MEETING THE CHALLENGE?

TRANSITIONS OUT OF LONG-TERM HOMELESSNESS

A randomised controlled trial examining the 24 month costs, benefits and social outcomes from the Journey to Social Inclusion pilot project

GUY JOHNSON, DANIEL KUEHNLE,
SHARON PARKINSON AND YI-PING TSENG

THE UNIVERSITY OF MELBOURNE
RMIT UNIVERSITY
Sacred Heart Mission
The Heart of St Kilda

THANKS TO

The researchers would like to express their appreciation to Nicola Wylie and Sandra Sesa for their assistance with the surveys and all the people who have participated in the study for sharing their experiences and time.

We would also like to thank the Department of Human Services (Victoria), HomeGround Services, St Kilda Community Housing and Yarra Community Housing for providing cost information.

QUALITY ASSURANCE

An Evaluation Reference Group has been established to oversee the evaluation of J2SI. This group has reviewed this report and provided comment. Members of this group include Professor Terry Burke (Swinburne University); Cathy Humphrey (CEO, Sacred Heart Mission); Sue Grigg (Manager, J2SI); Nicola Wylie (Project Officer, J2SI); Quynh-Tram Trinh (Manager, Research & Evaluation, Department of Human Services). Additional input from John Daley (CEO, Grattan Institute) and David Green (LaTrobe University).

ABOUT THE AUTHORS

Dr Guy Johnson is a Senior Research Fellow at the Australian Housing and Urban Research Institute, RMIT University.

Dr Yi-Ping Tseng is a Senior Research Fellow at The Melbourne Institute for Applied Economic and Social Research, The University of Melbourne.

Dr Sharon Parkinson is a Research Fellow at the Australian Housing and Urban Research Institute, RMIT University.

Daniel Kuehnle is a Research Officer at The Melbourne Institute for Applied Economic and Social Research, The University of Melbourne, and a PhD candidate at The University of Erlangen-Nuremberg, Germany.

ABOUT SACRED HEART MISSION

Sacred Heart Mission has 30 years experience delivering services that meet the most basic needs of people who are chronically disadvantaged and it assists hundreds of people every day who are homeless or living in poverty.

For further information about Sacred Heart Mission go to **www.sacredheartmission.org**.

SUGGESTED CITATION

Johnson, G., Kuehnle, D., Parkinson, S. & Tseng, Y. (2012) *Meeting the Challenge? Transitions out of long-term homelessness. A randomised controlled trial examining the 24 month costs, benefits and social outcomes from the Journey to Social Inclusion pilot program.* Sacred Heart Mission, St Kilda.

SACRED HEART MISSION WOULD LIKE TO THANK THE FOLLOWING FOR THEIR FINANCIAL SUPPORT OF J2SI:

Lord Mayor's Charitable Foundation
The Peter and Lyndy White Foundation
RE Ross Trust
William Buckland Foundation managed by ANZ Trustees
Victorian Government
St Mary's Parish East St Kilda
AndyInc Foundation
Limb Family Foundation
Cabrini Health
Orcadia Foundation

SERVICE PARTNERS

RMIT University and the Australian Housing & Urban Research Institute
Alfred Health Psychiatric Services
Department of Human Services
Windana Drug and Alcohol Recovery
Melbourne Institute of Applied Economic & Social Research
Mental Illness Fellowship
UnitingCare ReGen

EXECUTIVE SUMMARY

Journey to Social Inclusion (J2SI) is a pilot project designed to break the cycle of long-term homelessness. The project provides intensive support for up to three years to assist people who are long-term homeless receive the range of services they need.

This is the second of four reports evaluating the J2SI project. It documents the social outcomes and the economic costs and benefits from the first 24 months. The evaluation uses a randomised controlled trial that tracks the outcomes of J2SI participants (Group J) and compares their outcomes with those of a comparison group (Group E) who are being supported by existing services.

After 24 months the evidence shows a sustained improvement in the housing circumstances of the J2SI participants compared to those in the control group. Critically, most (86%) have maintained their housing. While the move to independent housing was difficult in the beginning, the high rate of housing retention suggests that most of the participants are developing the skills and confidence needed to keep their housing. The outcomes data also reveal ongoing improvements in other areas of life for the J2SI participants relative to Group E. In particular, compared with Group E there have been improvements in Group J's physical health – the proportion of Group J who reported they experienced no 'bodily' pain almost doubled over the 24 month period, while there is little change in Group E over the same time. Group J's emotional health has improved in the second year and they report lower levels of stress and anxiety compared to the baseline results and also relative to Group E. People in J2SI are, on average, presenting less frequently to emergency departments and when they are admitted they are now staying for shorter periods in hospital and psychiatric units. While only a small number are employed, nearly half of the J2SI participants are now actively looking for work.

Nonetheless, there are still challenges. The report indicates limited changes in the participants' drug using behaviour. However, these findings need to be understood in the context of a harm minimisation approach where the key goal is stabilising people's lives. Similarly, the extent to which the participants feel connected to and accepted by the community has not changed significantly. These results mirror findings from similar program evaluations overseas that suggest countering the effects of deep social exclusion is a long-term process of change.

The report contains the first cost-benefit analysis (CBA) of a program working with the long-term homeless. The CBA shows three things. First, all of the benefit-cost ratios are positive, indicating that the J2SI pilot generates positive outcomes. Second, the report shows that the initial investment is high but the long-term benefits are potentially significant. The CBA shows that in the short-term (two years) the costs to government and society outweigh the benefits – for every dollar invested the savings are 0.24 cents and 0.35 cents respectively. However, the position is reversed over a 10 year time frame where for every dollar invested there is a saving of $2.03. Finally, the results of our sensitivity analysis that adjusted for attrition suggest that the true short-term benefit for society lies between 0.35 (or a return of 35c for every dollar invested) and 1.46 (or a return of $1.46 for every dollar invested).

This report shows that breaking the cycle of chronic exclusion is possible but difficult and that policy makers must have realistic expectations about what services working with the long-term homeless can achieve. Over the next 24 months we will continue to track the progress of the trial participants. Future evaluation reports will assess the program outcomes after three and four years. As more data become available we will undertake more powerful statistical analysis that will indicate whether the J2SI approach provides lasting solutions to long-term homelessness and whether the benefits justify the costs.

1. INTRODUCTION 6
1.1 Structure of the report 7

2. SUCCESSFUL INTERVENTIONS: WHAT'S THE EVIDENCE? 8

3. METHOD 11

4. SOCIAL AND ECONOMIC OUTCOMES 13
4.1 Housing outcomes 13
4.2 Mental health outcomes 15
4.3 Physical health: Pain and mortality 16
4.4 Health service usage 17
4.4.1 Usage rate 17
4.4.2 Usage intensity 18
4.4.3 Average use 19
4.5 Other service usage 20
4.6 Substance use 21
4.7 Economic participation 23
4.8 Social connectedness 24
4.9 Summary 26

5. COST BENEFIT ANALYSIS 27
5.1 Cost benefit vs. Cost effectiveness 27
5.2 General analytic framework 28
5.2.1 Society or government 28
5.2.2 Quantifying costs and benefits: Preliminary considerations 28
5.3 Cost of the J2SI program 29
5.4 Benefit of the J2SI program 30
5.5 Net Benefit of the J2SI program 31

6. CONCLUSION 34

REFERENCES 37

APPENDIX A Tables 44
APPENDIX B Cost benefit analysis: Approach and assumptions 53

1. INTRODUCTION

'NUMBER ONE ON MY LIST IS TO GET STABILISED IN ACCOMMODATION ' (1050)

The difficulty of breaking the cycle of long-term homelessness has long been understood by housing and welfare services in Australia. While structural constraints in the housing and labour market are often cited as major problems (Paris 1993; Horn 2002; Erebus Consulting Partners 2004; LenMac Consulting 2005; FaHCSIA 2008), it is also the case that Australia's major homelessness programs are structured around crisis or relatively short transitional interventions. This approach has proven ineffective at resolving the problems of many long-term homeless people (FaHCSIA 2008; Johnson, Gronda and Coutts 2008).

The J2SI pilot project is a three year initiative that commenced in Melbourne in November 2009 with the aim of assisting 40 long-term homeless people to make a permanent exit from homelessness. The central premise of J2SI is that people who are homeless for a long time require different kinds of assistance than what is currently available. J2SI differs from existing approaches in five important ways. First, J2SI provides long-term support. J2SI supports each client for up to three years while specialist homelessness services[1] are funded to provide, on average, 12 weeks of support[2]. Second, J2SI provides intensive support. The client case load is 1:4 for the three year period. This is much smaller than existing funded case loads in specialist homelessness services (SHS) which are around 1:48 over a 12 month period. The third point of difference is that J2SI focuses on the rapid housing of participants in safe, secure, affordable, long-term housing. Fourth, J2SI responds to the mental health needs of participants, with a specific focus on the impact that trauma has played in people's lives. Finally, J2SI includes integrated training and skills development that aim to enhance self-esteem and provide participants with interpersonal, practical, tenancy and vocational skills.

As part of the development and implementation of J2SI, Sacred Heart Mission commissioned researchers from RMIT University and the University of Melbourne to undertake a longitudinal randomised controlled trial to evaluate the social and economic impact of J2SI. Findings from the evaluation are to be released in a series of four reports. Each report covers a 12 month period, with the first three reports tracking outcomes over the course of the three year pilot and the fourth examining how J2SI participants are travelling one year after the completion of the project.

This is the second evaluation report. It examines whether after 24 months the housing, well-being, service usage and social outcomes differ between those who receive support and assistance from existing services (Group E) and those receiving assistance from J2SI (Group J). It also includes a cost-benefit analysis of J2SI.

This report builds on the first report which revealed most participants had experienced childhood trauma (87%), virtually all had chronic mental or physical health problems (90%) and a significant majority (89%) had drug and alcohol problems (Johnson, Parkinson, Tseng and Kuehnle 2011). It found that after 12 months there had been some important improvements in the circumstances of J2SI participants relative to people receiving assistance from existing services. The most

[1] From 1985 to the end of 2008 the Supported Accommodation Assistance Program (SAAP) was Australia's flagship homelessness program. Since 2009 services for people who are homeless, known as specialist homelessness services (SHS) have been provided under the National Affordable Housing Agreement (NAHA). There are few fundamental differences in the operational aspects of NAHA and SAAP.
[2] There is considerable variation in the length of support provided by SHSs. Some provide very short interventions, while others provide intensive support for longer periods (up to 12 months).

dramatic difference was improved housing, but other notable changes included reduced service use. However, in many areas there were little if any statistically significant changes in the average outcomes of the two groups. While this is not entirely surprising given the depth of the material, emotional and symbolic disadvantage reported by the participants, it does emphasise an important policy and practice issue. Recovering from long-term homelessness is 'highly individualised and depends on the stage of life, severity and/or permanency of conditions experienced and the capacity for change among each individual participant' (Johnson, Parkinson and Parsell 2012).

1.1 STRUCTURE OF THE REPORT

The report is structured as follows. First, we examine evidence of the types of outcomes found in similar programs overseas to put the progress of J2SI into a broader programmatic context of what is realistically achievable for the long-term homeless. Next we present the methodology, drawing attention to the issue of attrition and its impact on randomisation. The findings follow in Chapters 4 and 5. Chapter 4 examines and compares the housing, mental health, pain and mortality, health and other service use, substance use, economic participation and social connectedness outcomes of the two groups after 24 months. In Chapter 5 the economic costs and benefits of the J2SI project are presented.

2. SUCCESSFUL INTERVENTIONS: WHAT'S THE EVIDENCE?

I RANG MENTAL HEALTH AND THEY COME, SAT IN MY KITCHEN, "WHAT CAN WE DO TO HELP YOU?" I SAID "WELL NORMALLY WHEN I GET LIKE THIS I NEED LOCKING UP FOR MY OWN SAFETY AND THE SAFETY OF OTHERS, LIKE IN A LOCKED WARD" BECAUSE IF I SAY I'M SUICIDAL I'M AT THAT POINT WHERE I CAN'T TURN BACK. THEY SAID, "THAT'S NOT AN OPTION, WHAT CAN WE DO TO HELP YOU?" AND I SAID "IF I KNEW WHAT THE FK YOU COULD DO TO HELP ME I WOULDN'T NEED TO RING YOU IN THE FIRST PLACE" (1025)**

The goal of the J2SI project is to break the cycle of long-term homelessness and assist people back into the mainstream community. This is a worthy goal, but given that breaking the cycle of long-term homelessness is a challenging task, is it realistic? In the following section we examine what has been achieved by programs that have similar aims to J2SI. The purpose of this section is to provide an evidence base to better understand the progress (or otherwise) of the J2SI project.

Australian researchers have compiled a substantial body of material highlighting the distinct characteristics of the long-term homeless, and to a lesser extent their patterns of service use (Neil and Fopp 1993; Scutella, Johnson, Moschion, Tseng and Wooden 2012). But few studies examine the effectiveness of service interventions among the long-term homeless. A recent longitudinal study of long-term homeless men who were provided with specialist assistance in Sydney indicates that 40% were in independent housing after 12 months (Mission Australia 2012). The study also reported increased attachment to the labour force, and an overall net savings generated by the project (p. 61) but few changes in 'physical and mental health circumstances and substance use habits' (p.30). However, over 60% of the original participants (n=253) dropped out of the study which is likely to have biased the findings in favour of the intervention (Mission Australia and Murdoch University 2010).

The evaluation of the Housing and Accommodation Support Initiative (HASI) in NSW provides further insights. Although HASI is designed to assist people with a mental illness rather than the long-term homeless it reported that at entry into the program about half of the consumers (n=839) were in stable housing while the remainder were homeless. After 24 months 70% of HASI consumers had remained in the first property they were housed in, which the authors attribute to the availability of appropriate supports (Muir and Fisher 2007:50). It is however, unclear if the homeless were doing as well as those who were housed when they started the program.

A larger, more robust body of evidence comes from the United States where during the last decade or so Federal policy has concentrated on ending chronic homelessness. As part of this broad policy shift there has been a move away from traditional approaches that seek to address substance misuse and/or physical and mental health issues before providing the chronically homeless with permanent housing. In place of this 'treatment first' approach services have moved towards a 'Housing First' approach, originating in the Housing Pathways service model in New York (Tsemberis 1999; McNaughton Nichols and Atherton 2011). A Housing First approach offers permanent housing to chronically homeless individuals with few conditional requirements to participate in rehabilitative activities such as medical, addictive or psychiatric treatment. These services are

available but participants choose when and how often to engage with them.

Along with rapid access to permanent housing and consumer choice, other critical elements of the Housing First approach include (but are not limited to) the separation of housing and support, a recognition that recovery is an ongoing process, and community integration (Tsemberis 2010). With its emphasis on long-term intensive support, rapid housing and no requirement to reduce substance use or accept clinical treatment, the J2SI model shares some features of a Housing First approach. We now review what studies examining Housing First services found in terms of improvements in a number of areas such as housing, mental and physical health, service usage and substance abuse.

With respect to housing, one study compared the housing outcomes of those using traditional services and those using a Housing First approach. It found that 88% of those housed through the Housing First program retained their housing for two years compared to 47% of those using a traditional 'treatment first' model (Gulcur, Stefanie, Shinn, Tsemberis and Fischer 2003). After four years housing retention rates were 75% and 48% respectively (Padgett, Gulcur and Tsemberis 2006). A more recent randomised controlled study of 407 chronically homeless adults with profound physical and mental health issues found that 66% of the chronically homeless who were provided with immediate access to housing remained housed after 18 months compared with only 10% in the treatment as usual group (Sadowski, Kee, Vanderweele and Buchanan 2009). These findings suggest that the long-term homeless can maintain their housing 'when provided with the opportunity and necessary supports' (Tsemberis and Eisenberg 2000:487).

A number of studies report significant reductions in health care, justice and other social service use associated with housing stability (Culhane, Metraux and Hadley 2002; Larimer, Malone, Garner, Atkins, Burlingham, Lonczak, Tanzer, Ginzler, Clifasefi, Hobson and Marlatt 2009; Sadowski et al. 2009). While these studies also report substantial cost offsets associated with the reduced use of hospital, psychiatric, emergency and justice services (Gulcur et al. 2003; Larimer et al. 2009) there are some important caveats. First, cost offsets (or savings) as a result of reduced hospitalisation, acute treatment and involvement with the criminal justice system do not necessarily equal the cost of providing intensive support and housing to the long-term homeless (Culhane et al. 2002; Culhane and Metraux 2008). Second, some studies rely on annualised cost comparisons. Annualised cost comparisons are likely to overstate the cost offsets associated with Housing First as they presume that, in the absence of Housing First programs, Housing First clients would spend all of their time in prison or in a psychiatric hospital. In all but the most extreme cases such assumptions are unlikely to hold true. Thus, financial savings are likely to decrease if services work with chronically homeless people who do not regularly use expensive treatment services (Kertesz and Weiner 2009). Third, to our knowledge a full cost benefit study involving a randomised sample has yet to be published (Rosenheck 2010; Tsemberis 2010). These three issues suggest that `cost effectiveness should not be the sole arbiter of program merit' (Rosenheck 2010:52).

The impact of service interventions to the long-term homeless in other areas is mixed. The evidence shows that services working with the long-term homeless generally struggle to generate significant improvements in their physical or psychiatric health (Tsemberis, Gulcur and Nakae 2004; Sadowski et al. 2009). With respect to substance misuse the evidence is patchy – some studies report declines in alcohol intake (Larimer et al. 2009), but others do not (Tsemberis et al. 2004; Padgett et al. 2006). Similarly, some studies report declines in illicit drug use (Milby, Schumacher, Wallace, Freedman and Vuchinich 2005), but other studies find rates of illicit

drug use among the chronically homeless remain fairly constant (Tsemberis et al. 2004; Padgett et al. 2006; O'Connell, Kasprow and Rosenheck 2009). In part, these findings reflect the harm minimisation focus of many Housing First services, but they also highlight the deeper challenge facing services working with people who have been substance dependent for many years. The literature in this area shows that progress is often very slow and that setbacks are common (Tommasello, Myers, Gillis, Treherne and Plumhoff 1999; Henderson, Ross, Darke, Teesson and Lynskey 2002).

With respect to the emotional well-being and mental health of the long-term homeless, a number of qualitative studies have found issues of social isolation and loneliness among the long-term homeless who are in permanent accommodation. Both social isolation and loneliness are associated with depression, a reduced sense of control and pessimistic social expectations (Schutt and Goldfinger 2011:31). Padgett (2007) and Yanos, Felton, Tsemberis and Frye (2007) found that despite being in stable accommodation chronically homeless people often lacked a sense of involvement with the broader community, a sense of purpose or any meaningful pursuits. The point to bear in mind is that while high levels of housing retention and reductions in service use are achievable outcomes, addressing social and economic exclusion among the long-term homeless is a more challenging task.

In conclusion, the international evidence clearly shows that it is possible to assist chronically homeless people into housing and to keep them housed. But what the literature also makes plain is that the problems faced by chronically homeless people do not magically disappear once they are housed. As Tsemberis (2010:52) notes:

> Housing First and other supportive housing interventions may end homelessness but do not cure psychiatric disability, addiction, or poverty. These programs, it might be said, help individuals graduate from the trauma of homelessness into the normal everyday misery of extreme poverty, stigma, and unemployment.

In this context it is important to reflect on the complex histories of the trial participants. As was noted in the first J2SI report, many have experienced profound trauma in their lives. Traumatic events, such as neglect and abuse during childhood, and violence and victimisation as adults, influence the way the long-term homeless interact with others and with institutions. Patterns of behaviour that have been established from an early age and reinforced over time do not change quickly. The core message to take from the evidence is that it is crucial to have realistic expectations about what services working with the long-term homeless can achieve.

3. METHOD

This study employs a randomised controlled trial (RCT) to assess and compare the outcomes of the J2SI participants with a similar group of long-term homeless who are receiving existing services. The RCT includes both a social and economic evaluation. The social evaluation elicits quantitative and qualitative data to gain an in-depth understanding of the J2SI participants' historical trajectories, as well as any changes in life domains relating to housing quality and stability, social acceptance and connectedness, emotional functioning and physical well-being, as they progress through the trial. The economic evaluation calculates the benefit-cost ratio based on the impact and the cost of the J2SI project.

The RCT is testing the hypotheses that those receiving the J2SI intervention (Group J) will, in comparison to those in the control group (Group E), achieve and sustain greater residential stability; exhibit greater improvements in their physical and psychological health; demonstrate greater reductions in rates of drug and alcohol abuse; as well as higher rates of economic and social participation. In this report we focus on both the social and economic outcomes of trial participants 24 months after the trial commenced.

A detailed account of the method of recruitment and randomisation including the tests for assessing statistical comparability of the treatment group and the control group is outlined in Johnson et al (2011). In sum, a total of 96 clients have been referred to the service and assessed as being eligible prior to March 2010[3] . They were randomly assigned into two groups: 44 people were assigned to the treatment group (J) and the remaining 52 were assigned to the control group (E). T-tests and Pearson's Chi-squared test were used to test the independence of treatment assignment based on variables drawn from referral data. At the time of randomisation there were no statistically significant differences between J and E groups in terms of their social and demographic profile.

The evaluation involves eight surveys over a four year period. Quantitative data are collected on entry into J2SI (baseline survey) and at six monthly intervals over a three year period. The final survey will be undertaken 12 months after the completion of the pilot. Self-reported information about education, employment, and income as well as social connectedness, mental and physical health, housing, substance use and service usage is collected in each survey.

In addition, four in-depth qualitative interviews are being undertaken with 40[4] participants to supplement the quantitative analysis. The four rounds of interviews are scheduled to coincide with the baseline survey and the 12, 24 and 36 month follow up (mfu) surveys. Where we use qualitative material in the report people's names and various personal details have been changed to ensure confidentiality[5].

This report draws on baseline and outcome data collected during the first 24 months, as well as the first two in-depth interviews. A total of 84 trial participants have ever responded to at least one of the five surveys, a response rate 87.5%. Table 1 presents the retention rates for each group over the first 24 months. The retention rate is at the upper end in comparison to similar studies (Tsemberis et al. 2004; Sadowski et al. 2009; Mission Australia 2012).

[3] The eligibility criteria was people who:
• had slept rough continuously for more than 12 months; and/or
• had been in and out of homelessness for at least three years (including people who have been housed in the last six months and are at risk of further homelessness); and
• were aged between 25 and 50 (within 12 months of their 25th birthday or 50th birthday at commencement of the program).
[4] 20 qualitative interviews were conducted with Group J participants and 20 with Group E participants.
[5] Approval for the study was obtained from RMIT University's Ethics Committee – Register number HRESC B-2000197-07/09.

It is important to note that while retention rates are high in comparison to similar studies, we observe a higher rate of attrition among Group E as the trial progressed and it is worth bearing in mind the potential impact of attrition on randomisation. Our initial tests at baseline indicated that random assignment had produced two more or less equivalent groups – that is on a range of key demographic variables we found no statistically significant difference between Group E and Group J.

While the loss of participants is always a problem in longitudinal studies, in an RCT attrition can seriously undermine the comparability (or equivalence) of the treatment and control groups. On the one hand some longitudinal studies have found that those who drop out differ little from those who remain – essentially attrition is random and unlikely to have an impact on randomisation (Padgett, Gulcur and Tsemberis 2006). On the other hand, some studies report that those who drop out are more likely to differ from the 'follow up sample in a number of ways' (Wong and Piliavin 1999). The latter point suggests attrition can be non-random.

In our sample, participants who used emergency health services and those who moved frequently were more likely to drop out of the study (significant at 5%). As Group E has a higher attrition rate, losing more people who are doing poorly will have a positive influence on Group E's outcomes and consequently reduce the difference in average outcomes between the two groups. As a result it is likely that the estimated effect of the J2SI intervention relative to Group E is larger than is subsequently reported[6].

TABLE 1: RETENTION RATES

	Survey Participants	Base Line	6mFu	12mFu	18mFu	24mFu
Group E	44	n=42 (95.5%)	n=35 (79.5%)	n=34 (77.3%)	n=31 (70.5%)	n=32 (72.7%)
Group J	40	n=33 (82.5%)	n=37 (92.5%)	n=36 (90.0%)	n=36 (90.0%)	n=36 (90.0%)
TOTAL	**84**	**n=75 (89.3%)**	**n=72 (85.7%)**	**n=70 (82.1%)**	**n=67 (79.8%)**	**n=68 (81.0%)**

[6] Due to the small sample size, we are not able to effectively adjust for this bias.

4. SOCIAL AND ECONOMIC OUTCOMES

'IT'S A HOMELESS PERSON'S DREAM TO BE ABLE TO GET OFF THE STREETS AND MOVE INTO A PLACE WHERE YOU CAN KEEP YOURSELF WARM AND ENJOY PRIVACY' (1067)

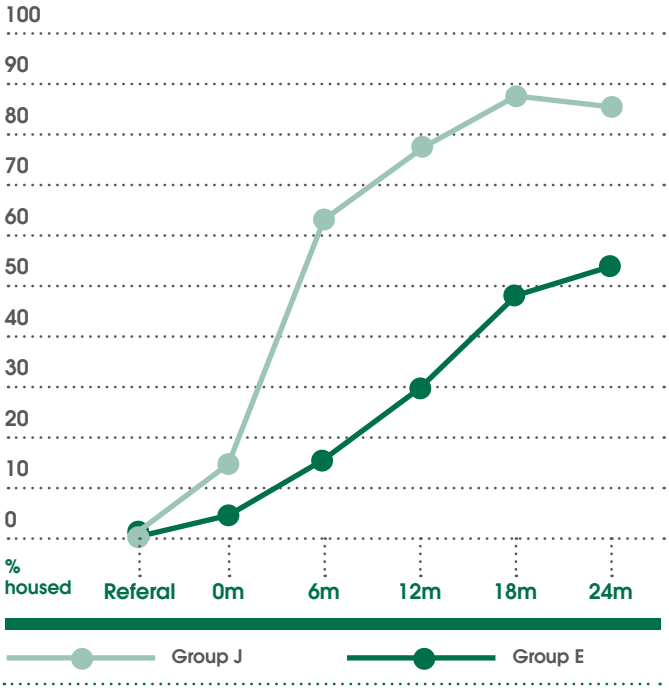
Two years into the evaluation improvements are evident in the circumstances of people in both groups. While a range of factors contribute to changes in people's circumstances, the random treatment assignment enables us to draw stronger causal inferences about the impact of the J2SI project. This chapter presents and discusses the housing, health, pain and mortality and other service use, substance use, economic participation and social connectedness outcomes for the first 24 months of the project.

4.1 HOUSING OUTCOMES

Research shows that the long-term homeless typically experience multiple episodes of homelessness (Piliavin, Wright, Mare and Westerfelt 1996; Metraux and Culhane 1999; Dworsky and Piliavin 2000; Robinson 2003; Johnson and Chamberlain 2008). The episodic nature of homelessness implies that the issue is not only getting the long-term homeless housing but ensuring they remain housed (Anucha 2005; Johnson et al. 2008).

From the outset, J2SI devoted considerable energy to assist participants to access and retain their housing. After 24 months the housing outcomes of J2SI participants are promising. Although there is a slight decline from 90% at the 18 month follow up, Figure 1 shows that 86% of Group J participants are in independent housing (Table 1, appendix A). Of the 31 who were housed at the 24 month follow up, the majority are in public housing (84%) and the remainder in either supportive or community housing with only one person in private rental.

FIGURE 1: PROPORTION HOUSED



In comparison the housing outcomes of Group E were poorer. Among those relying on existing services just over half (53%) were housed at the 24 month follow up. However, as was noted earlier the attrition rate in Group E is higher. After analysing housing data obtained from inner city homelessness agencies and housing providers it appears that the Group E participants who remained in the trial were doing better with respect to their housing than those who had dropped out of the trial. Thus, we suspect the difference between the two groups' housing circumstances may be slightly larger than indicated in Figure 1.

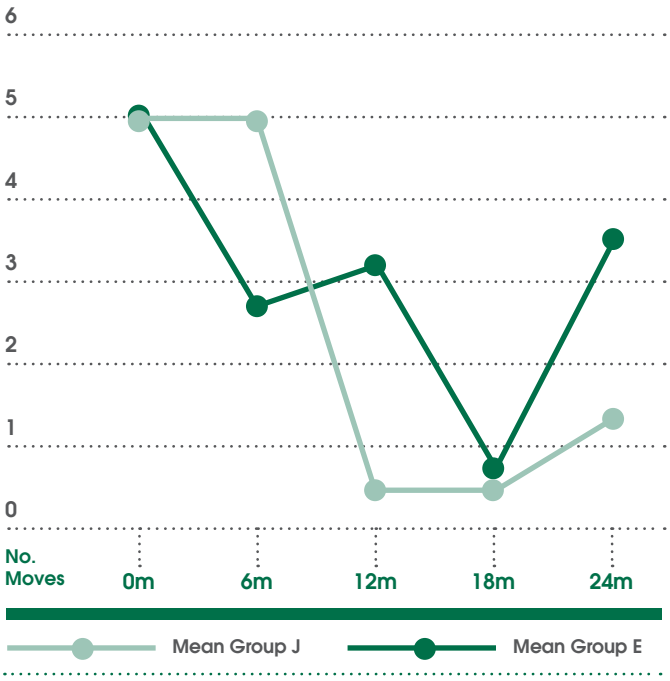
At the 24 month follow up there are significant improvements in Group J's housing, but the data reflect people's housing circumstances at five different points in time. In between collection periods housing circumstances can change. To assess the housing stability of trial participants we also recorded and analysed the number of moves people had between waves.

Among Group J the average number of moves reported in the six months prior to the baseline survey was five (Figure 2, also see Table 2 appendix A). This has subsequently dropped to and stabilised at around one. However, housing instability increased slightly in the most recent six month period between the 18 and 24 month survey. The increase in reported moves comes from a small number of Group J participants (n=4) who moved twice or more in the previous six months, thereby lifting the average number of moves for the group as a whole. In contrast, the average number of moves in Group E between the 18 and 24 month survey is three. While the average number of moves is much higher than Group J, the key finding is the average number of moves is taken from a larger group (N=10) who continued to move on a regular basis.

The high level of housing retention observed in Group J sits at the upper end of what has been achieved internationally (see Chapter 2) and provides further confirmation that the long-term homeless can maintain permanent housing if they have access to appropriate housing and support.

In the next section we examine whether the very different housing outcomes of the two groups are associated with any changes in physical and mental well-being.

FIGURE 2: AVERAGE NO. MOVES, PREVIOUS 6 MONTHS



4.2 MENTAL HEALTH OUTCOMES

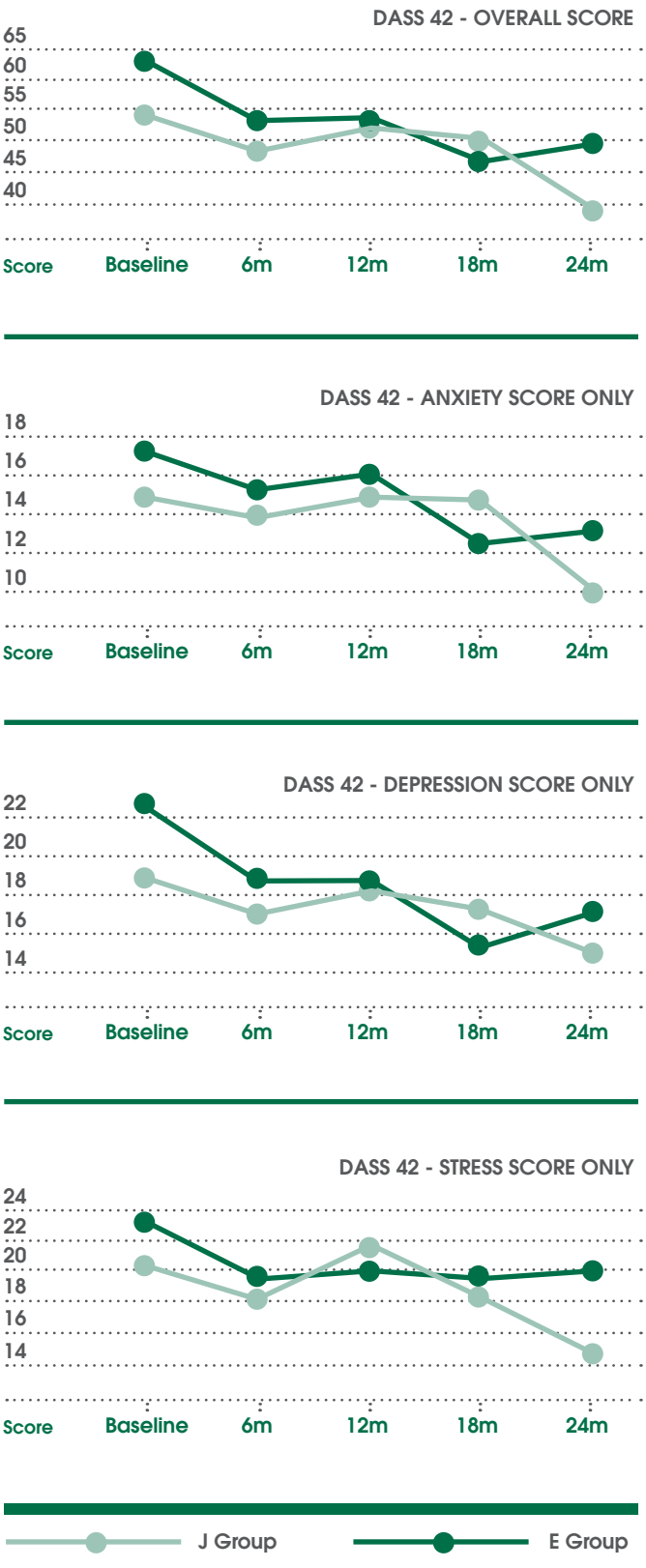
With improved housing circumstances we expected to see an improvement in the emotional and mental well-being of the Group J participants, both over time and relative to Group E. We use the Depression, Anxiety and Stress Scale (DASS) to assess the emotional and mental well-being of participants. This multi-dimensional instrument produces an average score where a higher score indicates more severe psychological distress.

Over the 24 month period the average overall DASS score declined by similar amounts, although from a slightly different starting point[7]. In Group E it decreased from 63.2 to 50 while for Group J it declined from 54.5 to 42 (Figures 3-6 below). While in every domain – anxiety, depression and stress - Group J's scores are lower than Group E's after 24 months, the improvements are relatively small. Although Group J's level of depression declined slightly, the overall decline was driven mainly by improvements in the level of stress and anxiety felt by participants (Tables 3, 4, 5 and 6, appendix A).

The visual trend in Figures 3 - 6 indicate that improvements in Group J's levels of anxiety and stress are more marked in the second year than the first, and also relative to Group E. We suspect the reason for little change in the first year is because the transition out of homelessness is a critical juncture that involves an abrupt separation from existing roles and routines, combined with the new challenges of moving into and managing accommodation. For the long-term homeless this is often a highly `stressful experience' (Tsemberis 2010:227) and constitutes a complex stage in their transition out homelessness. Many participants had not been housed for years and they struggled to adjust to living in a house. Carly (32) told us that when she first moved in:

… for a while I slept on the couch, I couldn't make it into the bedroom because I just felt too scared. I thought this is just too scary for me because I hadn't been used to sleeping in a bedroom. (1019, Group J)

FIGURES 3-6: AVERAGE SCORES IN DASS 42



[7] Acceptance into J2SI may help explain the difference at baseline – e.g. the knowledge that they were being offered ongoing support may have contributed to a lower score.

Some participants were worried about losing their accommodation and ending up back on the streets, while others mentioned the stresses and anxieties they encountered in their attempts to distance themselves from their homeless peers. Anne (39) told us that when she got her place she:

…had a lot of anxiety you know, people were asking me where I live, I just had to say something or other, you know I couldn't go around telling everyone that I've got a place. (1022, Group J).

Another factor that contributed to people's stress and anxiety was the nature of the neighbourhood they moved into. A majority of the participants were in public housing, and for those who ended up in high density estates, problems with other residents were a common source of stress and anxiety. Carly (32) was happy to be housed in a 'housing commission' property but she told us that:

I've had a lot of difficulties with neighbours yelling and just abusive neighbours, neighbours that don't want you there… The other people that live there, some of them are quite violent, like one man's been raided for guns and stuff like that, so that makes it a bit scary, and I know he has got one on him at the moment which makes it even scarier that he could just go off and do anything at any time (1019, Group J).

The long-term homeless are often at acute risk in the early stages of their tenancies. But, as other studies have found, having ongoing intensive support to assist people through the initial period of adjustment and to help them develop the skills and confidence to keep their housing, makes a difference (Susser, Valencia, Conover, Felix, Tsai and Wyatt 1997; Lennon, McAllister, Kuang and Herman 2005). Service activity data recorded in the J2SI client database reveal that the practices associated with assisting people to settle into their housing constituted the largest proportion of total case management activity in the first six months (Parkinson 2012). One Group J participant (1022) said that having a support worker available:

Made a big difference … and was the one thing that helped me settle in.

Over time as the participants became more accustomed to being housed and more confident about their ability to maintain their housing we observe a decline in their levels of stress and anxiety. Andrew (41) said that the:

… most significant thing that's changed is having a space that's my own and slowly losing the anxiety. (1085, Group J)

4.3 PHYSICAL HEALTH: PAIN AND MORTALITY

Long-term homelessness is associated with significant acute and chronic health conditions and over three quarters (78%) of the participants reported chronic physical ill-health when the trial commenced (Johnson et al. 2011). While it is generally accepted that most people never fully recover from the sort of chronic health conditions reported by the participants[8], having good support and stable housing are linked to better health management (McDermott, Bruce, Fisher and Muir 2009; McDermott, Bruce, Oprea, Fisher and Muir 2011).

In this section we focus on the level of bodily pain the participants felt in the last four weeks ranging from 'no bodily pain' to 'severe pain'. Reports from Group J suggest their physical health has improved. The number who reported no bodily pain increased by 24 percentage points (from 27% at baseline to 51% at the 24 mfu). Some of the reasons why people experience less bodily pain were provided in more detail in the interviews. Bess (37) told us that her health is:

…a lot better. Well probably not from being beaten up. That was one step but I am having regular treatment. (1071, Group J)

[8] At baseline 42% of the participants reported diseases of the digestive system, 39% reported diseases of the respiratory system, 29% reported physical disabilities and 16% reported diseases of the circulatory system.

When we examined all of the responses to the question on bodily pain, Group J reported lower levels of mild, moderate and severe bodily pain at the 24 month follow up than at baseline.

In Group E the pattern in relation to bodily pain was less consistent. Just under a quarter (24%) reported no physical pain at benchmark and this increased only slightly to 29% at the 24 month follow up (Table 7, appendix A)[9]. The 22 percentage point difference between the two groups at the 24 month follow up suggests the J2SI program is having a positive impact on some people's physical health and its management.

The most extreme health outcome among the participants was the mortality rate. Research shows that the mortality rate among the homeless, particularly the long-term homeless, is higher than the general community (Babidge, Buhrich and Butler 2001; Gossop, Stewart, Treacy and Marsden 2002; Hwang, Wilkins, Tjepkema, O'Campo and Dunn 2009; Sadowski et al. 2009).

Many participants from both groups had lost friends and acquaintances – sometimes as a result of violence, but more often the result of drugs. Rachael (39) told us:

The worst thing is probably that I've lost a couple of friends in the last 18 months, probably four. (1049, Group E)

After 24 months two[10] Group E participants had passed away while all of the Group J participants remain alive.

4.4 HEALTH SERVICE USAGE

Given the poor health of the long-term homeless and their vulnerability to violence it comes as little surprise that the long-term homeless are frequent users of costly emergency department and hospital services (Culhane et al. 2002; Sadowski et al. 2009). We collected data on the participants' use of different health services – their use of emergency health services (both hospital and psychiatric) and also admissions into general hospital and psychiatric units. While there are clear findings with respect to changed patterns of health service use over the 24 month period, it needs to be noted that there were some differences between the two groups reported use of health services at baseline. In the following section we report the most noticeable findings and direct the reader to appendices for more detailed information.

There are many ways of measuring service use but we use three to investigate different patterns of health service use among the two groups. The first measure investigates the usage rate. This refers to the proportion of people who used the service. Second, we examine usage intensity. This is the average amount of time a service is used by the people who use it. We then combine the above two measures to generate the average number of days of health service usage per individual, or the average use. The following sections work through each measure.

4.4.1 USAGE RATE

After 24 months the proportion of people in Group J presenting at emergency health departments, both hospital and psychiatric, has declined, as has the proportion admitted to general hospital or into psychiatric units (Table 8, 9, 10 and 11, appendix A). The most marked decline in the usage rate occurred in the first 12 months, increasing slightly thereafter across all four types of health services. However, the usage rate at 24 months still remains well below the baseline rate. The most striking decline is the number of people using emergency psychiatric services where the rate has almost halved from 24% at baseline to 14% at the 24 month follow up (Figure 7).

[9] The percentage of people reporting mild bodily pain in Group E rose over the two year period, the number reporting moderate pain declined while the percentage reporting severe bodily pain remained constant.
[10] In fact three Group E participants passed away. The third person joined the trial late and was not included in the data for this paper. For an explanation of the cut off dates see Johnson et al 2011:32-33.

FIGURE 7: PROPORTION USING EMERGENCY PSYCHIATRIC SERVICES, LAST SIX MONTHS

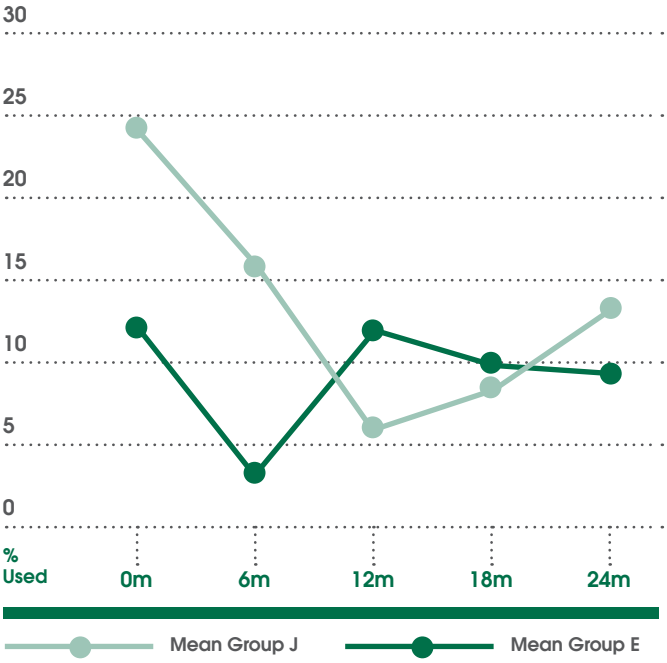
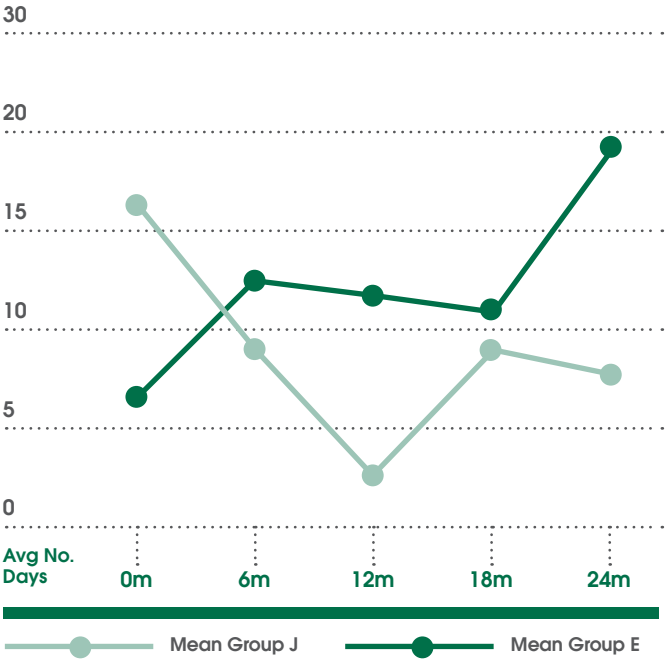


FIGURE 8: GENERAL HOSPITAL ADMISSION, AVERAGE NUMBER OF DAYS (USERS ONLY)



Among Group E the proportion requiring emergency hospital treatment or admission to general hospital declined by nearly half over the 24 months, while the number presenting for emergency psychiatric assistance declined by two percentage points. The proportion who were admitted into a psychiatric unit remained much the same.

4.4.2 USAGE INTENSITY

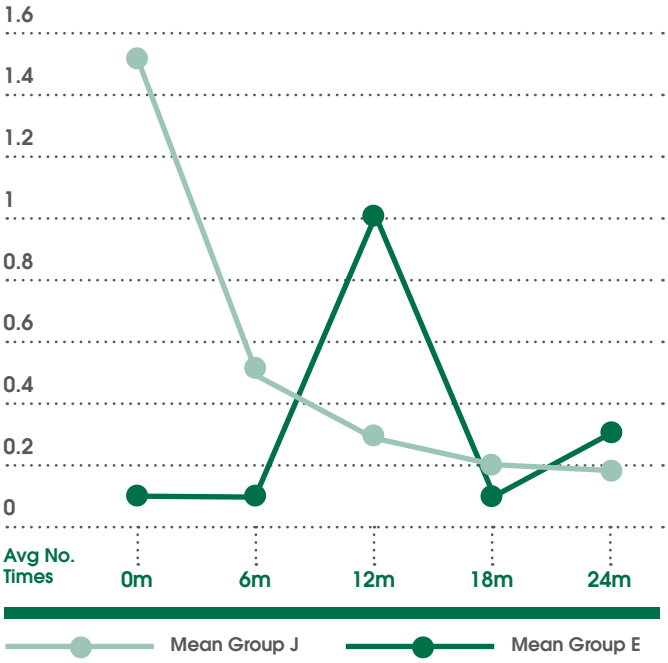
While there has been an overall decline in the proportion of people in both groups using health services, a key issue is whether those that used them are using them less often after two years than at the start of the trial. Although we observe fluctuations between observation periods, Group J participants used all four health services less often at the 24 month mark than they did at baseline. The most noteworthy results were reported in the usage intensity of general hospitals and emergency psychiatric presentations. The number of days Group J participants were admitted to general hospital declined from 16 days at baseline to just over seven at the 24 month follow up (Figure 8). The number of times people in Group J presented to emergency hospital departments for psychiatric assistance declined from 5.7 at baseline to 1.2 at the 24 month follow up.

In Group E the pattern is less consistent. Group E participants spent slightly fewer days in psychiatric units and presented to emergency hospital departments less often, but they spent almost three times as many days in a general hospital ward at the 24 month follow up compared to baseline (19 days vs 7 days). They also required emergency psychiatric assistance more often than they did at baseline - 1.7 times at baseline against 2.7 times at the 24 month follow up (See Tables 12, 13, 14 and 15, appendix A for more detail).

The crucial finding is that those in Group E who use health services stay for longer and require more intensive and costly interventions. This could indicate a number of things. Lewis and Lurigio's (1994) study of hospital patients in Chicago found that people who are homeless often use hospitals as short-term housing arrangements. It could also indicate that assessments are more complicated and time consuming when there is no active case manager carrying the participant's history, and/or that discharges are often delayed in Group E because a significant minority have nowhere to go. Whatever the reason, access to housing and enhanced support services appears to generate substantial reductions in the amount of time people spend in hospital.

FIGURE 9: AVERAGE NUMBER OF TIMES USED EMERGENCY HOSPITAL (INCL. NON USERS)

FIGURE 10: AVERAGE NUMBER TIMES USED EMERGENCY PSYCHIATRIC SERVICES (INCL. NON USERS)



4.4.3 AVERAGE USE

In this section we combine the two previous measures to generate the average health service usage per individual, or the average use. Figure 9 shows that at baseline both groups used emergency hospital services on average 1.5 times in the previous six months (Table 16, appendix A). After 24 months both groups average use of emergency hospital services has declined, although the decline was slightly larger in Group E.

Figure 10 shows that the average number of times Group J required emergency psychiatric assistance has declined considerably from on average 1.5 times at baseline down to 0.2 times at the 24 month follow up, while Group E's use has increased, albeit very slightly (Table 17, appendix A).

When we examine the average number of days people have been hospitalised the pattern is clearer. Figure 11 shows a marked reduction in the average number of days Group J has been hospitalised (4.4 days at baseline versus 1.7 days at the 24 month follow up). Among Group E participants we observe an increase over the two year period in the average number of days they are hospitalised from three days at baseline to just over five days at the 24 month follow up (Table 18, appendix A).

Finally, with respect to the average number of days people have been hospitalised in a psychiatric unit, Figure 12 shows a decline in Group J who reported that they spent on average three days in the six months prior to the 24 month follow up in a psychiatric unit compared to six days at baseline. While Group E's average use has also declined, and after two years it is the same as Group J, they are coming off a slightly lower starting point, and there are also marked increases in the average number of days in a psychiatric unit at the 12 and 18 month follow up (Table 19, appendix A).

Although there is some variation in the use of health services with both groups showing greater improvements in some areas relative to the other group, the most important empirical finding is that Group J's average use of emergency psychiatric services and their average number of days hospitalised in both a general hospital and a psychiatric unit has declined

FIGURE 11: GENERAL HOSPITAL ADMISSION, AVERAGE NUMBER DAYS HOSPITALISED (INCL. NON USERS)

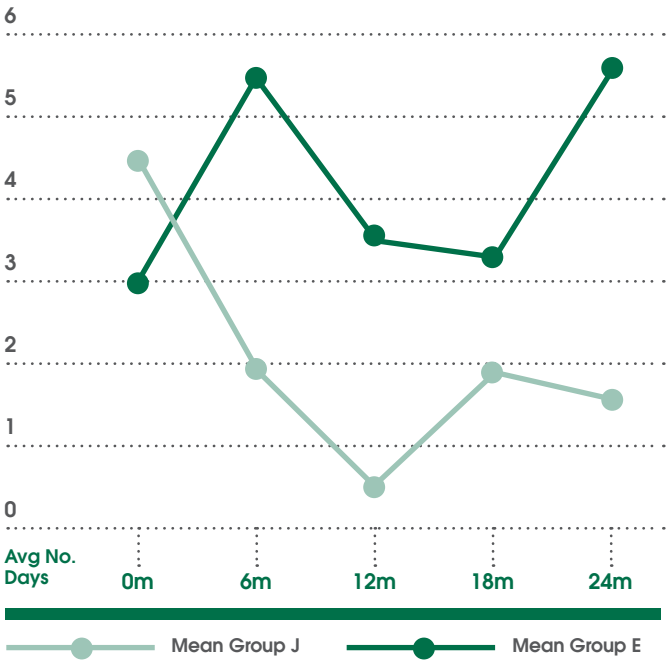
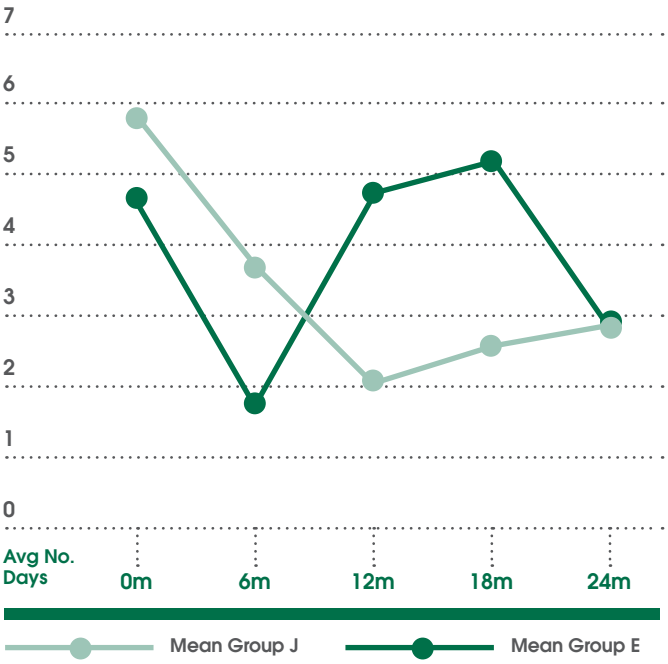


FIGURE 12: PSYCHIATRIC HOSPITAL ADMISSION, AVERAGE NUMBER DAYS (INCL. NON USERS)



both over time and relative to Group E. Group J's need for emergency hospital treatment has also declined over time but less than Group E.

This translates into a substantial health care impact and suggests that an intervention comprising of stable housing and intensive case management can reduce the public burden associated with the over-use of health services.

4.5 OTHER SERVICE USAGE

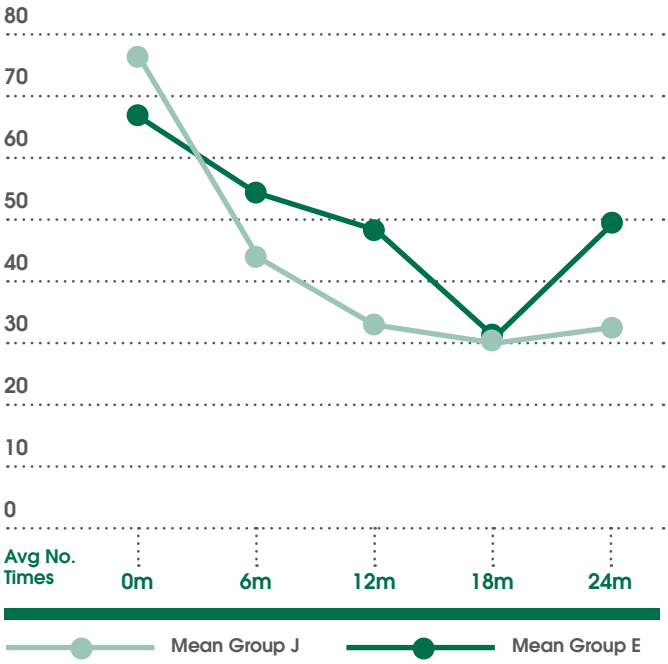
There has been a significant decline in both groups' use of homelessness services over the 24 months (Table 20, appendix A). Group J are using crisis facilities less often than at baseline while Group E are using them on average, slightly more often. However, the difference is small and statistically insignificant (Table 21, appendix A).

As was the case in the first 12 months there are no large or significant changes in most other service use indicators. The one area where a significant decline was observed was with Sacred Heart Mission's meals program (Figure 13, see Table 22, appendix A).
The number of times Group J used the meals program halved in the first 12 months (76 to 34 occasions) and has subsequently stabilised at around 30. Group E's use of the meals program also declined in the first 12 months from 67 to 48 occasions and has subsequently stabilised at just under 50. The overall decline is greater in Group J and may be part of a deliberate strategy to avoid their homeless peers, a point we elaborate on in subsequent sections.

There are also some important changes in the participants' experiences with the justice system over the 24 month period. Group J's involvement with the justice system has declined slightly. We found that the proportion of Group J that had been charged with a criminal offence declined from 27% at baseline to 17% after 12 months. However, in the next 12 months the proportion rose to 25% at both the 18 and 24 month follow ups. For Group E there has been a more consistent decline from 24% at baseline to 9% at the 24 month follow up (Table 23, appendix A).

The proportion of Group J participants who were incarcerated went up slightly in the first year and then came down in the second year – at baseline 10%

FIGURE 13: AVERAGE NUMBER TIMES USED MEALS PROGRAM, LAST SIX MONTHS



of Group J had been incarcerated in the six months prior to the survey and the equivalent figure for the 24 month follow up is 6% (Table 24, appendix A). Group E start at a lower point (2%) and no-one reported being incarcerated in the 6, 12 or 18 month follow ups. However, at the 24 month follow up two Group E participants (6%) reported they had been incarcerated.

An interesting trend emerged when we examined the average number of days in prison across Group J. In the first year the average number of days in prison was 11.5 at the 6 mfu and 13.8 days at the 12 mfu. The average subsequently declined to 6.1 days at the 18 mfu and then to 2.6 days at the 24 mfu (Table 25, appendix A). While Group J clearly had a higher rate of incarceration in the first year, this was often as a result of offences committed before the J2SI project began. The subsequent decline in the average amount of time incarcerated is perhaps a truer reflection of the impact of J2SI.

4.6 SUBSTANCE USE

Reported rates of substance misuse among the homeless are much higher than the general community and even higher among the long-term homeless (Horn 1999; Teesson, Hodder and Buhrich 2000; Teesson, Hodder and Buhrich 2003; Kemp, Neale and Robertson 2006). While substance use can trigger homelessness or can be a consequence, it is regularly cited as a major barrier to exiting homelessness (Neale 2001; Fountain and Howes 2002; Johnson and Chamberlain 2008). At baseline, many of the participants reported long-term problems with substance use – over 70 % reported a history of IV drug use, and on average they first started injecting drugs at 17 years of age. The earlier people start and the longer they misuse legal or illegal drugs, the more difficult it is to change their behaviour.

In the policy domain there are two clear lines of thought. The first approach, abstinence, aims to overcome dependency by requiring that people refrain from use. The second approach, harm minimisation, prioritises assisting people to manage their substance use in a way that reduces physical and emotional harm, the risk of premature death and the risk of losing their housing. J2SI adopted a harm minimisation approach that explicitly recognised ending problematic drug and alcohol use is often a long and complex process.

In this section we are interested in whether the participants' patterns of substance use have shifted over the two years. More specifically, we examine what drugs they used in the last six months and, if they did use, whether there has been a shift in the frequency[11] of consumption. We recognise that these measures are limited, particularly as they do not include the amount people consume. We tried to collect as detailed information as we could on the amount people consumed but the quality of the data was poor. We also note that measuring changes in patterns of drug use is problematic. Researchers use a variety of measures to understand substance use and there is considerable debate in the literature about what constitutes the best measures (Leukefeld and Bukoski 1991).

Furthermore, problems with recall, the stigma attached to drug use and also changes in the availability of drugs, influence what people report. Given the challenges

[11] In the analysis we are interested in those who reported consuming frequently. We define frequent use of drugs as consuming daily or weekly (including 2-3 times a week).

collecting reliable data on drug using behaviour and that many of the changes we observe are too small to make meaningful comparisons, we refer readers to Tables 26, 27, 28 and 29 in appendix A for more detailed information.

Notwithstanding these issues, we found the use of illegal drugs remains a big issue for both groups. At baseline, just over two thirds (67%) of Group J reported using illegal drugs in the six months prior to the survey and this had increased by 11 percentage points (78%) at the 24 mfu. In Group E there was a similar pattern where the proportion using illegal drugs increased from 74% to 81% over the two year period.

Alcohol and cannabis were the most commonly used drugs – in both groups the proportion using alcohol remained relatively constant over the two years (70%). The proportion using cannabis remained relatively constant in Group E (57% at baseline and 58% at the 24 mfu), but there was an 11 percentage point decline in Group J over the same period – from 61% at baseline to 50% at the 24 mfu.

Benzodiazepines were the next most commonly used drugs. Benzodiazepines such as Diazepam, Valium and Xanax are a prescription drug favoured by some because they are cheaper, easier to access and mimic the effects of opioids like heroin. But benzodiazepines can be highly addictive when they are used regularly (Ashton 2005). At the 24 mfu just over 40% of the participants in both groups reported they had used benzodiazepines in the previous six months. However, the proportion of people using benzodiazepines declined from baseline by 14 percentage points for Group E and four percentage points for Group J.

We are particularly interested in the use of heroin as it is a major barrier to exiting homelessness. Heroin is highly addictive and often leads to a destructive cycle that involves raising money (often through illegal means), scoring and using. When people get stuck in this cycle they tend to focus on the present, often neglecting their physical and emotional health. It also means that other things like their housing, which require time, planning and adequate resources get pushed aside (Johnson et al. 2008).

Over the 24 month period we observe a 19 percentage point decline in the proportion of Group E using heroin (46% to 27%) and a 10 percentage point decline among Group J over the same period. Alongside the decline in heroin use among Group E we observe an eight percentage point increase in methadone use (37% at baseline to 45% at the 24 mfu). However, there was a five percentage point decline in the number of people in Group J using methadone over the two year period (39% at baseline to 34% at the 24 mfu).

While the overall pattern is uneven - in some areas we observe increases in the proportion of people using, in other areas the proportion is more or less stable, and in some areas there have been improvements – two points stand out. First, the proportion of people using illegal drugs remains high. Second, Group E appears to be doing slightly better.

The second area we examined was the frequency people used substances. Overall, the proportion using frequently is trending upwards. Over the two year period frequent use of alcohol increased from 4% to 11% for Group J and from 8% to 13% for Group E. We observe a more significant increase in the frequent use of illegal drugs. The rate increased 27 percentage points (42% to 69%) for Group J and 6 percentage points (62% to 68%) for Group E. Although Group E has a smaller increase they had a higher starting point so at the end of 24 month period, the proportion of people who frequently used illegal drugs is similar.

For Group J, the rate of frequent use is increasing across almost all types of drugs - there was a 13 percentage point increase in the proportion that used heroin frequently. This contrasts with a 17 percentage point decline for Group E (27% to 10%). Similarly, the frequent use of benzodiazepines increased by three percentage points in Group J (33% to 36%), but has decreased by 12

percentage points in Group E (44% to 32%).
To summarise: in some areas Group E are doing better but the differences between the two groups are generally quite small. The core empirical point is that not much has changed for either group. Other studies of the long-term homeless and marginalised drug dependent populations such as war veterans, prisoners and people with chronic mental health problems report similar results (Tsemberis 1999; Tsemberis and Eisenberg 2000; Gulcur et al. 2003; Tsemberis et al. 2004; Padgett et al. 2006; O'Connell et al. 2009). These studies consistently show little if any reduction in drinking and virtually no decline in illicit drug use. However, these studies focus on interventions like J2SI that have a harm minimisation approach where helping people to manage their substance use in a way that reduces physical and emotional harm and also reduces the risk of losing their housing is the key goal. The key message is that changes in patterns of drug use need to be understood as part of a broader process of change that individuals manage at their own pace and according to other circumstances in their life.

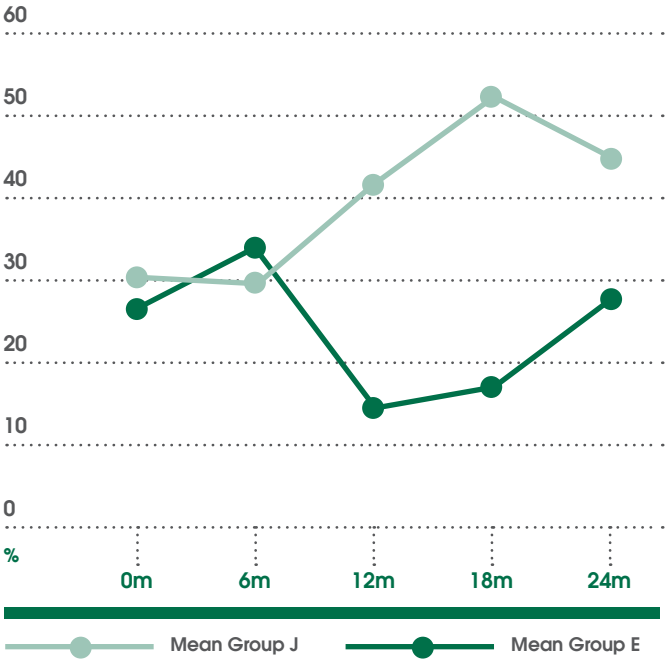
4.7 ECONOMIC PARTICIPATION

The long-term homeless are economically marginalised and face significant barriers gaining employment. However, one of the working hypotheses was that Group J would exhibit higher rates of labour force participation than Group E. Labour force participation is indicated by respondents who are either doing paid work or looking for paid work.

There has been a marked shift in the overall labour force participation rate of J2SI participants. Figure 14 shows that labour force participation among Group J improved from 30% at baseline to 44% at the 24 month follow up. In contrast labour force participation for Group E rose only slightly over the two year period from 26% to 28% (Table 30, appendix A).

A more detailed breakdown of labour force participation reveals that improvements in the rate were mainly driven by changes in the number of people

FIGURE 14: LABOUR FORCE PARTICIPATION RATE (%)



looking for work. After 24 months the proportion of Group J unemployed but looking for work increased from 27% to 36%, while for Group E it declined from 21% to 12.5% (Table 31, appendix A).

The higher proportion of Group J participants looking for work corresponds with a significantly higher use of employment services relative to Group E over the course of the project. At baseline, the average number of times people used employment services in the previous six month period was 2.6 times per person in Group J and it was 4.8 times per person for Group E. At the 24 month follow up, the average number of times people in Group J used employment services has increased to seven times per person in the previous six months, while the equivalent figure was 0.5 times per person in Group E (Table 32, appendix A). These findings indicate that as time passes, J2SI participants have become more engaged with employment services which could ultimately open up pathways to independence and the capacity to re-connect with the broader community.

While enabling participants to be ready and actively looking for work is an important indicator, doing

paid work is a key measure. Working has important implications beyond providing money, especially for the long-term homeless. Work can provide new routines and access to new social networks which are crucial pre-conditions for addressing social exclusion. Turning again to the qualitative data, we can see how work provides a sense of purpose and this is often a foundation for deeper identity shifts as people's self-esteem improves. Jason (38) had a job and he told us that:

The money is good but it's more than that you know. It's the social scene, friends have come back into the picture so I'm invited out more by these friends. Don't use drugs, not part of our life, mentally, physically everything it's having an impact, I'm eating more, I'm feeling better of late (1091, Group E).

While obtaining paid work has an important impact, it remains a huge hurdle with the overall number of people in paid work in both groups still small. At the 24 month follow up more people in Group E were working (5 versus 3) but at the 12 and 18 month follow up more people in Group J were working (4 versus 1 at both follow ups, Table 33, appendix A). Fluctuations in the number of people in paid employment suggest that the work available to the long-term homeless is often insecure. The main types of employment have been of a casual nature and this reflects the difficulties that many marginalised workers face in the contemporary labour market.

Nonetheless, the signs are that J2SI is making a difference to workforce participation but it is important to be realistic about what can be achieved. While a few are in paid work, a few in unpaid work and some are now actively looking for work, the process of integrating into the labour market is a slow one. In the next section we examine whether there have been any changes in the extent to which the trial participants feel supported by and connected to the broader community.

4.8 SOCIAL CONNECTEDNESS

Alongside the goal of assisting people into housing and helping them to retain it, the J2SI pilot has an explicit focus on social inclusion and enabling people to connect to the broader community. We use two measures to investigate the participants' feelings of social connectedness. The first measure investigates the participants' perception of social acceptance using an internally consistent scale derived from six questions in the study[12]. Scores range from 0 – 24, with 24 being the highest level of social acceptance. Increasing scores indicate participants feel more socially accepted. The second measure we developed investigates the amount of social support participants received from various sources outside relationships with support workers. The highest possible score is 49 and an increase in scores indicates a perceived increase in social support.

Group J and Group E have similar levels of social acceptance and social support. The results drifted slightly upwards for both groups over the first 12 months. This trend continues in the second year, with Group J reporting slightly higher levels of social acceptance (Figure 15, Table 34, appendix A) and Group E reporting slightly higher levels of social support (Figure 16, Table 35, appendix A). However, the differences are extremely small and as yet the overall change in both groups is relatively minor.

The modest improvements in social acceptance and support serve as a reminder of how formidable the task of social re-integration is. For the long-term homeless, homelessness is a familiar space; it is a place where social networks have been formed, and a space with distinct normative patterns, codes, rules, lexicons and hierarchies of power. But it is a 'sealed world' structured by a deep and persuasive experience of social exclusion that provides few opportunities to gain a foothold in mainstream society. Experiences and resources that are taken for granted by the broader community – work, family, leisure, reliable social relationships and predictable routines – and which form a critical source of social capital are not available to the long-term homeless. Instead, the long-term homeless adapt to a 'landscape of exclusion' (Sibley 1995) by seeking companionship with others whose affiliations to the mainstream are equally fragile.

[12] At initial tests the scale had a Cronbach's alpha score of 0.782, which falls within the accepted range of reliability for a scale measure. For further information see Johnson et al 2011.

FIGURE 15: SOCIAL ACCEPTANCE SCALE

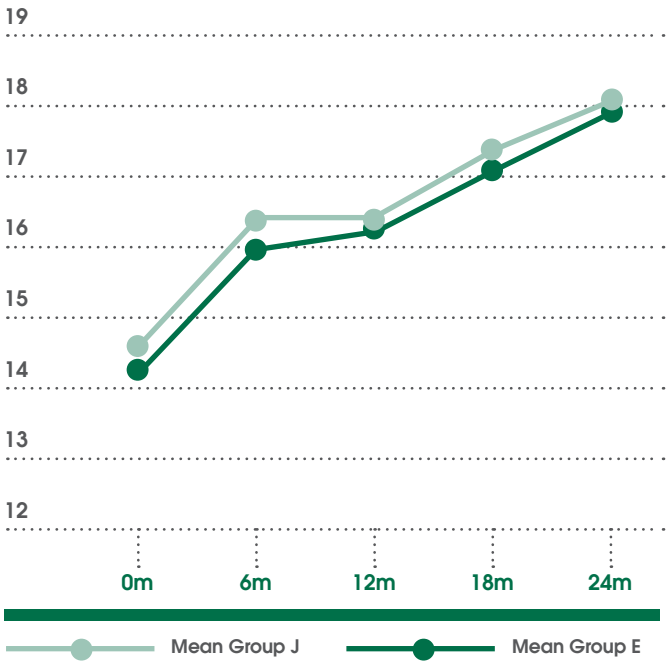
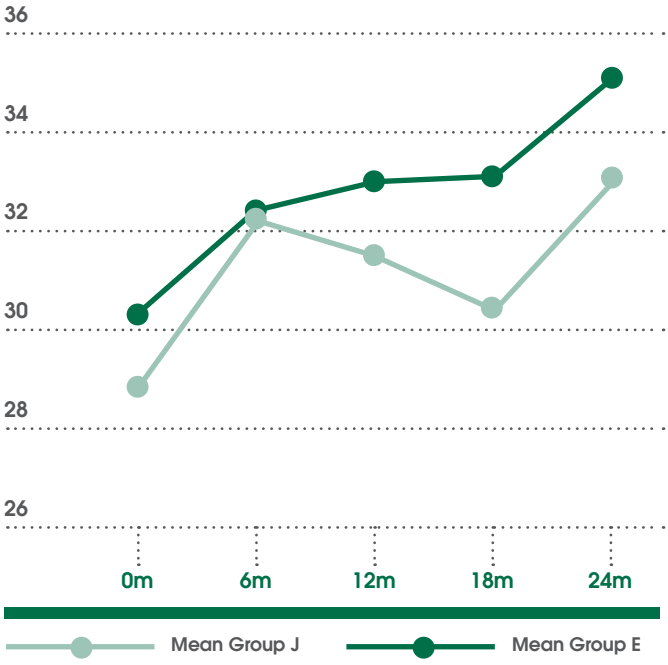


FIGURE 16: SOCIAL SUPPORT SCALE



Thus, for the long-term homeless a key stage in the transition out of homelessness involves breaking the link with their homeless peers (Fitzpatrick 2000; Johnson et al. 2008). This is a complex and challenging process, particularly for those with a history of substance dependence. A common strategy involves disengaging or distancing themselves from their social networks. Distancing is a deliberate strategy designed to reduce exposure to damaging social practices such as drug use but also as a way of distinguishing individuals from other homeless people (Snow and Anderson 1993). But there are consequences. As we noted earlier, without new social networks to replace those they have left behind, isolation and boredom are common outcomes.

The potential for increased feelings of isolation is illustrated in the following comments from Anne. When Anne moved into her new place she disengaged with her homeless friends and acquaintances. As a result:

… the friends I used to have, I don't really have any more. I've got to be careful about who I'm friends with because if they think, oh yeah you've got an extra room or you've got a place, they automatically assume they'll be right to move in…I don't bring them to my house…I felt a bit lost and lonely (1022, Group J).

But there are signs that over time new social networks have started to form and in some cases relationships with other family members have improved. These are positive signs and suggest that some participants are starting the process of reconnecting to their community, although it is difficult to tell at this stage what this might mean with respect to a permanent transition out of homelessness. The key point is that the transition out of homelessness is a complex process that involves leaving behind established social networks, social practices, routines and roles that are often integral to each individual's sense of identity and sense of belonging. Building new social connections is a process that takes time. Despite the material, social and cognitive barriers that confront the long-term homeless, being housed and having persistent, reliable support are the foundations for a

successful transition out of homelessness. Anne (39) told us that she had finally found a:

… sense of belonging, I feel like I belong there and when I was on the streets I didn't feel like I belonged anywhere and that's gradually changing. It's not changing as quick as I'd like but, yeah I'm starting feel like I belong. That's where I belong. So hopefully that'll keep going (1022, Group J)

4.9 SUMMARY

After 24 months the overall impression is that there have been some important improvements in the 'social' circumstances of Group J relative to Group E. The most dramatic difference is the improved housing circumstances among Group J. While having a home is no guarantee that people will fully recover, having a place to call home provides the opportunity to experience a less stigmatised and volatile life. There have been notable improvements in other areas such as economic participation and also a decline in the average use of some expensive health services and some indications that the participants' mental and physical health has improved.

In some areas such as problematic substance use and social acceptance and support Group J's circumstances have not improved greatly. This is not entirely surprising as the process of becoming housed often involves moving away from social roles, routines and networks which have provided a sense of belonging and meaning in the lives of the long-term homeless. Further, given the deep and widespread disadvantages of the long-term homeless this data reminds us about the difficulties addressing deep social exclusion and the importance of being realistic in terms of what programs working with the long-term homeless can achieve. As the English researcher Nicholas Pleace notes, there is little evidence anywhere in the world that 'sustained worklessness and social isolation are being effectively counteracted by other homelessness service models' (Pleace 2011:120). Next, we examine the economic benefits and costs of the J2SI program.

5. COST-BENEFIT ANALYSIS

In recent times policy makers have shown increasing interest in the costs and benefits of social programs, including those designed to end homelessness. Both cost-benefit analysis (CBA) and cost-effectiveness analysis (CEA) are useful tools for program evaluation as they enable policy makers to compare different programs and allocate resources more efficiently. However, despite their importance the number of Australian 'cost studies' examining program interventions designed to end homelessness is small and most have significant limitations.

In this chapter we start by outlining the difference between a cost-benefit analysis and cost-effectiveness analysis. The second section outlines the general framework we employ in our analysis. Sections 3 and 4 provide a more detailed discussion of the items we use to calculate the program cost and how we assign monetary values to the program outcomes (or benefits). In the final section we present the net benefit for J2SI. We also include a sensitivity analysis to test our assumptions and their possible impact on the results.

5.1 COST-BENEFIT VS. COST-EFFECTIVENESS

The two most common techniques used to analyse the costs and benefits associated with a particular social program are cost-benefit analysis and cost-effectiveness analysis. While each has its own usefulness, peculiarities and issues, there is some confusion as to the difference between the two.

In simple terms CEA is a technique that relates the costs of a program to its key outcomes (or benefits). A CEA identifies and places a dollar value on the cost of a program and then relates that cost to a specific measure of program effectiveness. A cost-effectiveness ratio is obtained by dividing program costs by the unit of effectiveness. The unit of effectiveness is any quantifiable outcome central to the program objectives. For example, if the primary goal of the J2SI project is to assist people into permanent housing then the cost-effectiveness ratio would be total costs divided by the number of people housed due to the J2SI project. The result is expressed in dollars per person housed. CEA have many uses, particularly when the outcomes (or units of effectiveness) are difficult to quantify in monetary terms. An example would be programs seeking to improve participants' self-esteem or their life satisfaction, as both outcomes are difficult to put a monetary value on. However, CEA typically focus on a single outcome which makes it difficult to use when social programs have several objectives and multiple outcomes, which is the case with J2SI.

CBA takes the process one step further. Like the CEA, CBA places a dollar value on program costs. Where they diverge is that CBA turns program outcomes (or benefits) into monetary values. Those monetary values are then used to generate a net benefit ratio where the monetarised program benefits are divided by total program costs. The final output of a CBA makes comparisons across different types of programs relatively easy. Not only can a CBA be used to compare different programs designed to end homelessness but they can also be used to compare other social programs and other types of social investment such as education. A CBA also differs from a CEA in that it can examine multiple outcomes. Nonetheless, it is challenging and in some instances arguably impossible to put a monetary value on all outcome measures. Therefore, a CBA often requires a range of assumptions.

Irrespective of whether one uses CEA or CBA the most important measure for both techniques is the outcome (or benefit). In the case of social programs not only are outcome measures idiosyncratic, it is difficult to attribute an outcome to a specific program without a control group. Finding a proper comparison group is

difficult and consequently most Australian studies do not use them. But this creates the problem of accurately assessing a program's true impact.

In this evaluation the random assignment of participants ensured that there were no systematic differences between the characteristics of the treatment and control group prior to the commencement of J2SI. This means that we can use the outcomes of the control group as reliable proxies for the outcomes of the J2SI participants in the absence of the J2SI intervention. Thus, the benefit of the J2SI project can be obtained by calculating the difference between the average outcomes of the treatment group and the average outcomes of the control group. As Australian studies that examine various interventions designed to end homelessness typically favour CEA and do not employ proper control groups, comparing our results with ostensibly similar evaluations is misleading.

5.2 GENERAL ANALYTIC FRAMEWORK

5.2.1 SOCIETY OR GOVERNMENT

CBA is often performed from different perspectives. In some studies researchers use CBA to focus on the costs and benefits to government, while other researchers use them to focus on the benefits to society. The key difference between the two is that a CBA that focuses on the benefits to society ignores taxes and transfers as these two items simply represent a shift of resources from one person to another.

The potential benefits to society of the J2SI project occurs in relation to the reduced use of health services, reduced contact with the justice system, and reduced demand on support services from homeless or other government agencies. In our analysis we exclude any reduction in demand for meals programs or rent subsidies as both food and accommodation are basic human needs.

In contrast, a CBA that takes a government perspective provides an idea of the budgetary implications to government if a program were to be 'funded by government'. While each perspective is important, a CBA from society's perspective is arguably a better reference point for the actual value of the J2SI project. Nonetheless, as policy makers are interested in both program effectiveness and budgetary implications, we provide both.

5.2.2 QUANTIFYING COSTS AND BENEFITS: PRELIMINARY CONSIDERATIONS

We obtained detailed information on the costs of the J2SI program from Sacred Heart Mission. We detail the specific cost items in the following section. Our approach to quantifying the benefits that are attributable to J2SI involves measuring the differences in average outcomes between J and E groups and then assigning a monetary value (in 2012 dollars) to the benefits. As both cost and benefit items cover multiple time periods, a discount rate of 4% is applied to both to obtain net present values[13]. We then present the net benefit by subtracting the cost of J2SI from the estimated benefit. The detailed procedures are listed in appendix B.

As we noted earlier, it is not possible to measure the monetary value of every item. For example, it is difficult to assign a monetary value to an individual's health condition, their self-esteem, their level of social support or their feelings of connectedness to the local community. Yet, these 'intangible' benefits are important for the long-term homeless. One option is to employ shadow prices to resolve the issue. However, as there are no existing estimates of the shadow price(s) for the long-term homeless population we made a decision to leave these items out. This means that our estimate is likely to underestimate the full benefit of the J2SI project. It should also be noted that while the shadow price for an individual's health condition is well documented, we assume that changes in an individual's heath condition may be partially captured by changes in the use of health services. Thus, the key benefit items we measure include earnings, service usage and contact with the justice system. A more detailed discussion of these items is in Section 5.4.

[13] The 4% rate is based on the Treasury indexed bond rate which is commonly used in cost-benefit analyses. In this report, varying the discount rate does not alter the results a great deal as we focus only on the costs and benefits of the J2SI project in the first two years.

Another difficulty is the projection of future outcome(s). The benefits of J2SI may accrue over many years into the future. However, due to the high volatility of the outcomes in both groups, and the fact that only two years of information is available, it is impossible to tell exactly what will happen in the future – some participant's trajectories may broadly follow the existing trend, but for others their circumstances may well deteriorate. Furthermore, given that J2SI is a three year program, guessing what may happen to the participants after an additional year of treatment adds a further complication. Nevertheless, we include two year and 10 year projections based on the number of lives saved in the sensitivity analysis to highlight the importance of future outcomes.

A further complication in measuring the benefit of J2SI is the participation of other homeless programs, in particular those that provide supportive housing such as CommonGround and Sacred Heart Mission's Queens Road Rooming House Plus Program. It is not clear whether our estimate of J2SI's net benefit will be biased upward or downward by the effect of these programs. This depends on two things - the number of participants in each group who receive this assistance and the impact or the size of the effect of these programs on each participant. While the extent to which participation in multiple programs affects people's outcomes is unknown, the number of participants who entered supportive housing was similar (17 for Group J and 18 for Group E). Thus, the estimates of the net benefit of the J2SI program should not be significantly biased. Nonetheless, we take the cost of these programs into account by including them in the calculation of usage of homelessness services.

Finally, as mentioned earlier, attrition may potentially bias the estimates of the J2SI project outcomes. Due to the small sample size, it is difficult to perform statistical tests to adjust for any bias. Therefore we have constructed a bound analysis to test for the sensitivity of the net impact. That is, we assign the worst possible outcomes to people who dropped out of the study (the attrited sample) to estimate an upper bound of the project's impact. We then assign the best outcomes to the attrited sample to estimate a lower bound of the project's impact.

5.3 COST OF THE J2SI PROJECT

The first step in costing the J2SI project involved identifying set-up costs. Set-up costs, which include office set-up and staff time during the establishment phase, were $145,000. The initial set-up costs of the pilot have been excluded from the analysis as we want to focus on the actual running costs of J2SI. In the next step, we break J2SI costs into six components. They are:

1. General management and governance. This includes the J2SI manager (0.9 EFT) and a part-time project officer (0.26 EFT). We also factor in the opportunity cost of the CEO's time (0.05 EFT)[14].

2. Intensive Assistance and Coordination (IAC). This includes the cost of a full time IAC manager, 10 full-time IAC case workers and staff training.

3. Building Up and Developing Skills (BUDS) program. This component includes costs for one full-time BUDS coordinator and all BUDS related expenditure.

4. Therapeutic intervention. This component includes an onsite psychologist (from September 2010 to the end of year two) and payments for off-site treatments.

5. Other service delivery. This includes flexible funds for J2SI participants[15] and the costs of an employment consultant seconded from the Mental Illness Fellowship of Victoria[16].

6. Operational cost includes office occupancy and service costs, motor vehicle and travel expenses, amenities and overheads.

[14] Due to privacy reasons we do not use the actual salary of the Sacred Heart Mission CEO to calculate the cost. We assume the salary and on-cost of a CEO of a medium sized NGO to be around $150,000 in 2012.
[15] Every J2SI participant is allocated $500 flexible funds per annum. These funds are used for furniture and other household goods, groceries, rental arrears, recreation, legal costs and healthcare.
[16] Twelve months into the pilot Sacred Heart Mission entered into a partnership with the Mental Illness Fellowship of Victoria to co-locate a specialist employment consultant full-time with the J2SI team. The employment consultant works alongside the BUDS Coordinator and the IAC casework team and focuses on securing employment for J2SI participants. Sacred Heart Mission contributes $25,000 per annum to this position.

For staff costs, the time staff members used to assist with the evaluation of J2SI are excluded. The costs include both salary and on-costs. Table 2 provides the costs of J2SI in the first two years.

The J2SI pilot is overseen by an external Steering Committee and a Service Delivery Committee and the evaluation is overseen by an Evaluation Reference Group. We ignore the opportunity cost of the time that Steering Committee, Evaluation Reference Group and Service Delivery Committee members spent on the project. Although the governance structure may potentially increase the quality of service delivery, there is no direct evidence of the size of the effect. However, we factor in eight hours per month of the CEO's time in the governance category.

TABLE 2: COST OF THE J2SI PROJECT

ITEM	YEAR 1	YEAR 2
Project management and governance	$110,610	$119,719
Case management	$684,514	$729,679
BUDS	$53,802	$75,310
Therapeutic intervention	$11,817	$35,730
Other service delivery costs	$19,338	$44,220
Operational costs	$96,369	$117,976
TOTAL	**$976,449**	**$1,122,633**
Net present value (NPV) cost per person	**$51,398***	

*All figures are converted to 2012 Australian dollars.

5.4 BENEFIT OF THE J2SI PROJECT

The key benefits quantified in this report includes employment gains and reduced use of health, employment, homelessness and accommodation support services, as well as drug and alcohol, gambling support, justice system and parenting support services. Table B1 in appendix B provides a full list of the items we used to calculate the benefits, the sources of our price data, and the assumptions that were made in determining the unit prices of each benefit item. Table 3 shows our estimate of the benefit per person to both government and society. The positive numbers in the table reflect gains from J2SI while the negative numbers indicate losses[17].

The present value of the total benefit of J2SI is slightly higher for society ($17,882) than for government ($12,282). The difference between the two figures primarily stems from accommodation and homelessness support services. With respect to supportive accommodation, only the costs of support services and the administrative costs of tenancy changes are included in the calculation of the benefit to society.

TABLE 3: BENEFIT OF J2SI ($ PER PARTICIPANT)

	SOCIETY		GOVERNMENT	
	YEAR 1	YEAR 2	YEAR 1	YEAR 2
Earnings	61	-903	-	-
Tax and transfer	-	-	1,901	1,194
Health service	10,216	10,168	10,216	10,168
Drug and alcohol services	1,413	347	1538	471
Accommodation and homeless support services	2,959	4,787	-1,157	-1,019
Other services	674	-307	674	-307
Contact with justice system	-8,185	-2,920	-8,185	-2,920
TOTAL BENEFIT (per participant)	7,138	11,173	4,986	7,588
PRESENT VALUE OF BENEFIT (per participant)	**$17,882**		**$12,282**	

[17] We use Group J minus Group E to calculate the employment benefit. For the remaining calculations we use Group E minus Group J.

Our reasoning here is that accommodation is a necessity and thus accommodation costs are effectively a transfer between members of society. In our calculation of the benefit to government, the subsidies government provides for accommodation (e.g. public housing subsidies) are included. It is important to note that some of the subsidies were derived from the opportunity cost of public housing, and may not be the actual costs to government if a cash flow approach was applied.

We consider increased earnings as a benefit to society, while increases in tax and reductions in income support payments are considered a benefit to government. However, given that the employment rate in both groups is very low, the difference between the two groups is small. The negative benefit to society in the second year is largely driven by one person in Group E who reported considerable earnings.

In terms of health service use, we assume all treatments are publicly funded given the degree of disadvantage among this population. Similarly, there are no differences between government and society perspectives for the cost of drug and alcohol detoxification services, contact with the justice system and other services, as we assume these services are all government funded.
The major societal benefit of J2SI is the reduction in health services and accommodation and homelessness support services. As shown in Chapter 4, reduced demand and reduced lengths of stay in hospital are where the largest benefits accrue. In terms of accommodation and homeless support services, the majority of Group J are housed in public housing. In addition, Group J moved less frequently than Group E, so the costs associated with moving and changing tenancies are lower for Group J.

In terms of contact with the justice system, Group J had a higher average number of days incarcerated which results in relatively high costs. However, as discussed in Chapter 4, while the amount of time incarcerated in Group J was higher in the first 18 months, this was often the result of offences committed before the J2SI project began. Further, if any of the people in Group E who dropped out of the study were incarcerated this would impose a negative bias on these results, resulting in an under-estimation of the true benefit of the J2SI pilot.

Finally, following established conventions we treat the use of drug and alcohol services as a cost to society. However, given that 89% of participants had drug and alcohol problems prior to the start of the trial (Johnson et al. 2011), the use of detoxification services is a positive change for the participants, particularly in the early stages of a program. This raises an important issue – other studies show that the cost of interventions like J2SI are high in the early stages as people start to receive a more comprehensive range of services designed to deal with their health, drug and related problems. Not only should these costs decline in the longer term, but with improvements in people's health, self-esteem and the like, other potential benefits may start to emerge.

5.5 NET BENEFIT OF THE J2SI PROJECT

In this section we present the two commonly used measures in CBA – the net benefit and the benefit-cost ratio. The net benefit, in which costs are subtracted from the benefits, shows the size of the return. The benefit-cost ratio measures the return per dollar invested – for example where the benefit-cost ratio is 1.5, this means that for every dollar invested the return or savings to the community is $1.50. A benefit-cost ratio that is greater than one indicates the benefits exceed the costs.

Based on the estimates discussed in the previous two sections, the last column in Table 4 shows that in the first two years the costs outweigh the benefit, from both a government and society perspective – for every dollar invested the return is 0.24 and 0.35 respectively.

However, the estimated benefit in our basic measure does not include the lives saved by the J2SI project – in the first two years there were two lives lost among Group E and none in Group J.

According to the 'Best Practice Regulation Guidance Note - Value of statistical life' published by the Australian Government Department of Finance and Deregulation (2008), the value of a statistical life year in 2007 was $151,000. The value of a statistical life year is an estimate of the 'value society places on reducing the risk of premature death, expressed in terms of saving a statistical life year'. We adjusted the value to 2011/12 dollars ($199,074) and applied it to the benefits in the first two years. The result is that the benefit-cost ratio increases from 0.35 in the basic model to 0.71. If we assume the gap of two statistical lives between Group E and J persists for 10 years[18], the benefit to cost ratio increases to 2.03 – that is for every dollar invested there is a $2.03 return to the community. However, while lives saved is a tangible benefit for both the individual and the community, placing a monetary value on a person's life is a contentious activity. Thus, the point of this exercise is to illustrate the potential size of under-estimation of the benefit of the J2SI project.

The final two lines of Table 4 provide the results of our sensitivity analysis that explicitly deals with sample attrition. Our sample size is too small to correct attrition bias using econometric methods so we created upper and lower bounds by assigning the best possible and worse possible outcomes to the participants we lost along the way. When the worst possible outcomes are assigned to the participants we lost, the average outcomes of both groups are worse. However, the changes are larger for Group E than Group J as Group E has a higher attrition rate.

This means that we observe larger differences between Group J and Group E compared to the original differences. The larger difference thus yields a higher estimated benefit, which we use as an upper bound of the program impact. Similarly, if we assign the best possible outcomes to those participants we lost, the new estimated benefit will be smaller than the original and can be considered as the lower bound of the program impact[19].

TABLE 4: NET BENEFIT (PER PARTICIPANT) AND BENEFIT-COST RATIO OF J2SI PROGRAM

	BENEFIT (per person)	NET BENEFIT (benefit-cost)	BENEFIT-COST RATIO (benefit/cost)
NPV government (basic)	12,282	-39,116	0.24
NPV society (basic)	17,882	-33,516	0.35
NPV society (statistical life-first two years)	36,477	-14,921	0.71
NPV society (statistical life-10 years)	104,251	52,853	2.03
NPV society (upper bound)	75,015	23,617	1.46
NPV society (lower bound)	614	-50,784	0.01

[18] A UK study by the Crisis organisation (Crisis 2011) shows that the average age of death of a homeless person is 47 years old. The average age of our participants at baseline is 36.3. Therefore, we assume a 10 year statistical life. In addition, another person in Group E and one person from Group J passed away in the third year, meaning the gap of statistical life years remained two. Thus, we believe our assumption of a gap of two statistical lives over a 10 year period is conservative.

[19] It is possible that the people who missed a survey have more extreme outcomes than the maximum and minimum of the observed outcomes. However, it is unlikely that average outcomes of all people who missed a survey are more extreme than the maximum and minimum of observed outcomes. Therefore, we are confident that the new estimates can be treated as the upper and lower bounds of the net benefit.

Using these upper and lower bound assumptions we re-calculated the benefit-cost ratio. Table 4 shows that in the best case scenario, the J2SI project generates a benefit which is higher than the cost (1.46). However, in the worst case scenario, the benefit is very small and yields a large negative net benefit (0.01). This raises the question of which direction the attrition bias will go? As discussed previously, our analysis of attrition shows that individuals with worse outcomes are more likely to miss the next survey. This result is generally supported in the existing longitudinal literature (Wong and Piliavin 1997). Finally, although the lower bound estimate is very small, it does give us the confidence that J2SI project generates positive outcomes even in the worst case scenario.

To summarise, although some important benefits defy quantification, the CBA shows that the J2SI project generates positive outcomes. It also shows that while the short term costs are higher than the benefit, in the long-run, the benefits may potentially outweigh the costs.

THUS, WE BELIEVE IT IS REASONABLE TO ASSUME THE TRUE BENEFIT OF J2SI IS LOCATED SOMEWHERE BETWEEN THE BASIC ESTIMATE OF $17,882 (A BENEFIT-COST RATIO OF 0.35) AND THE UPPER BOUND ESTIMATE OF $75,015 (A BENEFIT-COST RATIO OF 1.46).

6. CONCLUSION

After 24 months, the findings challenge the entrenched view that the long-term homeless are resistant to service intervention and incapable of maintaining their housing. The capacity of J2SI to successfully engage and assist the long-term homeless is both a significant achievement, but also a strong sign that to successfully work with the long-term homeless agencies need sufficient resources and the capacity to respond flexibly.

Clearly, the most defining outcome for the program is the ongoing housing stability for a significant majority of the J2SI participants. The housing retention rates match and even surpass similar supportive housing programs overseas. This is a substantial achievement for the project.

There are signs of improvement in other areas, most notably improvements in physical health and emotional well-being, as well as sustained declines in service use. This is particularly important as the costs involved in repeated use of health services for instance are high. The data indicates that intensive case management is effective at reducing the public burden associated with overuse of the health system. In addition, many J2SI participants are now actively looking for work, and this is a good sign. But securing employment is difficult and the long-term homeless face numerous obstacles such as poor employment histories, lows levels of education, health issues and in many cases criminal records.

However, the report also shows that there are limited changes in more enduring patterns of behaviour, particularly around problematic drug use and to a lesser extent criminal behaviour (offences committed). Policy makers and service providers need to be cautious and realistic in their expectations of what services can do to change patterns of problematic drug use. Other research, as well as the data in this report, indicates that changing a lifetime pattern of addiction is extremely difficult and the connection between illegal activities and maintaining an addiction is well documented.

It is also the case that the circumstances of some of those remaining in Group E have improved over time. In some areas, such as their involvement with the justice system, Group E is in fact doing better. While non-random attrition may be a factor, it is not entirely surprising that the existing service system has an impact given the sizable investments governments have made. However, the report indicates that overall effectiveness of the existing service system is less than the J2SI project. Although the differences are generally not statistically significant, this has much to do with the small sample, the difficulty in measuring change and also that to be statistically significant any change has to be dramatically different – while this has proven to be the case with housing, time will tell for other areas. Nonetheless, the results reinforce the importance of long-term intensive support that is individually tailored and delivered in a flexible manner.

As we noted in earlier reports, the biographies ofthe long-term homeless are characterised by enduring structural disadvantages and complex traumatic experiences. The long-term homeless have social networks that ameliorate some of the exclusionary and stigmatizing effects of being homeless. But these networks are double edged – while they provide a sense of belonging and meaning in their lives, they also link people into social practices that are dangerous to their physical and emotional health and often undermine their efforts to get out and stay out of homelessness.

For the long-term homeless establishing new social networks is an enormous challenge. Nonetheless, the report shows that given time and the right sort of support the long-term homeless can make the transition out of homelessness. Program designers need to be more sensitive to the fact that the transition out of

homelessness is a complex journey and there are often setbacks along the way. Having a service assist people through the transition out of homelessness is critical if the journey out is to be a permanent one.

Finally, we have attempted the first cost-benefit analysis of an intervention designed to end long-term homelessness. This was not an easy task and many of the intangible but important benefits that have emerged as a result of the J2SI intervention – improved confidence, trust and motivation - are not included. Nonetheless, the benefit-cost analysis confirms that the costs of the program are high in its early stages. Given the circumstances of the participants when they started the program this is not entirely surprising. However, the report indicates that over the longer term the potential benefits exceed the costs. This clearly suggests that programs working with the long-term homeless must be seen as long-term investments with potential cost savings to society and government.

Clearly, much has been achieved but it is also the case that with 12 months still to run the program has the capacity to effect further and potentially significant changes, particularly for those participants struggling to make a permanent transition out of long-term homelessness. While the J2SI project has done well overcoming the barriers people face accessing and sustaining housing, and while there are other promising signs, until we have data for the duration of the program we cannot determine the full social impact of the J2SI pilot. In 12 months time we will report on the outcomes of the J2SI project after it has run for its full term of three years. At that stage we will be able to provide a more complete picture as to whether the J2SI pilot project has met the challenge of ending long-term homelessness.

REFERENCES

Ashton, H. (2005). 'The diagnosis and management of benzodiazepine dependence', in Current Opinion in Psychiatry. 18(3): 249-255.

Babidge, N. C., N. Buhrich and T. Butler (2001). 'Mortality among homeless people with schizophrenia in Sydney, Australia: a 10-year follow up', in Acta Psychiatrica. 103(2): 105-110.

Culhane, D. and S. Metraux (2008). 'Rearranging the deck chairs or reallocating the lifeboats', in Journal of the American Planning Association. 74(1): 111-121.

Culhane, D., S. Metraux and T. Hadley (2002). 'The impact of supportive housing for homeless people with severe mental illness on the utilization of the public health, corrections, and emergency shelter systems: The New York-New York Initiative', in Housing Policy Debate. 13(1): 107-163.

Crisis (2011). Homelessness: A silent killer. A research briefing on mortality among the homeless. Crisis, London

Erebus Consulting Partners (2004). National Evaluation of the Supported Accommodation Assistance Program (SAAP IV) - Final Report. Canberra, Commonwealth of Australia.

FaHCSIA (2008). The Road Home: A National approach to reducing homelessness. Canberra, Department of Families, Housing, Community Services and Indigenous Affairs.

Fitzpatrick, S. (2000). Young Homeless People. Basingstoke, MacMillan.

Fountain, J. and S. Howes (2002). Home and dry? Homelessness and substance use in London. London, National Addiction Centre.

Gossop, M., D. Stewart, S. Treacy and J. Marsden (2002). 'A prospective study of mortality among drug misusers during a 4-year period after seeking treatment', in Addiction. 97(39-47).

Gulcur, L., D. Stefanie, M. Shinn, S. Tsemberis and S. Fischer (2003). 'Housing, hospitalisation, and cost outcomes for homeless individuals with psychiatric disabilities participating in continuum of care and Housing First programmes', in Journal of Community and Applied Social Psychology. 12(2): 171-186.

Henderson, N., J. Ross, S. Darke, M. Teesson and M. Lynskey (2002). Longitudinal studies of dependent heroin users in Australia: Feasibility and Benefits. Monograph No. 49. Sydney, National Drug and Alcohol Research Centre, University of New South Wales.

Horn, M. (1999). Drugs and Homelessness: The Prevalence of Alcohol and Drug Dependence among People experiencing Homelessness. Melbourne, Hanover Welfare Services.

Horn, M. (2002). Increasing Homelessness: Evidence of housing market failure in Australia.

Hwang, S., R. Wilkins, M. Tjepkema, P. O'Campo and J. Dunn (2009). 'Mortality among residents of shelters, rooming houses and hotels in Canada: 11 year follow-up study', in BMJ online.

Johnson, G. and C. Chamberlain (2008). 'Homelessness and substance abuse: Which comes first?', in Australian Social Work. 61(4): 342-356.

Johnson, G., H. Gronda and S. Coutts (2008). On the Outside: Pathways in and out of homelessness. Melbourne, Australian Scholarly Press.

Johnson, G., S. Parkinson and C. Parsell (2012). Policy shift or program drift: Implementing Housing First in Australia. Melbourne, Australian Institute of Housing and Urban Research.

Johnson, G., S. Parkinson, Y.-P. Tseng and D. Kuehnle (2011). Long term homelessness: Understanding the Challenge. Melbourne, Sacred Heart Mission.

Kemp, P., J. Neale and M. Robertson (2006). `Homelessness among problem drug users: prevalence, risk factors and trigger events', in Health and Social care in the Community. 14(4): 319-328.

Kertesz, S. and S. Weiner (2009). `Housing the chronically homeless: High hopes, complex realities', in Journal of the American Medical Association. 301(17): 1822-1824.

Larimer, M., D. Malone, M. Garner, D. Atkins, B. Burlingham, H. Lonczak, K. Tanzer, J. Ginzler, S. Clifasefi, W. Hobson and G. Marlatt (2009). `Health care and public service use and costs before and after provision of housing for chronically homeless persons with severe alcohol problems', in Journal of the American Medical Association. 301(13): 1349-1357.

LenMac Consulting (2005). Sustaining Housing After Homelessness. Final Research Report to the National SAAP Coordination and Development Committee. Canberra.

Lennon, M. C., W. McAllister, L. Kuang and D. Herman (2005). `Capturing intervention effects over time: Reanalysis of a critical time intervention for homeless mentally ill men', in American Journal of Public Health. 95(10): 1760-1766.

Leukefeld, C. and W. Bukoski (1991). `An Introduction to Drug Abuse Prevention Intervention Research: Methodological Issues', in. Drug Abuse Prevention Intervention Research: Methodological Issues. C. Leukefeld and W. Bukoski (editors). Rockville and Washington, DC, U.S. Department of health and Human services, Public Health Service Alcohol, Drug Abuse, and Mental Health Administration. NIDA Research Monograph 107.

Lewis, D. and A. Lurigio (1994). The State Mental Patient and Urban Life. Springfield, Illinois, Charles.C.Thomas.

McDermott, S., J. Bruce, K. R. Fisher and K. Muir (2009). Evaluation of the whole of mental health, Housing and Accommodation Support Initiative (HASI) Evaluation Plan, Social Policy Research Centre.

McDermott, S., J. Bruce, I. Oprea, K. R. Fisher and K. Muir (2011). Evaluation of the Mental Health, Housing and Accommodation Support Initiative (HASI) - Second Report. Sydney, University of New South Wales, Social Policy and Research Centre.

McNaughton Nichols, C. and I. Atherton (2011). `Housing First: considering components for successful resettlement of homeless people with multiple needs', in Housing Studies. 25(5): 767-777.

Milby, J., J. Schumacher, D. Wallace, M. Freedman and R. Vuchinich (2005). `To house or not to house: The effects of providing housing to homeless substance abusers in treatment', in American Journal of Public Health. 95(7): 1259-1265.

Mission Australia (2012). The Michael Project, 2007-2010: New perspectives and possibilities for homeless men. Sydney, Mission Australia.

Mission Australia and Murdoch University (2010). Increasing our understanding of homeless men: The Michael project. Sydney, Mission Australia.

Muir, K. and K. Fisher (2007). `Stable Housing: The foundation of improved mental health. Findings from the Housing and Accommodation Support Initiative (HASI)', in New Paradigm/Parity. September: 50-53.

Neale, J. (2001). `Homelessness amongst drug users: A double jeopardy explored', in The International Journal of Drug Policy. 12: 353-369.

Neil, C. and R. Fopp (1993). Homelessness in Australia: Causes and Consequences. Melbourne, CSIRO.

O'Connell, M., W. Kasprow and R. Rosenheck (2009). `Direct placement versus multistage models of support housing in a population of veterans who are homeless', in Psychological Services. 6(3): 190-201.

Padgett, D. (2007). `There's no place like (a) home: Ontological security among persons with a serious mental illness in the United States', in Social Science and Medicine. 64(9): 1925-1936.

Padgett, D., L. Gulcur and S. Tsemberis (2006). `Housing first services for people who are homeless with co-occurring serious mental illness and substance abuse', in Research on Social Work. 16(1): 74-83.

Paris, C. (1993). Housing Australia. South Melbourne, MacMillan Education Australia.

Parkinson, S. (2012). The Journey to Social Inclusion Project in Practice: A Process Evaluation of the First 18 months. St.Kilda, Sacred Heart Mission.

Pleace, N. (2011). `The ambiguities, limits and risks of Housing First from a European perspective', in European Journal of Homelessness. 5(2): 113-127.

Rosenheck, R. (2010). `Service models and mental heath problems: Cost-effectiveness and policy relevance', in. How to House the Homeless. I. Ellen and B. O'Flaherty (editors). New York, Russell Sage Foundation.

Sadowski, L., R. Kee, T. Vanderweele and D. Buchanan (2009). `Effect of a housing and case management program on emergency department visits and hospitalizations among chronically ill homeless adults: a randomized trial', in Journal of the American Medical Association. 301(17): 1771-1778.

Schutt, R. K. and S. Goldfinger (2011). Homelessness, Housing and Mental Illness. Cambridge, Massachusetts, Harvard University Press.

Scutella, R., G. Johnson, J. Moschion, Y. Tseng and M. Wooden (2012). Wave 1 Journeys Home Research Report. Canberra, Department of Families, Housing, Community Services and Indigenous Affairs.

Sibley, D. (1995). Geographies of Exclusion. London, Routledge.

Snow, D. and L. Anderson (1993). Down on their luck: A study of street homeless people. Berkeley, University of California Press.

Susser, E., E. Valencia, S. Conover, A. Felix, W. Y. Tsai and R. J. Wyatt (1997). `Preventing recurrent homelessness among mentally ill men: A "critical time" intervention after discharge from a shelter', in American Journal of Public Health. 87(2): 256-262.

Teesson, M., T. Hodder and N. Buhrich (2000). `Substance abuse disorders among homeless people in the inner Sydney', in Social Psychiatry. 35: 451-456.

Teesson, M., T. Hodder and N. Buhrich (2003). `Alcohol and other drug use disorders among homeless people in Australia', in Substance Use & Misuse. 38(3-6): 463-474.

Tommasello, A., P. Myers, L. Gillis, L. Treherne and M. Plumhoff (1999). `Effectiveness of outreach to homeless substance abusers', in Evaluation and Program Planning. 22: 295-305.

Tsemberis, S. (1999). `From streets to homes: an innovative approach to supported housing for homeless adults with psychiatric disabilities', in Journal of Community Psychology. 27(2): 225-241.

Tsemberis, S. (2010). `Housing First: Ending homelessness, promoting recovery and reducing cost', in. How to house the homeless. I. Ellen and B. O'Flaherty (editors). New York, Russell Sage Foundation.

Tsemberis, S. and R. Eisenberg (2000). `Pathways to housing: supported housing for street-dwelling homeless individuals with psychiatric disabilities', in Psychiatric Services. 51(4).

Tsemberis, S., L. Gulcur and M. Nakae (2004). `Housing first, consumer choice, and harm reduction for homeless individuals with a dual diagnosis', in American Journal of Public Health. 94(4): 651-656.

Wong, I. and I. Piliavin (1997). `A dynamic analysis of homeless-domicile transitions', in Social Problems. 44(3): 408-423.

Yanos, P., B. Felton, S. Tsemberis and V. Frye (2007). `Exploring the role of housing type, neighbourhood characteristics, and lifestyle factors in the community integration of formerly homeless persons diagnosed with a mental illness', in Journal of Mental Health. 16(6): 703-717.

APPENDIX

APPENDIX A – TABLES

TABLE 1: PROPORTION HOUSED

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
Referal	0			0				
0m	12.1	87.9	33	2.4	97.6	42	9.7	0.126
6m	62.2	37.8	37	14.3	85.7	35	47.9	0
12m	77.8	22.2	36	29.4	70.6	34	48.4	0
18m	88.9	11.1	36	48.4	51.6	31	40.5	0
24m	86.1	13,9	36	53.1	46.9	32	27.4	0.003

TABLE 2: AVERAGE NUMBER OF MOVES

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	5	7.4	33	5	8.3	40	-0.1	0.976
6m	5	7.9	37	2.6	4.3	35	2.4	0.108
12m	0.4	0.9	36	3.1	4.9	34	-2.7	0.003
18m	0.4	1.1	36	0.5	0.9	31	-0.1	0.774
24m	1.2	4.5	35	3.3	15.9	32	-2.2	0.459

TABLE 3: AVERAGE SCORE IN DASS 42

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	54.5	36.6	33	63.2	31	41	-8.7	0.279
6m	49	33.7	35	53.3	32.7	35	-4.3	0.586
12m	54.2	34.4	36	54.1	30.7	34	0.1	0.989
18m	49.4	38.2	35	47.2	29.9	31	2.1	0.799
24m	39.8	32.9	35	49.9	31.2	32	-10	0.204

TABLE 4: DASS 42 - DEPRESSION SCORE ONLY

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	19.1	12.6	33	22.5	13.1	42	-3.4	0.261
6m	17	13.1	35	18.2	13.6	35	-1.1	0.722
12m	18	12.7	36	18	13.4	34	0	1
18m	17	13.6	35	15.6	12.2	31	1.4	0.658
24m	15	13	35	17	12.5	32	-2	0.53

TABLE 5: DASS 42 - ANXIETY SCORE ONLY

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	15.2	13.8	33	17.2	11.5	42	-2.1	0.488
6m	13.8	11.6	35	15.6	11.4	35	-1.8	0.522
12m	15.3	12.7	36	15.9	11.5	34	-0.6	0.835
18m	14.3	13.3	35	12.5	9.5	31	1.8	0.519
24m	10.2	10.9	35	13.2	10	32	-3	0.242

TABLE 6: DASS 42 - STRESS SCORE ONLY

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	20.2	13.1	33	23.4	11.4	42	-3.2	0.273
6m	18.1	11.5	35	19.5	11.5	35	-1.4	0.605
12m	20.9	12.1	36	20.2	11.8	34	0.7	0.804
18m	18.1	13.1	35	19.2	11.8	31	-1.1	0.72
24m	14.6	11.9	35	19.7	12	32	-5.1	0.088

TABLE 7: PERCENTAGE REPORTING NO BODY PAIN

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	27.3	72.7	33	23.8	76.2	42	3.5	0.738
6m	27.8	72.2	36	17.1	82.9	35	10.6	0.289
12m	33.3	66.7	36	20.6	79.4	34	12.7	0.235
18m	31.4	68.6	35	25.8	74.2	31	5.6	0.62
24m	51.4	48.6	35	29	71	31	22.4	0.065

TABLE 8: USED EMERGENCY HOSPITAL DEPARTMENT, IN PAST 6 MONTHS (USAGE RATE %)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	33.3	66.7	33	52.4	47.6	42	-19	0.1
6m	29.7	70.3	37	51.4	48.6	35	-21.7	0.063
12m	25	75	36	47.1	52.9	34	-22.1	0.056
18m	27.8	72.2	36	32.3	67.7	31	-4.5	0.696
24m	27.8	72.2	36	28.1	71.9	32	-0.3	0.975

TABLE 9: USED EMERGENCY PSYCHIATRIC SERVICES, IN PAST 6 MONTHS (USAGE RATE %)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	24.2	75.8	33	11.9	88.1	42	12.3	0.181
6m	16.2	83.8	37	2.9	97.1	35	13.4	0.054
12m	5.6	94.4	36	11.8	88.2	34	-6.2	0.366
18m	8.3	91.7	36	9.7	90.3	31	-1.3	0.851
24m	13.9	86.1	36	9.4	90.6	32	4.5	0.567

TABLE 10: ADMITTED TO HOSPITAL, IN PAST 6 MONTHS (USAGE RATE %)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	27.3	72.7	33	42.9	57.1	42	-15.6	0.162
6m	21.6	78.4	37	42.9	57.1	35	-21.2	0.056
12m	19.4	80.6	36	29.4	70.6	34	-10	0.34
18m	22.2	77.8	36	29	71	31	-6.8	0.533
24m	22.2	77.8	36	28.1	71.9	32	-5.9	0.583

TABLE 11: ADMITTED TO PSYCHIATRIC UNIT, IN PAST 6 MONTHS (USAGE RATE %)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	24.2	75.8	33	11.9	88.1	42	12.3	0.294
6m	16.2	83.8	37	2.9	97.1	35	13.4	0.66
12m	5.6	94.4	36	11.8	88.2	34	-6.2	0.154
18m	8.3	91.7	36	9.7	90.3	31	-1.3	0.77
24m	13.9	86.1	36	9.4	90.6	32	4.5	0.533

TABLE 12: USED GENERAL HOSPITAL, AVERAGE NUMBER OF DAYS USERS ONLY (USAGE INTENSITY %)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	16.1	24.1	9	6.9	8.7	18	9.2	0.294
6m	8.9	16.8	8	12.3	18	15	-3.4	0.66
12m	3	2.6	7	12	18.1	10	-9	0.154
18m	8.9	16.8	8	11.4	18.7	9	-2.6	0.77
24m	7.5	14	8	19.1	51.7	9	-11.6	0.533

TABLE 13: USED EMERGENCY HOSPITAL, AVERAGE NUMBER OF TIMES USERS ONLY (USAGE INTENSITY %)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	4.6	7.2	11	2.7	2.8	22	1.9	0.416
6m	3	3.6	11	2.2	1.9	18	0.8	0.486
12m	2.1	3	9	2.8	4	16	-0.6	0.653
18m	5.4	7.7	10	1.6	1	10	3.8	0.154
24m	2.6	2.4	10	1.6	0.7	9	1	0.219

TABLE 14: USED EMERGENCY PSYCHIATRIC SERVICES, AVERAGE NUMBER OF TIMES UERS ONLY (USAGE INTENSITY %)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	5.7	12.9	9	1.7	1.2	3	4	0.383
6m	2.8	3.5	6	4	-	1	-1.2	-
12m	5.5	6.4	2	8.8	14.2	4	-3.2	0.719
18m	1.8	1.5	4	1.3	0.6	3	0.4	0.638
24m	1.2	0.4	5	2.7	2.9	3	-1.5	0.472

TABLE 15: ADMITTED TO PSYCHIATRIC UNIT, AVERAGE NUMBER OF DAYS UERS ONLY (USAGE INTENSITY %)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	24	21.3	8	38.6	46.7	5	-14.6	0.54
6m	22.8	15	6	60	-	1	-37.2	-
12m	37.5	46	2	41	30.9	4	-3.5	0.934
18m	29.3	20	3	52.7	59.5	3	-23.3	0.575
24m	20.2	1.8	5	30	26	3	-9.8	0.581

TABLE 16: USE OF EMERGENCY HOSPITAL, AVERAGE NUMBER OF DAYS INCL NON USERS (AVERAGE USE)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	1.5	4.6	33	1.4	2.4	42	0.1	0.896
6m	0.9	2.3	37	1.1	1.7	35	-0.2	0.646
12m	0.5	1.7	36	1.3	3	34	-0.8	0.199
18m	1.5	4.7	35	0.5	0.9	31	1	0.211
24m	0.7	1.7	36	0.4	0.8	32	0.3	0.373

TABLE 17: USE OF EMERGENCY PSYCHIATRIC SERVICES, AVERAGE NUMBER OF DAYS INCL NON USERS (AVERAGE USE)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	1.5	6.9	33	0.1	0.5	42	1.4	0.247
6m	0.5	1.7	37	0.1	0.7	35	0.3	0.257
12m	0.3	1.7	36	1	5.1	34	-0.7	0.439
18m	0.2	0.7	35	0.1	0.4	31	0.1	0.624
24m	0.2	0.4	36	0.3	1.1	32	-0.1	0.686

TABLE 18: USE OF GENERAL HOSPITAL, AVERAGE NUMBER OF DAYS INCL NON USERS (AVERAGE USE)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	4.4	14.1	33	3	6.6	42	1.4	0.59
6m	1.9	8.3	37	5.3	13.1	35	-3.3	0.204
12m	0.6	1.6	36	3.5	11	34	-2.9	0.13
18m	2	8.5	36	3.3	11	31	-1.3	0.599
24m	1.7	7	36	5.4	27.7	32	-3.7	0.466

TABLE 19: ADMITTED TO PSYCHIATRIC UNIT, AVERAGE NUMBER OF DAYS INCL NON USERS (AVERAGE USE)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	5.8	14.4	33	4.6	19.3	42	1.2	0.755
6m	3.7	10.2	37	1.7	10.1	35	2	0.41
12m	2.1	11.7	36	4.8	16.3	34	-2.7	0.425
18m	2.5	9.6	36	5.1	22.1	31	-2.6	0.55
24m	2.8	7.1	36	2.8	11.1	32	0	0.998

TABLE 20: USE OF HOMELESSNESS SERVICES, AVERAGE NUMBER OF TIMES

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	3.5	5.2	33	5.9	9	42	-2.4	0.156
6m	2.2	8.4	35	5.7	19.3	35	-3.6	0.321
12m	0.9	4	36	7.9	29.1	34	-6.9	0.177
18m	0.9	2.7	36	1.5	6	31	-0.6	0.615
24m	0.6	1.6	36	0.8	2.4	32	-0.2	0.698

TABLE 21: USE OF CRISIS ACCOMMODATION, AVERAGE NUMBER OF TIMES

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	0.6	0.9	33	0.3	0.7	42	0.4	0.066
6m	0.4	1.1	35	0.7	2.2	35	-0.2	0.58
12m	0	0.2	36	0.2	0.6	34	-0.2	0.099
18m	0.1	0.2	36	0	0.2	31	0	0.645
24m	0.1	0.3	36	0.5	2.3	32	-0.4	0.321

TABLE 22: USE OF MEALS PROGRAM, AVERAGE NUMBER OF TIMES

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	76	73.7	33	67	70.8	42	8.9	0.597
6m	44.3	63.7	35	53.1	66.2	35	-8.7	0.575
12m	34	67.9	36	47.8	64.9	34	-13.8	0.388
18m	30.9	52.5	36	32.1	54	31	-1.2	0.926
24m	32	48.9	36	49.9	109.3	32	-18	0.396

TABLE 23: PROPORTION CHARGED WITH A CRIMINAL OFFENCE, LAST 6 MONTHS

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	27.3	72.7	33	23.8	76.2	42	3.5	0.738
6m	22.2	77.8	36	29.4	70.6	34	-7.2	0.5
12m	16.7	83.3	36	20.6	79.4	34	-3.9	0.679
18m	25	75	36	19.4	80.6	31	5.6	0.585
24m	25	75	36	9.4	90.6	32	15.6	0.087

TABLE 24: PROPORTION INCARCERATED, LAST 6 MONTHS

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	9.7	90.3	31	2.4	97.6	41	7.2	0.228
6m	14.3	85.7	35	0	100	35	14.3	0.023
12m	13.9	86.1	36	0	100	34	13.9	0.023
18m	8.3	91.7	36	0	100	31	8.3	0.083
24m	5.6	94.4	36	6.3	93.8	32	-0.7	0.905

TABLE 25: AVERAGE NUMBER OF DAYS INCARCERATED, LAST 6 MONTHS (INCL 0s)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	8.1	29.9	31	0	0	40	8.1	0.143
6m	11.5	42.9	35	0	0	35	11.5	0.122
12m	13.8	44	36	0	0	34	13.8	0.068
18m	6.1	30.4	36	0	0	31	6.1	0.233
24m	2.6	11.4	36	1.9	10.6	32	0.7	0.801

TABLE 26: % WHO USED IN THE LAST 6 MONTHS, GROUP J

	SURVEY PERIOD				
	0	6	12	18	24
ALCOHOL	68	55.6	65.7	60	69.4
HEROIN	39.3	29.7	31.4	32.4	28.6
METHADONE	39.3	36.1	30.6	35.3	34.3
ICE	18.8	11.4	30.6	33.3	19.4
SPEED	22.6	22.9	16.7	14.7	8.3
BENZODIAZEPINES	45.8	50	54.3	47.1	41.7
CANNABIS	60.9	44.1	63.9	60.6	50
ILLEGAL	66.7	64.9	80.6	82.4	77.8

TABLE 27: % REPORTED USING FREQUENTLY IN THE LAST 6 MONTHS, GROUP J

	SURVEY PERIOD				
	0	6	12	18	24
ALCOHOL	4	8.3	5.7	8.6	11.1
HEROIN	7.1	16.2	8.6	17.6	20
METHADONE	39.3	33.3	30.6	35.3	34.3
ICE	3.1	0	5.6	9.1	8.3
SPEED	6.5	2.9	0	2.9	0
BENZODIAZEPINES	33.3	38.2	48.6	38.2	36.1
CANNABIS	34.8	32.4	44.4	42.4	41.2
ILLEGAL	42.4	48.6	63.9	64.7	69.4

TABLE 28: % WHO USED IN THE LAST 6 MONTHS, GROUP E

	SURVEY PERIOD				
	0	6	12	18	24
ALCOHOL	74.4	61.8	60.6	58.6	70
HEROIN	45.9	34.4	40.6	30	26.7
METHADONE	36.8	44.1	51.5	45.2	44.8
ICE	10.3	17.1	14.7	9.7	9.7
SPEED	15.4	5.7	11.8	9.7	12.9
BENZODIAZEPINES	55.6	52.9	45.5	35.5	41.9
CANNABIS	57.1	60	71	70	58.1
ILLEGAL	73.8	74.3	82.4	87.1	80.6

TABLE 29: % REPORTED USING FREQUENTLY IN THE LAST 6 MONTHS, GROUP E

	SURVEY PERIOD				
	0	6	12	18	24
ALCOHOL	7.7	17.6	9.1	10.3	13.3
HEROIN	27	15.6	9.4	6.7	10
METHADONE	36.8	44.1	45.5	41.9	44.8
ICE	2.6	2.9	0	0	0
SPEED	2.6	0	2.9	0	0
BENZODIAZEPINES	44.4	32.4	33.3	26.3	32.3
CANNABIS	34.3	50	48.4	50	48.4
ILLEGAL	61.9	60	58.8	64.5	67.7

TABLE 30: LABOUR FORCE PARTICIPATION (%)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	30.3		33	26.2		42	4.1	
6m	29.7		37	34.3		35	-4.6	
12m	41.7		36	14.7		34	27	
18m	51.4		35	16.1		31	35.3	
24m	44.4		36	28.1		32	16.3	

TABLE 31: PROPORTION UNEMPLOYED BUT LOOKING FOR WORK

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	27.3	72.7	33	21.4	78.6	42	5.8	0.567
6m	27	73	37	31.4	68.6	35	-4.4	0.687
12m	30.6	69.4	36	11.8	88.2	34	18.8	0.055
18m	40	60	35	12.9	87.1	31	27.1	0.011
24m	36.1	63.9	36	12.5	87.5	32	23.6	0.022

TABLE 32: NUMBER OF TIMES PARTICIPATED IN ALL EMPLOYMENT SERVICES

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	2.6	5.9	33	4.8	18.9	42	-2.2	0.486
6m	0.2	0.7	36	2.2	7.2	35	-2	0.111
12m	3.4	10	36	2.1	9.3	34	1.2	0.601
18m	3.1	7.5	36	0.4	1.3	31	2.7	0.037
24m	7	14	36	0.5	1.6	32	6.5	0.009

TABLE 33: DOING PAID WORK (%)

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	3	97	33	4.8	95.2	42	-1.7	0.701
6m	2.7	97.3	37	2.9	97.1	35	-0.2	0.969
12m	11.1	88.9	36	2.9	97.1	34	8.2	0.184
18m	11.4	88.6	35	3.2	96.8	31	8.2	0.201
24m	8.3	91.7	36	15.6	84.4	32	-7.3	0.367

TABLE 34: SOCIAL ACCEPTANCE SCALE

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	14.4	4.6	31	14.2	4.7	40	0.7	0.53
6m	16.3	4.5	30	15.9	5.3	35	0.4	0.712
12m	16.4	5.2	28	16.3	5	28	0	0.979
18m	17.5	5.6	29	17.2	5	26	0.3	0.82
24m	18.1	4.9	27	17.9	5	26	0.2	0.912

TABLE 35: SOCIAL SUPPORT SCALE

	MEAN GROUP J	SD	n	MEAN GROUP E	SD	n	dif J-E	pvalue
0m	29.2	8.5	32	30.3	11.2	39	-1.1	0.652
6m	32.5	10.3	30	32.3	11.2	34	0.2	0.949
12m	31.5	12.6	27	33	10.8	30	-1.5	0.637
18m	30.5	9.2	27	33	9.4	27	-2.5	0.324
24m	33.1	10.1	28	35.2	9.1	26	-2	0.438

APPENDIX B – COST BENEFIT ANALYSIS: APPROACH AND ASSUMPTIONS

STEPS TO GENERATE NET BENEFIT OF J2SI PROJECT:

a. Calculate the average real dollar value of benefit items per person each 6-month period since program commencement for 2 years.

b. Calculate differences in averages of each items between groups E and J (J - E for employment and E - J for other items).

c. Sum up results from step b above, for survey 6 and 12, and sum up for survey 18 and 24 to create annual benefit figure

d. Apply discount rate 4% annual figure for both benefit and J2SI project cost and sum up the annual figures to obtain Net Present Value (NPV) of cost and NPV of benefit.

e. Subtract cost from the benefit to obtain Net benefit. Net benefit ratio is defined as Net benefit (NPV) divided by cost.

TABLE B1: BENEFIT ITEMS AND SOURCES OF UNIT PRICE USED IN CBA

COST ITEM	DEFINITION	AVAILABILITY	SOURCE
HEALTH SERVICES			
GP consultation	Medicare benefits paid on non-referred GP attendances / Total number Medicare non-referred GP attendances	Victoria.	Department of Health and Ageing. Medicare Statistics.
Medical specialist	Medicare benefits paid on specialist attendances/ Total number of Medicare specialist attendances	Victoria.	Department of Health and Ageing. Medicare Statistics.
Other health services	Medicare benefits paid on other health services / Total number of Medicare other health services attendances	Victoria.	Department of Health and Ageing. Medicare Statistics.
Nights in hospital	Total admitted patient recurrent expenditure / total admitted patient days	Victoria.	AIHW, Australian Hospital Statistics.
Casualty or emergency	Emergency department average cost per occasion of service, by triage class, public sector, Australia.	National average.	Productivity Commission. Annual Report on Government Services.
Outpatient	Non-admitted clinic occasions of service reported at Tier 0 clinics, public sector, Australia.	National average.	Productivity Commission. Annual Report on Government Services.
Other health worker	Non-admitted clinic occasions of service for tier 1 clinics, sample results, public sector. 2008-09. Cost per occasion of service.	National average.	Productivity Commission. Annual Report on Government Services.
Ambulance	Total expenses / total number of patients transported.	Victoria.	Ambulance Victoria. Annual report.
Day clinic	Total expenditure / total occasion of services for non-admitted clinics, total average.	National.	Productivity Commission. Annual Report on Government Services.
Psychiatric ward	Average cost per occasion of service.	National.	Productivity Commission. Annual Report on Government Services.
Night in psychiatric hospital	Average recurrent costs per inpatient bed day in psychiatric hospitals (all units)	Victoria.	Productivity Commission. Annual Report on Government Services.
Community mental health services	Average cost of ambulatory care per day: cost per episode / number of average days per episode.	Victoria.	Productivity Commission. Annual Report on Government Services.
Dentist	Average cost per occasion of service.	National.	Productivity Commission. Annual Report on Government Services.
Needle exchange	Total spending on NSP (Needle and Syringe Exchange Programs) / Number of syringes exchanged.	Victoria.	Department of Health and Ageing, 2009. Return on investment 2: Evaluating the cost-effectiveness of needle and syringe programs in Australia.

TABLE B1: BENEFIT ITEMS AND SOURCES OF UNIT PRICE USED IN CBA

COST ITEM	DEFINITION	AVAILABILITY	SOURCE
JUSTICE SERVICES			
Charged with criminal offence	Court administration recurrent expenditure less income / total number of finalisations.	Victoria.	Productivity Commission. Annual Report on Government Services.
Night in prison	Recurrent expenditure per prisoner per day.	Victoria.	Productivity Commission. Annual Report on Government Services.
Child protection services	Average cost per incident calculated as weighted average of cost per notification, investigation and substantiation.	Victoria.	Productivity Commission. Annual Report on Government Services.
SERVICE USAGE			
Homelessness services	Cost per hour of consultation. Assume on average 1 hour per visit.	Victoria.	Sacred Heart Mission (award rate of community service worker grade 4 plus 25% on cost)
Job network services	Cost per hour of consultation. Proxied by hourly wage of full-time public employee in Victoria.	Victoria.	Australian Bureau of Statistics. TABLE 14B. Average Weekly Earnings, Private and Public Sectors, Victoria (Dollars) - Original – Persons.
Parenting support services	Cost per hour of consultation. Proxied by hourly wage of full-time public employee in Victoria.	Victoria.	Australian Bureau of Statistics. TABLE 14B. Average Weekly Earnings, Private and Public Sectors, Victoria (Dollars) - Original – Persons.
Neighbourhood house/ community centre	Cost per hour of consultation. Proxied by hourly wage of full-time public employee in Victoria.	Victoria.	Australian Bureau of Statistics. TABLE 14B. Average Weekly Earnings, Private and Public Sectors, Victoria (Dollars) - Original – Persons.
Gambling support services	Cost per hour of consultation. Proxied by hourly wage of full-time public employee in Victoria.	Victoria.	Australian Bureau of Statistics. TABLE 14B. Average Weekly Earnings, Private and Public Sectors, Victoria (Dollars) - Original – Persons.
Consumer or tenancy services	Cost per hour of consultation. Proxied by hourly wage of full-time public employee in Victoria.	Victoria.	Australian Bureau of Statistics. TABLE 14B. Average Weekly Earnings, Private and Public Sectors, Victoria (Dollars) - Original – Persons.
Other services	Cost per hour of consultation. Proxied by hourly wage of full-time public employee in Victoria.	Victoria.	Australian Bureau of Statistics. TABLE 14B. Average Weekly Earnings, Private and Public Sectors, Victoria (Dollars) - Original – Persons.
HOUSING			
Crisis accommodation	Cost of support service per week Cost of accommodation per week	Victoria	Data obtained from the Victorian Department of Human Services Note: Cost of support services, only cost per person data is available, assumed 12 weeks services received per person to translate the figure to weekly figure.
Community rooming house - shared facilities	Administrative cost per change of tenancy	Victoria	The actual location of the participants is unknown. Used information from St Kilda Community Housing as a proxy for all community housing.
OoH (Public housing)	Administrative cost per change of tenancy	Victoria	Data obtained from the Victorian Department of Human Services.
	Rent subsidy per week	Victoria	Market rent–25% of household income per week
SRS (supported residential service)	Support services per week	Victoria	Assume the same as Queen's Road supportive housing.
TH (transitional housing)	Administrative cost per change of tenancy	Victoria	Information obtained from DHS
	Rent subsidy per week	Victoria	Market rent–25% of household income per week–15% of family tax benefit per week.
Supportive housing - Queens Road	Support services per week	Victoria	Information obtained from Sacred Heart Mission.
Supportive housing - CommonGround	Support services per week	Victoria	Information obtained from CommonGround.
Community housing.	Administrative cost per change of tenancy	Victoria	The actual location of the participants is unknown. Used information from St Kilda Community Housing as a proxy for all community housing.

Note 1. The administrative cost per change of tenancy for supportive housing is assumed to be the same as transitional housing.
Note 2. For market rent, use DHS rental report table 9 moving annual median rent for inner Melbourne. If single or couple, use one bedroom flat. If a couple with children use two bed room flat. Sole parent use two bedroom flat.

SOURCES

Productivity Commission, 2012. Report on Government Services 2012. Volume 1: Early Childhood, Education and Training; Justice; Emergency Management. Canberra

Productivity Commission, 2012. Report on Government Services 2012. Volume 2: Health; Community Services; Housing and Homelessness. Canberra.

Ambulance Victoria, 2011. 2010-2011. Annual Report. Melbourne.

Department of Health and Ageing. 2009. Return on investment 2: Evaluating the cost-effectiveness of needle and syringe programs in Australia. DoHA: Canberra.

Australian Institute of Health and Welfare. 2010. Australian Hospital Statistics 2008–09. AIHW: Canberra.

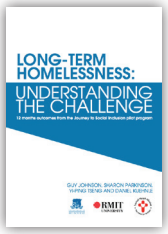
INTERNET

DoHA, Medicare Statistics available from http://www.health.gov.au/internet/main/publishing.nsf/Content/Medicare+Statistics-1

DHS rental report time series data from http://www.dhs.vic.gov.au/about-the-department/documents-and-resources/research,-data-and-statistics/current-rental-report

THIS IS THE SECOND IN A SERIES OF FOUR REPORTS ON THE J2SI EVALUATION.

The first report examined 12 months outcomes from the J2SI pilot program and can be downloaded from www.sacredheartmission.org.

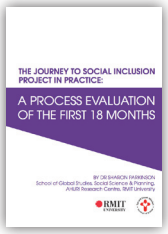


Johnson, G., S. Parkinson, Y.-P. Tseng and D. Kuehnle (2011). *Long term homelessness: Understanding the Challenge*. Melbourne, Sacred Heart Mission.

The third report will examine the social and economic outcomes after 36 months. It is due for release in August 2013.

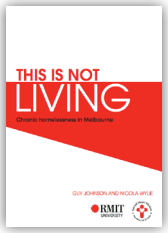
The fourth report will focus on what has happened to the trial participants 12 months after the program ends. It is due for release in August 2014.

For those interested in the process evaluation of the J2SI model, the report can be downloaded from www.sacredheartmission.org.



Parkinson, S. (2012). *The Journey to Social Inclusion Project in Practice: A Process Evaluation of the First 18 months*. St.Kilda, Sacred Heart Mission.

For those interested in the participants' experiences of homelessness, the report can be downloaded from www.sacredheartmission.org.



Johnson, G. and N. Wylie (2010). *This is not living: Chronic homelessness in Melbourne, Melbourne*, Sacred Heart Mission.

FOR FURTHER INFORMATION ABOUT THE J2SI EVALUATION CONTACT:
guy.johnson@rmit.edu.au