

Outcome Evaluation of the Woolshed Program

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Outcome Evaluation of the Woolshed Program

Project Synopsis

This project assessed the health outcomes achieved by the therapeutic community run through the Woolshed in South Australia. This effort involved an observational study of outcomes of residents who have progressed through the Woolshed program. They were assessed in a number of areas including drug use, criminal activity, HIV risk, health, psycho-social adjustment and psychological morbidity.

1 Literature review

As set out by Mattick and Hall (1993), in the late 1940's the concept of providing a treatment for residents with behavioural disorders as part of a "community" in which both residents and staff lived in a structured residential environment that was thought to be in itself therapeutic was introduced. Drug-free therapeutic communities originated as a treatment option for drug users with the establishment of Synanon in California in 1958. Synanon was loosely based on the principles of AA and used lay therapists. Many other groups have since developed a variety of treatment models within a residential context and these are usually grouped under the therapeutic community label. In 1978, the Therapeutic Communities of America defined a therapeutic community as follows:

The primary goal of a Therapeutic Community is to foster personal growth . . . by changing an individual's life style through a community of concerned people working together to help themselves and each other.

The Therapeutic Community represents a highly structured environment with defined boundaries, both moral and ethical. It employs community imposed sanctions and penalties as well as earned advancement of status and privileges as part of the recovery and growth process. Being part of something greater than oneself is an especially important factor in facilitating positive growth.

Members and staff act as facilitators, emphasising personal responsibility for one's own life and for self-improvement . . . and sharing . . . meaningful labor so that there is a true investment in the community ...

Peer pressure is often the catalyst that converts criticism and personal insight into positive change. High expectations and high commitment from both members and staff support this positive change. Insight into one's problems is gained through group and individual interaction, but learning through experience . . . is considered to be the most potent influence toward achieving lasting

change.

The Therapeutic Community emphasises the integration of an individual within this community and progress is measured against that community's expectations. It is this community, along with the individual, that accomplishes the process of positive change in the member.

Authority is both horizontal and vertical, encouraging the concept of sharing responsibility, and supporting the process of participating in decision making when this is feasible and consistent with the philosophy and objectives of the Therapeutic Community (Latukefu, 1988).

There have been few outcome studies in which therapeutic communities have been compared to other treatments. In the only other major project that investigated such a comparison other than the Drug Abuse Reporting Study (DARP, Sells, 1974; Sells et al., 1976; Simpson, 1986) and the Treatment Outcome Prospective Study (TOPS, Allison, Hubbard, & Rachal, 1985; Hubbard, Allison, Bray, Craddock, & Rachal, 1983; Hubbard et al., 1989; Hubbard, Rachal, Craddock & Cavanaugh, 1984), Bale and his colleagues (1980) conducted a prospective study which compared the outcome of opiate addicted, male veterans who received no treatment or entered a therapeutic community or a methadone maintenance program. Initially, 545 subjects were randomly assigned to a treatment program, but client resistance led to the randomisation being abandoned and final analyses were conducted on the basis of self-selection of treatment. This led to five comparison groups:

- (i) a no-treatment control group who underwent detoxification only;
- (ii) a non-Veterans Administration (VA) treatment group who entered a variety of residential and outpatient treatment programs during the study period;
- (iii) a short-term therapeutic community (less than 7 weeks) group;
- (iv) a long-term therapeutic community (more than 7 weeks) group; and
- (v) a methadone maintenance group.

Subjects were followed up 6, 12 and 24 months after admission. Outcome was measured in terms of retention rates, drug use, criminal behaviour and work or school attendance. The major findings were as set out below.

Retention in methadone at one year was about 75%. In therapeutic communities where the program was designed for an optimal stay of six months, the retention rate was poor, with only 50% remaining after less than two months.

- . There was no significant difference in the rate of heroin or other illegal drug use between the methadone and the long-term therapeutic groups. Both methadone and the long-term therapeutic community groups had significantly fewer clients using any heroin at one year when compared with the no-treatment group. However, only the long-term therapeutic community group had significantly fewer residents using illegal drugs after one year when compared with the no-treatment group.
- . Criminal behaviour was measured by convictions rather than arrests on any serious crime. Both methadone and long-term therapeutic community groups had significantly fewer convictions during the first year and had significantly less residents in gaol when compared with the no-treatment group. In addition, neither the therapeutic community group treated as a whole, nor the long-term therapeutic community group, differed significantly from the methadone group on arrests or convictions.
- . Neither the therapeutic community group as a whole, nor the long-term therapeutic community group by itself were significantly different from the methadone group in their employment or school history during or at the end of one year. Both the long-term therapeutic community and the methadone groups had significantly better work and school attendance than the no-treatment group.
- . For the subjects treated in a therapeutic community, the length of time spent in treatment was strongly related to better outcomes at follow-up.

In summary, in the Bale et al. study, the long-term therapeutic community group and the methadone group were more likely to be employed or attending school, less likely to be in gaol, using heroin or to have been convicted of a serious crime than were the group who received detoxification alone. The short-term therapeutic community group did no better than the no-treatment group. These findings have to be placed in the context of the poor retention rates for the therapeutic communities. As Bale et al. (1980) have concluded, the therapeutic communities that participated in the study were found to be effective with subjects who had longer stays in treatment, but they had difficulty in attracting people into treatment and difficulty retaining them once they had entered. The numbers who actually chose to enter these communities, and the retention rates of those who did, were lowest for the therapeutic community that had a confrontational treatment style along with rigid goals for all residents.

The DARP study, a large-scale research project, investigated the outcome for people who entered therapeutic communities, outpatient drug-free programs, methadone programs and detoxification programs in the late 1970's in the United States (Sells, 1974; Sells et al., 1976; Simpson, 1986). The results showed that residents who were treated in therapeutic communities, methadone maintenance programs or who received outpatient drug-free treatment had better outcome in terms of drug use, criminal activity and employment than individuals who simply underwent detoxification or received no treatment at all (Sells, et al., 1976;

Simpson, 1986). Overall, 83% of therapeutic community residents said that they would recommend a therapeutic community to another person with a drug problem, if they were asked, as did a similar proportion of those who were maintained on methadone. The outcome for clients in both methadone and therapeutic communities improved with length of time in the program, although those in therapeutic communities overall required at least three months residence before any improvement was evident at follow-up compared with at least 12 months of methadone maintenance (Simpson & Sells, 1982). Completing treatment substantially improved a client's outcome at follow-up for residents in therapeutic communities.

The third and final study that has compared the long-term outcome of clients who have passed through therapeutic communities, methadone maintenance and outpatient drug-free programs is the TOPS study (Allison, Hubbard, & Rachal, 1985; Hubbard, Allison, Bray, Craddock, & Rachal, 1983; Hubbard et al., 1989; Hubbard, Rachal, Craddock & Cavanaugh, 1984). Fourteen of the treatment centres participating in the TOPS were therapeutic communities. The majority of residents in these therapeutic communities were males with a broad range of problems. Over half the residents had reported regular heroin use in the year before treatment, but over the three years of data collection, the proportion of heroin users decreased while the proportion of polydrug users increased. At the same time, the proportion of non-narcotic users increased from 20% to 30%. By comparison with the DARP which had 23% of therapeutic community residents reporting daily heroin use before entry to treatment, only six percent of those participating in the TOPS reported daily use. Overall, in comparison to the other two treatments being studied in the TOPS, residents in therapeutic communities tended to be polydrug users, more involved criminally and to have been heavy drinkers (Hubbard et al., 1989). In their review of the literature, Gerstein and Harwood (1990) concluded that residents in therapeutic communities also tend to be younger and are more likely to be white. They point out that long-term residential treatment with a focus on resocialisation is more likely to appeal to, and benefit, those drug users who have been severely damaged by their drug use or through social disadvantage.

Directors' reports about optimum length of stay from the TOPS showed that the planned duration of treatment was shorter on average than that reported a decade before in the DARP study. Only one therapeutic community had a planned length of stay of more than 18 months. Nine of the 14 communities expected a stay of 12 months for most residents, four planned on 10-12 months and one required less than four months. One of the most important issues arising from this shorter length of stay was the issue of the compression or elimination of a planned re-entry into the community. In the TOPS study, the majority of programs with lengths of stay of more than 12 months saw the re-entry phase as an important phase of their program. However, the majority of residents who graduate from a program do not return to work in the general community, but often remain as workers in other therapeutic communities. Graduation rates for the TOPS program was about 20%, a rate that is similar to rates reported from other therapeutic communities.

Overall, the findings from the TOPS study suggest that stays of at least 12 months in a therapeutic community are necessary before long-term improvements are seen in drug use, crime and employment. However, those who had only stayed from 6 to twelve months also showed less involvement in crime. As in the DARP study, retention rates for therapeutic communities were poor with around half of those admitted for treatment having left treatment within three months.

In summary, therapeutic communities offer an effective form of treatment for drug users who find them acceptable. These drug users will be those who suffer the more severe consequences of the harm associated with their drug use, criminal activity and social disadvantage. Stays of three months and perhaps as long as a year are necessary before enduring changes in drug use and criminal behaviour can be expected, and residents who complete the program are more likely to be successful than those who do not. A significant problem for therapeutic communities is the low retention rates observed in the major outcome studies. Retention is more likely to be a problem in those communities that adopt a rigid, confrontational style as a part of their program.

2 Project background

The role of residential therapeutic community interventions in Australia for drug and alcohol problems has come under increasing scrutiny over recent years. This scrutiny has been partly related to evidence on the benefits of residential or inpatient based treatment compared to outpatient care. Nonetheless, there is reasonable international literature which suggests that therapeutic communities may have benefit for some residents who are willing to undergo the program, as set out above.

As part of its charter, the Woolshed Program in South Australia (funded through the Drug and Alcohol Services Council of the South Australian Health Commission) needed to evaluate the impact that it has on individuals who undergo the program. A single group pre- to post-observational study of a cohort of residents going through the Program was deemed the most feasible way of commencing the evaluation of the impact of the program in terms of long-term outcomes. The limitations of such a design in confidently inferring causality were recognised. However, one aim was the development of an ongoing monitoring mechanism for the Woolshed. This aim was considered likely to provide reasonable information for the judgement of the adequacy and impact of the program.

3 Objectives

The first objective of the project was to evaluate the impact of the program in terms of the parameters mentioned earlier including length of stay compared with recommended duration of treatment for each resident, as well as post-treatment

drug use, criminal activity and legal problems, physical health, psycho-social adjustment, HIV risk and psychological morbidity.

The second objective was to describe the criteria for entry into the program, specifically what types of residents enter treatment and what criteria are used in judging their need for such residential treatment.

The third objective was to relate the length of stay of the residents to outcome, where possible.

The fourth objective was to ascertain the acceptability to residents of a long-term follow-up (six months after leaving the treatment facility) as an ongoing monitoring mechanism, and to determine the feasibility of such a follow-up.

4 Methods

4.1 Subjects

The subjects were 56 residents who entered the Woolshed program from mid 1997 until early 1998. They were assessed for problems in the areas mentioned earlier at entry and again at the completion of the program and at three month follow-up.

4.2 Design

This study was a prospective single group pre-post observational study. Because there was no control group, there are problems in inferring causality (in terms of any changes of behaviour) to the program. However, the evaluation was designed to set a baseline of outcome and allow for ongoing monitoring into future outcomes.

The follow-up period of three months was chosen to achieve a balance between a reasonable length of time out of the program, and the need to track residents and achieve a high follow-up rate. Interviews in the follow-up were conducted face-to-face, or if the resident could not attend, then a telephone or mail follow-up procedure was used.

4.3 Measures

The measures used for this project were derived from the Opiate Treatment Index as developed at the National Drug and Alcohol Research Centre (Darke, Hall, Heather, Wodak, & Ward, 1992), and the SF-36 (Ryan & White, 1996). In addition, there were measures of the utility of program components. In particular, residents were asked whether they could recall components of the program. Thereafter, they were asked whether they recalled having any involvement in each of the components, whether that involvement was valuable and whether they are able to utilise the skills or information which they learnt in the program in their current lives.

4.4 Hypothesis

It was hypothesised that the Woolshed Program would be associated with improvements in each of the areas being assessed in terms of treatment outcome.

4.5 Statistical analysis

The data were collected by a contract research officer (JD) who was independent of the Woolshed Program. The data were entered through a contract data entry service in Sydney and analysed at the University of New South Wales by the National Drug and Alcohol Research Centre (SO'B). The main outcome variables were drug use, criminal activity, HIV risk behaviours, psycho-social adjustment, physical health and psychological morbidity. Subsidiary analyses were conducted to assess the extent to which the program components were recalled and skills and information learnt therein utilised. In addition, the duration of time spent on the program was correlated with outcome.

4.6 Integration of information

The outcomes of the Woolshed Program were contrasted against the existing literature on the impact of therapeutic communities on drug use in the international literature. Accordingly, the content or components of the program were contrasted against what is suggested as appropriate intervention in international literature and in specific reviews on therapeutic communities and residential treatment for drug dependence.

4.7 Audit

The Program was also visited and components of the intervention discussed with staff who were involved in treatment delivery to determine the extent to which components are being implemented with integrity. Additionally, the qualifications of the staff and their training and ongoing education was determined.

5 Results I - The Woolshed Program

5.1 Admission criteria

The criterion used for entry into the Woolshed program in the past has been problematic use of drugs or alcohol for two years or more. With recent changes in the program the criteria have been specified in greater detail. The criteria now include:

- (a) problem use for at least one to two years (the change in duration of problem use having the aim of dealing with individuals who are earlier in their drug or alcohol using career and who may not need as intensive an intervention);
- (b) evidence of attempts to overcome drug use through outpatient, sessional therapy, or through brief interventions;
- (c) age of 16 years or more;
- (d) evidence that the client has detoxified either through a detoxification unit or through monitoring withdrawal by urine tests (to minimise the danger of residents withdrawing within the Woolshed program and to increase the probability that the resident has made a decision to cease use);
- (e) no involuntary admissions (although individuals may enter the Woolshed if there is instruction from a court to seek treatment with supervision of a probation officer);
- (f) no pending court appearances in the near future;
- (g) acceptance of the four rules of the Woolshed of no stealing, no sexual interactions with other residents, no violence and no use of drugs; and
- (h) if there is a serious psychological disorder such as bipolar disorder, schizophrenic disorder, or panic disorder in need of specialist treatment, this may affect the acceptance of the individual into the program.

5.2 Assessment

Prior to entry into the Woolshed program, residents are normally assessed face-to-face, although occasionally they are assessed by telephone if distance is too great for travel. The Woolshed staff also have access to the Drug and Alcohol Services Council clinical notes and records. The assessment information includes referral agency, drug use patterns, legal problems, health problems, previous treatment and motivation for treatment currently. The drug use patterns are assessed in terms of quantity and frequency of drug use, the types of drugs, the routes of administration, and the duration of use of each of the drug types. No diagnosis of a substance use disorder under the DSM-IV is made.

Upon arrival a urine screen is undertaken. There is no formal assessment of psychological well-being, as at entry the residents are often too distressed to undertake such a process. Assessment of their social functioning is conducted within the program itself, although information about relationships is gathered at base line. There is also assessment of previous treatment and this is used to determine whether the client should enter the long term or short term program which differ in duration and intensity.

A treatment plan is also agreed upon and the patient is accepted into the program. Upon arrival, there is a one or two hour admission process. Within this process, a client history form is used to record the mode of presentation, drug use history, periods of reduced use or abstinence from drugs, periods of increased use of drugs, previous assistance received, legal history, family history, educational and relationship details are recorded. There is increasing attention given to the goals the resident wishes to achieve and this information is used in the treatment plan and allows the focus on different components in the program. This treatment plan is reviewed and updated bi-monthly.

In addition, throughout the program, assessment continues as issues become apparent of each client's clinical status. This assessment involves several levels of feedback and monitoring of each patient. There are specific feedback sessions, house meetings, group feedback sessions and each client has one-to-one interaction with a counsellor. Once a fortnight there is a case conference on a Wednesday when the combined staff assesses the progress of residents.

Finally, at the stage of residents leaving the program, there is consideration given to what each client has learnt, what issues remain to be dealt with and what strategies will be undertaken to continue to provide the client with intervention. Supports in the community are identified. Residents are connected with specific agencies that may provide particular assistance, for example in the case of child or sexual assault or physiological disorders. In addition, the resident's relapse prevention approach is checked.

5.3 Short-term and long-term programs

The introduction of two forms of program in the Woolshed has divided the program provided into either long term or short term. These two programs follow the same group format, but the demands in the long term group are slightly less and some aspects of the work in the short term program are slightly different from the long term program. However, the information behind the program is to teach residents "crucial tools" within a four week program cycle.

In the short term program residents undertake "Stream 1" interventions twice, that is repeating the four week cycle on two occasions. However, at week five they can extend their stay at the Woolshed or simply continue on the original eight week intervention program. If a resident intends to stay more than eight weeks they undertake "Stream 2". The Stream 1 groups are deemed to be the crucial component of the program although there is an option to be involved in some of the "Stream 2" groups. The Stream 2 groups focus on the development of life skills such as budgeting skills, communications skills and a more intense focus on living skills plus a compulsory "special topics" group.

5.4 Structure of the groups

The groups are run for 90 minutes. The first 25 minutes of the 90 minute period for Stream 1 groups is used for relaxation exercises including guided imagery, meditation, or simply going for a walk in order to introduce different ways of relaxing and managing stress. The remaining 65 minutes of the group has an

educational focus using an adult interactive model of education which involves role plays of past ways of dealing with the particular problem area and better ways of coping. In addition to this focused education effort, the residents are expected to use the information gleaned from the group setting throughout their time at the Woolshed to enhance the learning process. In this fashion there is a clear emphasis on using skills from the group sessions in day to day activities in the Woolshed community, especially if there is a clear need for that form of intervention.

5.5 Integrity of treatment implementations/supervision

The groups are facilitated by staff and, where staffing allows, the team coordinator or another staff member is present in order to monitor activities and the content of each group. There is also a case conference which allows for the supervision and support of staff so that clinical problems and ethical issues can be addressed. There is also direct supervision from the Manager of the Woolshed and the team co-ordinator as well as from appropriate professionals within the community.

The Manager of the Woolshed also undertakes work performance review and addresses time management issues. The team co-ordinator supervises staff at a clinical level. The team co-ordinator also undertakes quarterly supervision of after hours staff to support their activities as the skills of the after hours staff are limited. In addition there is on call access to the manager and team co-ordinator. It was also apparent that the Drug and Alcohol Council is undertaking a review of the supervisory activities.

5.6 Follow-up/after care

When residents leave the Woolshed they can move to a half-way house if they have successfully completed their time at the Woolshed and with the agreement of the clinical staff of the Woolshed. The half-way house accommodates 6 to 8 people and involves the residents in self-help groups, church support groups, GROW, and there is the prospect of returning to the Woolshed if difficulty is encountered in the half-way house. Alternatively, if residents need to return to the Woolshed after leaving the program they may travel from the Woolshed to the city on a daily basis. There are two half-way houses and there is one group meeting per week sometimes using ex-resident's as support persons.

There are a number of other sources of support including telephone support which are available as needed, and a resources folder for advice to residents about where they may find further assistance within their own community. There is a Drug and Alcohol Services Council network of counsellors and this network is available in principle, but access may prove to be a problem.

There is no prescribed follow-up activity and there are no Woolshed staff who either can or do undertake routine follow-ups on ex-residents at any set time period. There has been a six month mail-out to ex-residents with a questionnaire and there have been a number of groups run for ex-residents in the year. The Woolshed staff previously ran night-time follow-up groups in Adelaide but they have not been able to continue this activity because of lack of funding. Appropriate onward referral may be included if warranted, for example, issues of

domestic violence and other ongoing issues.

5.7 Group program

The group program, its aims, types of groups, and the focus of groups are set out in the Woolshed procedures manual. However, the content of these groups was reviewed.

- 5.7.1 Anger and resentment:* This group has a goal of exploring feelings relating to anger and resentment. It aims to instruct residents in simple methods to deal with these feelings. There are no components of cognitive restructuring or assertiveness training within this group intervention, as these later interventions are kept separate. A number of client hand-outs are made available on storing up anger, a description of the nature of anger, six steps for dealing with anger and resentment, methods for detecting feelings of hidden anger and expressing feelings of anger appropriately.
- 5.7.2 Addiction and Personal Program:* This group focuses on educating residents about the nature of addiction and how it occurs through discussion. The goal is to review the concept of addiction and to become aware of the appropriate tools within each resident's program to deal with problems arising from being dependent on alcohol or drugs. The group focuses on physical, emotional and spiritual aspects of residents' wellbeing. There are suggested activities to incorporate into each resident's personal program to deal with different problem areas.
- 5.7.3 Openness, Honesty and Willingness:* This group focuses on communication skills and spiritual aspects of residents' wellbeing. It defines honesty, open mindedness and willingness and asks residents to draw up lists for themselves of how they have behaved in the past in these areas and how they could change this in the future. The goal is to understand the principals of honesty, open mindedness and willingness and how and why these are applied in daily life.
- 5.7.4 Budgeting:* The goal of the budgeting group is to understand the process of budgeting and to provide residents with skills to budget outside the Woolshed by understanding the budgeting process both at the Woolshed, at half-way houses and in the general community. Residents are instructed in a number of methods of determining both income and expenses.
- 5.7.5 Slowing Down:* This intervention focuses on a variety of methods of reducing levels of arousal including use of relaxation tapes, meditation tapes, recreational activities, reducing intake of stimulants such as caffeine and tobacco, time management, setting realistic expectations, and a number of other procedures.
- 5.7.6 Self-esteem:* The goal of the self-esteem group is to understand the nature of self-esteem and self-confidence and to identify ways of improving individual self-esteem using a number of hand outs and "affirmation"

sheets. Prior to being instructed in a number of methods of improving self-esteem the method used is basically positive self statements. The intervention uses cognitive restructuring techniques.

- 5.7.7 *Timeline Addiction:* The timeline addiction group has a goal of having residents gain an understanding of their problematic alcohol and drug intake, the necessity for abstinence at this stage at their lives, and to help residents gain a clear perspective of the time and energy involved in their problematic alcohol and drug use. The method used asks members about the duration of use, their first realisation of a problem, the seriousness of their problem, any attempts to cut down or cease use and discussion of alternative lifestyles. The intervention is aimed to have a motivational enhancement function by focusing on the negative aspects of the career of drug use and on the positive aspects of changing drug use.
- 5.7.8 *Problem Solving:* The problem solving group aims to introduce the concept of life as an evolving series of problems to be solved, and outlines the basic tools of problem solving. The intervention used is related to assertiveness training and anger management and relies on role-play activities. Problems are defined, solutions sought and the possible solutions evaluated and one selected. Residents are taught to plan how to implement the solution and given specific examples such as accommodation or similar problems to use in this process.
- 5.7.9 *Time Management:* The time management group focuses on instructing residents in strategies to allow them to allocate time to tasks which have priority and to have a daily routine. Residents are required to list tasks and activities which they may have to carry out, to draw up timetables for these activities, to decide upon priorities within the activities and to review the timetable. They are provided with a number of handouts including a weekly planner, a time plan sheet and a day plan sheet.
- 5.7.10 *Preactive Addiction Group:* The preactive addiction group deals with the status of the client prior to actively becoming involved with alcohol or other drugs. The focus of the group is to allow the residents to gain insight into the sorts of reasons why people want to stop using drugs and to realise that these are often the reasons why people start using drugs. The aim is to have a practical ideology underpinning abstinence. The strategy used is to ask the residents to visualise themselves as children gradually increasing the age that they are and to associate their feelings with drug use and possibly the influences on drug use and realise that abstinence may result in good outcomes for them.
- 5.7.11 *Assertion:* The assertiveness group has a goal of gaining some insight into the methods of communications that we use when trying to meet our needs and introduce a variety of communication styles. There is discussion of the advantages and disadvantages of submissiveness, aggression, and assertiveness. Residents are provided with a number of handouts describing different styles of communication and training in appropriate assertiveness.

- 5.7.12 *Relapse Prevention*: The relapse prevention group has the goal of increasing the residents' understanding of the process of relapse and to develop strategies to prevent relapse. The method used is the identification of the process of relapse, the identification of high risks situations, the development of alternative coping skills, and a plan in case of lapse to drug or alcohol use. The procedures used appear to be based on the relapse prevention work which has been promoted over the last twenty years, as developed in North America and developed further by others in Australia.
- 5.7.13 *Grief Group*: This group focuses on the loss of friends, family, and lifestyle associated with drug use. It looks at a variety of situations that may cause grief to the individual, and the effect of grief psychologically. It also emphasises the phases of grief through which people feel a sense of loss, fear, physical symptoms, guilt, depression, anger, and eventually realism and a positive attitude with positive accepting.
- 5.7.14 *Self-Esteem and Self-Nurture*: This group uses the procedure in the self-esteem approach (see earlier), and adds to it by attempting to have the Stream 2 client learning to like themselves and to pursue activities which they enjoy. The group participants are required to pursue practical ways of enjoying themselves, by developing hobbies, attending to their physical and emotional needs and avoiding isolating themselves.
- 5.7.15 *Support and Feedback Group*: The rationale behind this group is to clearly define the value of supported feedback in a therapeutic community. This involves the discussion of support and feedback, determining useful and relevant support feedback, and discovering the benefits of giving and receiving support and feedback. The method used is to have residents form small groups and discuss the aforementioned topics. The findings are then discussed when the group reassembles.
- 5.7.16 *The Paraphrasing Group*: This group is aimed at improving communication skills by practising paraphrasing what is said in conversation and correctly interpreting it. The rationale is that the reduction of miscommunication decreases stress. Role play is used for the demonstration of the methods of reflective listening within this particular group.
- 5.7.17 *Other Groups*: In addition to the group interventions set out above there are several other groups run within the Woolshed program. There are a number of sexual health groups and relaxation groups. There are also craft groups. In addition, the Monday of each week is set as a work day, involving residents in manual and other activities. The Woolshed has no cooks or cleaners. Work is part of the therapeutic process and residents learn to work with others, negotiate, plan and organise for the effective day-to-day running of the Woolshed (for example there are maintenance, administration and outdoors teams).

5.8 Staffing of the Woolshed

The Woolshed is staffed by 6 day staff and 5 after hours support staff. All of the day staff have relevant qualifications ranging from counselling certificates to graduate and post-graduate qualifications, either completed or in process. The after hours support staff have counselling certificates or diplomas or under graduate qualifications, either completed or in process. The staffing has been affected by the recent loss of one staff member from the Woolshed establishment, and this loss has affected the ability of the staff to deliver the level of intervention thought necessary to optimise outcomes.

6 Results II - Outcomes from the program

6.1 *Sample characteristics*

The sample consisted of 56 drug users, interviewed shortly following their entry into the Woolshed program. Seventy percent (70%) of the sample were male and the mean age of the sample was 28 years (SD 6.9; range 19-44) at the time of entry. There was no significant difference in age between males and females (29 versus 26). The majority of subjects (70%) were unemployed in the 3 months prior to interview.

The majority of subjects (75%) chose to participate in the 3 month program, and the remainder in the condensed 8 week program. Those subjects participating in the 3 month program stayed an average of 76 days at the Woolshed (SD 36.4; range 11-147) and those in the 8 week program an average of 61 days (SD 35.7; range 12-143).

Most of the sample (88%) had been in drug or alcohol treatment previously, with these subjects undergoing a median of 4 treatments (SD 14.7; range 1-98) throughout their using careers. The treatment most commonly reported by these subjects as having been tried was detoxification (92%), followed by drug free counselling (71%), Narcotics Anonymous (67%), Alcoholics Anonymous (49%), a therapeutic community (41%) and methadone (27%).

6.2 *Baseline drug use*

Polydrug use was the norm among the sample, with a median of 5 drug classes (SD 1.6; range 2-8) having been used by subjects in the month preceding interview. Excluding tobacco, the most commonly used drug in the month preceding interview was cannabis, used by 91% of the sample. Alcohol was the second most commonly used drug with 82% of the sample reporting using it in the previous month followed by, in descending order, amphetamine (46%), heroin (43%) and tranquillisers (43%), other opiates (36%), hallucinogens (21%), cocaine (7%), barbiturates (4%) and inhalants (2%) (see Table 1).

6.2.1 *Tobacco.* All but one subject reported smoking in the month prior to treatment, with a median of 25 cigarettes (SD 12.5; range 0-52.5) consumed daily during that time.

6.2.2 *Cannabis.* Use of cannabis in the month prior to treatment was common. The amount of cannabis consumed, however, varied considerably ranging from 1 joint/bong in the past month up to 70 per day. The median number of joints or bongs consumed per day by these subjects in the previous month was 5.

6.2.3 *Alcohol.* The amount of alcohol consumed by the 82% of the sample who imbibed varied from 1 standard drink in the past month to a maximum of 126 standard drinks daily for one particular subject. Based on National Health and Medical Research Council guidelines (1987), 30% of the sample recorded alcohol consumption levels which would be considered as

"responsible", 11% as "hazardous" and 41% as "harmful". A median of 6 standard drinks per day were consumed by those subjects who drank in the last month. Of the males who drank in the last month 40% would be considered as having "responsible" levels of alcohol consumption (i.e., 4 or less units per day), 13% as "hazardous" (i.e., >4-6 units per day) and 47% as "harmful" (i.e., more than 6 units per day). Among the female subjects who drank in the last month, 29% would be considered as having responsible alcohol consumption levels (i.e., 2 or less units per day) , 14% as "hazardous" (i.e., >2-4 units per day) and 57% as "harmful" (i.e., more than 4 units per day).

- 6.2.4 *Amphetamines*. Approximately half of the sample used amphetamines in the month prior to treatment. The amount of use ranged from a minimum of only once in the last month up to a maximum of 4.5 times daily. As can be seen in Table 1 the median number of hits/snorts of amphetamine used by these subjects per day was .75 (i.e., more than once a week). Further analysis revealed the majority (81%) of these subjects used more than once per week, with 34.6% indicating using more than once a week, 11.5% using daily and 34.6% using more than once per day.
- 6.2.5 *Heroin*. Twenty-four subjects (43%) reported using heroin in the previous month. The amount of heroin used ranged from a minimum of only 2 times in the last month up to a maximum of 3.5 times daily on average for one participant, with a median daily consumption of .63 hits/snorts (or more than once a week). Certainly, the majority (92%) of these subjects used more than once per week, with 38% appearing to be daily heroin users.

Table 1: Drug use at baseline, exit and follow-up.

Drug class	Baseline (n=56)		Exit (n=34)		Follow-up (n=23)	
	% who used in last mth	median amount used daily#	% who used in last mth	median amount used daily#	% who used in last mth	median amount used daily#
Tobacco	98%	25 cigarettes	97%	20* cigarettes	96%	15* cigarettes
Cannabis	91%	5 joints/bongs	6%	.04* joints/bongs	26%	.5* joints/bongs
Alcohol	82%	6 standard drinks	3%	.42* standard drinks	39%	.42* standard drinks
Amphetamine	46%	0.75 hits/snorts	0%	nil	22%	.11* hits/snorts
Heroin	43%	0.63 hits/smokes /snorts	3%	.04* hits/smokes /snorts	17%	1.25 ^{ns} hits/smokes /snorts
Sedatives/ tranquillisers	43%	2.5 pills	0%	nil	13%	.11 ^{ns} pills
Other opiates	36%	0.18 hits/snorts /doses	3%	.14 ^{ns} hits/snorts /doses	4%	.43 ^{ns} hits/snorts /doses
Hallucinogens	21%	0.09 tabs/ trips	0%	nil	0%	nil
Cocaine	7%	0.15 hit/smokes /snorts	0%	nil	4%	.21 ^{ns} hits/smokes /snorts
Barbiturates	4%	0.22 pills	0%	nil	0%	nil
Inhalants	2%	.04 sniffs	0%	nil	0%	nil

Note. # The median was used as the data contained a number of outliers making this a more appropriate statistic. The median for all drug classes is calculated using only the data of those who used the drug in the last month. * $p < .05$, ^{ns} $p > .05$ for t-tests between baseline & exit, and baseline & follow-up.

6.2.6 *Sedatives/tranquillisers.* The number of sedative tablets consumed by those reporting using them in the last month ranged from 1 up to 69.5 per day for one particular subject. The median number of tablets consumed by these subjects was 2.5 daily.

6.2.7 *Other drug use.* As can be seen in Table 1, just over one third (36%) of the sample indicated they had used other opiates in the last month, recording a median consumption of .18 hits/snorts/doses per day (or slightly more than once per week). The frequency of other opiate use ranged from once in the past month up to 7.5 times daily for one particular subject. It is of interest to note that approximately one fifth (21%) of the sample reported using hallucinogens (eg. LSD/acid, ecstasy, magic mushrooms) in the past month, ranging from a minimum of once only up to a maximum of about 5 times per week. The median use per day by these subjects was .09 which is equivalent to using one tab/trip approximately 2-3 times in the last month.

6.3 *Baseline HIV risk-taking behaviour (HRBS)*

The mean score received by the sample on the HIV Risk-taking Behaviour Scale was 9 (SD 6.1; range 0-25) which corresponds to the clinical category "above average" in terms of the risk of either contracting or transmitting HIV and other blood borne viruses (see Table 2). Further analysis indicated that the injecting and sexual behaviours of the sample put 13% at low risk, 23% at below average risk, 18% at average risk, 30% at above average risk and 16% at high risk of either contracting or transmitting HIV and other blood borne viruses.

Table 2: Summary of mean scores obtained on the OTI scales at baseline, exit and follow-up.

	<i>Baseline (n=56) Mean Score (SD)</i>	<i>Exit (n=34) Mean Score (SD)</i>	<i>Follow-up (n=23) Mean Score (SD)</i>
<i>HRBS</i>	9 (6.1)	.76 (1.9)*	5 (4.6)*
<i>Social</i>	24 (8.2)	17 (4.3)*	16 (5.8)*
<i>Health</i>	22 (7.5)	8 (7.0)*	11 (7.5)*
<i>GHQ</i>	19 (5.7)	3 (4.9)*	8 (9.3)*

Note. * $p < .05$, ns $p > .05$ for t-tests between baseline & exit, and baseline & follow-up.

6.4 *Baseline social functioning*

The mean score obtained by the sample on the OTI Social Scale was 24 (SD 8.23; range 6-44) which corresponds to the clinical category of "above average" in terms of levels of social dysfunction encompassing aspects such as employment, residential stability, inter-personal conflict, social support and drug-culture

involvement. The breakdown into clinical categories of social dysfunction for the sample is as follows; 14% low, 7% below average, 21% average, 16% above average and 41% high.

6.5 Baseline physical health

The Health Scale of the OTI is a symptom check-list designed to give an indication of the subjects' current state of health. As shown in Table 2, the mean score subjects recorded on this scale was 22 (SD 7.5; range 7-37) which corresponds to the clinical category of "high" in terms of overall poor health. In fact, 70% of the sample recorded scores placing them in the clinical category of "high". The breakdown into clinical categories for the remainder of the sample is as follows; "above average" (16%), "average" (9%) and "below average" (5%).

6.6 Baseline psychological functioning (GHQ)

The GHQ provides a global measure of current psychological adjustment and as shown on Table 2 the sample obtained a mean score of 19 (SD 5.7; range 4-28) on this scale. The majority of subjects (66%) recorded scores placing them in the clinical category of "high" in terms of levels anxiety, somatic symptoms, social dysfunction and depression. Twenty-five percent of the sample had scores placing them in the category of "above average", 7% as "average" and 2% as "below average" on this scale.

6.7 Baseline SF-36 health survey

The SF-36 measures health status across eight scales as listed in Table 3. For each of the eight scales responses are transformed to a score out of 100 where 0 equals the worst possible health state and 100 equals the best possible health state. Corresponding to the results achieved on the OTI health scale, the SF-36 scores recorded at initial assessment indicate that overall the group was in extremely poor health. As shown in Table 3, at baseline subjects' scores on every scale were worse than the population norms for South Australia (1995). Indeed, a comparison of these mean SF-36 scores and those of 100 clients entering a methadone program in Adelaide (1996) revealed this group were worse by approximately .2 to .9 standard deviations on every scale suggesting significant impairment over and above that seen in clients entering methadone treatment.

6.8 Baseline criminality

The majority of the sample (77%) reported committing some form of crime in the month preceding interview, with just under a quarter (23%) of the sample currently facing charges. The most common type of crime committed in the last month was selling illicit drugs (52%). In line with the illicit drugs most commonly used by the sample in the last month, cannabis (86%) and speed (55%) were the drugs most commonly sold by these subjects. Property crime was committed by 43% of the sample, with shoplifting (65%) and break and enters (52%) the most commonly reported types among these subjects. Just over a quarter of the sample (26.8%) had committed fraud at least once in the past month, with social security fraud the most often cited type (60%). Ten subjects in the sample (17.9%) had committed a violent crime in that period.

Table 3: Summary of SF-36 results at baseline, exit and follow-up.

Scale	Population norms for S.A¹	Baseline (n=56) Mean Score (SD)	Exit (n=34) Mean Score (SD)	Follow-up (n=23) Mean Score (SD)
Physical functioning	82.3	70.2 (22.1)	92.1 (14.2)*	83.9 (23.6) ^{ns}
Role functioning - physical	78.3	21.4 (29.6) [#]	81.6 (32.2)*	70.7 (38.2)*
Role functioning - emotional	83.2	12.5 (25.4) [#]	71.6 (38.6)*	56.5 (47.6)*
Social functioning	84.9	27.7 (25.3)	85.7 (19.7)*	71.7 (29.3)*
Bodily pain	75.6	47.6 (24.4)	76.1 (23.7)*	67.3 (26.5)*
Mental health	75.7	21.7 (18.2)	72.4 (17.3)*	62.3 (23.2)*
Vitality	63.7	24.6 (13.5)	65.6 (19.3)*	52.8 (24.9)*
General health	71.1	30.9 (23.3)	71.3 (20.1)*	64.5 (24.2)*

Note. # data missing for 8 patients on these two scales, therefore t-tests between baseline & exit, and baseline & follow-up on these scales based on 29 and 18 pairs respectively.

* $p < .05$, *ns* $p > .05$ for t-tests between baseline & exit, and baseline & follow-up.

¹Age and sex standardised (n=2,980).

6.9 Exit details

Brief exit details including date of exit, whether planned or unplanned (client or program initiated) and whether the subject was transferred to another DASC unit as an inpatient were collected for 52 of the 56 subjects. Overall, the majority of discharges were unplanned (60%), with the majority of these unplanned discharges initiated by the client (74%). Only 3 subjects were transferred to another DASC unit as an inpatient.

Thirty-four (61%) of the 56 participants completed the interview schedule when or soon after leaving the Woolshed program. Approximately half (47%) of all exit interviews completed were by subjects whose discharges were planned. Indeed, the majority (84%) of all subjects having planned discharges completed an exit

interview.

There was no difference between those who completed an exit interview and those who didn't on the vast majority of baseline outcomes (eg. age, HIV risk-taking behaviour, levels of social and psychological functioning, general health, criminality). However, for the most commonly used drug classes, differences in consumption patterns between the two groups were found for amphetamine, hallucinogens and sedatives/tranquillisers. It appears the group who did complete exit interviews contained a higher proportion of amphetamine and hallucinogens users who used significantly more of these two drugs at baseline than those who didn't complete the interviews. On the other hand, those who didn't complete exit interviews reported using significantly more sedatives/tranquillisers at baseline. Also, those subjects not completing exit interviews recorded participating in a significantly higher mean number of previous treatments (10 vs 4, $t=1.38$, $p<.05$). Caution must be used in interpreting these differences as approximately 28 t-tests were conducted on the data set so it is possible these differences are Type 1 errors, or chance results, as a consequence of multiple testing.

6.10 Exit drug use

With the exception of tobacco, Table 1 shows that the proportion of subjects using each drug in the month prior to exiting the Woolshed program decreased considerably across all drug classes.

Indeed, at exit subjects reported using a median of only 1 drug class (SD .5; range 0-3) in the month preceding interview compared to 5 in the month preceding entry into the program. Looking at Table 1 it is clear that for the overwhelming majority of the subjects interviewed, tobacco was the only drug they used in the month prior to leaving the Woolshed program. Furthermore, with the exception of the drug class "other opiates", in those few instances where other drugs were used the amount consumed was significantly less at exit compared to pre-treatment ($p<.05$).

6.10.1 Tobacco. As previously stated, tobacco represents the only drug class where the proportion of subjects using the drug did not decrease post treatment. However, it should be noted that the mean number of cigarettes smoked per day by the subjects decreased significantly in the month prior to exiting the program compared to the same period of time before entering the program (25 vs 17, $t=3.19$, $p<.005$).

6.10.2 Cannabis. Only 6% of the subjects, as opposed to 91% at entry, reported using cannabis in the month prior to exit, both subjects using it only once. As shown in Table 1, the decrease in mean daily consumption after treatment compared to pre-treatment is statistically significant (9.8 vs .002, $t=3.57$, $p<.05$).

6.10.3 Alcohol. Only one subject (female) used alcohol in the month prior to exit, drinking approximately half a standard drink daily which is classified as a "responsible" drinking pattern based on National Health and Medical Research Council guidelines (1987).

6.10.4 *Heroin*. One subject (3%), as opposed to 43% at entry, reported use of heroin in the month prior to exit, using it once, which is significantly less than the amount used by the group in the month prior to treatment (.38 vs .001, $t=2.82$, $p<.05$).

6.10.5 *Other opiates*. One subject used an opiate (other than heroin) in the month prior to exit compared to 36% of the sample in the month prior to entry. This is the only instance where the amount consumed by the group interviewed at exit was not significantly less than that consumed pre-treatment. However, there was only one subject who used in the post treatment group.

6.11 *Exit HIV risk-taking behaviour (HRBS)*

Compared to a mean score of 9 at entry, subjects interviewed at exit recorded a significantly lower mean score of .76 (SD 1.9; range 0-25) on this scale at exit. All of the subjects obtained scores on this measure placing them in the clinical categories of either "low" (88%) or "below average" (12%) in terms of the risk of contracting or transmitting HIV and other blood borne viruses through their injecting and sexual practices.

6.12 *Exit social functioning, general health and psychological functioning*

As shown in Table 2 the subjects recorded a significant improvement in social functioning, psychological functioning and general health for the month prior to exit compared to entry into the program ($p<.05$). The mean score obtained by those interviewed at exit on the OTI Social Scale was 17 (SD 4.3; range 8-27) which corresponds to the clinical category of "below average" in terms of levels of social dysfunction, a good outcome.

On the OTI health scale, subjects recorded a mean score of 8 (SD 7.01; range 0-23), also a good outcome placing the majority of subjects (53%) in the clinical category of "low" in terms of levels of poor health. Eighteen percent (18%) of the subjects had scores placing them in the category of "below average", 3% as "average", 15% as "above average" and 12% as "high".

The average score obtained on the GHQ was 3 (SD 4.9; range 0-21), a score which corresponds to the category of "below average" in terms of levels of anxiety, somatic symptoms, social dysfunction and depression. Only 6% of those interviewed had scores placing them in the category of "high" as opposed to 66% of the sample at initial assessment. The remaining subjects received scores falling in the "average" (15%), "below average" (21%) or "low" (59%) categories.

6.13 *Exit SF-36 health survey*

In line with the significant improvement observed in social functioning, general health and psychological functioning at exit, the subjects recorded significant improvement across all eight scales of the SF-36 compared to initial assessment (see Table 3). In fact, as shown on Table 3, the subjects interviewed at exit recorded mean scores for each scale very much in line with the age and sex

standardised population norms for South Australia (1995).

6.14 Exit criminality

Compared to 77% of the sample who had committed some form of crime in the month preceding the entry interview, only one subject (3%) of those interviewed reported committing crime in the month prior to exit. The crime committed an average of once per week was social security fraud.

6.15 Three month follow-up details

Of the 56 subjects participating in the Woolshed program, twenty-three (41%) were successfully contacted 3 months following discharge and administered the interview schedule. Similar to the exit interviews, approximately half (48%) of all follow-up interviews completed were by subjects whose discharges were planned. More than half (58%) of the subjects whose discharge from the Woolshed program was planned completed a follow-up interview.

Once again, only a few differences were found between those who completed follow-up interviews and those who did not on baseline outcomes ($p < .05$). In line with the group of subjects who completed exit interviews, the follow-up group of subjects used significantly more amphetamine and hallucinogens and significantly less sedatives/tranquillisers at baseline than those who didn't complete the interviews. Subjects not followed up used significantly greater amounts of heroin and other opiates at baseline and had been in treatment previously a significantly greater number of times.

6.16 Three month follow-up drug use

As can be seen from Table 1, excluding tobacco, the proportion of subjects using each drug at 3 month follow-up was still less than that at entry, although generally greater than at exit, across all drug classes. At 3 month follow-up subjects reported using a median of 2 drug class (SD 1.5; range 0-7) in the month preceding interview compared to 1 at exit and 5 at initial assessment. For the drug classes, tobacco, cannabis, alcohol and amphetamine, the amount consumed by those interviewed was still significantly less at 3 month follow-up compared to that used in the month prior to entry into the Woolshed program ($p < .05$). However, for the drug classes, heroin, sedatives/tranquillisers, other opiates and cocaine there was no difference in the amounts used by the follow-up group in the month before follow-up as compared to the month prior to entry.

6.16.1 Tobacco. Similar to the findings at exit, tobacco represents the only drug class where the proportion of subjects using the drug was not substantially smaller compared to that at initial assessment. The mean number of cigarettes smoked per day by these subjects, however, continued to be significantly less at follow-up compared to initial assessment (25 vs 15, $t=3.7$, $p < .005$). So, although the same number of subjects still smoke, they're smoking fewer cigarettes.

6.16.2 Cannabis. Twenty-six percent (26%) of the subjects interviewed at follow-up reported using cannabis in the previous month as opposed to 91% at entry. Subjects who used consumed a median of half a joint/bong per day

(or 1 joint/bong every second day), which is still significantly less than that consumed by these subjects at entry (12 vs .76, $t=3.02$, $p<.05$).

6.16.3 Alcohol. The greatest increase in the proportion of subjects using a particular drug from the time of exit to follow-up was recorded for alcohol with 9 subjects (39%) reporting imbibing in the previous month compared to only one subject at exit. Subjects reported drinking a median of approximately half a standard drink daily which is classified as a "responsible" drinking pattern for both males and females and still significantly less than that consumed by these subjects at entry (15 vs .78, $t=2.65$, $p<.05$).

6.16.4 Amphetamine. As shown in Table 1, whereas none of the subjects reported using amphetamine when interviewed at exit, 5 (22%) subjects reported using the drug in the month prior to follow-up. These subjects used a median of .11 hits/snorts of amphetamine per day (i.e., once a week or less) which remains significantly less than that used at entry into the Woolshed program (.03 vs .99, $t=3.22$, $p<.05$).

6.16.5 Heroin. Four subjects (17%), as opposed to 43% at entry, reported using heroin in the month prior to follow-up, using a median of 1.25 hits/snorts/smokes per day (i.e., daily) during this time. The amount of heroin used in the month prior to follow-up by the group did not differ from the amount used in the month prior to entry.

6.16.6 Sedatives/Tranquillisers. Three subjects (13%) reported using sedatives/tranquillisers at follow-up, compared to 43% at entry and none at exit, using a median of .11 tablets daily (i.e., one tablet once a week or less). There was no significant difference in the amount of tablets consumed by the 23 subjects at follow-up compared to entry.

6.16.7 Other opiates. Only one subject in the follow-up group used an opiate (other than heroin) in the month prior to follow-up compared to 36% of the sample in the month prior to entry. The amount consumed by the subjects was not significantly different to that consumed pre-treatment.

6.16.8 Cocaine. Only one subject (4%), as opposed to 4 at entry, reported using cocaine in the month prior to follow-up, using on average more than once per week (i.e., a median of .21 hits/smokes/snorts daily). There was no significant difference in the amount of cocaine used by the subjects at follow-up compared to entry.

6.17 Three month followup HIV risk-taking behaviour (HRBS)

As shown in Table 2, compared to a mean score of 9 at entry, subjects interviewed at follow-up recorded a significantly lower mean score of 5 (SD 4.6; range 0-15) on this scale at follow-up. The majority (74%) of the 23 subjects obtained scores on this measure placing them in the clinical categories of either

"low" (30%) or "below average" (43%) in terms of the risk of contracting or transmitting HIV and other blood borne viruses through their injecting and sexual practices.

6.18 Three month followup social functioning, general and psychological health

Although in general not as great as that observed at exit, the subjects interviewed at follow-up still recorded significant improvement in social functioning, psychological functioning and general health compared to that observed at entry into the program ($p < .05$). As shown in Table 2, the mean score obtained by those interviewed at follow-up on the OTI Social Scale was 16 (SD 4.3; range 4-27) which is in fact 1 point better than that recorded at exit and corresponds to the clinical category of "below average" in terms of levels of social dysfunction, a good outcome. On the OTI health scale, subjects recorded a mean score of 11 (SD 7.5; range 0-25) placing 26% of the subjects each in the clinical categories of "low" and "below average" in terms of levels of poor health. Seventeen percent (17%) of the subjects had scores placing them in the category of "average", 9% as "above average" and 22% as "high" in terms of levels of poor health.

The average score obtained on the GHQ was 8 (SD 9.3; range 0-26), a score which corresponds to the category of "average" in terms of levels of anxiety, somatic symptoms, social dysfunction and depression. 17% of those interviewed had scores placing them in the category of "high" as opposed to 66% of the sample at initial assessment and 6% at exit. The remaining subjects received scores falling in the "above average" (13%), "average" (17%), "below average" (17%) and "low" (35%) categories.

6.19 Three month followup SF-36 health survey

Similarly, although the improvement in SF-36 mean scores were not as great at 3 month follow-up as that observed at exit, the subjects interviewed still maintained significantly improved outcomes on all scales bar one of this measure in comparison to initial entry into the program ($p < .05$). The only scale on which subjects did not record a significant improvement at follow-up was the physical functioning scale, although it should be noted the mean follow-up score for physical functioning was slightly better than the population norm so this is not of great concern. For all of the other scales, mean scores had levelled off from the time of exit to be slightly lower than the comparison population norms.

6.20 Three month followup criminality

Similar to the results at exit from the program, only one subject (4%) reported committing crime in the month preceding follow-up which is a considerable decrease from 77% at initial assessment. The crime committed was property crime, entailing break and enters and stealing cars, committed on average less than once per week.

6.21 Correlational analyses

Correlational analyses between the duration of time spent in the program and the outcomes showed relationships between time in the program and physical health, psychological well-being, and social adjustment at exit. However, at follow-up the relationships between duration of time in the program and all health outcomes

were non-significant, possibly because of the reduced sample size at that assessment occasion.

6.22 Exit and three month follow-up program evaluation

Subjects who completed exit and follow-up interviews were also asked to evaluate the program by answering a series of questions regarding the program and responding to each on a scale of 1-10. As shown on Table 4, overall, the subjects rated the program highly on each statement at both exit and follow-up. The statements receiving the lowest mean ratings concerned subjects' understanding of the content of the program before entry and the accessibility of the program staff. Overall, however, the residents rated the program highly.

Table 4: Summary of evaluation of the program components at exit and 3 month follow-up.

<i>Evaluation question</i>	<i>Exit mean rating (SD) (n=34)</i>	<i>Follow-up mean rating (SD) (n=23)</i>
How satisfied were you with the advice staff provided?	8.2 (1.9)	7.5 (2.4)
How well did you understand the content of program before entry?	5 (3.2)	5 (3.3)
How much opportunity for your specific needs and issues to be listened to?	7.8 (2.4)	7 (2.5)
How accessible were the program staff?	6.7 (2.3)	6 (2.6)
To what extent did the program meet your expectations?	8.2 (1.8)	7 (2.8)
How likely are you to recommend the program to a friend in similar need?	9.8 (2.2)	7.6 (3.4)
<i><u>Note.</u></i> Coding: 1 = very unsatisfied, poor understanding, very little opportunity, very inaccessible, met no expectations & very unlikely. 10 = very satisfied, very good understanding, ample opportunity, very accessible, met all expectations and very likely useful.		

Table 5 shows the percentage of subjects who participated in each of the various activities while in the Woolshed program and the percentage who thought the activity was "most useful", in both the exit and follow-up groups.

Table 5: Summary of participation rates in each activity and percentage of those who found activity "most useful" at exit and 3 month follow-up.

Activity	Exit (n=34)		Follow-up (n=23)	
	% who participated	% found activity "useful"	% who participated	% found activity "useful"
Self-esteem	97%	97%	100%	91%
Assertiveness	97%	97%	87%	78%
"Huddle"	97%	85%	91%	74%
House meetings	97%	77%	91%	83%
Rules and guidelines	97%	79%	91%	70%
Slowing down	91%	85%	96%	61%
Addiction	91%	88%	87%	83%
Anger and resentment	94%	91%	83%	83%
Journal writing	82%	56%	78%	70%
Family and friends	65%	59%	74%	52%
Men's/women's group	32%	18%	35%	26%

Shown in Table 6 is the percentage of participants who answered at exit and 3 month follow-up that they learnt a particular skill while in the program, found it most useful and use the skill currently. It should be noted that in a few cases the percentage of participants who responded that a skill was most important to them and that they currently use that skill was greater than the percentage of participants who reported that they learnt the skill. This discrepancy is thought to be related to the way in which the questions were worded, with respondents possibly answering items without reference to the Woolshed program.

Table 6: Summary of percentage who learnt the skill, found the skill most useful and who use the skill currently at exit and 3 month follow-up.

<i>Skill</i>	<i>Exit (n=34)</i>			<i>Follow-up (n=23)</i>		
	% learnt the skill	% responded skill "most important"	% who use the skill currently	% learnt the skill	% responded skill "most important"	% who use the skill currently
Stress management	91	82	79	87	78	70
Relapse prevention	91	88	79	83	83	65
Communication	88	85	88	87	91	87
Time management	85	74	74	78	78	70
Daily living	68	59	74	78	66	83
Budgeting	68	50	59	57	52	44

7 Discussion and conclusions

The results from the research on the well-being of residents of the Woolshed at baseline, exit and follow-up have been presented covering residents' drug use, HIV risk-taking behaviour, social functioning, physical health, psychological well-being and criminality.

7.1 Baseline

Results show, as expected, high levels of drug use at baseline with residents reporting high use of cannabis, alcohol, amphetamine, heroin, sedatives, tranquillisers, other opiates and hallucinogens. Forty-six percent of the residents at baseline reported above average or higher risk of either contracting or transmitting infectious diseases. Fifty-seven percent reported high levels of social dysfunction, seventy percent had poor physical health and there were high levels of psychological dysfunction. The results on criminal activity show high levels of criminal behaviour with seventy-seven percent of the sample reporting committing some form of crime in the month preceding the interview and approximately one quarter of the sample was facing charges at the time.

The results of the SF-36 were most interesting as, at baseline, the residents of the Woolshed reported extremely poor functioning in virtually every area assessed by the SF-36. What is more revealing is that a comparison between the scores of the residents entering the Woolshed with patients entering methadone maintenance treatment in South Australia indicated that the residents were worse in terms of functioning on every subscale of the SF-36.

7.2 Exit

The exit interviews with thirty four of the original fifty six residents showed a dramatic decline in drug use and an improvement in functioning on the SF-36 and on all of the indices assessed.

7.3 Three month followup

The more important results, however, relate to the three month follow-up. Forty-one percent of the residents were successfully contacted at three month follow-up. An analysis of the residents who completed the three month follow-up and those who did not showed that there were no systematic differences in their well-being at baseline. This suggests that the results for the twenty three residents who were successfully interviewed are not biased by them either being more or less dysfunctional than those not followed up at the baseline.

At the follow-up, there was some return to drug use, as would be expected, but not to baseline levels. The proportion of residents using the various drug classes at the follow-up had declined markedly. In addition, and more importantly, where drug use was occurring the rate of use was much lower than at baseline. These details are set out clearly in Table 1 where for instance, at baseline, ninety one percent of residents entering treatment had used cannabis and used five times per day on average. At follow-up, only twenty six percent had used cannabis in the preceding month and the use was much lower at an average of once every two

days. Similar patterns can be seen for alcohol, amphetamine, sedatives and other drug classes.

The exception to this pattern was for heroin and other opiates. Whilst there was a decline in use by virtue of fewer residents using at follow-up, the rate of use was slightly higher on average. This result suggests that a subset of residents have continued to use heroin and other opiates at a high rate and such a result is consistent with the international literature on opiate dependence indicating that such dependence is a relapsing disorder. However, it is noted that the differences between extent of use at baseline and follow-up for heroin and other opiates was not significant suggesting no significant increase in the amount of use.

Consistent with the results on drug use, there were improvements in HIV risk-taking behaviour with the majority of the follow-up residents obtaining scores in the low or below average range in terms of risk of contracting or transmitting infectious disease. There was also continued improvement in terms of social functioning, general health and psychological functioning.

The results on the SF-36 at exit showed marked improvements above baseline although there was some loss of the gains achieved at exit. Of course, again, such a result is perfectly consistent with expectation. One would expect that when in a relatively protected environment such as therapeutic community, well-being would be higher and drug use lower than upon return to an individual's usual environment.

7.4 Residents' views of the program

The evaluation of the program by the residents suggested that at both exit and follow-up, residents were satisfied with the program which they participated in. In particular, they found the advice from staff satisfactory, the staff were generally accessible and the program generally met expectations with residents indicating that they would recommend the program to a friend in similar need. In terms of the components of the program, in almost all cases, the activities were found to be useful at both exit and follow-up. The single exception to this was the men's and women's groups and relatively few residents participated in these groups although of those who participated, the majority found them to be useful.

7.5 Content of the program

Turning to the components of the program themselves, the audit showed that the Woolshed has clearly defined processes for admission and assessment. The assessment processes appear to be adequate and consistent with recommendations made elsewhere (e.g., Mattick & Hall, 1993). One area which was not well assessed was psychological morbidity. Residents are screened for serious psychological disorders such as bipolar disorder, schizophrenic disorder, or other disorders. However, there is no clinical psychologist, psychiatrist, or screening questionnaire given and it would be helpful if such an assessment were carried out.

In addition, it would be usual to make a diagnosis of substance use disorder under either the ICD-10 or the DSM-IV. Some formalisation of the assessment process

could be undertaken, perhaps using some of the instruments reported on in this document, if they appeared suitable to the staff of the Woolshed.

The content of the program focuses on skill development and this approach is again consistent with recommendations concerning the content of such interventions (Mattick & Hall, 1993, 1994). In particular, the focus on stress management, social skills training, communication skills training, relapse prevention, problem solving and time management are all important components. Additionally, the social support from other residents and from the staff is also very important. There is a planned return to the resident's usual environment with strategies for dealing with high risk situations of return to drug use. The Woolshed also appears to have an abstinence focus but is cognisant of harm reduction strategies and these are integrated into the interventions.

A small number of the groups, one or two in particular, did not appear to have any clear basis on which they rested either in terms of theory or research. It is suggested that all the components that the Woolshed offers should attempt to have some research base or some clear rationale. Having said that, it is still to be noted that the program's interventions are generally consistent with recommendations about program content. The program's interventions are also consistent with the international literature which more broadly supports the use of skills-based approaches in these settings.

One aspect of the Woolshed program which is of concern is of the lack of systematic support after exit from the Woolshed. The international research literature suggests that ongoing monitoring and follow-up procedures with supportive interventions are likely to benefit residents of this kind of program. It is recommended that such follow-up be conducted as it is likely to provide maximum benefits for the residents.

7.6 Future data collection for monitoring the program

One of the issues for this evaluation was to also attempt to make recommendations based on the process of the evaluation for the future ongoing monitoring activities of the Woolshed. It is not recommended that the Woolshed be evaluated in exactly the fashion that has been carried out and reported herein. The resources required for such an evaluation would be too great. Instead, it is recommended that a modified approach be used. In particular, it is recommended that the Drug Use section of the Opiate Treatment Index continue to be given at baseline, exit and follow-up and that the SF-36 be also given at those times. The results from these assessments can then be compared with the current data and also with other results for similar populations either in South Australia or elsewhere.

It is also not recommended that every resident be followed-up. Rather, it would be more economical to follow-up one in three or one in five residents. The decision about the number of residents to follow-up will be partly determined by resources available, however, at a minimum, it is suggested that one in five residents be followed up at either three or six months after the intervention. The residents followed up should be chosen in either a random fashion or through choosing the

fifth consecutive resident continuously. Such an approach will avoid the selection of "good" residents for the follow-up.

7.7 Summary

In summary, the Woolshed program uses interventions which are consistent with recommendations for therapeutic community program content. These interventions are consistent with the international literature on the approaches that will be most valuable for individuals with drug or alcohol problems. The residents find the vast majority of these program components to be acceptable and useful to them.

The results of the study show that the residents entering the Woolshed have significant drug use and dysfunction, probably greater dysfunction than other patient groups such as methadone maintenance patients. Through the Woolshed program and at follow-up, the residents achieve and maintain gains at better levels than at baseline. Clearly there is some loss of gains between exit and follow-up but this is to be expected. However, the residents do not return to the very poor state of functioning that they were experiencing at baseline. Of course, one of the major limitations is the short follow-up period and it is recommended that a longer follow-up time frame be adopted in the future, monitoring the Woolshed's results in order to improve knowledge of residents' well-being sometime after leaving the program.

It is also recommended that the Program Manager and staff consider altering aspects of the assessment processes, particularly with regard to assessment of psychological morbidity and that a formalised program of assessment be put in place. Full follow-up support should be offered. In addition, the program may benefit from exposure to some of the recent work setting out methods for intervening when using skills based approaches. In particular, the work of Jarvis *et al.* (1995) and Monti *et al.* (1989) is recommended as being suitable for the Woolshed to use as a basis for inspecting the program content and possibly modifying it.

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