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COST BENEFITS OF THERAPEUTIC COMMUNITY PROGRAMMING

RESULTS OF AN UPDATED SURVEY

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ABSTRACT

Therapeutic communities for the treatment of alcohol and other drugs misuse have been in operation throughout Australia since 1972. The therapeutic community movement was formalised in Australia in 1985 during the Premiers Conference, held in Melbourne Victoria, which was the forerunner of the National Campaign Against Drug Abuse. An organization, Australasian Therapeutic Communities Association (ATCA) was established at this time to represent and promote the interests of its members. Under the ATCA umbrella members have benefited from processes of accountability, information sharing, and more recently attempts to establish what are standards of best practice in therapeutic community treatment.

The extent to which the therapeutic communities contribute to the attainment of desired outcomes in alcohol and other drugs treatment has been questioned at times. In order to determine the extent to which therapeutic communities contribute to the alcohol and other drugs sector a survey was conducted of its membership. The survey was conducted at Odyssey House. Cost benefits were determined by calculating the costs to society as a result of each person's drug misuse in the year prior to entry to therapeutic community treatment. Determining indices included: criminal activity, drug misuse, costs of court, costs of solicitors, and time missed from work as a result of drug misuse. These costs were measured against the amount of time spent in the therapeutic community indicated by drug free, crime free days and the monetary value apportioned to them.

Introduction

There has been recognition recently of the need to have better information as to the effects economics have in the illicit drug debate. A cautionary note has been issued to researchers and policy makers to allow advances in the understanding of the economics of illicit drugs to better inform research and consequently policy formation. Unless this takes place, it is stated, the prospects for developing more effective responses to the illicit drugs issue are dismal! (Bridges, 1999).

To effectively examine the cost benefits and economics associated with alcohol and other drug usage, it is necessary to determine the extent to which it impacts on society in economic terms. There have been a number of studies which have sought to document the phenomena of the drug crime nexus and its economic impacts. Criminal behaviour and its relationship to drug use has been well established. There are considerable costs associated with drug use and criminal behaviour. Costs have been apportioned to: a) value of merchandise stolen, b) costs of medical care for crime victims, c) productivity losses for those who abandon legitimate economics, d) costs for police protection, e) legal representation, f) adjudication, g) sentencing and maintaining convicted offenders in correctional institutions. These factors contributed to the \$69.9 billion dollars estimated to be the cost of alcohol and drug related crime in the U.S. in 1992 (Harwood et al, 1998).

Another study sought to determine the economic costs of heroin addiction in the U.S. (Mark et al, 2001). They used the cost of illness methodology outlined by Hodgson and Meiners (1982) in which three types of costs can be included in studies of this type. They are: 1) Direct costs which include medical care expenditure for treatment and diagnosis and treatment of the addiction and its medical sequelae as well as non-medical expenditure occasioned by the illness, such as prison and law enforcement related costs. 2) Indirect expenditures include loss of earnings due to premature mortality, incarceration, and reduced human capital. 3) Psychosocial costs such as reduction in the quality of life of the heroin addict and members of his/her social network were excluded because, though very important, were extremely difficult to quantify.

They found that heroin made up 20% of the total economic cost of illicit drugs in the United States which was estimated to have been \$109 billion in 1995 (Harwood et al, 1998), now its \$484 billion. The costs exceeded the total drug control budget of the United States federal government which was \$13.5 billion in 1996. The cost of heroin was \$21.9 billion in 1996. The budget is now \$30.1 billion (Office of National Drug Control Policy, 2007). The addiction costs were broken down as follows:

1.	Productivity Costs	-	52.6%
2.	Criminal Activities	-	23.9%
3.	Medical Care	-	23%
4.	Social Welfare	-	.5%

This study was relevant to Australian policy makers given the estimated number of heroin dependent persons, 74,000, in Australia (Hall, et al) at that time. In Australia the costs of all drug abuse is \$56 billion.

315 . Tobacco

155 . Alcohol (2005)

8 . Illicit

(Moore T.J. (2005). Monograph No 1: What is Australia's drug budget? Drug Budget estimated to be \$3.2m. The policy mix of illicit drug related government spending in Australia. DPMP Monograph Series. Firtzroy: Turning Point D&A Center).

Criminality

The strong association between crime and illicit drug use is well known (Hall et al, 1993). A substantial body of evidence exists which demonstrates a strong link between illicit drugs and crime (Chaiken and Joynson, 1988; Ball, 1986; Chaiken, 1986; Wish and Johnson, 1986; Inciardi, 1979). The involvement in crime and the amount of crime committed during periods of addiction are far greater than during non addicted periods (Ball et al, 1983; McGlothlin et al, 1978; Nurco et al, 1989; Nurco et al, 1985). Two of the most frequent methods of criminal activity to obtain money to purchase drugs are through acquisitive crimes involving theft or through drug dealing (Hammersley et al, 1989; Ball et al, 1983).

Residential Treatment Effectiveness

Residential treatment has been criticised as to its effectiveness. Some observers point out it is difficult to establish a cause and effect relationship due to the lengths of residential programs. They further point out this makes residential programs open to criticism as to their cost effectiveness compared to shorter options (Wever, 1990). Therapeutic communities in particular have been criticised as to their effectiveness due to the lack of randomised controlled trials. However, the authors note this applies to other forms of drug treatment as well. The only exception to this phenomena is methadone maintenance, which is the most researched intervention for the treatment of opioid addiction. There have only been six trials which meet this standard for research (Ward, Mattick, and Hall, 1992). Studies of a controlled observational nature are acknowledged as being the best that can be expected in assessing a chronic relapsing condition like opiate dependence (Ward, Mattick and Hall, 1992). Evaluation of treatment programs show treatment more than pays for itself through reductions in crime to society (Bernstein et al, 1994; Harwood et al, 1994). Cost Benefit analysis found treatment programs in California, which were publicly subsidised, demonstrated the economic benefits of treatment outweighs the costs by a ratio of 7 to 1. Three quarters of the costs benefits were attributable to reductions in crime (Hubbard et al, 1989). In the National Treatment Outcome Research Study (NTORS), (Gossop et al, 2000) they found that drug selling crime of clients from residential treatment agencies had been reduced to less than two thirds of intake levels at a 1 year follow up.

Other studies have shown residential treatment reduced the costs of criminal behaviour in comparison to other modalities, and that residential treatment was the most cost effective even though it was more costly to implement (Daley et al, 2000). Residential treatment was shown to have better outcomes on measures of psychiatric symptomatology, and social problem severity when compared to day care (Guydish, 1999). The Drug Abuse Reporting Program (DARP) study found that therapeutic communities were of considerable importance in the rehabilitation of substantial percentages of clients between 1969-72 (Simpson and Sells, 1980).

Further study of the DARP data indicated opiate use dropped from 70% of clients using daily pre treatment to 50% using daily in the 1st year post treatment, and in 21% of the client sample there was no illicit drug use. Other dependent measures showed a general and statistical improvement in therapeutic communities, methadone maintenance, and drug free outpatient treatment regarding employment, productive activity, and criminal behaviour.

There was a linear relationship between longer staying clients and better post treatment outcomes. For therapeutic communities discernible effects of treatment were seen at 90 days, while for methadone the period was 1 year (Simpson and Sells, 1983). A number of other studies have evaluated the effectiveness of therapeutic communities. Positive outcomes were shown in the diminution of drug use and criminality and the increase of more socially acceptable behaviour such as employment and/or educational involvement (Bale, 1979; Collier and Hijazi, 1974; De Leon, Wexler and Jainchill, 1982; Latukefu; 1987, Pitts 1991; Toumborou et al, 1994).

ODYSSEY HOUSE ATOS DATA

Baseline sample n=38

Proportion followed up at 3 months = 35/38= 92%

NB: The baseline data presented below is based on n=35

Baseline sample n=38

Proportion followed up at 12 months = 30/38= 79%

Data presented below is based on n=30

Baseline sample n=38

Proportion followed up at 24 months =30/38=79 %

Data presented below is based on n= 30

Demographics at 24 month follow up (n=30)

67% (n=20) are male

Mean age = 24.9 (SD 5.7, range 18-41)

Baseline sample n=38

Proportion followed up at 36 months = 27/38= 71%

Data presented below is based on n=27

Treatment status and abstinence rate at

	3 months (n=35)	12 months (n = 30)	24 months (n = 30)	36 months (n = 27)
Still in index treatment (%)	54	N/A	N/A	N/A
Currently in treatment, but not the index treatment (%)	20	40	37	33
Any intervention since baseline (%)	26	60	80	82
Abstinent from heroin for month preceding 3mth follow-up interview (%)	91	63	73	67

Drug use

(N=35)	<u>Baseline</u>	<u>3mths</u>	<u>12 mths</u>	<u>24 mths</u>	<u>36 mths</u>
Heroin use days in preceding month (mdn)	21	0	0	0	0
Number of drug classes used in preceding month (mean)	5.1	2.0	3.1	2.6	2.3
Daily or more frequent injecting in preceding month (%)	74	6	3	10	7
Overdosed in preceding 3 months (%)	23	0	7	3	4

Criminal activity

	<u>Baseline</u>	<u>3mths</u>	<u>12 mths</u>	<u>24 mths</u>	<u>36 mths</u>
Criminal activity in preceding month					
(N=35)					
Property crime	46	6	17	7	0
Drug Dealing	11	0	3	10	0
Fraud	20	0	3	0	4
Violent crime	9	0	0	3	0
Any crime	51	6	17	13	4

Psychiatric distress

(N=35)	<u>Baseline</u>	<u>3mths</u>	<u>12 mths</u>	<u>24 mths</u>	<u>36 mths</u>
Current Major Depression (%)	23	9	13	7	7
SF-12 mental health score (mean)*	31.4	41.4	37.9	42.1	42.8

Physical health

(N=35)	<u>Baseline</u>	<u>3mths</u>	<u>12 mths</u>	<u>24 mths</u>	<u>36 mths</u>
SF-12 physical health score (mean)*	43.9	51.3	51.6	51.4	49.1
Current injection-related health problems (%)	89	9	20	27	30

* NB: Higher SF-12 scores are indicative of better health

Please also note that one of the people followed up at 24 months was not interviewed at 12 months, and similarly 1 of the Odyssey clients interviewed at 12 months was lost to follow-up at 24 mths. Hence, while the sample size=30 at 12 months and 24 months, the baseline data may appear slightly different.

Cost Benefits And Cost Effectiveness Of The Treatment For Drug Abuse

Cost benefits analysis converts all the costs and benefits of a particular form of treatment into a common unit of measurement (usually money) and then confirms whether that form of treatment is economically efficient (Ernst, Young, 1996). In the alcohol and other drugs field there has been a tendency to compare the cost benefits of treatment to the cost benefit of no treatment at all. Cost effective analysis compares the relative efficiency of two or more treatment methods in arriving at the same goal. Heather (1992) was one author to claim research evidence does not demonstrate any significant cost effectiveness of residential treatment over non-residential treatment. While some claimed to have found a negative relationship between effectiveness and cost (Holder et al, 1991).

Harwood et al (1988) calculated the crime related costs of drug abuse to be 40% of the total of \$47 billion of drug abuse in America in 1980. In comparison, treatment and preventative costs amounted to 3% of the total costs.

When they compared 3 modalities of treatment to determine the reduction on crime related costs following residential treatment, outpatient drug free, and methadone maintenance they found that residential treatment appeared to have the greatest economic return of the three treatment modalities. However, they did note those treated in residential programs had greater levels of criminal activity pre and post treatment than those treated in outpatient programs. This fact should come as no surprise given the client profiles of those who are appropriate for residential care. Collins and Lapsley (1991) estimated the economic costs of alcohol and other drug abuse in Australia at \$14 billion, 10% of which was attributed to illicit drugs.

In the California Drug and Alcohol Treatment Assessment (CALDATA) General Report, researchers looked at: 1) The cost of treatment on participant behaviour, 2) Costs of treatment, 3) Economic value of treatment to society. They looked at 4 treatment types: 1) Residential, 2) Residential %Social Model+ programs, 3) Outpatient drug free, 4) Outpatient methadone. The sample, N=3000, was taken between October 1991-September 30, 1992 who were in treatment or discharged. The sample, N=3000, was representative of 150,000 people in treatment in California during that period, which made it larger than any prior follow up study. Phase 2 of the study sought to contact and interview a sample, N=1850, from 83 agencies within 9 months of clients leaving treatment. On average, follow up interviews occurred 15 months after treatment.

Key findings of the study were:

1. Cost of treating 150,000 participants in the study sample in 1992 was \$209 million. The benefits received during treatment and in the first year afterwards were worth \$1.5 billion in savings to society, due mostly to reductions in crime.
2. Each day of treatment paid for itself on the day it was received, primarily through an avoidance of crime.
3. The benefits of alcohol and other drug treatment outweighed the costs of treatment by ratios of 4:1 to greater than 12:1 depending of the type of treatment.
4. The cost benefit ratio for tax paying citizens was highest for discharged methadone patients. Lowest, but still economically favourable, for participants in residential programs.
5. Cost benefits for the total society ranged from 2:1 to more than 4:1 of all treatment types except methadone treatment episodes ending in discharge, where they were net losses, mainly from earning losses to the treatment participants themselves.

In addition, criminal activity declined by two thirds post treatment from pre treatment levels. The greater length of time spent in treatment, the greater the percent reduction in criminal activity.

Declines of approximately two fifths occurred in the use of alcohol and other drugs before treatment to after treatment.

There were one-third reductions in hospitalisations from before treatment to after treatment, and corresponding significant improvements in other health indicators.

Those who stayed longer in treatment had better employment post treatment, and this finding was greater for those in residential and social model programs. (Gerstein et al, 1994).

Australian Therapeutic Communities Association

Therapeutic communities have operated in Australia since the mid to late 1970s (Carr-Gregg, 1984). It is believed the first therapeutic community was We Help Ourselves (WHOS) in 1973. Odyssey House was established in 1977 in Sydney's south western suburbs. Other therapeutic communities established within this same period of time were, The Buttery, Karrilika, and Westmount Co-operative. There was little, if any, formal association between these programs. A clear rationale for this would be speculative, but it would appear a sense of mistrust, professional jealousies, and divergent applications of the therapeutic community model could all be cited as contributing factors. Due to this type of enmity the movement remained fractious initially. In 1985, at the Premiers Conference held in Melbourne, which was the genesis of the National Campaign Against Drug Abuse, a situation arose which would alter the situation and enable better understanding among therapeutic community administrators in Australia.

During the Conference, there were a number of workshops and discussion groups which took place. Each group and workshop was defined by the particular discipline representative of the varying professions and groups who were in attendance at the conference. As such, accommodation was made for psychiatrists, psychologists, doctors, social workers, and nurses of various Nations. When the time had come for groups to meet one had not received a room, or space to congregate. therapeutic communities!

The attendees requested, and were granted a facilitator. This resulted in the formation of a working party which scheduled a follow-up meeting at Odyssey House, in Melbourne. Through a series of meetings, which alleviated and dispelled many of the misconceptions about the philosophies of various programs, an association was formally established in 1985. It was named the Australian Therapeutic Communities Association initially, and the name was modified in 1999 to reflect the broader geographical representation of its membership. The first National Conference was held in November 1986.

The Survey

Therapeutic Communities have been under question as to their efficacy on the provision of treatment services for people who have alcohol and other drugs problems. This is despite an extensive review of these types of programs undertaken in 1994-95 under the aegis of the National Drug Strategy Review of Long Term Residential Treatment for People with Alcohol and Other Drug Use Programs and conducted by Ernst & Young. The review involved the examination of:

- Clients needs
- Treatment practices and approaches
- Effectiveness of treatment programs
- Funding of long term residential treatment
- Best practice, and
- performance and accountability indicators.

The review team concluded that the provision of long term residential treatment for drug use problems, and for whom other treatment options are not effective or appropriate, has significant benefits for the community as a whole and for these individuals+(Ernst & Young, 1996).

In an effort to demonstrate the quantifiable benefits of therapeutic community treatment models, a survey was conducted of the residents of the Australasian Therapeutic Communities Association membership. The survey was conducted on the same day, August 19, 2001, for all participants in the survey. The survey had been developed and used by Odyssey House McGrath Foundation, located in New South Wales as a mechanism to respond to the often asked question of "What is your success rate?" In the complex interactions which take place during, and after treatment, along with the different expectations of the goals of treatment for various programs, the answer to this question is difficult to put forth in a simplistic manner. The survey was designed to ascertain the costs of the respondents' drug use to the community in the year immediately prior to entering treatment. 16 member organizations of ATCA responded of the total membership of 29.

In addition, data was sought on age of respondents, frequency of drug usage, age of onset of illicit drug use, and reasons attributed to the onset of illicit drug usage.

Costs of drug usage of the respondents was also calculated against the services supplied to them by society as a result of their drug usage i.e. legal services, medical services, court adjudication, welfare benefits. These costs in total were averaged out based upon the number of respondents to give a total daily cost of the respondent sample's cost of drug use to society. These costs were pro rated using a formula developed by Ernst & Young to determine client retention rates for therapeutic communities (Ernst Young, 1996) to determine a total savings to society based upon crime free and drug free days which are accumulated while residents are in treatment at therapeutic communities. The assumption being there is no illicit drug use, and no criminal activity while a resident is in treatment.

The survey was self administered under the supervision of a clinical staff person at participating programs.

The questions in the survey were:

1. Please give your date of birth.
2. Frequency of use . would you please state how often you use drugs i.e. monthly, weekly or daily.
3. Would you please state the age when you started using any drugs i.e. alcohol or tobacco? At what age did you start using illicit drugs?
4. Would you please state, from your perception, what made you start your use of drugs?
5. What made you continue to use drugs?
6. Have you had legal problems as a direct result of your drug usage during the past year?
7. If you answered yes to number 6, do you believe you would have legal problems if drugs were legalised?
8. If you answered yes to number 6, did you have legal problems before the start of your drug usage?
9. In the year before you entered treatment, what would you estimate to be the cost of your drug use on a daily basis?
10. In the year before entering your current treatment, how often did you attend court, a solicitor, or a barrister?
11. In the year before entering treatment, were you hospitalised as a result of your drug use. If so, for how long?
12. In the year before entering treatment, how many times would you estimate you visited a doctor's surgery for any reason?

13. In the year before entering Odyssey House were you legally employed? For how long, and what was your salary?
14. Did you participate in criminal activity in order to support your drug usage? If so, what would you estimate to be your weekly income from your criminal activity prior to entering treatment?
15. Were you on government benefits of any kind in the year prior to entering Odyssey House? If so, what kind and for what period of time?
16. How long have you been in Odyssey House? Please put in days if possible.

Results

Completed questionnaires were received from 16 of the 29 organisations which are members of the Australian Therapeutic Communities Association. A total of, n = 433, people responded to the questionnaire.

1. Age

The average age was 23.6.

2. Frequency of Drug Use

Daily use was n = 425

Weekly use was n = 8

3. Average age of onset of illicit drug use

n = 397

Ages ranged from 5 to 50 years of age.

Average age of onset of illicit drug use was 12.5 years.

4. Started using due to :

a. Peer pressure	98
b. Family problems	75
c. Experimentation	63
d. Affective disorder	13
e. Social problems	83
f. Anxiety	9
g. Didn't like self	58
h. Availability	18
i. Had been abused	16

n = 433

5. Why continued drug usage

a. Enjoyed it	111
b. Stress / Anxiety	16
c. Blocked out thoughts	78
d. Addicted	136
e. Peer pressure	4
f. Helped self confidence	43
g. Family problems	22
h. Depression	12
i. Lonely	5
j. Don't know	6
n =	433

6. Legal problems due to drug use

Yes	-	237
No	-	159
No response	-	37
n =		433

7. Would have legal problems if drugs were legalised

Yes	-	194
No	-	54
Don't know	-	185
n =		433

8. Had legal problems before drug use?

Yes	-	88
No	-	170
Don't know	-	175
n =		433

9. Cost of daily drug use

n = 345 \$104,201.20 per day

* 88 respondents did not know or did not answer.

Cost per annum = \$38,033,438
Average of \$110,241.84 per user per year
or
\$302.32 per day

10. Attendance at a court, solicitor, or a barrister

a. Not at all	127	127
b. Once	54	54
c. Twice	43	86
d. 3 times	25	75
e. 5 times	29	145
f. 10 times	40	400
g. < 15 times	55	825
h. No response	59	
<i>Total</i>		1585

There were 1585 visits / court appearances.

The cost of a solicitor to appear in court for a day is \$2,000 (which is inclusive of preparation for the court appearance).

The cost of a barrister to appear in court for a day of \$1,650 per day.

The cost of issuing a summons to appear in court is \$58.00 per day.

The cost of a court appearance is \$58.00.

* This information was obtained from Marsdens, The Law Group and corroborated by Ms Rosemary Freeman, principal in Freemans, The Solicitors.

11. Hospitalised in the year prior to entering Treatment

Yes	-	234
No	-	168
No answer	-	31
	n =	433

Period of hospitalisation

Period	N	Days
1 week	59	413
2 weeks	25	350
3 weeks	7	147
1 month	12	336
6 weeks	10	420
Total	N = 113	1666

* Cost of daily stay in hospital = \$235.

1666 bed days
x \$235
\$391,510 per year

* Information obtained from Campbelltown Hospital

12. Number of visits to doctors surgery

N = 330, who had visited a doctors surgery in the year prior to entering treatment.

There were 19,281 recorded visits
\$36 per visit
\$694,116 for the year

13. Employed on the year prior to entering treatment

N = 70

Total salary = \$775,134.00

The average salary was \$11,073.34

The average length of employment - 5 months.

14. Participated in criminal activity

Yes	n = 231
No	n = 103
No answer	9

Weekly income from criminal activity was \$661,830 per week
X 52 weeks
\$32,415,160 per year

15. Number on Government Benefits

Yes	-	n = 377
No	-	n = 49
No answer	-	n = 7
		n = 433

Type of benefit

Pension	n = 96	\$454 per fortnight
Youth	n = 61	\$383 per fortnight
Newstart	n = 165	\$451 per fortnight
Sickness	n = 65	\$494 per fortnight

Total

Pension	n = 96 x	\$11,804 per annum =	\$1,133,184
Youth	n = 61 x	\$9,958 per annum =	\$ 607,438
Newstart	n = 165 x	\$11,726 per annum =	\$1,934,790
Sickness	n = 65 x	\$12,844 per annum =	\$ 834,860
			= \$4,510,272 p.a.

Cost of drug use to society

1.	Drug use	n=345	\$38,033,438 per annum
2.	Court	n=432	excluded due to ambiguity of question
3.	Hospitalisation	n=113	\$391,510 per annum
4.	Doctors visits	n=330	\$694,116 per annum
5.	Criminal Activity	n=321	\$34,415,160
6.	Government Benefits	n = 337	\$4,510,272

Total costs of drug use to society in the year prior to entering treatment was \$77,964,494 !

Average length of stay in treatment

The average length of stay in treatment was calculated based upon the formula used by Ernst & Young, in their review of Long Term Treatment Programs (Ernst & Young, 1996).

They calculated that:

- 56% of clients remained in treatment 30 days to 3 months
- 31% of clients remained in treatment between 3 - 6 months.
- 9% of clients remained in treatment between 6 - 12 months.
- 4% of clients remained in treatment over 18 months.

We took the mid point of each of the time in treatment categories to calculate the number of days spent in treatment.

This was necessary due to an oversight on the part of the author to include a question which would have determined each person's actual stay in treatment. My sincere apologies.

The total cost of drug use \$77,964,494 per annum was divided by 365 to obtain a daily rate of costs of drug use = \$213,601.35 per day for the sample, n = 289.2 (average number of respondents time in treatment categories).

Cost of daily use per person = \$738.59

Categories of time in treatment

Time	Mid Point	Costs
1. 30 days to 3 months	45 days for 56% of sample	\$5,382,753.90
2. 3 . 6 months	135 days for 31% of sample	\$8,939,216
3. 6 . 12 months	270 days for 9% of sample	\$5,190,512,70
4. Over 18 months	630 days for 4% of sample	\$5,382,754

Total savings drug free, crime free days - \$24,895,235

Discussion

The results obtained from the questionnaire were interesting in that they verified some trends which have been documented in recent demographic studies. Ages ranged from 17 to 62 years of age, with the average age at 23.6 years, this trend toward a younger clinical population of drug misusers has been vogue for several years. Use of illicit drugs started at 12.5 years for the sample. This has some significance given this is the age at which the most rapid emotional and intellectual development occurs for boys and girls. The reasons for the onset of drug use attributed most to the clusters of peer pressures, family/social problems; experimentation and low self-esteem. The sample continued to use because they enjoyed using, were addicted, blocked out their thoughts, and bolstered their self esteem.

A significant number of the sample attributed their legal problems to their use of drugs and felt they would have legal problems even if drugs were legalised, and approximately 20% of the sample claimed to have had legal problems prior to their use of drugs.

The cost of the daily use of drugs, \$38,033,438 was consistent with findings of other studies which confirmed the high proportion of the costs of drug use to society was attributable to drug use, and criminal activity, \$34,415,160, whose combined total accounted for over 90% of the total costs of drug use to society within the sample.

Other costs of a health related nature were significant for hospitalisation, 1666 bed days, given the small population of the sample, n = 113, as were the number of visits to doctors'surgeries, 19,281 by a significant proportion of the sample, n=330.

There were extremely low rates of employment, $n = 70$, within the sample, and salaries were generally low, at an average of \$11,073.34 per annum. This is in light of the high proportion, $n = 377$, who were on government subsidy on the year prior to entering treatment.

Conclusion

The therapeutic community residential treatment model has been shown to be effective in the treatment of persons with alcohol and other drugs problems. Persons who have high rates of daily drug usage, and higher rates of participating in criminal activity to support their use of drugs are prominently featured within the therapeutic community sample. These two indices can have a negative correlation to positive treatment outcomes and thus this population is a challenge to therapeutic community clinicians as they are truly involuntary clients.

In spite of this difficult population therapeutic communities have provided an environment whereby individual correlates of compulsive/intensive/dependent use of substances are well documented and recognised: a link to intensified criminal activity; loss of employment and unemployability; deteriorated interpersonal relationships; and a focus on drug seeking and using activities and peers. The therapeutic community can assist an individual to process, deal with, and work through many of these issues in a safe environment and promote the acquisition of more adaptive coping skills.

The cost benefits of treatment have been shown to have ratios of from 4:1 to 12:1, depending on the treatment modality. Within this context therapeutic communities have demonstrated costs benefits equal, to and in some cases, superior to other treatment interventions. These benefits have been documented in some of the largest independent studies undertaken to date. In 1996, Ernst & Young estimated the average expenditure per place in long term residential treatment program was \$14,093 per year, or approximately \$39 per day. At the same time the cost to keep a person in a minimum security prison was \$34,000. According to Collins and Lapsley the average costs of a hospital bed in 1995 was \$384 per day. On these two comparisons alone therapeutic communities treatment had significant cost benefits. The Australian Bureau of Crime Statistics calculates the 1996 figure of \$14,093 per year cost of residential treatment would equal \$59,000 if indexed to inflation and cost of living increases over the period. The costs of keeping a person in prison in minimum security is \$50,709 per annum, and currently maximum security costs \$66,000 per annum (Department of Corrective Services, New South Wales. Annual Report 1999-2000) . Government funding on a per bed basis in New South Wales is generally low, although it has improved post Drugs Summit. The New South Wales Drugs Court pays \$100 per bed per day, or \$33,650 per year, and the Magistrates Early Referral Into Treatment initiative (MERIT) will subsidise residential care providers at a rate of \$65 per day, or \$23,725 per annum. Therapeutic communities provide a range of services which are recommended through the Quality Assurance Project Monograph No. 21, which are indicative of best practice approaches. These services are delivered without the concomitant %best practice+in funding.

The sample of therapeutic community respondents had cost the community in general a significant amount of money, \$77,964,494, due to the costs associated with their drug usage. The sample had high rates of criminal activity; high rates of unemployment and low salary levels; high rates proportionately for hospitalisations due to their drug usage; utilisation rates of doctors that were excessive; high rates of government subsidy through various welfare benefits and many contacts within the legal system. The participation in therapeutic community treatment provided a number of drug free and crime free days which saved society \$24,895,235! While this is significant, it is perhaps an underestimate of the true savings in dollar terms due to this survey's inability to accurately apportion the exact number of drug free and crime free days to the sample.

This statement is made in light of a similar survey conducted at Odyssey House McGrath Foundation New South Wales, which calculated that during 1999-2000 that program enabled residents to achieve over 54,000 drug free and crime free days for a savings to the community of over \$21,000,000! (Pitts, 2000)

Therapeutic communities provide substantial costs benefits to the community and the residents who utilise their services. Not only are the cost benefits substantial, but gains are made in other domains as well. The costs saved through the utilisation of this model of treatment not only justifies the method of service delivery, but warrants a review of the levels of funding given to program of this type based upon their cost savings. Most importantly, when residents are in treatment they stay alive!

Results of an Updated Survey – May 2009

N = 63

1. Age

The average age - 27.5
The range : 19-50 years old

2. Frequency of Drug Use

87% used on a daily basis

3. Average age of onset of illicit drug use

Average age of onset of any drug use was 13.4 years.
The drug nominated at first use was tobacco, followed closely by alcohol.

Tobacco and the age it is first used is a prediction for illicit drug use in adolescence.

4. Started using due to :

When asked what made people use drugs, 41% attributed their use to the influence of friends.

25% listed mood disturbance.

15% said they wanted to have fun.

11% said they were curious

7% said their use was due to parental conflict

5. Why continued drug usage

By far the majority of the sample said their drug use continued because they liked it . 71%, while 25% said they continued because it stabilised their mood. In this category most people indicated depressive or anxiety symptomatology.

6. Legal problems due to drug use

73% of the sample indicated they had legal problems as a result of their drug use.

7. Would have legal problems if drugs were legalised

50% of the sample stated they would have legal problems if drugs were legalised.

8. Had legal problems before drug use?

Only 20% of the sample had incurred legal problems prior to their drug use.

9. Cost of daily drug use

Costs of drug use for the sample were \$49,751,159 in the year immediately prior to their entry to Odyssey House. n = 62

10. Attendance at a court, solicitor, or a barrister

The costs of court, and legal representation in the sample was \$539,800.
N=41

11. Hospitalised in the year prior to entering Treatment

The sample was hospitalised a total of 653 days at a cost of \$274,260.
N = 24

12. Number of visits to doctors surgery

The costs of visits to the doctor totalled \$122,320. N = 49

13. Employed on the year prior to entering treatment

Of the people legally employed during the year, n = 30, employment ranged from 3 months to 1 year, with an average employment rate of 6 months.

Total wages earned for the sample were \$875,639

14. Participated in criminal activity

70% of the sample, n = 62 indicated they had participated in criminal activity to support their drug use.

The total cost of their criminal activity to support their drug use was \$17,055,910!

15. Number on Government Benefits

72% of the sample, n = 62, had been on welfare benefits in the year prior to entry to the program.

On average they had been on benefits 34 weeks at a cost of \$112,110.

16. How many days resident at Odyssey House

The sample, n = 63 had been in residence for a total of 6456 days.

So, the cost to society for this sample are:

1.	Costs of illicit drug use	\$49,751,159
2.	Costs of court and legal representation due to their drug use	\$539,800
3.	Costs of hospitalisation	\$274,260
4.	Costs of criminal activity to support illicit drug use	\$17,055,910
5.	Costs of welfare benefits	\$112,110
6.	Costs of visits to the doctor	\$112,340
	Total Costs	\$67,855,579

Therefore, in this sample of residents the average cost to society for each person was \$802,458 per year, or \$2,198 per person per day.

The resident sample, while in treatment at Odyssey House represented 6456 drug free and crime free days.

At \$2,198 per day this is a savings to society of \$14,190,258!

Last year 827 people passed through our residential services.

Bibliography

1. Bale, R.N., 1979. Outcome Research in Therapeutic Communities for Drug Abusers: A Critical Review, 1963-1975. *International Journal of the Addictions*. 14 (8), 1053-1074.
2. Ball, F.C., 1986. The Hyper Criminal Opiate Addict. In B.D. Johnson and E. Wish (Eds). *Crime Rates Among Drug Misusing Offenders: Final Report to the National Institute of Justice*. New York: Narcotics and Drug Research Inc.
3. Ball, F., Shafer, J.W., Munro, D.N. 1983. The Day to Day Criminality of Heroin Addicts in Baltimore: A Study of the Continuity of Offence Rates. *Drug and Alcohol Dependency*. 12, 119-142.
4. Bridges, J.P. 1999. Can Economics Add to the Illicit Drug Debate?+ *Drug and Alcohol Review*, 18, 251-252.
5. Carr-Gregg, C., 1984. *Kicking The Habit, Four Australian Therapeutic Communities* : University of Queensland Press, St Lucia, Queensland, Australia.
6. Chaiken, M.R., 1986. *Crime Rate and Substance Abuse Among Types of Offenders* : Final Report to the National Institute of Justice. New York : Narcotics and Drug Research Inc.
7. Chaiken, M.R., and Johnson, B.D., 1988. *Characteristics of Different Types of Drug Offenders*. Involved Washington, D.E., National Institute of Justice.
8. Collier, W.V., and Hijazi, V.A., 1974. follow Up Study of Former Residents of a Therapeutic Community. *International Journal of the Addictions*. 9 (6), 805-826.
9. Collins, D.J. and Lapsley, H.M., 1991. *Estimating the Economic Costs of Drug Abuse in Australia*. NCADA Monograph Number 15. Australian Government Publishing Services. Canberra.
10. Daley, M., Argeriou, M., McCarthy, D., Callahan, J.J. Jr., Sheppard, D.S. and Williams, C., 2000. The Costs of Crime and the Benefits of Substance Abuse Treatment for Pregnant Women. *Journal of Substance Abuse Treatment*. 19, 445-458.
11. De Leon, G., Wexler, H. and Jainchill, N., 1982. The Therapeutic Community: Success and Improvement Rates 5 Years After Treatment. *International Journal of the Addictions*. 17, 703-747.
12. Ernst & Young. 1996. *Review of Long Term Residential Treatment for People with Alcohol and Other Drug Use Problems*, National Drug Strategy, Commonwealth Department of Human Services and Health.
13. Gernstein, D.R., Harwood, H.J., Suter, N., and Maloy, K., 1994. *Evaluation Recovery Services: The California Drug and Alcohol Treatment Assessment (CALDATA)*. Sacramento, California : Department of Alcohol and Drug Programs.
14. Gernstein, D.R., Johnson, R.A., Harwood, H.T., Suter, N., and Malloy, K., 1994. *Evaluating Recovery. The California Drug and Alcohol Treatment Assessment (CALDATA)*. Sacramento, California : Department of Alcohol and Drug Programs. National Opinion Research Centre at the University of Chicago and Lewin . VHI, Inc., Fairfax, Virginia
15. Hall, W., Ross, J., Lynskey, M., Law, M., and Degenhart, R., 2000. How Many Dependent Opioid Users are there in Australia?+ Monograph 44, National Drug and Alcohol Research Centre. University of New South Wales.

16. Hall, W., Bell, J, and Carless, F., 1993. %Crime and Drug Use Among Applicants of Methadone Maintenance+ Drug and Alcohol Dependence. 31, 123-129
17. Hammersley, R., Forsyth, D., Monison, V., and Davies, J.B., 1989. The Relationship Between Crime and Opioid Use. British Journal of Addiction. 84, 1029-1043.
18. Harwood., H.J., Foundation, D., and Livermore, G., 1998. %The Economic Costs of Drug and Alcohol Abuse in the U.S. . 1992+ Rockville, Maryland National Institute on Drug Abuse and National Institute of Alcohol Abuse and Alcoholism, NIH 98-4327.
19. Harwood, H.J., Hubbard, R.L., Collins, J.J., and Rachal, J.V., 1994. The Costs of Crime and the Benefit of Drug Abuse Treatment: A cost benefit analysis using TOPS data in : C.G., Leukenfeld and F.M.Tims (Eds). Compulsory Treatment for drug abuse. Rockville, Maryland, National Institute on Drug Abuse (NIH 94 . 3713.
20. Harwood, H.J., Hubbard, R.L., Collins, J.J., and Rachal, J.V., 1988. The Costs of Crime and the Benefits of Drug Abuse Treatment: A cost benefit analysis using TOPS data. NIDA Research Monograph, 86, 209-235.
21. Heather, N., Batey, R., Saunders, J.B. and Wodak, A.D., 1989. The Effectiveness of Treatment for Drug and Alcohol Problems: An Overview. National Campaign Against Drug Abuse, Monograph series, Number 11.
22. Hodgson, T.A., and Meiners, T.R., 1982. %Cost of Illness Methodology : a guide to current practices and procedures.+ Millbank Memorial Fund Quarterly, 60, 429-462.
23. Holder, H., Longabaugh, R., Miller, W.R., and Rubons, A.V., 1991. The Cost Effectiveness of Treatment of Alcoholism: A First Approximation. Journal of Studies on Alcohol.
24. Hubbard, R.L., Marsden, M.E., Rachal, J.V., and Fingburg, H.M., 1989. Drug Abuse Treatment: A National Study of Effectiveness. Chapel Hill: University of North Carolina Press.
25. Inciardi, J.A., 1981. Heroin Use and Street Crime. Crime and Delinquency, 25 (3): 333-346.
26. Latukefu, R.A., 1987. Karralika . An Evaluation of a Therapeutic Community for Drug Users in the Australian Capital Territory. National Campaign Against Drug Abuse, Monograph Series Number 6. Australian Government Publishing Service, Canberra, Australian Capital Territory.
27. Mark, T.L., Woody, G.E., Biday, T., and Kleber, H.D., 2001. %The Economic Costs of Heroin Addiction in the United States+ Drug and Alcohol Dependency, 61, 195-206.
28. McGlothlin, W.H., Anglin, M.D., and Wilson, B.D., 1978. Narcotic Addiction and Crime. Criminology, 16, 293-316.
29. Munco, D.N., Hanlon, T.E., Kinlock, T.W., and Duszunski, K.R., 1989. The consistency of types of criminal behaviour over pre addiction, addiction, and non addiction status period. Comp. Psychiatry, 30, 391-402.
30. Munco, D.N., Ball, J., Shaffer, J.w., and Hanlon, T.E., 1985. The Criminality of Narcotics Addicts. Journal of Nervous Mental Disorders, 173, 94-102.
31. Pitts, J.A., 1991. The Relationship Between Time in Treatment and Treatment Outcome at a Drug Free Residential Therapeutic Community, Odyssey House New South Wales, Australia. World Federation of Therapeutic Communities Conference, Montreal, Quebec, Canada. September 22-27, 1991.
32. Pitts, J.A., 2000. Survey of residents in Odyssey House.

33. Simpson, D.D., and Sells, S.B., 1980. The Case for Drug Abuse Effectiveness, based on the DARP Treatment Research Program. *British Journal of Addiction*, 75, 117-131.
34. Simpson, D.D., and Sells, S.B., 1983. Effectiveness of treatment for drug abuse : An Overview of the DARP Research Program. *Advances in Alcohol and Substance Abuse*. 2(1), 7-29.
35. Toumborou, J.W., Hamilton, M., Fallon, B., Scott, J, and Skalls, W., 1994. Out of Harms Reach: An evaluation of the effectiveness of different levels of treatment at Odyssey House, Drug and Alcohol Research Department of Public Health and Community Medicine, The University of Melbourne.
36. Ward, J., Mattick, R., and Hall, W., 1992. Key Issues in Methadone Maintenance. University of New South Wales, Sydney.
37. Wevey, L.J.S., 1990. Drug Treatment in the Netherlands %Aims and effects. The effectiveness of drug abuse treatment: Dutch and American perspectives. Platt, J.R., Kaplan, C.D., and McKim, P.J.(Eds). Roberty E. Keizer Publishing Company, Malibu, Florida.
38. Wish, E.D., and Johnson, B.D., 1986. The impact of substance abuse on criminal careers. Blumstein, A., Cohen, F., Roth, A., Jeffrey, A., and Usher, C.A. (Eds). *Criminal Careers and Career Criminals*. Vol. 2, Washington, D.C. National Academy Press.