SUSTAINING EXITS FROM LONG-TERM HOMELESSNESS

A RANDOMISED CONTROLLED TRIAL EXAMINING THE 48 MONTH SOCIAL AND ECONOMIC OUTCOMES FROM THE JOURNEY TO SOCIAL INCLUSION PILOT PROGRAM

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SACRED HEART MISSION

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About Sacred Heart Mission

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

For further information about Sacred Heart Mission go to http://www.sacredheartmission.org/

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EXECUTIVE SUMMARY

Journey to Social Inclusion was a three year pilot that provided intensive support designed to break the cycle of long-term homelessness. This report presents the social and economic outcomes of the J2SI pilot. It covers the three years the trial ran, and the 12 month period following the completion of the trial. The evaluation used a randomised controlled trial to track and compare the outcomes of the J2SI participants (Group J) with those of an equivalent group of long-term homeless people (Group E) who were supported by existing services. After 48 months 67% of the original participants remained involved in the trial.

The evidence suggests that J2SI had a positive impact on the lives of most participants, over time and relative to the control group. The physical health of Group J improved, with the proportion reporting no bodily pain increasing from 27% to 45% over the four year period. In other measures of bodily pain Group J also report larger gains over time and relative to Group E. 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 pattern to note is that Group J's average use of emergency hospital services and their average number of days hospitalised in general hospitals and psychiatric units declined by about 80% over the 48 month period. Group E's need for emergency hospital treatment increased by 21%. While the average number of days Group E spent in hospital declined by about one third, the reduction is considerably less than observed in Group J. These results represent a substantial health care impact and suggest that an intervention comprising of stable housing and intensive case management can reduce the public burden associated with the over-utilisation of health services. The report also shows improvements over time and relative to Group E in the use of welfare and homelessness services, and the amount of time incarcerated.

In the absence of the J2SI Program, Group J's use of welfare service has started to rise. Finally, there was only a modest improvement in the extent to which the participants' felt connected to and supported by the community over the four years. However, the trend was always in a positive direction, and in the final survey J2SI participants recorded their highest scores on both social support and social acceptance indexes.

There are signs, however that the impact of J2SI is declining in some areas. After three years 85% of J2SI participants were housed compared to 41% of those who were receiving existing services. In the 12 months following its closure the proportion of J2SI participants who were housed dropped by 10 percentage points to 75%. Although this was substantially higher than at baseline, compares favourably with international studies, and is still 17 percentage points higher than that reported by the control group (58%), it was the first 'substantial' decline we have observed over the four year period. Similarly, while the emotional health of the J2SI participants improved and they report lower levels of stress, anxiety and depression after four years compared to where they were at the start of the trial, the results are not much different to those reported by Group E. Similarly, although there had been substantial gains in the labour force participation rate during the trial, these gains were not sustained when J2SI closed. Throughout the trial we found little change in the substance use behaviour of the participants, although this is a common finding in studies evaluating service impacts among the long-term homeless. Finally, we found the short-term economic benefit to be modest but trending upwards, with a return of 0.25 for every dollar invested. Taking into account lives saved over a 10 year time frame the economic benefit was more substantial, with a $1.32 return for every dollar invested.

J2SI shows that breaking the cycle of long-term homelessness is possible and that intensive support coupled with stable housing can reduce demand on expensive health, justice and welfare services. However, some of the successes and improvements were not sustained and some individuals subsequently became homeless once J2SI support ended. About one quarter of the participants would have benefitted from ongoing support. The agencies they had been referred to after J2SI ended failed to provide the level and breadth of support necessary for ongoing stability. This presents two challenges for policy makers. First, many services, particularly clinical health services, are configured in such a way as to exclude the long-term homeless for the very issues they seek assistance with. Second, policy makers need to explicitly acknowledge that a small minority of homeless people require ongoing and indefinite support.

Among those who had succeeded in maintaining their housing some had made a successful journey out of homelessness and were continuing to move on with their lives. Equally, it was clear that having a home did not lead to social acceptance and social inclusion for everyone. With limited employment options, few social networks outside of the homeless population, and few alternative social activities, opportunities for social inclusion remain limited for many individuals whose experience of social exclusion is both wide and deep.

In this context programs designed to permanently end long-term homelessness such as J2SI need to temper their expectations and accept that years immersed in homelessness not only have physical and emotional effects, but long-term social and economic effects as well. Further, despite sharing many similar characteristics and experiences the long-term homeless are a heterogeneous group. Recognising similarities and differences among the long-term homeless is important in terms of designing appropriate interventions – whereas some participants would benefit from ongoing support, for others the support requirements were less. Much has been learnt from the J2SI pilot – what works, what doesn't, for whom and why. The key now is to translate these findings into a more balanced policy framework that is sensitive to the challenges and complexities of permanently ending long-term homelessness.

1. INTRODUCTION

In November 2009 Sacred Heart Mission (SHM) launched a three year pilot program that aimed to assist 40 people to make a permanent exit from long-term homelessness. The pilot, called Journey to Social Inclusion (J2SI), was developed by SHM in response to the problems existing services had in providing a permanent solution to long-term homelessness. Staff and management at SHM had been aware for a long time that the primary challenge was not just securing housing for the long-term homeless but ensuring they remained housed and made connections to a local community.

The J2SI model was different to existing approaches in a number of ways. First, SHM took the view that a meaningful relationship based on mutual trust, reliability and persistence was the key element underpinning personal change. For J2SI workers to develop meaningful relationships they had small case loads and a significant amount of time – each J2SI worker supported four clients for up to three years. Second, J2SI focused on securing rapid access to safe, secure, independent, affordable permanent housing. Third, the J2SI pilot had a specific focus on the impact of trauma, an issue commonly reported among the long-term homeless but one that few specialist homelessness services explicitly focus on. Finally, the J2SI pilot included an integrated training and skills development program to provide participants with interpersonal, practical, tenancy and vocational skills (see Parkinson 2012; Parkinson and Johnson 2014 for a full overview of the model).

After three years of operation the J2SI pilot finished in November 2012. This report examines the impact of the J2SI pilot over a 48 month period. This covers the three years the trial ran for and the first 12 months after the intervention ended. This report builds on three previous reports that examined the impact of the J2SI program after 12, 24 and 36 months (Johnson, Parkinson, Tseng and Kuehnle 2011; Johnson, Kuehnle, Parkinson and Tseng 2012; Johnson, Kuehnle, Parkinson, Sesa and Tseng 2013), but our aim is slightly different. Whereas previous reports examined the impact of J2SI while it was 'in progress', our aim in this report is to establish if the improvements made during the course of the three year J2SI intervention are sustained in its absence. This is an important difference.

Numerous empirical studies report that improvements in the housing circumstances of the long-term homeless are often not sustained (Culhane and Metraux 2008; Please 2008). While the loss of housing is common, improvements in other areas such as health, service use and employment are often equally short-lived. Policy makers and service providers are now much more aware of the challenges of sustaining positive changes in the circumstances of the long-term homeless.

While this report focuses on the question of what outcomes are sustained in the absence of J2SI, it nonetheless shares much with the previous three reports. For readers unfamiliar with these reports, three issues need to be re-stated.

First, we use a randomised controlled trial (RCT) to assess the impact of the J2SI pilot. RCTs are considered the most robust method for assessing the impact of complex service interventions. In the case of the J2SI pilot we use a RCT to compare the outcomes of the J2SI participants (the 'treatment' group, Group J) with an equivalent group of long-term homeless who received assistance from existing services (the 'control' group, Group E). The assumption underpinning this approach is that any difference observed between the outcomes of the two groups can be attributed to the randomly allocated J2SI intervention.

A total of eight surveys were collected over a four year period. Quantitative data were collected on entry into J2SI (baseline survey) and at six monthly intervals for the first three years. The interval between the seventh and eighth survey was 12 months, but the substantive content of the eighth survey remained unchanged – as with the previous seven surveys self-reported information about education, employment, and income as well as social connectedness, mental and physical health, housing, substance use, and service usage was collected.

An increasing number of people involved in the evaluation of new social programs have argued that the value of randomisation can be enhanced through 'well-constructed qualitative research' (Gray, Plath and Webb, 2009: 41). Qualitative material offers researchers the opportunity to explore in greater depth complex social processes. We included a qualitative component in the research design that involved four in-depth semi-structured interviews with approximately half of the trial participants. The four interviews coincided with the baseline survey and the 18, 36 and 48 month follow-up surveys.

The second issue to keep in mind is the nature of the sample when the trial started. Data collected in the baseline survey and contained in the first report provides a clear picture of the participants' disadvantage (Johnson et al., 2011). The report found that the participants' housing was marked by chronic instability and that over half (53%) had their first experience of homelessness by the time they were 18 years of age. An equally significant finding was that a majority of the trial participants (87%) had experienced major and often repeated childhood trauma such as sexual or physical abuse, neglect and/or the involvement of child protection authorities. The report also found that the participants' current level of disadvantage was acute – over 90% had chronic physical or mental health issues, 89% reported drug and/or alcohol misuse problems, over three quarters had been physically assaulted at some point in their lives, half (52%) had been incarcerated, none were in paid employment, and most had not worked for five years or more. By any measure the trial participants' biographies and current circumstances were far removed from the community norm, and even within the homeless population their circumstances are extreme.

The third issue worth noting relates to the changes that occurred after the full three years of the J2SI intervention. The third (or 36 month outcomes) report showed significant improvements in the lives of J2SI participants compared to their baseline results, and to those in the control group (Johnson et al., 2013). The most striking improvements were observed in the participants' housing, labour force participation rate, and their physical health. There were also notable reductions in the number of presentations at emergency hospital departments, as well as a substantial decline in the use of homelessness, meals and similar welfare services. However, the report indicated that there were only limited changes in other areas of the participants' lives, particularly their substance use and the degree to which they felt accepted and supported by the broader community. In this context the key message of the 36 month report was cautionary – while breaking the cycle of long-term homelessness is possible, policy makers must have realistic expectations about what services working with the long-term homeless can achieve and about how long it takes to achieve these goals.

As with previous reports, this report evaluates whether the housing, well-being, service usage, and social outcomes differ between those who received support and assistance from existing services (Group E) and those who received assistance from J2SI (Group J). As noted, this report examines what has happened to the participants in the 12 months after the J2SI intervention ended. It thus contains a unique picture of the impact of an intensive intervention, both during, and after the J2SI intervention. This report also contains an update of the cost-benefit analysis of the J2SI program presented in the 24 and 36 month reports.

1.1 STRUCTURE OF THE REPORT

The way we structure the report follows a similar format to previous reports. In the next chapter we provide a brief summary of our approach and the issues that have emerged over the 48 months including attrition. Following this there are two empirical chapters. Chapter 3 examines and compares the housing, mental health, pain and mortality, health and other services use issues, substance use, economic participation, and social connectedness outcomes of the two groups after 48 months. In Chapter 4 the economic costs and benefits of the J2SI pilot are presented. In the final chapter (Chapter 5) we discuss the policy and practice implications of the findings.

The original plan was that this report would be the final one. However, we recently secured an ARC linkage grant[1] with the support of many of the original funding partners[2]. The grant will enable us to do two things. First, the J2SI dataset is an incredibly rich source of information and we now have the resources to undertake more sophisticated analysis. Second, we intend to follow the participants for a further two years. Of course, further attrition is a significant concern, but we are excited by the prospect of having information on the three years of the trial and three years following the trial.

2. METHOD

As outlined in previous reports the aim of the evaluation was to determine how the J2SI program affected the participants' housing stability, mental and physical well being, and social and economic participation over time. The approach we selected to evaluate the impact of the program was a randomised controlled trial (RCT). Potential participants were referred by Sacred Heart Mission with a small number from other homelessness agencies in inner city Melbourne. Of the 99 people initially referred, 88 people satisfied the admission criteria which were people who:

- had slept rough continuously for more than 12 months; and/or

- had been in and out of homelessness for at least 3 years (including people who have been housed in the last 6 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).

The 88 individuals were informed about the evaluation and gave informed consent to participate[3]. The 88 people were then randomly assigned at the beginning of the trial (November 2009) into two groups: 40 people were assigned to Group J which received J2SI services (the treatment group); and the remaining 48 were assigned to Group E (the control group) which received existing services. An additional 16 people joined the trial between January and July 2010 and 8 were randomly assigned to Group J and 8 to Group E. In this report we use individuals who joined the trial prior to Feb 2010 to ensure that those in Group J had the opportunity to receive J2SI services for approximately 3 years. For further details of the treatment assignment procedure see Johnson et al., (2011).

2.1 DATA FOR THIS REPORT

This report draws on baseline and outcome data collected over a 48 month observation period. This is a relatively long observation period for an evaluation of a homelessness intervention, with observation periods commonly ranging from between 12 and 24 months (Mission Australia and Murdoch University 2011, Mission Australia 2012, Johnson and Chamberlain 2013, Parsell, Tomaszewski and Jones 2013a, Parsell, Tomaszewski and Jones 2013b). The longer time frame, combined with the use of a control group, means that we can draw stronger inferences about the impact of the J2SI pilot.

However, long time frames and control groups also increase the risk of sample attrition. Where sample attrition is high findings can be seriously compromised. Table 1 shows that after 48 months the retention rate had dropped below 70% for the first time – over the preceding 36 months it had remained at or above 80%. The higher rate of attrition is likely a result of the J2SI program ending, and possibly compounded by the 12 months break between the seventh and eighth interviews.

Table 1: Retention rates[4]

	Survey participants	Base Line	6mfu	12mfu	18mfu	24mfu	30mfu	36mfu	48mfu
Group E	44	n = 42 (95.5%)	n = 35 (79.5%)	n = 34 (77.3%)	n = 31 (70.5%)	n = 32 (72.7%)	n = 36 (81.8%)	n = 34 (77.3%)	n = 28 (63.6%)
Group J	40	n = 33 (82.5%)	n = 37 (92.5%)	n = 36 (90.0%)	n = 36 (90.0%)	n = 36 (90.0%)	n = 38 (95.0%)	n = 34 (85.0%)	n = 28 (70%)
TOTAL	**84**	**n = 75 (89.3%)**	**n = 72 (85.7%)**	**n = 70 (82.1%)**	**n = 67 (79.8%)**	**n = 68 (81.0%)**	**n = 74 (88.1%)**	**n = 68 (80.9%)**	**n = 56 (66.6%)**

Low retention rates can systematically distort the findings. This is because people who remain engaged with longitudinal projects are often quite different from those who drop-out of the project (Sullivan et al., 1996: 263; Wong and Piliavin 1997). In a study of the relationship between psychological stresses and homelessness, Wong and Piliavin (1997: 1033) found that 'study participants who were lost due to attrition … differed from the follow-up sample in a number of ways'. Compared to the participants, they found those who dropped out were 'less well educated, more likely to have been homeless for one year or more … have fewer contacts with relatives and friends, and reported to have few close relationships' (op.cit. p.1033–34). This implies that those with longer homeless histories and more complex circumstances are more prone to dropping out.

In a single cohort study (e.g where there is no control group) this generally imposes a positive bias that favours the treatment group. In a RCT the situation is reversed. Our analysis shows that attrition was essentially non-random – the trial appeared to be losing those who had worse outcomes at previous interviews. In general, those who were homeless, had poorer health, used more health services and had contact with the justice system were more likely to drop out of the next survey, although only the number of times incarcerated was significantly different at 5% level in statistical terms between dropouts and non-dropouts. This is important because attrition was slightly higher in Group E throughout the trial. The loss of more people who were doing poorly had a positive influence on Group E's outcomes by reducing the spread of scores of those who remained in the trial. Thus, as non-random attrition imposed a bias in favour of Group E, we believe that the estimated effect of the J2SI intervention relative to Group E is likely larger than is reported[5].

This report also draws on the fourth in-depth interview. Where we use qualitative information people's names and various personal details have been changed to ensure confidentiality.

2.2 ETHICS

The J2SI evaluation sought and received ethics approval from RMIT University. In the last report we discussed the ethical issues associated with undertaking a RCT with people who are chronically disadvantaged. For those unfamiliar with that report, the key arguments are summarised below.

While RCTs are commonly used in countries such as the US, the use of RCTs to evaluate social programs is rare in Australia. Part of the reason is that they are costly. Part of the reason is ethical. In Australia, some have argued that the use of RCTs is considered inappropriate for two reasons (Flatau and Zaretzky 2008). First, that it is unethical to treat humans as subjects of a social experiment. Second, that it is unethical to deny people access to a service. We are not convinced by these claims for two reasons.

With respect to the argument that it is unethical to treat humans as subjects of social experiments, social programs are always, to some degree, experimental. The design of social programs is typically influenced by a mix of evidence, history, ideology and pragmatism and there is never complete certainty regarding their impact. In fact, millions of dollars are spent each year on homelessness programs for which there is little rigorous evidence. More than any other method RCTs can identify programs that have the greatest social and economic impact.

The second issue relates to the mechanisms used to decide who is admitted to a program. In the homelessness service system, where demand exceeds supply, there are a range of different allocation procedures but most fit under the rubric of 'needs based assessment'. While theoretically 'needs based' allocation procedures appear to be a transparent and objective response to a resource constrained environment and may appeal to academics and policy makers removed from the service delivery environment, in practice those with the highest needs are not necessarily guaranteed a place. This is because there are numerous systemic, organisational and individual channels which introduce bias into the assessment process. The random allocation of places into a program means that once a person has satisfied a broad set of criteria they have the same chance of getting into a service as anyone else. For both reasons we feel that a well conducted RCT is an ethical approach to the evaluation of social programs.

5 Due to the small sample size, we are not able to adjust for this bias.

3. SOCIAL OUTCOMES

3.1 HOUSING OUTCOMES

In the first three reports we noted that a feature of the J2SI pilot was its focus on getting participants into permanent housing as quickly as possible and then keeping them housed. This approach was very much in line with the latest evidence that shows the long-term homeless benefit from direct placement into permanent housing, coupled with ongoing support (Tsemberis 2010). While rapid re-housing is a laudable goal, gaining access to housing was one of the most significant challenges facing J2SI. We found that it took J2SI, on average, 206 days (or just under seven months) to secure permanent accommodation for its participants. In comparison it took Group E on average 410 days to secure permanent accommodation, or nearly double the amount of time it took Group J. The differences suggest that organisations that actively prioritise housing as a key element in service provision can substantially reduce the amount of time it takes to secure independent housing, irrespective of the condition of the housing market.

Getting access to housing is an important step, but it is only part of the challenge – maintaining housing is what really matters. We found that on a number of measures the overall housing circumstances of Group J were superior to those in Group E after the first three years. After 36 months 85% of Group J were in independent housing, while less than half (41%) of Group E were housed. We found that J2SI participants were housed for 67% of the time and two thirds (66%) had been housed for two years or more. In contrast, those in Group E were, on average, housed for just over one third (35%) of the trial. Further examination of the data revealed that nearly one third (31%) of those in Group E had remained homeless during the entire trial period (the corresponding figure in Group J was 7%), and another 10% had been housed in total for six months or less (in Group J it was 3%).

When we considered the housing outcomes achieved by J2SI after three years and what has been reported by evaluations of similar programs, we found that J2SI's housing results were very much at the upper end of what has been reported locally or internationally (Stefanic and Tsemberis 2007; Sadowski, Kee, Vanderweele and Buchanan 2009; Tsemberis 1999; 2010). Few services report higher rates and many report much lower rates of housing retention over shorter periods. Over the three year period the evidence was clear – the J2SI pilot had done a more effective job than existing services in securing and sustaining the tenancies of its participants.

Figure 1. Proportion housed
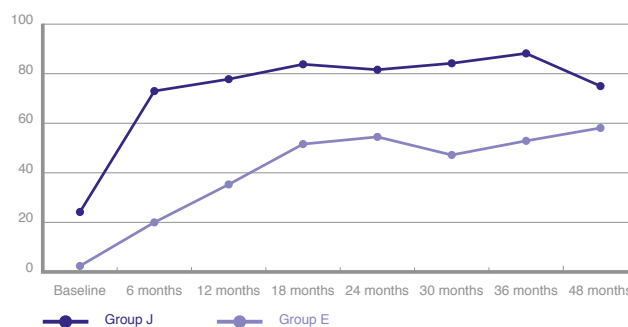
However, the picture shifted slightly in the last 12 months. Figure 1 shows that the proportion of Group J housed declined to 75% at the 48 month follow up survey, while the proportion of Group E housed had risen to 58%. It is not entirely clear why we observe the improvement in Group E's housing, although positive selection bias may be contributing. The decline in Group Js' housing is more straightforward to explain. A small number of participants had either abandoned their public housing or had been evicted for non-payment of rent. During the trial J2SI workers had worked closely with Office of Housing staff to prevent any problems escalating to the point where an individual's housing was jeopardized. Without J2SI to assist them, some participants were still very vulnerable to the sort of sporadic shocks most households easily overcome.

Some participants also felt the end was too abrupt and 'a bit of a shock to the system' (Edie, 38). Despite putting in place a number of practices and processes explicitly designed to alleviate potential distress, the loss of J2SI workers affected some people greatly. This was particularly pronounced when the new support services did not provide the level or continuity of support needed. Simone (32) told us that the:

> Impact has been really severe. The people they put me onto, a support service, were not very good.

Similarly, Edie (38) said that when:

> J2SI stopped I thought I would still have my psych worker … a couple of weeks later X quit her job and I was left with no-one … no one from HOPs (a homeless and outreach psychiatric service) wants to deal with me because they're scared of my partner.

Rod (30) experienced similar problems. He told us that since the closure of J2SI he had

> … three different workers … it's hard to get onto them … they don't have much time allocated.

What has happened in the last 12 months throws a spotlight on the impact of the trial in the first 36 months. The results show that over the first three years J2SI did an effective job in ending homelessness for most of the participants. The 48 months results suggest that for about three quarters of the participants three years of support is adequate. However, one quarter of the participants struggled to permanently resolve their homelessness. This group require ongoing support to maintain their housing. This should come as no great surprise – among the long-term homeless the support needs are very different and some require ongoing support to maintain their housing. Simone (32) had been in the system since she was 6 and had struggled since J2SI closed. Simone recognised she still needed support. Unfortunately, she had not found anyone 'that could work with me the way that J2SI worked with me'. She said that she had not been 'given enough time with J2SI to fully be able to rehabilitate my behaviours' and needed ongoing support.

3.2 MENTAL HEALTH OUTCOMES

At the start of the evaluation we hypothesised that improvements in the mental health and emotional well-being of the J2SI participants would be greater over time and relative to Group E. Emotional well-being was measured with the Depression Anxiety and Stress Scale (DASS) at every interview. The DASS is a 42 item self-report measure of anxiety, depression and stress developed by Lovibond and Lovibond (1995). The DASS has been extensively tested with the general and clinical populations and shown to be a 'reliable and valid measure for the constructs it was intended to measure' (Crawford and Henry 2003). We used the shortened version of the DASS, the DASS-21. Participants were read 21 statements such as 'I found it difficult to relax' and were asked to indicate how well each statement applied to them in the preceding week by choosing a number between 0 and 3. A zero indicated it did not apply to them, whereas a three indicated that it applied very much. The DASS scoring system is shown in Table 2. A high score indicates more severe level of anxiety, stress or depression.

Table 2: DASS Scoring system

	Depression	Anxiety	Stress
Normal	0 – 9	0 – 7	0 – 14
Mild	10 – 13	8 – 9	15 – 18
Moderate	14 – 20	10 – 14	19 – 25
Severe	21 – 27	15 – 19	26 – 33
Extremely Severe	28+	20+	34+

The DASS enabled us to create four measures. First, we created three individual measures to assess the level of depression, anxiety and stress. Second, we summated the scores of the 21 items to assess the overall emotional well-being of the participants.

Even though Group E and Group J's average overall baseline scores were quite different, both groups' scores converged to a similar point by the 48mfu survey – Group E's score had declined from 63.2 at baseline to 43.2 at the 48mfu, while Group Js score declined from 54.5 at baseline to 42.7 (Figure 2). Group E's score declined more over the four year period but much of the improvement came in the last 12 months – at the 36mfu Group E's overall score was only marginally lower than its baseline score but it subsequently declined by 14 points in the final 12 months – the largest single decline observed during the study. It is not clear why Group E's score declined so much in the final period.

Scores in each of the domains – depression, anxiety and stress – followed a fairly consistent pattern over the four year period. In each domain Group J's scores are lower at the 48 month survey than they were at the start – depression (Figure 3) declined from 19.1 (a moderate level) to 13.9 (a mild level); anxiety (Figure 4) declined from 15.2 (a severe level) to 10.1 (a moderate level) while stress (Figure 5) declined from 20.2 (a moderate level) to 18.7 (a mild level). In the last 12 months Group J's depression and anxiety levels continued to decline, but levels of stress increased – over the last 12 months period stress levels went from 14.7 to 16.7. Stress was the only measure to increase. We suspect it may be linked to the loss of housing experienced by some participants, and/or the closure of the J2SI program, but unless further investigation is undertaken we cannot be sure. Nonetheless, even taking into account this result, the overall decline across all three areas suggests the J2SI participants' emotional and mental well-being is better now than when they started the trial. As Maureen (43) told us:

> I feel really good … I don't know where I'd be if I hadn't been in contact with J2SI … they helped me with somewhere to live, helped me with my mental health issues, my physical health.

Group E's results are more puzzling, in part because we observe much greater volatility in their scores over the course of the trial, and in particular the last 18 months. In the 36 month outcomes report the scores of those in Group E had declined but not as much as those in Group J – Group E's stress levels had declined from 23.4 to 18.8; anxiety from 17.2 to 16.6 and depression from 22.5 to 19.7.

However, over the last 12 months we observe a larger decline in depression, stress and anxiety than we observed in any period with either group – Group E's depression levels declined from 19.7 to 14.4, anxiety from 16.6 to 9.9 and stress from 21.1 to 19.1. These are substantial declines. The final results of both groups across the three domains, and the overall score converge. It is not clear why the results converge in the last period – it may reflect the tendency of extreme scores measured at one point in time to revert back to an average score or normal range over time. The fact that we observe a similar sort of 'convergence' in other areas suggests further research is required to better understand what is going on.
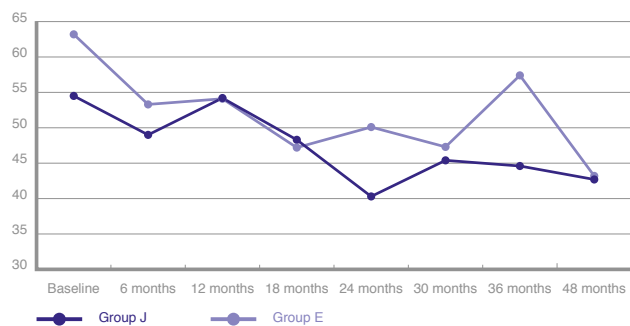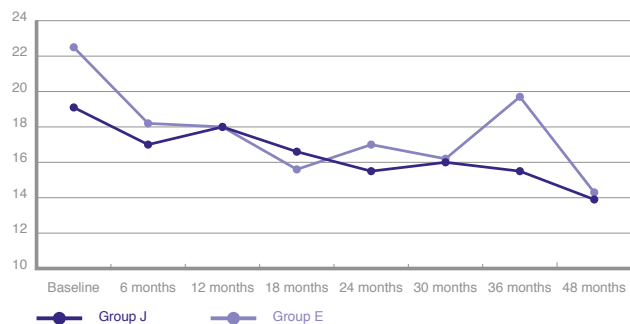
Figure 2. Overall scores

Group J   Group E

Figure 3. Depression

Group J   Group E

Figure 4. Anxiety

Group J   Group E

Figure 5. Stress

Group J   Group E
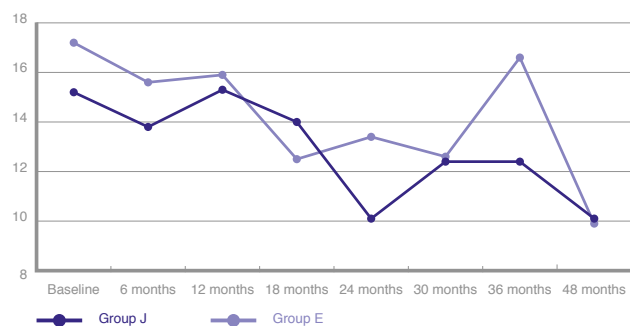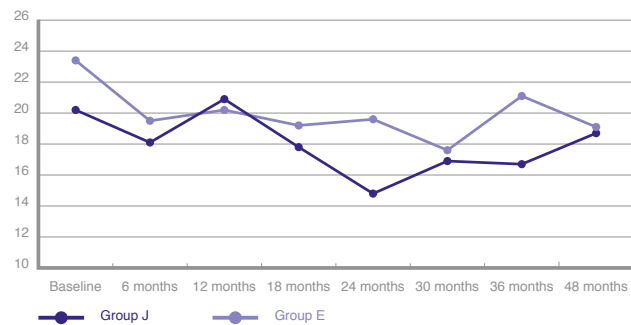
3.3 PHYSICAL HEALTH: PAIN AND MORTALITY

When the trial started the participants physical health was extremely poor – over three quarters (78%) reported chronic physical ill-health, and nearly half had three or more chronic health conditions (Johnson et al., 2011). The sorts of health problems identified by the trial participants included diseases of the digestive and the respiratory systems (42% and 39% respectively), as well as physical disabilities (29%), and diseases of the circulatory system (16%). Although full recovery from many of these health issues is unlikely, the way that health conditions are managed can significantly improve the quality (and duration) of day-to-day life. Chronically homeless individuals commonly struggle to manage their health for a variety of reasons including a lack of stable housing, exposure to adverse and unhygienic conditions, and poor diet to name just a few. A result is that many 'treatable' conditions get worse, and they often contribute to premature death. 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'.

Self-reports from Group J suggest their physical health had improved (Table A1–A3, appendix A). The proportion who reported no bodily pain increased by 19 percentage points, from 27% at baseline to 46% at the 48 month follow up. In Group E the pattern was less consistent. Just under a quarter (24%) reported no physical pain at benchmark and this increased only slightly to 29% in the first two years of the trial. In the next 12 months there was a marked increase in the number who reported no bodily pain, and at the 36 months survey 38% of Group E indicated they had no bodily pain in the preceding 4 weeks. After 48 months the proportion reporting no bodily pain declined by two percentage points to 36%.

My health's improved heaps … I'm not having nearly as many seizures. I haven't had a seizure for nearly six months. Overall I'm doing a bit more exercise (Tamara, 28)

Thus, we find the differences between the control and treatment groups shifted considerably over time – at the 24 month follow up there was a 22 percentage point difference between the two groups, by the 36 month survey the difference was only three percentage points, and, by the 48 month follow up survey it had increased to 10 percentage points.

When we examined reports of severe and moderate bodily pain we found that over the 48 month study period the proportion reporting severe bodily pain declined by 9 percentage points in Group J, or more than double the rate reported in Group E (4 percentage points). Among those reporting moderate pain there was a 17 percentage point decline reported among J2SI participants, although this was only slightly larger than the decline reported by Group E (13 percentage points).

The volatility in Group E's results makes it difficult to precisely determine the impact of J2SI. However, across all measures of bodily pain, Group J reports larger gains both over time and relative to Group E. In short, the evidence suggests that J2SI has had a positive impact on the participants' physical health.

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). The mortality rate in Group J was half of what was reported in Group E. After 36 months three Group E participants had passed away, as had one Group J participant. In the next twelve months another two participants passed away, one from each group[6].

3.4 HEATH SERVICE USE

Numerous studies from around the world show that relative to the general population the long-term homeless are frequent users of costly emergency departments, psychiatric and hospital services. Since the work of Culhane, Meraux and Hadley (2002) showed that chronically homeless people placed into permanent housing used shelters, hospitals, and prisons much less often, there has been significant interest around the world in the potential cost savings (or offsets) that can be achieved by direct placement of chronically homeless individuals into permanent supportive housing. While cost offsets are a crucial element in making a case for appropriately designed and resourced interventions, it is worth bearing in mind that the poor health of the long-term homeless means that high levels of health assistance are often still required. Hence, a number of studies have pointed out that well targeted service interventions can actually lead to an increased use of some types of health services. Further, despite an increasing number of claims alleging cost offsets generated by various program interventions, the methodologies used are often weak, the assumptions simplistic, and the samples too small or lacking in an appropriate control group.

Nonetheless, reducing service use was a goal of the J2SI pilot and in this section we examine the use of emergency health departments, both psychiatric and general hospital, as well as admissions into general hospital and psychiatric units over the four years. We report the most noticeable findings and direct the reader to the appendices for more detailed information.

Our first task, as it has been in each report, is to explain how we analyse the service use data as there are many ways of measuring service use. We use three measures 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 numbers of days of health service usage per individual, or the *average use*. The following three sections work through each measure.

[6] Because we know very little about what happened to those people in Group E who dropped out of the study, the numbers of people deceased in group E may be higher than what we reported. Therefore, the mortality rate reported for group E here is best thought of a lower bound.

3.4.1 USAGE RATE

After four years the pattern in Group J's use of health services is clear. We observe little change in the proportion that used general hospital services but a substantial decline in the proportion that used psychiatric services.

First, the proportion of Group J presenting at emergency hospital departments changed little – there was a decline of 4 percentage points, from 33% at baseline to 29% at the 48 month follow up, while the proportion admitted to general hospital only declined by 2 percentage points over the four years (from 27% to 25%). In the last 12 months the proportion admitted to general hospital declined slightly (1.5%) while the proportion presenting to emergency hospital increased, but only by a modest amount (2%). In short, the number of J2SI participants who were using emergency departments and/or were admitted to hospital did not change a great deal over the 4 years.

In contrast, among Group E the proportion presenting to emergency hospital departments declined by 13 percentage points and the proportion admitted to general hospital declined by 14 percentage points between baseline and the 48 month follow-up survey. In both cases the decline was larger in the first two years compared to the last year of the trial where the proportion of Group E presenting to emergency hospital departments and admitted to general hospital increased by four and two percentage points respectively.

While we observe little change in the usage rate of both types of hospital services the pattern is very different when we examine the use of psychiatric services, both emergency presentations and admissions to psychiatric units (Figure 6 and Figure 7). In both cases Group J's usage rate declined by over two thirds – the proportion of people using emergency psychiatric services declined from 27% at baseline to 7% at the 48 month follow up, while the proportion of people admitted to psychiatric units declined from 24% to 7% over the four year period. Importantly, we continue to observe a reduction (albeit slight) in the 12 month period following the end of the J2SI pilot.

Figure 6. Proportion using emergency psychiatric services
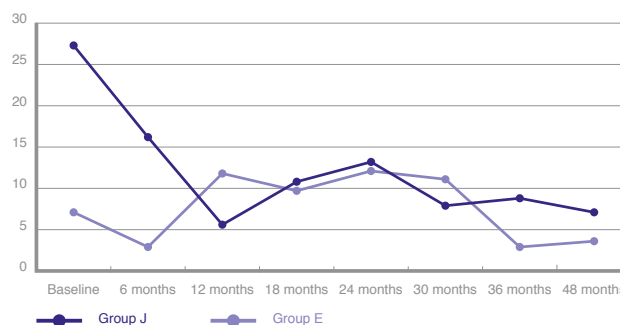
Figure 7. Proportion admitted to a psychiatric unit
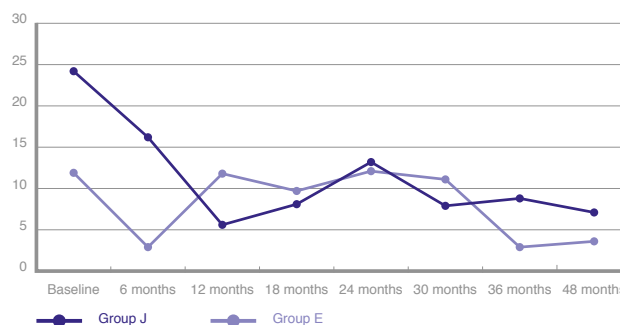
The data show that at the 48 month follow up fewer people in Group E were using the psychiatric services than at baseline, and compared to Group J. However, it is important to note two things with respect to Group E and Group J's use of psychiatric services. First Group E's starting point was substantially lower than Group J's. Second, the overall decline in Group E is much less than we observe in Group J.

3.4.2 USAGE INTENSITY

Although we observe different usage rates within and between the control and treatment groups, a key issue is whether those using health services are using them less often after four years than at the start of the trial.

Despite fluctuations between observation periods, over the full 48 month period there has been a marked and consistent decline in average usage intensity for those users of all four health services among Group J. The number of times people in Group J presented to emergency hospital departments declined by 75% from 4.6 at baseline to 1.1 at the 48 month follow up (Figure 8); the number of days they were admitted to general hospital declined by three quarters from 16 days at baseline to just over 4 days at the 48 month follow-up (Figure 9); the number of times Group J presented for emergency psychiatric assistance declined from 5.7 times at baseline to 1.0 at the 48 month follow up (Figure 10). Finally, the number of days that participants in Group J were admitted to a psychiatric unit for treatment declined by just over 70% between baseline and the 36 months survey from 24 days to 6 days, but in the next 12 months the average number of days increased to 19.5 (Figure 11).

Figure 8. Average number of times used emergency hospital (users only)
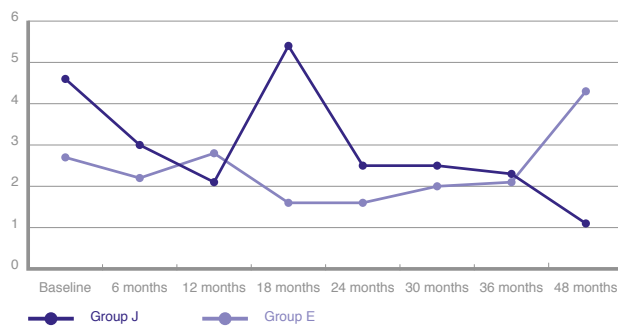
Figure 9. General hospital admissions, average number of days (users only)
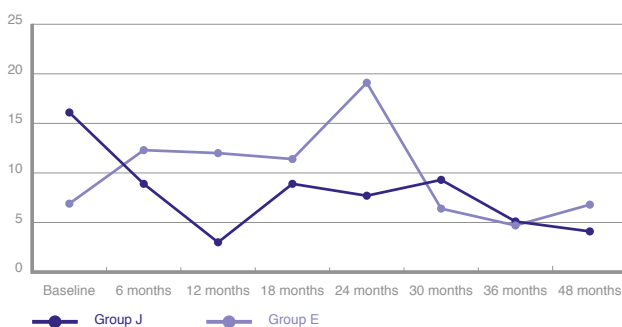
Figure 10. Average number of times used emergency psychiatric services (users only)
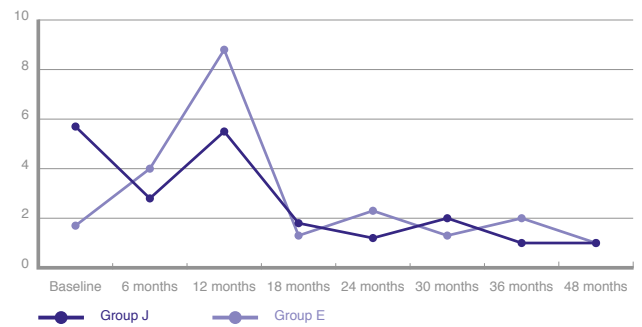
Figure 11. Psychiatric unit admissions, average number of days (users only)
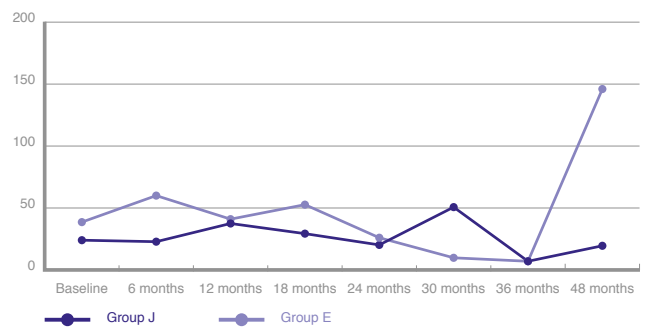
In contrast Group E presented to emergency hospital departments more often (2.7 times at baseline versus 4.3 times at the 48 month follow up), although there was a substantial increase in the last 12 months (Figure 8); Figure 9 shows that Group E spent the same number of days in hospital at the 48 month follow as they did at baseline (6.8 days against 6.9 days), while Figure 10 shows that Group E required emergency psychiatric assistance slightly less often at the 48 month follow up than they did at baseline – 1.7 times at baseline against 1.0 at the 48 month follow up.

3.4.3 AVERAGE USE

This section combines the two previous measures to generate the average health service usage per individual, or the *average use*. Figure 12 shows that at baseline Group J used emergency hospital services on average 1.5 times in the previous six months, while in Group E the average was 1.4. After 48 months– Group J's use of emergency hospital services has declined by 80% to 0.3, while Group E's increased to by 21% to 1.7.

Figure 13 shows that the average number of times Group J presented for emergency psychiatric assistance declined considerably from on average 1.5 times at baseline to 0.1 times at the 48 month follow up, while there was no material change in Group E's average use throughout the trial.

Figure 12. Average number of times used emergency hospital ward
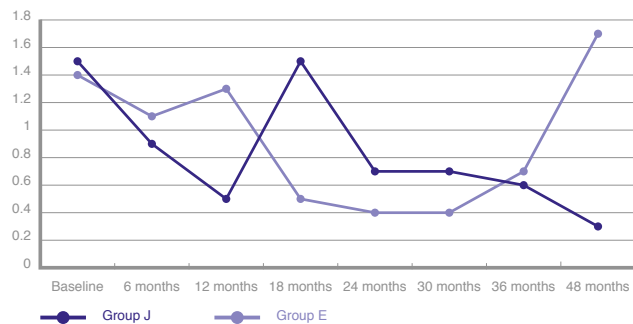
Figure 13. Average number of times used psychiatric services
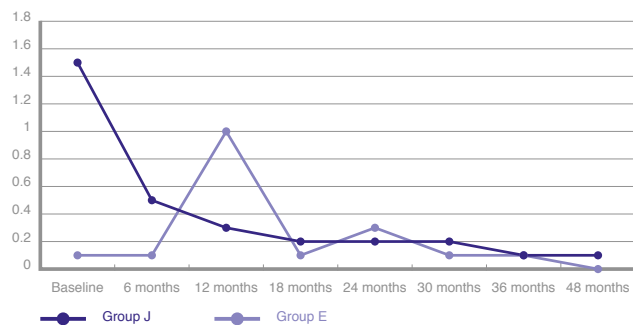
When we examine the average number of days people have been hospitalised the pattern is clearer. Figure 14 shows a reduction of about 77% in the average number of days Group J has been hospitalised (4.4 days at baseline versus 1 day at the 48 month follow up). Among Group E participants we observe a more modest 37% decline from 3 days at baseline to 1.9 days at the 48 month survey. Over the 48 month observation period the overall reduction observed in Group J is larger – not only is their starting point higher, and their final result lower, but at each measurement point Group E's average was substantially higher than Group J's.

Figure 14. Number of days hospitalised
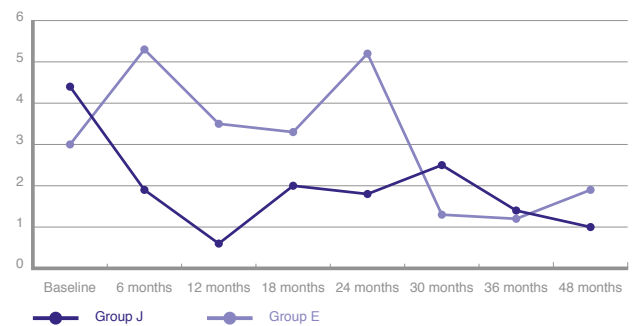
Figure 15. Number of days in a psychiatric unit
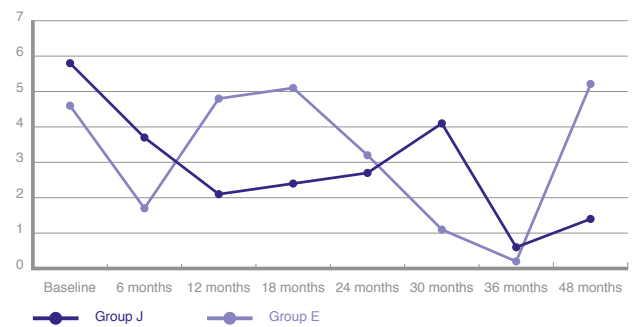
Finally, with respect to the average number of days people have been hospitalised in a psychiatric unit, Figure 15 shows Group J reported they spent on average 1.4 days in a psychiatric unit in the six months prior to the 48 month follow up survey compared to six days at baseline. Group E's average use after three years is slightly lower than Group J, but they are coming off a 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, as well as a substantial increase between the 36 and 48 month surveys.

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 hospital services and their average number of days hospitalised in general hospitals and psychiatric units has declined by about 80% over the 48 month period. Group E's need for emergency hospital treatment has increased by 21%, and while the average number of days in hospital has declined by about one third, the reduction is less than observed in Group J. 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-utilisation of health services.

3.5 OTHER SERVICE USAGE

While the use of health services by the long-term homeless has generated considerable interest in the policy community around the world, we were also interested in what other services the trial participants used, and whether their patterns of service use changed over the course of the trial. We were particularly interested in the use of homelessness services for two reasons. First, on a day-to-day basis, homelessness services cannot meet demand. Second, the chronically homeless use a disproportionate amount of service resources and any reduction could ostensibly free up resources.

There was a significant decline in both groups' use of homelessness services over the 36 months (Figure 16). In Group J we observe a consistent decline from an average of 3.5 times at baseline to 0.2 times at the 36 month survey. In the last 12 month period there was a slight increase to 0.5 times, but this is still well below the baseline result. In contrast, Group E's pattern is more volatile, changing little in the first 12 months, declining dramatically in the second year, rising again in the third year and then declining substantially in the last 12 months from 5.5 times to 0.8 times. The volatility in Group E's results may reflect a pattern of ongoing but episodic crises, although it is hard to say with any certainty. While Group E's result is much lower than at baseline, whether such a low level can be maintained remains to be seen.
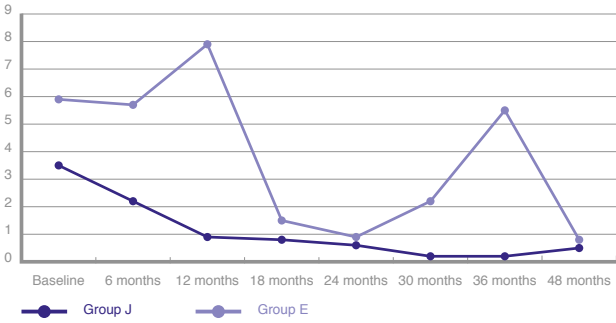
Figure 16. Average number of times used homelessness services

Group J's use of crisis facilities declined consistently (but modestly) through the first 36 months from 0.6 times to 0.1 times, but in the last 12 month period we observe an increase to 0.4 times. Group E's use of crisis facilities is uneven with substantial increases recorded at the 6 and 24 month surveys (Table A4, appendix A). While, the overall difference between the two groups is relatively small and statistically insignificant, an important empirical issue relates to the underlying pattern. Among Group E we observe greater volatility over time in their use of homelessness services. This likely reflects a higher level of instability and uncertainty in their day-to-day lives. Among Group J the underlying pattern is smoother, suggesting J2SI has been able to assist participants to develop the skills and confidence to manage potential crises effectively.

As was the case in the first 24 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 the Sacred Heart Mission meals program. The number of times Group J used the meals program halved in the first 12 months (76 to 34 occasions) and subsequently stabilised at around 30 in the second and third year of the pilot. In the last year it has risen to 41.3. Group E's use of the meals program also declined in the first 12 months from 67 to 48 occasions but subsequently declined further to around 20 times at the 36 month follow up survey. Like Group J there has been an increase in Group E's average use of meal programs in the last 12 months, rising by 69% from 16.8 to 28.4.

There are also some moderate changes in the participants' experiences with the justice system over the 36 month period. In the 36 month report we found that the proportion of Group J charged with a criminal offence at the 36 month follow up survey was nine percentage points lower than reported at baseline and for Group E it was 18 percentage points lower. By the 48 month survey the improvements had all but disappeared – in both groups the proportion charged with a criminal offence at the 48 month survey was only 2-3 percentage points lower than at baseline. (Table A5, appendix A).

The proportion of Group J participants who were incarcerated went up slightly in the first year, came down in the second year, peaked at just under 16% at the 30 month survey and has subsequently remained below the baseline results ever since (Table A6, appendix A). While the pattern is uneven, the overall trend is that fewer people in Group J are being incarcerated after four years than at the start of the trial. In contrast, Group E started 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 6% of Group E participants reported they had been incarcerated in the previous six months and this remained relatively constant across the 30 and 36 month follow up surveys. By the 48 month survey 10.7% of Group E had been incarcerated in the previous 6 months, which is five times higher than baseline, and 3 percentage points higher than Group J.

Figure 17. Average number of days incarcerated
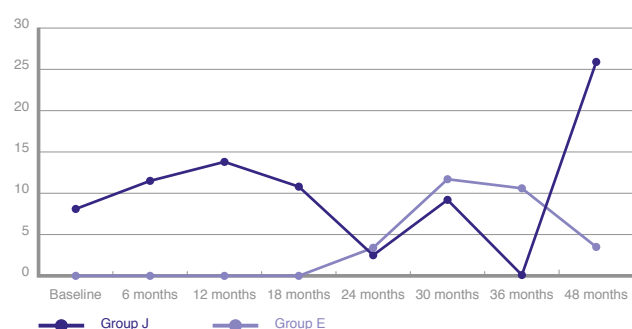
In the 24 month report we noted that when we examined the average number of days in prison an interesting pattern had emerged. In the first year the average number of days Group J spent in prison was 11.5 at the 6 month follow up (mfu) and 13.8 days at the 12mfu. The average number of days subsequently declined to 10.8 at the 18mfu and then to 2.5 at the 24mfu. At the 36 month survey the average number of days had declined to 0.1 (Figure 17).

In the last 12 months the trend was not sustained and we observe a substantial increase in the average number of days incarcerated (25.9), or just over three times the average number at baseline. However, the result reflects relatively long periods of incarceration reported by just 2 participants. In contrast the average number of days incarcerated in Group E stayed at zero for the first 2 years but subsequently rose in each period. It subsequently declined from 10.6 days to 3.5 days in the last 12 months – the pattern in Group J is the reverse of Group E and we can offer no compelling explanation why this is so.

3.6 SUBSTANCE USE

Problematic substance use is common among the long-term homeless, and this was the case among the trial participants. At the baseline survey almost 90% identified problems with substance misuse, with over 70% reporting a history of IV drug use, and nearly half reporting problematic alcohol use. However, it is important to note that patterns of problematic substance use are unevenly distributed among the long-term homeless – active drug addictions are more common among chronically homeless individuals under 40 years of age. In another study of the long-term homeless in Melbourne Johnson and Chamberlain (2013) found that 70% of their sample reported a history of IV drug use but that only 20% were using when first interviewed. The average age of their sample was 45, or 10 years older than the J2SI trial participants. The lower rate likely reflects a process of maturing out, and/or premature death. The key point is that when the J2SI trial commenced a significant majority of participants were still using.

We saw little change in the participants' patterns of substance use in the first three years and we did not expect to see any improvement in the absence of J2SI. As with previous reports we examine what drugs the participants used in the last six months and, if they did use, whether there has been a shift in the frequency they consume[7]. We recognise that these measures are limited, particularly as they do not include the amount people consume. Although attempts were made to collect detailed information on the amount people consumed, 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).

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[7] 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).

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 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 A7, A8, A9 and A10 in appendix A for more detailed information.

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 (Table A7), and four years later 68% reported using illegal drugs. In Group E the proportion using illegal drugs declined by 10 percentage points from 74% at baseline to 64% by the 48 month survey (Table A8). Despite fluctuations over time there was no statistically significant change in the proportion using illegal drugs after four years in either group.

Alcohol and cannabis were the most commonly used drugs. In Group E the proportion using alcohol dropped by 30 percentage points over the first three years, from 74% at baseline to 44% at 36 months. Over the next twelve months the proportion did not change. In Group J the proportion using alcohol also declined, but by about half as much (from 68% at baseline to 50% at both the 36mfu and 48mfu survey). Again, we observe no change in the final 12 months. The proportion using cannabis remained relatively constant in Group E – it was 57% at baseline and had declined to 50% at the 48mfu. Group J's results were more volatile but over the four year period there was a 15 percentage point decline – from 61% at baseline to 46% at the 48mfu.

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 baseline about half 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 40 percentage points for Group E and 20 percentage points for Group J. Interestingly both groups reported marked declines in the final 12 months.

I was on Xanax really bad, but they helped me get off it … I was buying sometimes 15 pills a day, ending up in hospital every couple of days overdosed on pills… I'm better now (Edie, 38)

We were particularly interested in the use of heroin, as it is a highly addictive drug that often leads to a destructive cycle that involves raising money through illegal means. Over the 48 month observation period there was a 32 percentage point decline in the proportion of Group E using heroin (46% to 14%) and a 14 percentage point decline in Group J over the same period (39% to 24%). We observe no change in the proportion of either group using heroin in the final 12 month period. Thus, it appears that the gains made during the first three years had been sustained. This is a good sign.

I've been clean for three years. It's a very big thing firstly for an addict to admit he or she has a problem, it's a very big trust problem (Jobe, 45)

In contrast to heroin, the use of methamphetamines (ice) had increased in both groups over time. Among Group J it had risen from 19% at baseline to 29% at the 48mfu, while in Group E it rose, albeit slightly, from 10% to 14% over the four year period.

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 – three points stand out. First, a high proportion of the trial participants in both groups continue to use illicit drugs. Second, Group E are still doing slightly better. Third, in the absence of J2SI we observe no significant increase in substance use behaviour among the trial participants.

The second area we examined was the frequency of substance use (Table A9 and A10). Over the four year period there was little material change in the frequent use of alcohol. In Group J it decreased 4% to 3% over the first three years, but in the final 12 months jumped considerably to 21.4%. It is unclear what is driving this rise – it may reflect a substitution effect but equally other unobserved factors may be at work. In contrast the proportion of Group E that reported frequent use of alcohol remained constant over the four year period. We observe greater change (and volatility) in the frequent use of illegal drugs. In Group J the rate increased by 22 percentage points (from 42% to 64%) over the four years, with the proportion increasing in the first 12 months of the trial and subsequently stabilising around 64% for the remainder of the trial. In Group E it declined by 6 percentage points (from 62% to 56%). Even taking into account the different starting points of the two groups, the proportion of people who frequently used illegal drugs is higher in Group J than in Group E.

For Group J, the rate of frequent use increased across almost all types of drugs – there was a 7 percentage point increase in the proportion who used heroin frequently. This contrasts with a 20 percentage point decline for Group E (from 27% to 7%). The frequent use of Benzodiazepines declined by 12 percentage points in Group J but in Group E the decline was double (29%).

The overall pattern is mixed – we observe improvements in some areas, but equally there are areas where substance use behaviour has worsened. The findings are not entirely surprising for two reasons. First, the literature clearly shows that the capacity of programs to effect change among homeless people with active addictions are limited. Second, J2SI's approach emphasised helping people to manage their substance use in a way that reduced physical and emotional harm and also reduced the risk of losing their housing. However, in the absence of J2SI we expected to see some participants relapse, more so when we found that some participants had lost their housing. This did not happen and it is clear that some participants have progressed – not all, but certainly some. For these individuals being clean and drug free is often part of a broader process. As Kate (26) told us

> Yeah, things are a lot different … When I first started on the program I was using every day flat chat and over the three years in the program I got clean a few times and then this last 10 months being clean …. I've learnt about the cycle I get into and I don't like to feel emotions so I go on a self-destructive path … I realise its not worth it anymore.

We think the key lesson to learn from J2SI is not that addressing substance abuse among the long-term homeless is difficult, there is already ample evidence of this. Rather, as Kate's quote indicates 'getting clean' is part of a broader process of change that individuals manage at their own pace and according to other circumstances in their life. Our results show that long-term homeless with an active addiction can maintain their housing and this can be a foundation for better health and a reduced risk of premature death. Having a home and a supportive long-term relationship are also foundations that can facilitate longer term, positive changes in substance use behaviour.

3.7 ECONOMIC PARTICIPATION

When the trial started none of the participants were working, most had not worked for many years and a significant majority (about 70%) were not looking for work. A key goal of the J2SI pilot was to improve the labour force participation rate, indicated by the percentage of respondents who were either doing paid work or looking for paid work.

Labour force participation for Group E and J at the baseline survey were similar – 26% and 30% respectively (Figure 18).

Figure 18. Labour force participation rate
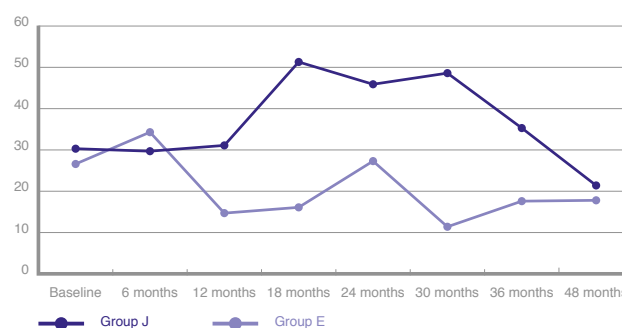
However, over the course of the trial labour force participation rates among the two groups were very different. After 18 months, just over half (51%) of Group J were either looking for work or were working, while the corresponding rate in Group E was 16%. The rate subsequently began to fall for Group J, and after three years the labour force participation was 35%, or just five percentage points higher than at baseline. In the last 12 month period the participation rate for Group J declined to 21%, or 9 percentage points lower than at baseline.

While this is a worrying sign, a comparison with Group E is interesting. Figure 18 shows that apart from the results from the 6 month survey, labour force participation in Group E is much lower than Group J in every period, and after three years 18% of those in Group E were participating in the labour force, or about half the rate reported in Group J (35%). However, in the last 12 month period the results of the two groups converge, and there is little material difference in the labour force participation rates of either group. The findings suggest two things. First, improving labour force participation among the chronically disadvantaged is possible but it is very difficult to maintain due to the precarious types of employment entered into.

Second, that without intensive assistance of the sort offered by J2SI the long-term homeless risk becoming further disaffiliated from the labour market over time.

As with previous reports, a more detailed analysis of labour force participation reveals that changes in the rate are primarily driven by changes in the number of people looking for work. After 12 months the proportion of Group J unemployed but looking for work increased from 27% to 31%. It then increased to 38% after 18 months. After this it started to decline and by the 48 month follow up had fallen to 21% – that is about 1 in 5 Group J participants was actively looking for work. In Group E, it declined substantially over the three years, from 21% at baseline to 3% at the 36 month survey, but subsequently increased to 11% at the 48mfu.

Figure 19. Average number of times use employment services
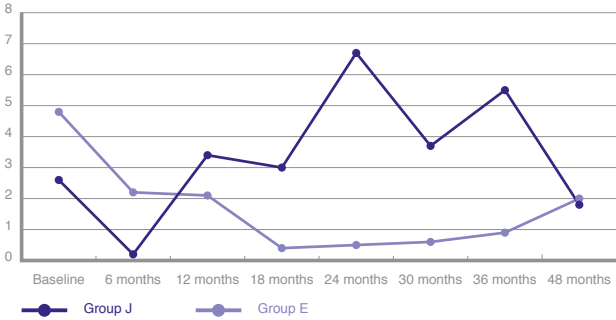
The higher proportion of Group J participants looking for work corresponds with a higher use of employment services relative to Group E over the course of the trial (Figure 19). At baseline, the average number of times people used employment services in the previous 6 month period was 2.6 times per person in Group J and it was 4.8 times per person for Group E. At the 12 month follow up the average number of times people in Group J used employment services had increased to 3.4 times per person in the previous 6 months, while the equivalent figure was 2.1 times per person in Group E. At the 24 month follow up, the average number of times people in Group J used employment services has increased to 7 times per person in the previous 6 months, while it had declined substantially to 0.5 times per person in Group E. By the 36mfu interview the average number of times people in Group J used employment services was 5.5 times per person in the previous 6 months, or about twice the average reported in the baseline survey.

In contrast, the equivalent figure was 0.9 times per person in Group E, or less than a quarter reported at baseline. In the final 12 months the pattern shifts – Group J's use of employment services declined to 1.8 times per person, while Group E's use of employment services had increased to 2 times per person. Although Group E's result was still more than half the rate reported at baseline, once again we observe that after 48 months the J and E groups results have converged.

From a program development perspective the data indicate the benefit of integrating employment and skills development components into models that work with the long-term homeless. While there are limits to the extent to which the long-term homeless can engage with the labour market, the J2SI pilot has shown that with the right sort of assistance, at the right time, about half the participants' tried to find a job. This is an important finding because it challenges the view that the chronically homeless do not want to work.

While enabling participants to be ready and actively looking for work is an important indicator, doing paid work is a key measure. However, getting and keeping a job is a significant challenge for the long-term homeless. At the 36 month survey five people in each group were in paid employment, although at the 12, 18 and 30 month follow up more people in Group J were working (Table A11, appendix). After 48 months no one in Group J was working and only one person in Group E was. While this suggests that intensive intervention can make a difference, the reality is 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. In short, while the evidence shows that J2SI made a difference to workforce participation it is important to reflect on the fact that getting the long-term homeless into the labour market is a lengthy process, with the outcomes often shaped by exogenous factors beyond the control of individuals or services.

Economic participation is not the only route to social inclusion. In this context the extent to which the long-term homeless trial participants feel supported by and connected to the broader community is another, arguably more relevant indication of the extent to which the participants feel socially included. In the next section we examine whether there have been any changes in the extent to which the participants feel supported by, and connected to the broader community over the four year period.

3.8 SOCIAL CONNECTEDNESS, SUPPORT AND SATISFACTION

Right from the inception of the J2SI pilot Sacred Heart Mission had high aspirations that, through a combination of stable housing and intensive support, participants would begin to develop new social connections outside of the homeless subculture. The high value placed on improving the participants' sense of social connectedness reflected an understanding that belonging to a community is an intrinsic part of life that most people value. Furthermore, SHM was acutely aware that the long term homeless have social networks, but that these networks are mainly made up of other homeless people. A result is that existing social networks are more often than not damaging rather than supportive. Thus, the goal of developing new social networks had to contend with breaking apart established social networks, social practices, routines and roles that were often integral to each individual's sense of identity and sense of belonging. The subsequent danger was that in trying to re-shape the participants' social networks there was a risk the participants could experience acute social isolation, which in turn increased the possibility of the re-occurrence of homelessness as people sought out their old friends.

We developed two measures to investigate the participants' feelings of social connectedness – the social acceptance scale and the social support scale. Self-rated perceptions of social acceptance were measured using an internally consistent scale from six questions used in the study[8]. The items include:

In the last six months:

- I have friends I see or talk to every week;
- I have felt accepted by my friends;
- I have felt accepted by society;
- I have felt clear about my rights;
- I have felt that I am playing a useful part in society;
- I have felt that what I do is valued by others.

Scores range from 0 – 24, with 24 being the highest level of social acceptance. Increasing scores indicate participants feel more socially accepted.

We also developed an internally consistent measure of the amount of social support received from various sources outside relationships with support workers[9]. This scale was derived from seven questions. The items include:

- I seem to have a lot of friends;
- I have people I can confide in;
- I have someone I can lean on in times of trouble;
- There is someone who can always cheer me up when I am down;
- I enjoy the time I spend with the people who are important to me;
- When something's on my mind, just talking with the people I know can make me feel better, and;
- When I need someone to help me out, I can usually find someone.

The highest possible score is 49 and an increase in scores indicates a perceived increase in social support.

Over the 48 months we observe a consistent, but fairly modest improvement on both measures by both groups. Figures 20 and 21 indicate that both groups reported similar levels of social support and social acceptance throughout the trial, which suggests that the impact of the J2SI pilot was modest.

> I: Are you being more social?
>
> R: Yeah, I find that I actually make an effort to go out and talk to the neighbours. If they are outside having a beer I'll go out and have a cigarette with them … I am feeling more social than I ever was in a boarding house (Tamara, 28)

[8] The scale has a Cronbach's alpha score of 0.782, which falls within the accepted range of reliability for a scale measure.
[9] The scale has a Cronbach's alpha score of 0.795, which falls within the accepted range of reliability for a scale measure.

Further, while Figures 20 and 21 show that the results fluctuated between observation periods, after 48 months the reported levels of social support are only 6 points and 4 points higher for Group J and E than at baseline respectively. While the overall change is modest Group J's 48 month survey result is the highest recorded and the highest recorded by either group during the study. The difference between baseline result and the 48 month results is much the same with respect to the social acceptance scale.

Figure 20. Social support
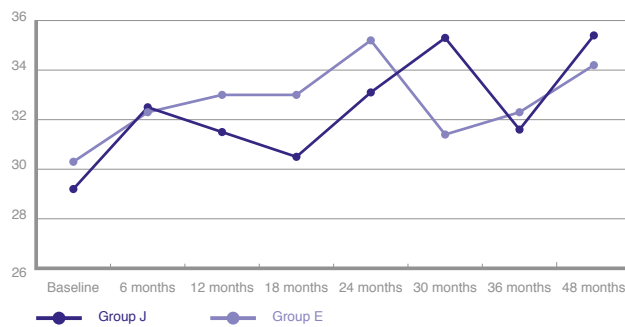
Figure 21. Social acceptance
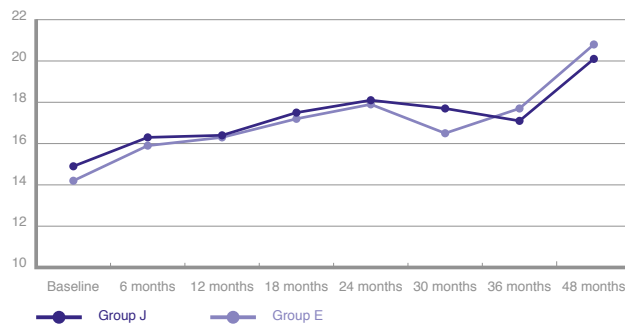
Without repeating what was said in earlier reports, after 48 months, we have strong evidence that corroborates findings from a number of international studies that the transition out of homelessness is a slow process. Not only do the social, systematic and structural experiences of the long-term homeless leave lasting emotional scars, but their functional adaptations to day-to-day life outside of traditional institutions and social roles makes developing new social networks a complex and arduous process.

I: You know sometimes when people are homeless they feel like people look down on them, they feel separate from the community. Do you feel that anymore?

R: No I don't feel that anymore. I feel part of the community (Anne, 39)

Nonetheless, no matter how challenging the transition out of homelessness may be, the results show a consistent improvement and this is a good sign. It serves as a reminder that while building new social connections takes time, as does building the sort of cultural and economic capital that is a necessary part of being a member of 'conventional' society, it is possible nonetheless.

4. COST BENEFIT ANALYSIS

In this chapter we update the results from the 24 and 36 month costs benefit analysis (Johnson et al., 2012; 2013). For readers unfamiliar with either of these reports we start by recounting various techniques that are used to analyse the costs and benefits of social programs. Next we explain our approach, and then we present our results.

The two most common methods are cost-benefit analysis (CBA) and cost-effectiveness analysis (CEA). Both are useful tools for program evaluation as they enable policy makers to compare different programs and allocate resources more efficiently. We use a CBA, which is considered the best approach to use when social programs have several objectives and multiple outcomes, as is the case with J2SI.

Briefly, a CBA places a dollar value on program costs. Program outcomes (or benefits) are then turned into monetary values. Monetary values are then used to generate a benefit-cost ratio where the monetarised program benefits are divided by total program costs. While the final output of a CBA makes comparisons across different types of programs relatively easy, it is challenging to put a monetary value on all outcome measures and a CBA often requires a range of assumptions.

Irrespective of what approach is used to examine the economic impact of a social program, the most important issue is how outcomes are measured. Although it is often the case that the outcome measures social programs use are idiosyncratic, the more critical issue is the difficulty of attributing an outcome to a specific program when there is no control group. Finding a proper control group is difficult and most Australian studies do not use them. The lack of a control group or even the use of a non-equivalent comparison group (Flatau, Zaretzky, Brady, Haigh and Martin 2008) commonly result in an over-estimation of a program's 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 the J2SI pilot. This means that we can use the outcomes of a control group as reliable proxies for the outcomes of the J2SI participants in absence of the J2SI intervention. Thus, the benefit of the J2SI program can be obtained by calculating the difference between the average outcomes of the treatment group and the average outcomes of the control group.

It is important to make the point that Australian studies that examine various interventions designed to end homelessness typically favour CEA and do not include proper control groups. As such comparing our results with ostensibly similar evaluations is misleading.

4.1 QUANTIFYING COSTS AND BENEFITS: PRELIMINARY CONSIDERATIONS

The first task was to obtain detailed information on the costs of the J2SI program. This was relatively straight forward and we sourced the data directly from Sacred Heart Mission.

The next step, quantifying the benefits attributable to the J2SI program, was slightly more complicated. We did this by 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[10]. We then present the net benefit by subtracting the cost of the J2SI program from the estimated benefit. The detailed procedures are listed in the appendix.

However, it was not possible to measure the monetary value of various 'intangible' benefits such as improvements to participants' self-esteem, or improvements in their sense of connectedness to the local community. Yet, as we know from the literature these 'intangible' benefits are important for the long-term homeless. This means that our estimate is likely to underestimate the full benefits of the J2SI program.

Another difficulty is the projection of future outcome(s). The benefits of the J2SI program may accrue over many years into the future. But, due to the high volatility of the outcomes in both groups, it is difficult to tell exactly what will happen in the future – some participants' trajectories may broadly follow the existing trend, but for others, their circumstances may well deteriorate. We include a 10 year projection based on the number of lives saved to highlight the importance of future outcomes.

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[10] The 4% rate is based on the Treasury indexed bond rate which is commonly used in cost-benefit analyses.

4.2 COST OF THE J2SI PROGRAM

The first step in costing the J2SI program involved identifying set-up costs. Set-up costs, which include office set-up and staff time during the establishment phase, were $145,000. Set-up costs have been excluded from the analysis. In the next step, we separated the J2SI program costs into six components. They are:

1. General management and governance.
2. Intensive Assistance and Co-ordination (IAC) – case management.
3. Building Up and Developing Skills (BUDS) programs.
4. Therapeutic intervention.
5. Other service delivery.
6. Operational costs.

Further information on the six cost areas is listed in Appendix B. Table 3 provides the costs of the J2SI program over three years. It shows that the total cost per participant was just over $80,000, and that case management accounted for approximately two thirds of the cost.

Table 3: Cost per person for the full three years of the J2SI program

Item	
Project management and governance	$9,032
Case management (IAC)	$55,829
BUDS	$5,334
Therapeutic intervention	$2,114
Other service delivery costs	$2,744
Operational Costs	$8,533
Total	**$83,587**
Net present value cost per person	**$80,326**

*All figures are converted to 2012 Australian dollars.

4.3 BENEFIT OF THE J2SI PROGRAM

The key benefits quantified in this report include 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 the appendix 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 4 (below) 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[11]. The present value of the total benefit of J2SI is considerably higher for government ($29,846) than for society ($19,687). This is a reverse of the position reported in the previous two reports. The are two important points of difference. First, there are considerable gains in reduced accommodation and support service costs among Group J. Second, the costs of justice system involvement are considerably higher in Group J. Only support services are included in the calculation of the benefit to society while the subsidies government provides for accommodation (e.g. public housing subsidies) are included for government budgetary consideration. It is also 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.

Table 4: Benefit of J2SI over the four year period ($ per participant)

	Society	Government
Earnings	905	–
Tax and transfer	–	2,858
Health service	19,714	23,489
Drug and alcohol services	1,301	2,391
Accommodation and support services	15,527	4,139
Other services	717	913
Contact with justice system	-17,903	-17,903
Total benefit (per participant)	$20,261	$15,886
Present value (per participant)	$19,687	$14,978

Note: for government, employment includes tax and transfers incurred based on their earnings.

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

We consider increased earnings 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.

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 justice system and other services, as we assume these services are all government funded.

We find that the major societal benefit of the J2SI program is in the reduction in health services and accommodation and support services. Overall, the economic benefit to society of the J2SI intervention in both areas is approximately $35,000. Although this is a positive economic outcome, the negative benefit in the justice system area remained. However, we are unable to separate out justice costs that were incurred because of crime committed prior to J2SI from costs that were incurred because of crimes committed during J2SI. Thus in Table 5 (below), we include in our sensitivity analysis a calculation that excludes the costs of contact with the justice system.

4.4 NET BENEFIT OF THE J2SI PROGRAM

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 5 shows that from a society perspective the benefit-cost ratio is 0.25, which is up slightly from the 0.22 recorded at year 3. From a government perspective, we observe a larger increase – from 0.09 at year 3 to 0.19 at year 4[12]. The higher benefit-cost ratio reported in year 4 reflects larger differences in health service usage between Group J and Group E, as well as gains in reduced accommodation and support services costs among Group J. While the year 4 results highlight the importance of investigating long run effects, due to the volatility of outcomes among this population we cannot do a precise projection on long-run effects. Thus, the findings reported here are on the conservative side, and the potential benefit could well be larger.

Table 5: 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)	14,978	-65,348	0.19
NPV society (basic)	**19,687**	**-60,639**	**0.25**
NVP society (without contact Justice system)	36,789	-43,537	0.46
NPV society (statistical life-10 years)	105,995	25,669	1.32

[12] In the 36 month outcomes report, government and society figures were mistakenly swapped. Also there are typographical errors in the net-benefit and benefit-cost ratio for governments. The results cited above are the correct figures. This means the year 4 ratios are slightly better than reported after 36 months.

The estimated benefit in our basic measure does not include the lives saved by the J2SI program – there were four lives lost among Group E and two 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 2011/2012 dollars ($198,933)[13] and applied it to the benefits. If we assume the gap of two statistical lives between Group E and J persists for 10 years[14], the benefit becomes far greater than cost (a ratio of 1.32, or for every dollar invested a $1.32 return to the community). In dollar terms, this represents a net benefit of nearly $26,000. 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 program.

To summarise, although some important benefits defy quantification, the CBA shows that the J2SI program generates some positive economic outcomes in the areas of health service use, as well as accommodation and support service use. However, it also shows that the short-term costs are higher than the short-term economic benefits. This, combined with our analysis of lives saved by J2SI, is perhaps a timely reminder that cost savings should never be the sole determinant upon which a program should be assessed.

[13] The number is slightly different from the second report due to the revision of CPI index by the ABS.
[14] 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. We also believe it is both plausible and conservative to assume a gap of two statistical lives over a 10 year period.

5. COMMENTS AND CONCLUSIONS

After the first three years of the trial we argued that relationship informed models based on persistence and trust, combined with a focus on rapid access to independent housing can turn the lives of the long-term homeless around. Our assessment was based on the fact that after three years 85% of Group J were housed. The rate of housing retention was more than twice what existing services achieved, and was comparable to the best results reported elsewhere in the world. We also found improvements in the emotional and physical health of J2SI participants, as well as substantial reductions in the use of costly health and welfare services. We also found that J2SI had an impact on the participants' involvement with the criminal justice system, but this pattern emerged quite late in the trial.

After 48 months, the picture has changed slightly and while we continue to see positive results in many areas (physical and mental health, health service use), we also found that in some areas the outcomes had started to decline. Perhaps the most crucial and worrying decline was in the participants' housing – while most were able to sustain their housing while they had intensive support (86%), when that support was no longer available the housing retention rate dropped to 75%. While this result is still positive it emphasises the point that some people require ongoing, possibly indefinite support to resolve their homelessness permanently.

Although the evaluation found improvements in a number of areas, the J2SI pilot did not have an impact in every area that we investigated. The issue of substance misuse in particular warrants further comment. While some studies reports declines in alcohol intake (Larimer et al., 2009) and illicit drug use (Milby et al., 2005), other studies have found, as we have, that interventions designed to end homelessness often have little direct impact on people's substance use behaviour (Tsemberis et al., 2004; Padgett et al., 2006; O'Connell, Kasprow and Rosenheck 2009). However, by enabling chronic substance users to stay alive in a safe and stable environment, J2SI may well have provided the foundation for future change.

> Most studies do not have a comparison group … This severely over-estimates the economic benefits

Finally, the short-term cost savings were not as large as was anticipated. However, it would be unwise to ignore the potential longer-term economic benefits, although these will always be hard to quantify. It is worth re-iterating that the way we estimate benefits in this evaluation is very different to other studies in this area. Our approach was to compare Group J and Group E outcomes. Most studies do not have a comparison group, so they often use baseline results of the treatment group or general population as the point of comparison. This severely over-estimates the economic benefits.

The evaluation has grappled with a raft of technical issues that policy makers and researchers need to be familiar with. One of the biggest issues we faced was measuring change – in areas such as housing this is not particularly difficult. In other areas such as service use, substance use, and health for example, it is much more difficult. The evaluation relied on self-reported data and while the research shows that homeless people are fairly accurate self-reporters (Calsyn et al., 1993; Gelberg & Siecke 1997), the evaluation would have generated stronger evidence had we had access to administrative data containing the participants actual use of health, justice and welfare services. This information is available and we tried to access the information but were unsuccessful. If policy makers want better evidence on the impact of program interventions funded from the public purse, more work needs to be done to improve the opportunities for linking program evaluations with individual unit records contained in administrative datasets held by the government.

Over the course of the four years we ran the evaluation, one thing that struck all of us is how heterogeneous the long-term homeless are. This emphasises the importance of developing service delivery frameworks that are flexible and reflect the needs of the participants rather than funding arrangements. As Roy (25) who was housed, had a new baby and a partner, told us

> When you rang I was in a semi-reflective state and everything just came flooding back over the last four years. I was looking at where I was, where I am now, what would have happened … [with J2SI] you were able to take your time … that's the thing J2SI did not rush me. We had three years. And that's the thing, if it had been 12 months, yes, it would have helped … but everything would have been rushed. I would have been pressured.

For other participants, challenges remain. The end of support was a particularly challenging time for some participants, as the cessation of support created concerns and doubts. Ariel (45) told us that she was:

… saddened and anxious about the program finishing and everything because J2SI was so much help … like you could ring up at anytime and there was someone to talk to … I've just gone downhill from when I was having J2SI, I've gone downhill.

After showing signs that she had turned her life around Kate struggled when the program finished. As Kate told us, her life

… went into a downward spiral after that … not long after I was in jail.

The end of J2SI was a function of its pilot status, and this is a timely reminder to governments that funding pilots, while important, can have longer term detrimental impacts on both clients and agencies – building relationships is not helped when there is uncertainty about the future.

Ultimately, what matters is how the trial participants felt about J2SI, as trust, persistence and flexibility were the cornerstones of the J2SI model. From what we were told J2SI gained the respect and trust of the participants. Jobe (45) said that J2SI made him feel a 'part of something' and Edie (38) said 'they were fantastic … whatever I needed I could count on J2SI'. The evidence from the J2SI trial demonstrates that being housed and having persistent, reliable support are the foundations upon which a successful transition out of long-term homelessness rests. This is not a new finding but it is a challenging one for Australian politicians and policy makers, who continue to baulk at the idea of providing ongoing funding for long-term intensive support programs, let alone the idea of permanent support. Until policy makers and politicians openly recognise the challenges the long-term homeless face in exiting homelessness and finding acceptance in the broader community, then it seems unlikely that policy reform will move in the right direction.

The J2SI pilot has shown that assisting the long-term homeless is possible, and this deserves to be recognised and celebrated. Most of the J2SI participants are now travelling a far more promising trajectory than prior to their involvement with J2SI, and the participants deeply appreciated what, together with J2SI, they had accomplished over the course of the three year journey.

I'd just like to say thank you for J2SI and everything they've done and if they could come back into my life they'd be really welcome (Edie, 38)

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APPENDICES

APPENDIX A

Table A1: Report no bodily pain last four weeks

	Mean Group J	N	Mean Group E	N	p-value
Baseline	27.3	33	23.8	42	0.738
6 month	27.0	37	17.1	35	0.318
12 month	33.3	36	20.6	34	0.235
18 month	32.4	37	25.8	31	0.555
24 month	44.7	38	27.3	33	0.128
30 month	52.6	38	41.7	36	0.352
36 month	41.2	34	38.2	34	0.808
48 month	46.4	28	35.7	28	0.424

Table A2: Report severe bodily pain last four weeks

	Mean Group J	N	Mean Group E	N	p-value
Baseline	30.3	33	19.0	42	0.273
6 month	37.8	37	11.4	35	0.009
12 month	41.7	36	38.2	34	0.773
18 month	27.0	37	16.1	31	0.279
24 month	23.7	38	21.2	33	0.807
30 month	18.4	38	13.9	36	0.602
36 month	23.5	34	20.6	34	0.774
48 month	21.4	28	14.3	28	0.494

Table A3: Report moderate bodily pain last four weeks

	Mean Group J	N	Mean Group E	N	p-value
Baseline	24.2	33	38.1	42	0.200
6 month	16.2	37	37.1	35	0.047
12 month	13.9	36	23.5	34	0.310
18 month	21.6	37	25.8	31	0.692
24 month	7.9	38	18.2	33	0.211
30 month	21.1	38	30.6	36	0.358
36 month	14.7	34	17.6	34	0.746
48 month	7.1	28	25.0	28	0.072

Table A4: Average number of times used crisis accommodation facilities

	Mean Group J	N	Mean Group E	N	p-value
Baseline	0.6	33	0.3	42	0.066
6 month	0.4	35	0.7	35	0.580
12 month	0.0	36	0.2	34	0.099
18 month	0.1	37	0	31	0.662
24 month	0.1	38	0.5	33	0.320
30 month	0.1	37	0.3	35	0.253
36 month	0.1	32	0.1	34	0.823
48 month	0.4	28	0.1	28	0.502

Table A5: Charged with a criminal offence between interviews

	Mean Group J	N	Mean Group E	N	p-value
Baseline	27.3	33	23.8	42	0.738
6 month	22.2	36	29.4	34	0.500
12 month	16.7	36	20.6	34	0.679
18 month	24.3	37	19.4	31	0.629
24 month	24.3	37	9.1	33	0.087
30 month	31.6	38	13.9	36	0.070
36 month	18.2	32	5.9	34	0.128
48 month	25.0	28	21.4	28	0.757

Table A6: Incarcerated last six months

	Mean Group J	N	Mean Group E	N	p-value
Baseline	9.7	31	2.4	41	0.228
6 month	14.3	35	0	35	0.023
12 month	13.9	36	0	34	0.023
18 month	8.1	37	0	31	0.083
24 month	5.4	37	6.1	33	0.908
30 month	15.8	38	8.3	36	0.330
36 month	2.9	34	5.9	34	0.562
48 month	7.1	28	10.7	28	0.647

Table A7: % who used between interviews, Group J

	Survey Period							
	0m	6m	12m	18m	24m	30m	36m	48m
Alcohol	68.0	55.6	65.7	58.3	70.3	56.8	50.0	50.0
Heroin	39.3	29.7	31.4	31.4	30.6	35.1	24.2	25.0
Methadone	39.3	36.1	30.6	34.3	36.1	38.9	31.3	32.1
Ice	18.8	11.4	30.6	32.4	18.9	25.0	27.3	28.6
Speed	22.6	22.9	16.7	14.3	7.9	2.7	3.0	3.6
Benzodiazepines	45.8	50.0	54.3	45.7	43.2	50.0	33.3	25.0
Cannabis	60.9	44.1	63.9	58.8	48.6	54.3	53.1	46.4
Illegal	66.7	64.9	80.6	80.0	76.3	73.0	69.7	67.9

Table A8: % who reported using frequently between interviews, Group J

	Survey Period							
	0m	6m	12m	18m	24m	30m	36m	48m
Alcohol	4.0	8.3	5.7	8.3	13.5	5.4	3.1	21.4
Heroin	7.1	16.2	8.6	17.1	19.4	10.8	18.2	14.3
Methadone	39.3	33.3	30.6	34.3	36.1	38.9	31.3	32.1
Ice	3.1	0.0	5.6	8.8	8.1	8.3	15.2	14.3
Speed	6.5	2.9	0.0	2.9	0.0	0.0	3.0	0.0
Benzodiazepines	33.3	38.2	48.6	37.1	35.1	41.7	33.3	21.4
Cannabis	34.8	32.4	44.4	41.2	40.0	45.7	53.1	39.3
Illegal	42.4	48.6	63.9	62.9	65.8	67.6	63.6	64.3

Table A9: % who used between interviews, Group E

	Survey Period							
	0m	6m	12m	18m	24m	30m	36m	48m
Alcohol	74.4	61.8	60.6	58.6	67.7	52.8	43.8	42.9
Heroin	45.9	34.4	40.6	30.0	29.0	17.1	15.2	14.3
Methadone	36.8	44.1	51.5	45.2	48.4	47.2	48.5	42.9
Ice	10.3	17.1	14.7	9.7	12.5	16.7	15.2	14.3
Speed	15.4	5.7	11.8	9.7	12.5	2.8	2.9	3.6
Benzodiazepines	55.6	52.9	45.5	35.5	43.8	38.9	30.3	14.8
Cannabis	57.1	60.0	71.0	70.0	59.4	61.1	61.3	50.0
Illegal	73.8	74.3	82.4	87.1	81.3	77.8	70.6	64.3

Table A10: % who reported using frequently between interviews, Group J

	Survey Period							
	0m	6m	12m	18m	24m	30m	36m	48m
Alcohol	7.7	17.6	9.1	10.3	12.9	11.1	9.4	7.1
Heroin	27.0	15.6	9.4	6.7	9.7	5.7	9.1	7.1
Methadone	36.8	44.1	45.5	41.9	48.4	47.2	48.5	42.9
Ice	2.6	2.9	0.0	0.0	0.0	5.6	3.0	0.0
Speed	2.6	0.0	2.9	0.0	0.0	0.0	0.0	0.0
Benzodiazepines	44.4	32.4	33.3	22.6	34.4	30.6	27.3	14.8
Cannabis	34.3	40.0	48.4	50.0	50.0	47.2	45.2	32.1
Illegal	61.9	60.0	58.8	64.5	68.8	61.1	55.9	42.9

Table A11: Number of people employed

	Group J	Group E
Baseline	1	2
6 month	1	1
12 month	4	1
18 month	5	1
24 month	4	5
30 month	8	2
36 month	5	5
48 month	0	1

APPENDIX B: COST BENEFIT ANALYSIS: APPROACH AND ASSUMPTIONS

STEPS TO GENERATE NET BENEFIT OF J2SI PROGRAM:

a. Calculate the average real benefit of J2SI program per person each 6 month period since program commencement for 4 years.

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

c. Sum up results from step b to create annual figures – i.e sum up results from survey 6m and 12m for year 1, 18m and 24m for year 2, 30m and 36m for year 3. For year 4, there is only one survey, the 48m follow up. Most survey items have only information on 6 month prior the survey 48m interview. Therefore, the benefit items are multiplied by 2 to proxy the full year benefit except items related to housing. The full housing history between 36m and 48m interviews are available. Therefore the housing benefit is calculated based on full year information.

d. Apply discount rate 4% annual figure for both benefit and J2SI program 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.

COST CATEGORIES – DETAILED BREAKDOWN

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)[15]. 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 this project. Although the governance structure may potentially increase the quality of service delivery, there is no direct evidence of the size of the effect.

2. Intensive Assistance and Co-ordination (IAC). This includes the cost of a full time IAC manager, 10 full-time IAC case workers and staff training. Costs include both salary and on-costs. Staff time to assist with the evaluation are not included.

3. Building Up and Developing Skills (BUDS) programs. This component includes costs for 1 full-time BUDS coordinator and all BUDS related expenditure.

4. Therapeutic intervention. This component includes 0.6 EFT onsite psychologist (from September 2010 to the end of year 2) and payments for off-site treatments.

5. Other service delivery. This includes flexible funds for J2SI participants[16] and the costs of an employment consultant seconded from the Mental Illness Fellowship of Victoria[17].

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

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[15] Due to privacy reasons we do not use the actual salary of Secret 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.

[16] 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.

[17] 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.

Table B1: Definition of cost items and sources used in CBA

Health services			
Cost item	**Definition**	**Availability**	**Source**
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.

Justice services			
Cost item	**Definition**	**Availability**	**Source**
Charged with criminal offence	Court administration recurrent expenditure less income/total number of finalizations.	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			
Cost item	**Definition**	**Availability**	**Source**
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			
Cost item	Definition	Availability	Source
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 Common Ground.
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.

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

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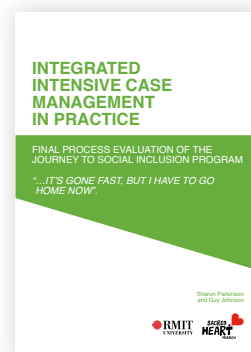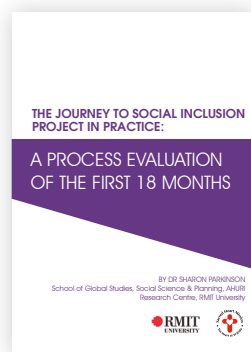
Australian Institute of Health and Welfare. 2010. *Australian Hospital Statistics 2008–09*. AIHW: Canberra.

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

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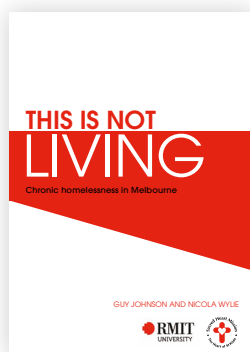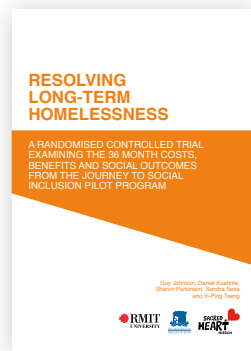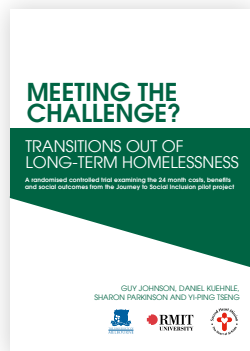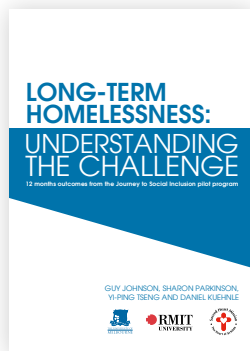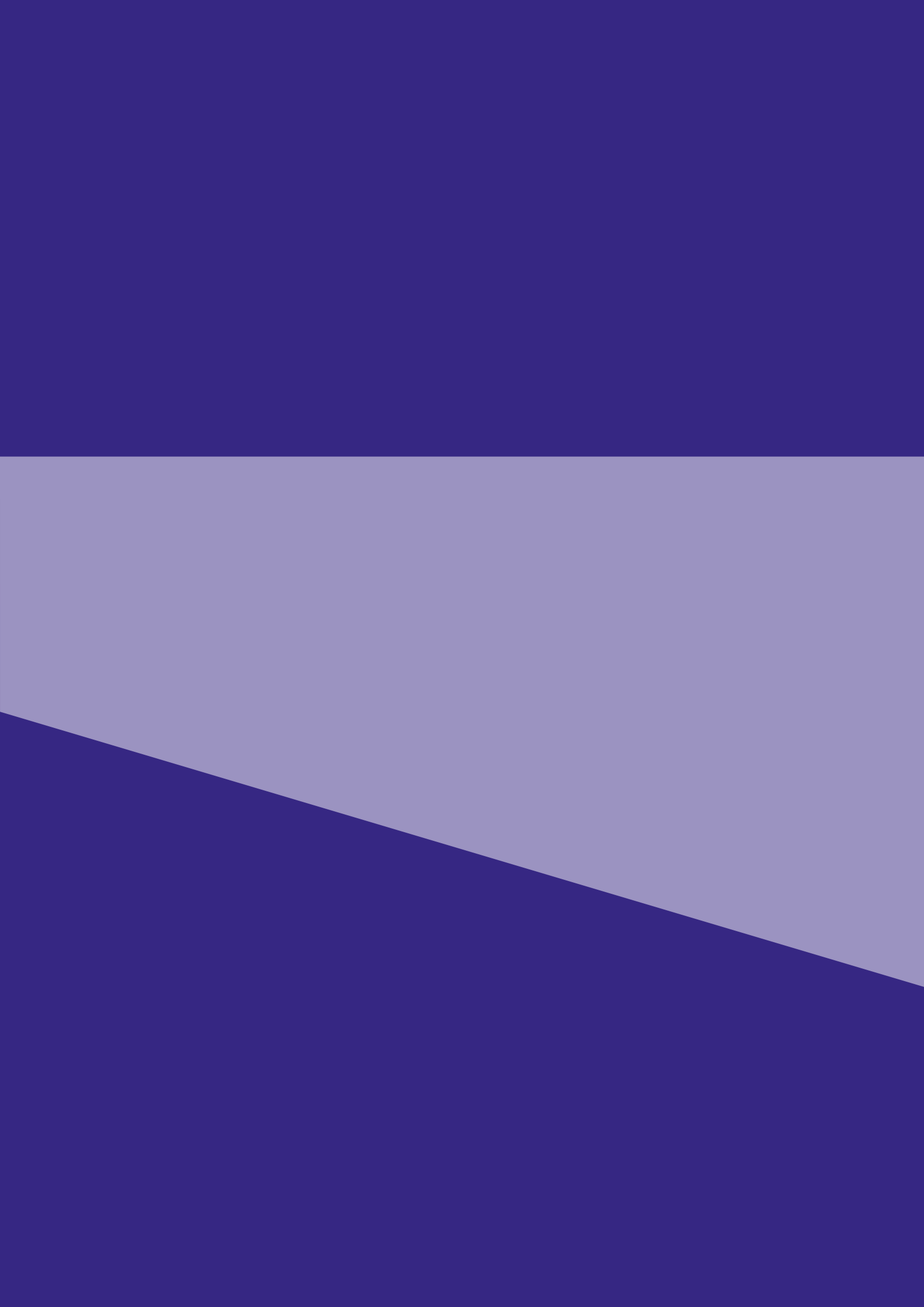**http://www.sacredheartmission.org/**

LONG-TERM HOMELESSNESS:
UNDERSTANDING THE CHALLENGE
12 months outcomes from the Journey to Social Inclusion pilot program

GUY JOHNSON, SHARON PARKINSON,
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RMIT UNIVERSITY

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

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RMIT UNIVERSITY

FOUNDATIONS OF EFFECTIVE PRACTICE
FOR SUPPORTING PEOPLE WHO ARE LONG-TERM HOMELESS WITH COMPLEX NEEDS

Sue Grigg
Suzi James-Nevell

THE JOURNEY TO SOCIAL INCLUSION PROJECT IN PRACTICE:
A PROCESS EVALUATION OF THE FIRST 18 MONTHS

BY DR SHARON PARKINSON
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Research Centre, RMIT University
RMIT UNIVERSITY

INTEGRATED INTENSIVE CASE MANAGEMENT IN PRACTICE
FINAL PROCESS EVALUATION OF THE JOURNEY TO SOCIAL INCLUSION PROGRAM
"...IT'S GONE FAST, BUT I HAVE TO GO HOME NOW".

Sharon Parkinson
and Guy Johnson
RMIT UNIVERSITY SACRED HEART MISSION

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