levels:

And if they're not in some sort of supported accommodation you know such as aged care facility then they're just going to fall back into the old patterns of drinking again. So I think it's also you know, being able to maintain that sort of change, that environment's going to be very important too.

As mentioned in previous sections, the use of aged care facilities in this manner was strongly countered however by those in the disability and aged care sectors.

It was also raised by stakeholders that residential options were not necessarily the service of choice for this population. Sometimes this was related to their spending preferences and desire to maintain control of their limited finances. For example, a stakeholder from a homelessness aged care facility commented:

> *A lot of them would prefer to be homeless and have control of their money and to have more money to buy casks or bottles of port and so on. So coming here, many of them see it as, even though we have minimal rules and so on, they still see it as restrictive. And because suddenly, you know, if they're staying in crisis accommodation, you spend whatever - $15, $20 – a night but they can choose not to do that. They can elect to spent a night on the streets and have that money for alcohol and they're deprived of that freedom here.*

Some stakeholders commented that the apparent lack of motivation of clients to deal with their alcohol problem is reflective of a wider social support system unable to deliver on its promises. Thus it was not necessarily an unwillingness to attempt change but 'learned hopelessness' that nothing good would ever come of it. For example, a stakeholder from a temporary accommodation service reflected:

> *I think it's a fairly simple concept that works, whether they are old or got ARBI or have a mental illness or whatever. If they're homeless and we can get them a house and support them then it's game over. I think it's naive to think that, umm, you know; what we're asking them to do in emergency hostel is unfair and unrealistic.*

Similarly, a community aged care stakeholder commented:

> *I think at the moment there's no incentive for them to want to change. They don't see that anything is going to be any different for them whereas if you're offering them what is nice, safe accommodation with treatment for up to nine months and then supported accommodation after that, I think a lot of people would choose that over sleeping on the streets every night.*

This view is consistent with the traditional approach to housing whereby homeless clients are expected to step through a series of support services before being housed (an approach currently being challenged by the emergence of 'housing first' models such as Common Ground in the USA). When asked about whether the traditional model of 'housing last' was feasible, a stakeholder from a temporary accommodation service responded:

> *The model would work well if the promise could be added. The system – however well intentioned – is inadvertently built in entrenchment because there is no exit points that are adequate. .... The system has allowed a concept [to develop] around someone proving their housing readiness before getting somewhere. And I think it's complete nonsense. We expect someone sleeping rough when offered accommodation to think that it's an obvious thing to do and they should jump at it and agree to a whole lot of nonsense that no tenant would agree to. Pay some money, keep your nose clean, keep your alcohol at the door for three months and perhaps there might be somewhere for them to move, maybe sharing a place with others, maybe for two years this time and again if they're keeping their nose clean, possibly at the end of that they'll get a place. .... You know, that process can be four or five years. It continues to identify them as homeless.*

Thus, although abstinence may offer the most benefit in regard to improved cognitive functioning and although individuals with ARBI can achieve abstinence if undertaken in a structured residential treatment setting, the homeless context presents significant challenges to the success of such an approach. The next section discusses

harm minimisation strategies used by stakeholders to manage alcohol use and associated harms among their clients in the absence of a secure facility.

Harm minimisation as a pragmatic alternative to abstinence

In attempting to manage alcohol use among their clients, many aged care services for the homeless forwent abstinence in favour of harm minimisation. This was seen as the only reasonable response given the facilities were typically not secure (that is, residents were free to come and go as they pleased), particularly when facilities were located in the inner city where there is a high density of licensed venues.

> *See the thing is you can't restrict it. It's very problematic because you sort of think, well, are you going to stop them from drinking? What is your plan? But the fact that you can leave the facility and go out for the day means that they are not going to stop because you have no control.*

This stakeholder explained their alcohol policy was developed not from evidence but out of sheer exasperation:

> *And it's not because, you know, I've got this great knowledge base, it was, it was a 'suck and see' so to speak. I just had to do something because what was happening wasn't working and it was really quite difficult.*

They then went on to explain the problem of clients leaving the facility during the day to binge drink, coming back to the facility of an evening severely intoxicated, having to be referred to another service to 'dry out' and staff having to re-commence stabilisation of the client (e.g. medications, nutrition) when they returned sober. This cycle of binge drinking made it difficult for staff to work effectively with clients because they continually had to re-stabilise the health of the resident and never reached a point at which they could build upon any gains achieved.

Stakeholders also discussed respect for clients as another critical reason for adopting a harm minimisation approach, as discussed by this homelessness stakeholder:

> *We use a harm minimisation approach so far as alcohol and substances are concerned. We have a least-restrictive environment so that doors are open all the time. We try very hard to honour the residents' rights and responsibilities under the aged care act, which means, amongst which is stuff about residents making risky life choices, that they have the right to do that. And we can counsel them, advise them and so on, but they are their choices, they are leading their lives.*

This stakeholder also acknowledged the transfer of risk from client to agency in adopting such an approach:

> *I think the fact that we have, in running a place in this way, it involves huge risks in terms of them wandering off and we wear those risks And my understanding is that very few aged care facilities will do that, they have locked doors or they have strict rules about alcohol on the premises and that kind of stuff. But our view is we need to do everything possible to help these men, to facilitate these men remaining here, so they don't choose to resume a life of homelessness, so that they get the care they need.*

These risks included *'their behaviours, and also their welfare when they're inebriated, and the impact of those behaviours on other residents and the staff of course'*. A specific example of this risk management was offered by this same stakeholder:

> *We have quite a few who, well actually, not at the moment, but historically we've had quite a few who elect to spend two or three nights away from here. And sometimes they'll just catch a train to Lithgow, get drunk and catch a train to Lithgow or the late train to Newcastle and then come home. So we don't, we're all the time balancing the risk to them in*

allowing them to do that, but it seems, it's their choice, really. So we do as much as possible, so long as they're not so cognitively impaired that they can't look after themselves out there, then we just allow them to do that.

A key feature of the harm minimisation approach most often discussed by stakeholders was in creating a controlled drinking environment. This was sometimes achieved by *'trying to stagger payments so they don't get a lot of money all at once'* but might also involve a limit on the amount of alcohol that can be brought onto the premises or establishing specific times when alcohol could be consumed. For example, a specialist drug and alcohol stakeholder explained:

A lot of the facilities that we've been coming across have things like happy hour where they provide the alcohol to the patients or the residents and it's that controlled environment. And I guess that you could take things all the way to the end to that different spectrum and examine what they've been doing in, I think it's Vancouver, Canada, you know, where they have wet messes and provide within homelessness shelters alcohol to the residents to the clients so that they are able to stay in there, drink within a controlled environment, rather than be outside binge drinking down the pub. There's some control placed over it.

Regular detoxification treatment and 'respite holidays' were other harm reduction strategies employed by stakeholders. These strategies aimed to provide clients with a break and allow some restoration of physical health. These strategies were readily accepted by clients, as seen in this case example discussed by a drug and alcohol stakeholder:

Really, it's just about doing no harm and saving a life at this point. And in most cases they fully recognise that okay it's time for me to have that break. I mean, my one client, he considers it a holiday. He says, 'I need to go on holiday again'. And I keep trying to tell him it's not a holiday [laughs], you know, but that's his perspective of it.

This same stakeholder also talked about the difficulty in referring older clients for repeated detoxification partly because staff had specific beliefs about the purpose or aim of detoxification treatment. The experience of this stakeholder suggests that some drug and alcohol workers consider detoxification only as a first step towards abstinence rather than as a treatment that could provide for multiple outcomes (i.e. harm reduction and abstinence). Clients who made repeated presentations to a detoxification service without attempting abstinence were sometimes denied further access to the service as this example illustrates:

And they get tired of seeing the repeat people. I actually had one agency state that it would be more harmful to keep detoxing him because he continues to accelerate. You know, he stays reduced for some time and then continues to accelerate. I mean, it's just the same pattern over and over. So it's just a matter of finding a way to network with the detoxes that periodically every three months or six months or so I can get him accepted into them.

Although sometimes starting from a point of frustration, the benefits of adopting harm minimisation were demonstrated in time and reinforced the use of such a strategy. The observed benefits included a shift in client motivation, possibly because of the respect afforded to clients with this type of approach (as mentioned previously) but also because of improvements in mental and physical health status (including cognitive functioning) that enabled clients to make better decisions about their drinking.

You know, these guys have been drinking for many, many years. What you need to do is reduce it, make them well, you know, by helping them with vitamins and good nutrition. You know, and then they, I've had a few here who have

actually then made the decision not to drink anymore. And it's giving them respect as well, you know and I think it becomes a two-way street, if you're saying to them well, you can drink, it is a bottle, you know, I will allow it but it's up to you now to not go over that quota and you know, just to do the right thing here. I've had no problem.

Increasing a client's participation in activities other than drinking was a key strategy mentioned by a number of stakeholders from both the drug and alcohol, housing and homelessness sectors. It was also an important feature of the Wintringham approach (an overview of which is provided in the section beginning page 44). When asked whether a focus on other life issues on its own would result in less drinking, one stakeholder from a housing support service cautioned:

It tends to be safer; I wouldn't say it's less but they tend to be safer, I think, in their drinking. They have less random visitors coming and start to actually take a bit more notice of their money, where it's going. You know, and I'm kind of cautious in saying this as well because there are some people with fairly significant frontal lobe damage who can't actually negotiate any of that planning activity but some of the tasks and functions they can.

Many stakeholders talked about the need to persist with clients despite their lack of insight and apparent lack of motivation to change. Harm reduction seemed to be an essential – possibly obligatory – framework for maintaining engagement with complex needs clients.

Summary

Key stakeholders from across the different sectors of homelessness, aged care and drug and alcohol were consistent in their comments about working with older homeless persons with a history of alcohol use disorder and associated cognitive impairment. They emphasised the need for persistent engagement with this population and the adoption of a harm minimisation approach as a pragmatic alternative to abstinence-based treatment. In particular, harm reduction strategies were often described as the first step in achieving abstinence in the longer-term.

Of critical import were the comments by stakeholders regarding improvements in cognitive functioning with reduced alcohol intake. This was a strong argument against the placement of younger-aged clients in aged care facilities or other long-term residential options. It also highlighted the need for a short-term residential program that could provide a structured environment to address alcohol use and associated cognitive impairment and allow clients to transition back into the community. An example of how such a service might be configured is described in the next section.

Wintringham case study

Wintringham was established in 1987 as a not-for-profit private company with the aim of delivering high quality aged care services for the elderly who are homeless or at risk of homelessness in Melbourne (Wintringham, 2007). Wintringham operates four types of services: outreach; community aged care packages (CACP); residential aged care facilities; and housing support (e.g. extended 'aged care at home' dementia packages). This suite of services is supported (in part) by Australian Government Department of Health and Ageing (DoHA) funding (e.g. CACP) rather than through the Department of Families, Housing, Community Services and Indigenous

Affairs (FaHCSIA). Thus Wintringham is situated in the aged care sector rather than the homelessness sector in line with its philosophy that clients are 'aged' first and 'homeless' second (Wintringham, 2007).

The following sections provide an overview of the key features of the Wintringham approach to residential aged care, an 18-month trial of an intensive residential model for the elderly homeless with severe ARBI, and lessons from the Wintringham experience that could inform service development at the Haymarket Foundation. These impressions are drawn primarily from a site visit to Wintringham conducted in August 2010 by Dr Burns and Dr Conroy and supplemented by publications held in the public domain (Wintringham, 2007, Rota-Bartelink and Lipmann, 2010, Rota-Bartelink, 2006a, Rota-Bartelink, 2010b, Rota-Bartelink, 2010a).

Key features of the Wintringham approach to residential aged care

Wintringham operates as an aged care service for clients that are alcohol dependent and homeless. Service delivery is focussed on two key objectives: i) stability of housing; and ii) harm minimisation in relation to drinking behaviour. Their approach is embedded within a social justice framework:

> *"Irrespective of the presence of brain injury or anti-social behaviour these individuals are entitled to receive care and support that is both appropriate to their needs and which promote empowerment and independence. We have come to see that there is little benefit in providing highly structured or institutionalised environments for these people as this often results in the person falling back into old ways once the direction associated with these models is removed" (Rota-Bartelink, 2010b).*

None of the Wintringham facilities are secure or locked and this allows residents to come and go as they please and to have visitors. In particular, the facilities are designed so that they feel like someone's house which tends to discourage people from wandering in off the street and ensures residents' privacy. House rules reflect socially normal behaviour and they apply to everyone, including staff and visitors. This is enforced by way of a mutual agreement rather than a punitive approach and aims to re-emphasise individual civil responsibility.

The client group is typically: male and female; 50 years of age and older[3]; alcohol use disorder; and homeless (broad definition). Physically fit clients are not deemed appropriate as they tend to bully the other clients.

Wintringham has developed a reputation for dealing well with the challenging behaviours associated with alcohol related brain injury (ARBI) and thus is considered a specialist provider in the aged care sector.

> *"The behavioural characteristics commonly associated with alcohol related brain injury have been shown to differ from that of age-related dementias particularly with regard to social skills and social interactions resulting in a completely different set of complex care needs"* (Rota-Bartelink, 2006b).

They focus primarily on alcohol (rather than substance dependence in general) because behaviour management strategies are dependent on the substance being used. There are three key aspects to their management approach, each of which is described below.

[3] Aged care is typically defined as 65 years but Wintringham has been able to bring this forward to 50 years for their clients after years of lobbying.

Harm minimisation approach

Wintringham has adopted a harm minimisation approach to the management of problematic alcohol use based on the premise that clients with ARBI do not necessarily have the ability to regulate drinking behaviour. A harm minimisation approach is achieved by controlling the finances of residents, for example, by setting up Centrelink direct debits for rent and other essential payments which effectively reduces the amount of money a resident has to spend on alcohol. Additionally, clients can opt into a 'dosing schedule' where the number and timing of drinks is negotiated with the client. This ensures that clients can enjoy a drink without the problems associated with binge drinking. Staff commented that it also reduces the stress associated with trying to source alcohol once their fortnightly government payments had been spent.

Behavioural modification strategies

All services operate within the 'assertive daughter' model. This model has a single caseworker that provides continuous and consistent support for the client. Although the person in this role may change over time, the responsibilities of the role remain the same. In particular, there is an individual focus or responsiveness around the person. An understanding of the particular needs of the individual is developed, particularly in relation to their 'trigger points', and a consistent proactive approach to managing these is adopted.

Intensive recreation program

Recreation staff are critical to the Wintringham model. There role is to establish a relationship with each resident and assist the resident to identify a hobby or activity they particularly enjoy. The recreational activities are highly individualised and have included a diverse range of activities, including bike rides and a trip to the pub for a drink with old mates. The focus is on identifying the unique social needs of each individual resident and reconnecting the individual to community-based activities. The entire approach is dependent on the relationship established between the recreation staff member and the resident and this can take time to develop.

The Wicking Project

Funded by a JO and JR Wicking Trust research grant, the Wicking Project was a demonstration project aimed at providing a service for older homeless clients with severe ARBI. This sub-group was identified by Wintringham as not well served by the existing Wintringham services and facilities. The facility was a purpose-built 4-bedroom community home and residents were provided with intensive support, including:

- 1:4 carer ratio provided 24 hours per day;
- Behaviour management strategy;
- Ongoing neuropsychological assessments of clients as well as staff consultation & supervision with the neuropsychologist
- Targeted structured activity program (with a focus on community integration and outdoor participation) for a minimum two days per week but optimally delivered as 4 half days. Recreation served as a useful distraction to substance use. It was found to be particularly important during the initial transition phase.
- Prescriptive alcohol – scheduled dosing times (no earlier than 10am) and prescribed amounts.

Participants for the Wicking Project were selectively recruited and were considered in terms of their homelessness, continued drinking, and unsuccessful tenancies due to ARBI-related behaviours. Total number of participants was 14 across 18 months – 7 'cases' with average length of stay of 7 months and 7 'waitlist controls'.

Challenging behaviours peaked approximately three months following admission and dropped off by six months. After intensive support some clients proved to be capable of moving into other less-restrictive residential facilities. Both alcohol and cigarette use declined considerably with the prescription model. In particular, the relief of not having to source alcohol and nicotine decreased client stress associated with running out of money and not being able to purchase these items.

Although the original aim of the model was to provide long-term intensive residential care, a key learning of the project was the improvement in client functioning and the transitioning to less intensive forms of residential care. The stabilisation of housing, nutrition and drinking and the management of challenging behaviours saw substantial improvements in client functioning. Thus, despite the expectation that clients would require long-term intensive supported care, clients evidenced improved functioning in relatively short periods of time that allowed them to move back into supported living arrangements.

> *"The Wicking Model has shown potential to be packaged as a transitional care model from which participants emerge with high potential to successfully transition into the mainstream funded care of specialist service providers such as Wintringham. After receiving a minimum of 5 months intensive specialised care, Wicking Model participants successfully transitioned out of the Wicking Model into Wintringham residential care" (i.e. lower intensity care model) (Rota-Bartelink, 2010b).*

The improved functioning and successful transitioning of clients meant the Wicking Project was able to support a greater number of successive clients over time. Although the model is costly to establish, there are substantial savings in the longer-term including costs associated with inappropriate health service utilisation and contacts with the justice system. Importantly, the Wicking Project demonstrated that the need for high-cost, intensive residential care can be time-limited even among those clients with severe ARBI.

Key learnings

Neuropsychological assessments

With regard to improving services for older homeless clients at Haymarket, Wintringham see better value in having a neuropsychologist on the team (rather than a psychiatrist) because of the need for differential diagnosis of ABI/ARBI and other mental disorders as well as the capacity to build up a behavioural profile. Wintringham partners with *arbias* to undertake neuropsychological assessments of their clients. These assessments legitimise the claims made by Wintringham for aged care and disability services.

Managing referrals

Wintringham emphasised the need for referring agencies to be honest when communicating client profiles (e.g. mental health problems, forensic status). For Wintringham staff, it is imperative they are aware of what they should be expecting from the client so that an appropriate care plan can be developed. As mentioned above, compromised executive functioning (due to alcohol misuse) requires adjustments to client management. If this information is not communicated as part of the referral it can take some time for Wintringham staff to build this

knowledge for individual clients. Additionally, clients need to be ready to need the service; Wintringham were clear about not forcing the service upon a client.

Advocacy and education across sectors

Wintringham have encountered a number of challenges with other agencies, such as mental health and aged care services. For example, Wintringham advocated to the aged care assessment service for a greater emphasis on behaviour management rather than physical care and educated the sector on premature ageing of their client group. The biggest barrier identified by Wintringham was the acceptance of clients into the services they required, for example, the aged care sector or the disability sector. Wintringham found these sectors had a tendency to focus on the physical problems of ageing and the western model of health as physical, rather than psychosocial dimensions of health and ageing.

Summary

Wintringham provide a niche service and have developed particular expertise in the management of older persons with chronic histories of homelessness and dependent drinking. Through their direct clinical experience and evaluations of their services, they provide invaluable evidence for how best to manage this client population. This is particularly important given the scarcity of research evidence in this area.

Similar to comments made by several key stakeholders, Wintringham staff highlighted the importance of understanding a client's trigger points, being proactive in managing these and providing a consistent staff response. The added value of Wintringham's experience is the development of documented evidence indicating that changes in cognitive functioning do occur within a harm reduction framework and that these changes are evidenced relatively quickly resulting in a step-down to less structured care environments.

Discussion

There were some clear findings to emerge from the present study, despite its exploratory nature. The first is that cognitive impairment is high among the Haymarket client group, and that this impairment is greatest for those diagnosed with lifetime alcohol dependence compared to those with lifetime alcohol abuse. The second is that improvements in cognitive functioning and challenging behaviours can be made with reduced alcohol intake, better nutrition, stabilisation of medication and a consistent and 'normalised' approach to individual support. Evidence regarding the degree of improvement that could be expected with reduced alcohol use (relative to abstention) and the length of time required to see these improvements was less clear.

There was quite a bit of discussion by the Haymarket staff regarding the minimum treatment required to improve cognitive functioning and the form in which this is best delivered in the homeless population; much of this discussion reflected the themes that emerged from the key stakeholder interviews. For example, while it was acknowledged that a structured residential environment would provide the needed support to minimise drinking, it was also recognised that many homeless clients were fatigued by the rules and regulations associated with such treatment modalities and with supported accommodation services. Thus it was deemed imperative that community-based options that did not demand abstention should be available to the homeless population.

There is a need to further explore whether this service response should take the form of better integration among existing services or reflect a newly developed service that is age-appropriate and transitional in nature. A critical factor in this discussion is the prevention of alcohol-related dementia in the homeless population. A community-based, harm reduction intervention (that does not have abstention as its only goal) specifically targeted to the homeless population would assist in reducing the burden on existing services. Further work needs to be undertaken to develop the most appropriate treatment model and this should include a better understanding of the treatment components deemed most acceptable to this client group.

Although many key stakeholders suggested there was a serious gap in the service delivery system for this group, it was also clear there were services and individuals with the knowledge and expertise to provide the appropriate care for this group. There is a clear need to develop better cross-sectoral links among both specialist and generalist agencies in the human services system. This need was also identified by the NSW Department of Ageing, Disability and Home Care (DADHC) in their report on service and referral options for people with an acquired brain injury (Steering Committee for the Interagency Agreement on the Care and Support Pathways for People with an ABI, 2011). The DADHC report identifies clear referral pathways for individuals with an ABI, including those with comorbid substance use and other mental disorder, and considers the appropriateness of housing as part of the service response. However, the findings from the present study suggest further work is required to address the particular needs of the older homeless individual with cognitive impairment.

Effective utilisation of the existing service system is dependent on assessment and appropriate referrals. Previous work by the authors has documented difficulties faced by specialist homelessness services in being able to refer clients to mainstream health services where there is no established relationship between agencies. This is in part due to a lack of recognition of the expertise of the referring homelessness staff member. A screener like the MoCA could help circumvent this problem. To this end, the issue of valid cognitive assessment in the context of drug and alcohol intoxication is critical because it can potentially impede the purpose of screening in facilitating referral to mainstream services. In the present study, some respondents who participated in the Client Survey requested the first appointment of the day and delayed their drinking until after completion of the interview. This demonstrates that it is possible to negotiate with a client to undertake the MoCA in a way that minimises the bias of intoxication.

It became clear as the project progressed that an understanding of the needs of this client population was underdeveloped and hence the initial goal of the project – a protocol for managing this client group – was not feasible within the present study design. Whilst the present study has identified the gaps in the current system as well as stakeholders with particular expertise in the area, the development of a protocol requires direct input from Haymarket staff and representatives from local drug and alcohol services and tenancy support programs.

Although further work in this area needs to be undertaken, key stakeholders commented on the benefit of this project in highlighting the significant needs of this client group and of the study being the first step in formulating a better service response for this group. As one stakeholder expressed:

> *"But if we never light up the problem or fail to document how much of a problem it is, then we will never get any closer to having an appropriate solution for it."*

Barriers and limitations

The major barrier faced in this project was locating relevant key stakeholders because the needs of the client group are not clearly situated within one or two service sectors. Unfortunately, the research team was unable to interview a stakeholder from DADHC which was the lead agency for the report on referral pathways for people with an ABI in NSW. This is a significant shortfall of the study as a number of other stakeholders suggested that DADHC was a critical player in the area and was undertaking significant work in this space to identify and address the needs of this client group.

Obtaining ethics approval for the client survey was also protracted and resulted in a delay to the commencement of the data collection. This was primarily due to the vulnerability of the target client population, particularly in relation to obtaining informed consent given the target sample was of older homeless individuals at high risk for cognitive impairment. It is critical that research methods be appropriately modified to enable highly marginalised populations to participate in research of this kind. This includes: conducting research interviews early in the day (before onset of drinking) and at locations that clients feel comfortable attending; extended recruitment periods; and conducting the research interviews in two parts (to avoid fatigue).

Measurement of ABI is difficult using a survey method. In this regard, a clinical interview would have been a better method but would have required specifically trained interviewers. Consequently the findings relating to the prevalence of ABI in this sample need to be viewed with caution.

The client survey was based on self-report and given the high levels of psychological distress and MCI in the sample, this may have reduced the reliability of the client responses. Additionally, while the staff at the Haymarket Centre (which includes an accommodation service) thought the profile of the participants in the sample matched quite strongly the profile of the clients seen in their service, Haymarket Clinic staff (which includes primary health care, counselling and a drop-in support service) felt that some of their more challenging clients were not well represented in the sample. This could have been addressed by having research interviewers spend more time at the Clinic so that greater trust with the community could have developed over time and hence participation in the study might have been greater. Thus there is some limit to the generalisability of the findings to chronically homeless individuals with complex needs.

Recommendations

The findings from the present study indicate further work is required to address the limitations of the existing service system and to enable more efficient access to services for older persons who are homeless. This needs to build on the existing partnerships between the various government departments and the work currently being undertaken by DADHC. It is also important that localised responses are developed given the different complement of services that may exist across areas. For example, the inner Sydney service system has a higher concentration of specialist homelessness services than Western Sydney. Additionally, the roles of specific health teams can differ across catchment areas. Thus, while leadership from State/Territory governments is critical (e.g. in providing frameworks or policy direction), relationships between services and teams need to be developed at the ground level.

Given that the Client Survey was undertaken within a single homelessness agency which is known for its expertise in assisting clients who have substance use problems, further research with other client samples is necessary to confirm the degree of cognitive impairment in the homeless population. In particular, the present sample was predominantly male and the prevalence and correlates of cognitive impairment among women may be different.

Further research also needs to be undertaken regarding alternative service delivery models for the homeless population to address harmful drinking and associated cognitive impairment. Some service models have been developed that could be adopted and trialled in different jurisdictions. For example, the Wicking Project conducted by Wintringharm and Catalyst (alcohol community rehabilitation program) run by ReGen. In particular, there is a need to more fully examine the effectiveness of a controlled drinking program for the homeless population given the identified barriers to abstinence-based treatment programs for this group.

Based on the findings of this pilot study, the following specific recommendations are made:

1. Targeted assessment of cognitive impairment among homeless clients with a recent history of problematic substance use and/or traumatic brain injury. This may require homelessness service staff to be trained in undertaking brief cognitive assessments and/or administration of the MoCA or similar screening tool (e.g. screening questions developed by arbias). Additionally, aged care and disability services would need to accept the validity of the MoCA (or other screening tool) in identifying clients with cognitive impairment. This could be incorporated into the development of a protocol (see next point) or formalised as a Memorandum of Understanding.
2. Development of a protocol in conjunction with the broader stakeholder group which could then be placed in the public domain for use by other agencies. This would more clearly identify the referral options for homeless individuals who do not have a precipitating incident(s) that results in hospitalisation but nevertheless present with a degree of cognitive impairment that would benefit from specialised support.

The next set of recommendations relate specifically to the Haymarket Foundation:

3. The Haymarket Foundation consider employing a neuropsychologist – or establish formal links with other organisations with neuropsychological expertise – for client assessment and case planning as well as providing consultation and support for Haymarket staff.
4. The Haymarket Foundation considers staff training needs in the management of ARBI. The expertise of Haymarket staff regarding cognitive assessments and ARBI management was not specifically addressed in the present study however a key theme to emerge from the key stakeholder interviews was the importance of consistency in the way staff worked with ARBI clients.

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Foundation for
Alcohol Research
& Education

Level 1
40 Thesiger Court
Deakin ACT 2600

PO Box 19
Deakin West
ACT 2600

www.fare.org.au

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